



Trainees' Guide





D3.2.2 Final Trainees' Guide

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Introduction

This is TRANSit Guide. The document outlines the curriculum of the training programme, connecting identified user needs with the Training Modules that will address them. It reflects the full set of competencies that participants shall acquire by the end of each module. The training programme is aimed at guiding teachers on how to teach effectively while simultaneously enhancing students' competences. It will focus on how teachers can design activities that promote the enhancement of competences. The modular approach of the training program will allow (in parallel with the systematic mapping of needs) localisation of the approach in the implementation countries.

1.1 Scope

This deliverable is D3.2.2 and it offers a guide for trainees/teachers listing relevant educational activities. It reflects the full set of competencies that participants may acquire by engaging with the training modules.

1.2 Audience

This report is addressed to project partners and the school teachers all around Europe.

1.3 Definitions

Competence means "the proven ability to use knowledge, skills and personal, social and/or methodological abilities (attitudes), in work or study situations and in professional and personal development" (European Commission, 2006).

Competence based learning implies, according to Bie-

mans et al (2004), creation of opportunities for students and workers, close to their world of experience, in a meaningful learning environment where the learner can develop integrated, performance-oriented capabilities for handling core practice issues.

1.4 Structure

Chapter 1: Gives an overview of this document, providing its scope, the definitions used and its structure.

Chapter 2: presents shortly the initial concepts and state of the art review in the theme of competence based learning, the teachers needs analysis performed in TRANSit, the aims of the TRANSit project, as well as the ways that the project will try to meet the documented teachers needs.

Chapter 3: describes the TRANSit Competency Framework for Teachers designed based on literature review of existing standards. The framework contains three stages of competency identifying standards in the use of skills, knowledge and attitudes/values to different degrees.

Chapter 4: describes the TRANSit Training Process, designed based on the needs analysis performed and the state of the art review from registration until final assessment with the optional delivery of an award system based on Open Badges. The different steps are analysed, and the expected learning outcomes are presented. Finally, these expected learning outcomes are

associated with the TRANSit Competency Framework for Teachers.

Chapter 5: describes the TRANSit Programme Design, the training methodology, the cycles of training implementation, Activity Guidelines, thus expectation for teachers participating in the course as well as the generic Design of the Training Curriculum for the face to face workshops, that might be adapted for use in different contexts/localised.

Chapter 6: describes the assessment processes of the training course, as well as description of the use of Open Badge. Taking part in the TRANSit program involves learner's participation in collaborative group work, discussion, designing and completing a wide range of tasks as they prepare work and lessons for their classes and schools. As the teacher works through the competency building module there will be opportunities for self-assessment, peer assessment and tutor assessment.

Chapter 7: presents the TRANSit training modules available through the TRANSit portal. For each Module there is a description of the aims and objectives followed by the sub-module titles contained in it. Each sub-module lists information on the learning activities and a description of the context and success criteria outcomes associated with completing it. Competency criteria are specified and associated with the sub-module to help the teacher to target a specific competency stage. Also listed with each sub-module are resources for further studying; documents, articles, videos, podcasts or examples of best practice.

Chapter 8: presents examples of Training Scenarios have been developed in order to be deployed during the seminar based training, as well as be available online for interested trainees to work at their own pace. The scenarios are provided as examples of learning strategies and material content that could be adapted to educational situations and regional particularities. In this chapter, indicative Guidelines /Training Resources are introduced on how users can upload their competence based resources on the teacher communities created

on ODS portal around the theme of competence based learning, as well as how to design their competence based cross-curricular learning scenarios following the ODS templates describing didactic approaches adapted for TRANSit (including the description of competences).

Chapter 9: presents indicative user-generated content, that can serve as use cases for interested education stakeholders around the theme of competence based learning. These resources can be accessed through the TRANSit portal (<http://transit.cti.gr/moodle/>), as well as the TRANSit community and sub-communities on ODS Portal (<http://portal.opendiscoveryspace.eu/community/training-teachers-competence-based-educationtransit-73929>). These indicative user generated learning scenarios cover a variety of subject areas and Transversal Key Competences, and have been created by participants in TRANSit training activities.

Chapter 10: presents Conclusions.

Initial Concepts

In the context of the Agenda for New Skills and Jobs (European Commission, 2010), recent forecasts of future skills' needs anticipate an increase in jobs requiring high- or medium-level qualifications. However, such qualifications need to be accompanied by key competences that equip young people to work in intercultural, multilingual and rapidly changing circumstances and to contribute to creativity and innovation. The concept of key competences originated with the adoption of the Lisbon Strategy in 2000 and it resulted in the European Reference Framework (2006). Key competences in the EU framework are those that 'all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment'. The development of key competences should include both subject-based and transversal competences that will motivate and equip students for further learning. The key competence acquisition (KCA) by every young person is one of the long term objectives of the updated strategic framework for European cooperation (ET2020, 2009). Most of the EU Member States are formulating and at least beginning to implement policies that move their school systems from being predominantly input led and subject-oriented towards curricula which include competences, cross-curricular activities, active and individual learning, as well as a focus on learning outcomes. Yet, these developments do not necessarily result in significant, widespread changes in practice – that is, in how schools actually organise and provide learning experiences for pupils.

2.1 TRANSversal key competences for lifelong learning

The transversal key competencies are a subset of the eight key competences identified in the European Reference Framework (2006). The competences are:

1. Communication in the 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;
8. Cultural awareness and expression

The key competences are all considered equally important, because each can contribute to a successful life in a knowledge society. Many of the competences overlap and interlock: aspects essential to one domain will support competence in another. Competence in the fundamental basic skills of language, literacy, numeracy and in information and communication technologies (ICT) is an essential foundation for learning, and learning to learn supports all learning activities. There are a number of themes applied throughout the Reference Framework: critical thinking, creativity, initiative, problem-solving, risk assessment, decision-taking, and constructive management of feelings, play a role in all eight key competences (European Commission, 2008).

2.2 Teachers Needs

As mentioned before the policy developments do not necessarily result in significant, widespread changes in daily teaching practice. The difficulty is in all cases translating these policies into practice. The challenge of supporting such initiatives, harnessing that innovation and bridging the gap between policy and practice on a wide scale is an issue. One of the core problems for the effective implementation of the above policies is the lack of initial education and training, as well as systematic support of teachers that could equip them with the skills and competences necessary to deliver KCA effectively. In fact the situation is even worse for teachers at secondary education since their training has not prepared them for the most part for holistic methods and cross-curricular teaching, although primary teachers may have more expertise in multidisciplinary approaches (Cluster Key Competences-Curriculum Reform Peer Learning Activity "Fostering Cross-curricular Key Competences for Creativity and Innovation, 2008). Moreover, we have to keep in mind that teachers need support in their everyday practice (training, institutional support, specific examples/good practice) and that they probably face difficulties in translating the policy into practice, especially when they don't have the proper underpinnings. New policies and practices must be therefore researched, developed and implemented to meet changing EU needs.

The Analysis of User Needs Report shows that teachers are generally open and positive towards enhancing the competencies of their students. They are interested in courses and workshops that can help them expand their knowledge about how to teach key competencies and how to assess the possible acquired competencies. The majority of participants never or almost never used rubrics, peer assessment, role play, e-Portfolios and simulation as tools to measure the knowledge and skills of the students. The paper and pencil tests and the computer assignments are still the most commonly used assessment methodologies. Other needs identified include practical assignments to good practices to self-assessment and interaction with peer teachers and social networking opportunities.

2.3 State of the Art

The key findings from the State of the Art Report (TRANSIt Deliverable D2.2) include the following:

- Hardware and software availability are slowly but constantly increasing and improving.
- Competency-based learning and teaching are not broadly adopted in the countries that participated in the research. Austria and Spain adopted the competence model, while the Netherlands and Ireland base their educational structure on skills and knowledge, formulated in goals.
- 50% of students almost never use digital resources and learning materials. Digital resources such as exercise software, online tests and quizzes, data-logging tools, computer simulations, etc. are still rarely used by students during lessons.
- The use of e-Portfolios is significantly undeveloped. E-Portfolio (electronic portfolio) is a collection of electronic evidence assembled and managed by a user, usually on the web.
- A willingness to adopt a competence-based approach is evident. Assistance to make this a reality will be required.
- It will be necessary to take the differences in availability of resources and approaches to teaching and learning in the different countries, into consideration when developing TRANSIt training.

2.4 The TRANSIt Project

The aim of the TRANSIt (TRANSversal Key Competences for lifelong learning: Training teachers in competence based education) project is to have a positive impact on the development of students' key competencies through building teachers' capacity on competence oriented education. To achieve this, a pilot teachers' training methodology will be developed on the didactics and e-assessment of key transversal competences. The methods of the project are founded on a holistic view of students learning, personal and social development, going beyond subject boundaries and finding application in a wide spectrum of curriculum subjects. The TRANSIt approach will contribute to the development of creativity, adaptation to rapidly changing circumstances, inter-

cultural and multilingual competences, social development, “learning to learn” competence and an improved perception of one’s own capacity to solve problems. The project aims to add its contribution towards improvement of the quality of competence education by addressing:

1. Teachers’ awareness of key competences;
2. Teachers’ professional skills regarding the didactics and e-assessment of the key competences with the use of e-Portfolios, supporting them to bring European and national policies into practice;
3. Students’ acquisition of key competences and underlying skills of critical thinking, problem solving.

The impact of the training material will be assessed by authentic assessment methods analysing qualitative dimensions, such as the behavioural change of teachers towards the importance of competence acquisition by their students and qualitative and quantitative characteristics of user-generated content uploaded in the e-portfolios and the digital communities created for teachers support.

2.5 How TRANSit corresponds to Teachers Needs

According to the needs identified, the training framework will include training on the methodological approaches on how teachers can effectively teach while simultaneously enhancing students’ competences. The training framework includes references to case studies and examples of good practice collected from previous initiatives and projects on how teachers can design activities that promote the enhancement of competences. Additional modules aiming to operationalize innovative approaches will be developed and tested in the framework of the project. The modular approach of the training methodology will allow (in parallel with the systematic mapping of needs) the localisation of the approach in the implementation countries.

The TRANSit project will provide a pilot teachers training methodology on the didactics and e-assessment of key transversal competences. In this course we have defined the criteria from which it will be possible for a teacher to know how competent they are in didactics

and e-assessment of transversal key competences (using rubrics). The result of the pilot has the potential for adoption by interested stakeholders promoting educational change.

The project methods are founded on a holistic view of students’ learning, and their personal and social development. The approach is designed to go beyond subject boundaries and find application in a wide spectrum of curriculum subjects such as social sciences and history, arts and cultural education, languages, and environmental education.

The TRANSit approach contributes to the development of teachers’ ability to enhance students’ transversal key competences. Moreover, the proposed approach promotes the Transversal Key Competency Acquisition (TKCA) by all, irrespective of student’s personal and social backgrounds. The TRANSit training programme will focus on the 5 of the Key Competencies known as the Transversal Key Competencies. These are:

1. Digital competence
2. Learning to learn
3. Social and civic competences
4. Sense of initiative and entrepreneurship
5. Cultural awareness and expression.

The activities of Work Package 2 of the project produced reports on User Needs and the State of the Art Report related to Transversal Key Competency teaching among and for teachers. (TRANSit Deliverable D2.1). The Needs Analysis Report was compiled from workshops, interviews, on-line questionnaires and Delphi studies with teachers from participating countries. This helped to identify their training needs in relation to the teaching of the Transversal Key Competencies. TRANSit Deliverable D2.2 provides information on the implementation and planning relating to the Transversal Key Competencies in the various countries involved in the study. What follows is a summary of these reports.

The course is inspired by constructivist methodologies. This means teachers taking the course or course modules will be carrying out their teaching duties but also creating and using e-Portfolios as part of their learning process. This feature is uniquely supported by the

tools and features of the TRANSIt learning environment. Constructivism views learning as a process in which the learner constructs knowledge based on their past experiences. The teacher only acts as a facilitator who encourages students to explore within a given framework. Learners may collaborate with others to organize their ideas and learn from each other to construct their own knowledge (Brader-Araje & Jones 2002).

In addition, teachers will have access to the Open Discovery Space (ODS) portal to access and publish learning resources created in the course of the TRANSIt course. ODS project (Open Discovery Space: A socially-powered and multilingual open learning infrastructure to boost the adoption of eLearning resources) (www.opendiscoveryspace.eu) aims to demonstrate ways to involve school communities in innovative teaching and learning practices through the effective use of eLearning resources and ICT.

The TRANSit Competency Framework for Teachers

The TRANSit course comprises three stages of competency with each stage identifying standards in the use of skills, knowledge and attitudes/values to different degrees. It is designed so that each stage requiring more complex standards of attainment. The work and activities of teachers at any given time will help them identify the competence stage they are at. This helps to describe teachers work in a continuum of practice. Teachers at any stage in their career may operate in different stages or parts of all stages. As teachers become familiar with the competency standards in each stage they may opt for Continual Professional Development if they feel it necessary to address a specific competency need.

Certain dimensions of a teacher's work are common to all the stages of competency. These dimensions are:

1. Facilitating Student Learning
2. Assessing and Reporting Student Learning Outcomes
3. Engaging in Continuing Professional Development
4. Establishing Partnerships and Collaborations

Each dimension describes the generic characteristics of teachers' work that are central to their professional effectiveness. Within these dimensions are indicators of effective practice which are competency-related professional

TRANSit Competency Framework for Teachers			
Dimension	Stages		
	Stage 1	Stage 2	Stage 3
Facilitating Student Learning	Engage students in purposeful and appropriate learning	Cater for diverse student learning styles and needs through consistent application of a wide	Use exemplary teaching strategies and techniques that meet the needs of individual students, groups and/or classes
	experiences	range of teaching strategies	of students in a highly responsive and inclusive manner

Assessing and Reporting Student Learning Outcomes	Monitor, assess, record and report student learning outcomes appropriately	Apply comprehensive systems of assessment and reporting strategies in relation to attainment of learning outcomes	Consistently use exemplary assessment and reporting strategies that are highly responsive and inclusive
Engaging 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 professional learning activities that promote critical self-reflection and the development of a learning community
Establishing Partnerships and Collaborations	Establish partnerships with students, colleagues, parents and other caregivers	Support student learning through partnerships and teamwork with members of the school community and other school communities	Facilitate teamwork within the school community, nationally and internationally

Table 1 TRANSit Teacher Competency framework

actions. These indicators provide examples of the professional behaviours likely to be demonstrated by teachers who have attained a particular competency standard. Each competency standard is a statement of the level of competency a teacher exhibits for that dimension. In the TRANSit training framework there is a qualitative scale for every competence. Each competence at a specific level consists of a set of sub competences. The teacher must attain all sub-competences, so as to master a competence at a specific stage. Professional excellence in the context of competence-based learning involves teachers engaging in all dimensions. These correspond to the three stages identified below.

As teachers become familiar with the competency stand-

ards in each stage they may opt for Continual Professional Development if they feel it necessary to address a specific competency need. The framework has three stages, with each stage requiring more complex standards of attainment.

Professional excellence involves teachers engaging in all dimensions. Dimensions 1 and 2 “Facilitating Student Learning” and “Assessing and Reporting Student Learning Outcomes” are critical in teaching practice and articulate effective interaction between teacher and student. Dimensions like “Engaging in Continuing Professional Development”, and “Establishing Partnerships and Collaborations” describe the working environment that supports effective teaching (Western Australia - Department of Education, 2009).

The TRANSit Training Process

The TRANSit training process is structured as a competency development programme, from registration until final assessment with the optional delivery of an award system based on Open Badges. The following figure outlines the processes teachers will engage in when activating the course.

Figure 1 illustrates the training progression from registration to awarding. The first time a teacher registers to participate in a module of the course and completes the registration the process begins with a skills check.

Skills Check: When a teacher is invited to perform a Skill Check, they complete a simple exercise where they will

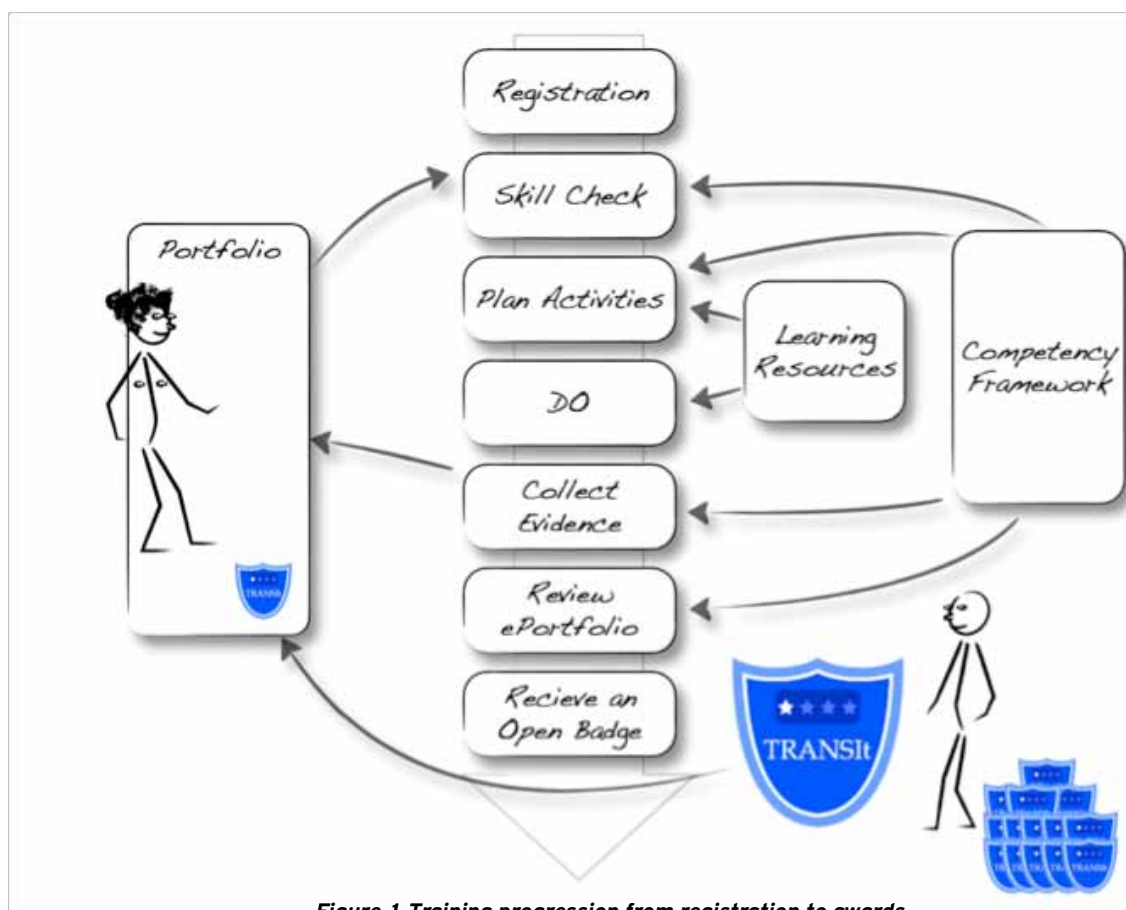


Figure 1 Training progression from registration to awards

be presented with a checklist and will check the competencies they believe they already have. Example of the questions included in the skills check is as follows:

- What do you hope to gain from this training course?
- How do you feel about your competence to teach Transversal Key Competencies?
- What areas do you feel training is needed to teach the Transversal Key Competencies?
- How can these training needs be met in TRANSit's online tools and training modules?
- When will you plan to take part in the training?
- How important is it to gain an Open Badge when you complete the training?

Teachers will then be invited to use the results of the skills check to build their first version of their e-Portfolio, by providing evidence confirming their declared competencies. Teachers can use their own e-Portfolio or one provided by TRANSit. If teachers feel they have no evidence of competencies at this stage they can add them in later.

Planning Activities: The next step is the planning of the learning activities teachers will engage in. For this, teachers will refer to their skill-check again, but this time, to help them establish the competencies they would like to acquire.

Based on the competencies a teacher decides to acquire (e.g. "Engage students in purposeful and appropriate learning experiences") they will identify the type of evidence they will need to produce to demonstrate the competencies. As the training module is about supporting the acquisition of key competencies, teachers should take into account the European Key Competence Framework to define the type of product, processes, lesson plans etc. that will contribute to the:

- acquisition of key competencies by their learners;
- development of their own targeted competencies.

Teachers will be supported in this phase by the TRANSit team, as well as with examples of products or artefacts they might want to use from their own resources and re-

search. There will be some 'mini-lessons' available also for teachers to use if necessary to support their learning activities.

Doing: In this step, a teacher might have decided to create a lesson plan to submit to other colleagues in their school. By keeping a journal of their activities, collecting information, writing narratives and reflections, they will develop valuable information to add to their ePortfolio for collation of evidence of their work.

Collating Evidence and Review: After completing the "Doing" phase the teacher will add as much evidence as they feel necessary in their e-Portfolio to reflect their newly attained competencies. The e-Portfolio is then submitted to a member of the TRANSit team for review. There may be some follow-up questions, and if the reviewer is satisfied, an Open Badge is issued to the teacher (optional).

As there are time limits set at the outset of the course, it is possible that some assignments might not be finalised on time. The main objective of this course is to get teachers to practice the competency-based (or outcome-based) learning approach. If teachers have demonstrated their ability to develop a competency-based approach in their teaching, they will receive an Open Badge recognising this competency. It is hoped that by participating in this course, which has been designed as competency-based activities and lessons, teachers will be likely to transfer this experience in their own working environment.

4.1 TRANSit learning outcomes

The TRANSit expected learning outcomes are the following and according to them the training modules have been designed:

1. Design

- 1.1. Derive Learning Objectives from a Key Competency Framework
- 1.2. Design a Learning Scenario/Programme for Acquisition of Key Competencies
- 1.3. Derive Assessment Plan from Learning Objectives
- 1.4. Plan Monitoring and Reporting

2. Prepare

- 2.1. Prepare Learning Environment for Acquisition of Key Competencies
- 2.2. Identify / Select / Adapt / Develop Learning Material and Technologies Supporting Relevant Practice for Acquisition of Key Competencies
- 2.3. Identify / Select / Adapt / Set-up Technologies Enhancing Learning and Assessment

3. Run

- 3.1. Run a Learning Scenario/Programme for Acquisition of Key Competencies
- 3.2. Use Digital Technologies to Support Learning and Assessment
- 3.3. Monitor and Assess Learning to Inform Further Learning

4. Review

- 4.1. Review an Educational Scenario/Programme for Acquisition of Key Competencies
- 4.2. Cross-referencing TRANSIt Learning Outcomes and TRANSIt Competency Framework

A purposeful and appropriate learning experience must be linked to a competency framework. The TRANSIt training approach incorporates this philosophy. The following table demonstrates the integration of the Learning Outcomes of the TRANSIt training programme (left column) with the TRANSIt Competency Framework Dimensions (top row). This table gives an indication of the general competencies learners will be developing while progressing through the TRANSIt programme. The numbers in the cells refer to the stages of competency (Table 1) that can be attained in each dimension.

Competency Framework / Learning Outcomes	Facilitating Student Learning	Assessing and Reporting Student Learning	Engaging in Continuing Professional Development	Establishing Partnerships and Collaboration
		Outcomes		
Design				
Derive Learning Objectives from a Key Competency Framework	1			
Design a Learning Sequence/Scenario/Programme for Acquisition of Key Competencies	1, 2, 3			2, 3
Derive Assessment Plan from Learning Objectives		1, 2, 3		2, 3
Plan Monitoring and Reporting		1, 2, 3		
Prepare				
Prepare Learning Environment for Acquisition of Key Competencies	1, 2, 3			2, 3
Identify / Select / Adapt / Develop Learning Material Supporting Relevant Practice for Acquisition of Key Competencies	1, 2, 3			2, 3
Identify / Select / Adapt / Set-up Technologies Enhancing Learning and Assessment	1, 2, 3			2, 3
Run				
Run a Learning Sequence/Scenario/Programme for Acquisition of Key Competencies	1, 2, 3			2, 3
Use Digital Technologies to Support Learning and Assessment	1, 2, 3			
Monitor and Assess Learning to Inform Further Learning		1, 2, 3		2, 3
Review				
Review a Learning Sequence/Scenario/Programme for Acquisition of Key Competencies			1, 2, 3	1,2,3

Table 2 Cross-reference table between TRANSIt learning outcomes and competency framework (numbers refer to the competency Stages)

Training Programme Design

5.1 Training Methodology

The TRANSit training programme is an innovative approach to allow teachers to acquire the skills and competencies to teach their students the Transversal Key Competencies. This training course could be described as a journey of discovery using the constructivist approach. The teachers participating in the training will work and learn from the activities they carry out in their own classrooms. The work will involve:

- Creating lesson plans
- Creating Educational Scenarios
- Self-reflection
- Self-assessment

The work can also include peer-to-peer assessment and working in collaborative groups, sharing ideas resources and best practices.

When participating in the course the teacher will recognise and utilize the competencies they already have and build on these to become aware of additional competencies and skills which they may wish to pursue and develop. The training course is designed in a roadmap

style where teachers can pick a competency stage (in a course module or sub-module) of their choice. Having completed it they can then move onto the next stage.

As in all innovative training courses (and particularly this one where the national curricula in each participating country are different) ideally the teacher should decide how best to introduce the Transversal Key Competencies to facilitate the teaching of the national curriculum. There will be exemplars and best practice materials to help the teacher in this task. The modules contain broad tasks, described as outcomes, which reflect competence acquisition, which each teacher could deliver in their classrooms. Included will be guidelines of best practice, resources and reading materials necessary to support the teacher developing and delivering the material. All this material will be available on the TRANSit portal through ODS and from the resources which teachers contribute as they carry out their training.

5.2 Teacher Activity Guidelines

The following guidelines are an indication of what teachers who take the course can expect and the activities which they will engage. It contains a detailed description

of the process from registration to developing resources to assessment and the awarding of badges which are an integral part of the course.

Site Registration

Identification / Spam Check

When the teacher registers, the system filters spam by asking to provide an email address that will be used for identification and further communication. This address will be the default one that will be used to send you an Open Badge when they complete successfully the TRANSit learning programme

Initial questionnaire/checklist

- What do you hope to gain from this training course?
- How do you feel about your competence to teach Transversal Key Competencies?

- What areas do you feel training is needed to teach the Transversal Key Competencies?
- How can these training needs be met in TRANSit's online tools and training modules?
- When will you plan to take part in the training?
- How important is it to gain an Open Badge when you complete the training?
- How many hours per week/month can you dedicate to this course?
- Do you have regular periods of time?
- Can you plan your learning time in advance?
- Do you have people who can support you locally?

Discovery of the learning environment

The learner will spend some time engaging with tools and reviewing resources available in the portal. The following are examples of activities:

- Your Portfolio

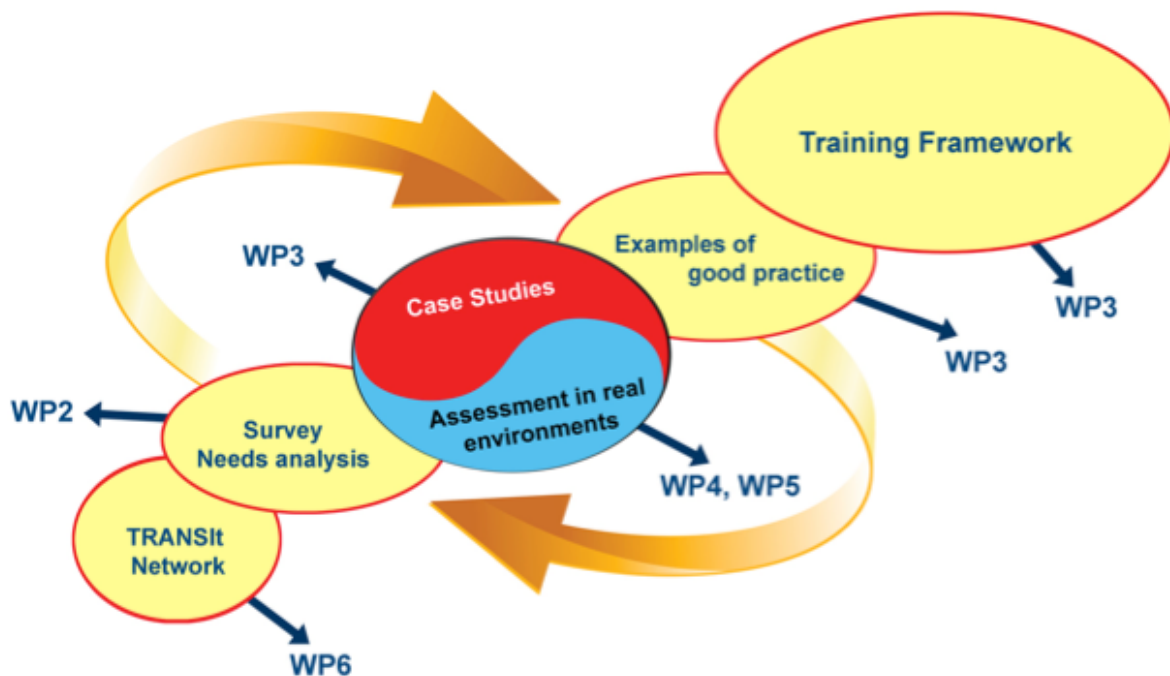


Figure 2 Development of TRANSit training framework

- The Learning Groups
- Learning Resources
- Lessons
- Learning Events (webinars)
- Examples of ePortfolios
- Learning Support
- Tutors per Learning Group
- Peers (TRANSit social network)
- Colleagues, friends, family, etc.
- TRANSit Assistant

5.3 Cycles of implementation-Timetable

TRANSit training programme is spanned into two implementation phases. The first training cycle is scheduled for the period September 2013 – January 2014 and the second training cycle for the period March 2014 – July 2014. Additionally, three 5days teachers training courses (summer/winter school) took place open for participations from teachers all around Europe. The implementation of the training program includes extended cycles of school centred work. Teachers will continuously give feedback to the academic team about their experiences gained in the classroom. This will not only increase the motivation of the teachers, and give weight to their practical experiences, but also provide the necessary cross-links between theory and practice. Upon suggestions of the teachers, the project team performed the necessary adjustments to the training approach. Finally, the TRANSit consortium will deliver a structured and reusable set of guidelines and recommendations which will further support the development and assessment of teacher training programs on the use of competency-based approaches.

5.4 The Design of the Training Curriculum (face to face workshops)

It was decided that the training material should comprise of both generic content, providing high level information relevant to all partner countries, and local content and examples that are only of interest to particular countries. The training material will therefore comprise of theoretical material to introduce topics and concepts and practical material to bring the theory to life – with a particular weighting on the latter.

The above training requirements were then further divided into six (6) distinct areas of commonality that would each form key parts of the three (3) hours of seminar based training. The duration of the training was adapted according to the findings of the Needs Analysis Report. The training sessions are the following ones:

1. **Introduction and overview of the course and the TRANSit Project (30 minutes):** This would comprise an introductory section to the training objectives, means, and the philosophy of the TRANSit Project.
1. **Approaches to competence based learning (CBL) teaching: principles, ideas (20 minutes):** This section will try to promote the competence based approach to teachers by demonstrating the benefits regarding the increase of student interest and motivation, as well as the enhancement of students' competences and 21st century skills (critical thinking, communication, collaboration).
2. **Learning Design Use Cases (30 minutes):** This would comprise an introductory section to Searching, Retrieving, Authoring, Uploading and Annotating Content with the presentation of the concepts of Learning Resources, Repositories & Metadata, Learning Activities, Learning Courses/Lesson Plans/Programmes and relevant Web 2.0 Technologies.
3. **Assessment/Awarding Framework (30 minutes):** This would outline how holistic, authentic assessment can be used for evaluating students' acquired competences, such as e-portfolio assessment, rubrics, peer & self-assessment, Open Badges.
4. **Practical training on creating a CBL scenario (50 minutes):** A detailed demonstration would be provided on searching and using learning objects in the classroom following a competence based learning approach. Furthermore, the annotation process using social tags in order to assess the scenario and in order it to be reused will be demonstrated.
5. **Closing Session (20 minutes):** This would provide an opportunity to remind attendees of the more important aspects of the training and the benefits, of applying competence based approaches.

Assessment/Evaluation

Taking part in the TRANSit program involves learner's participation in collaborative group work, discussion, designing and completing a wide range of tasks as they prepare work and lessons for their classes and schools. The assessment process will be undertaken in a number of ways. As the teacher works through the competency building module there will be opportunities for self-assessment, peer assessment and tutor assessment. This will all occur within the TRANSit portal as well as other tools and facilities that the teacher undertaking the training feels best facilitates the e-portfolio they are building. There will be opportunity for self-reflection as teachers will prepare cross-curricular lessons on Transversal Key Competencies for their classes. It is also envisaged that the teacher may include feedback of work done and results obtained in class from the students acquiring the Transversal Key Competencies.

Other forms of self-assessment will include:

- Surveys on attitudes towards teaching and learning. These can be taken a number of times so participants may see the progression and change as they progress through courses.
- Surveys to help them reflect on participation with others in the course.
- Submit work developed. Following the submission deadline, teachers are given 5 submissions from other participants to assess. The activity is marked complete when the teacher receives a grade.

Additional forms of assessment include quizzes and feedback sessions:

- Quiz on Transversal Key Competencies, as a measure of personal knowledge difference/gain pre- and post- modules
- Module Feedback, where participants provide feedback on the effectiveness of the class or activity and propose changes if required to improve the module.
- Final Feedback on overall effectiveness of the course and propose changes if required to improve the course. Feedback will also include how the teacher helped peers and how peers responded.
- Peer assessment mechanism based on demonstrable exercise or scenario.

6.1 Self-Assessment

The TRANSit process stresses the importance of using its powerful learning environment, e-portfolio and other OER tools which enable learners to engage in meaningful learning processes by developing resources for their own use and sharing with their peers and wider community. The competence assessment encompasses multidisciplinary and constructivist approaches where the learner constructs their own knowledge in interaction with their environment. The outputs from this interaction are artefacts, products, guidelines, rules of thumb, reports, or other tangible outputs that are naturally produced from the learning experience. These can be assessed based on rubrics and clearly identified competency standards guidelines. The learning is self-initiated, self-regulated, and aimed at developing personal competences. The approach allows for diversity in needs and, related to that, in goals and objectives. The learning process involves active discovery as well as resources and references being made available and accessible. It must also consist of a discovery aspect which will form part of the assessment process when the learner completes reflective pieces as part of self-assessments. The clearly defined criteria make it possible for a learner to know how competent they are in didactics and e-assessment of transversal key competences (using rubrics). This also supports the knowledge and understanding required to achieve all the defined stages of competency in teaching the transversal key competencies.

6.2 Peer Assessment

A significant amount of assessment of TRANSit learning rests on Peer Assessment and the verification of the assessment by a qualified Tutor. The role of the tutor will be undertaken initially by consortium members or teachers with such interest that have reached the third competency level and/or have collected the third level Badges. Trainees gain recognition of peers for competencies achieved. They may be offered TRANSit Open Badges. However, in order to be assessed and obtain the TRANSit Open Badges, the peer reviewer will have reviewed at least two Portfolios. The review of the Portfolios will contribute towards the recognition of their assessment competencies. The trainee will have the opportunity to

gain the specific TRANSit Competency-Based Learning Open Badges.

As the learner will be operating within learning groups of peers there is potential for peer to peer collaboration and assessment where learning will also take place. The level and quality of peer to peer interaction will be assessed and the willingness and level of engagement in collaborative activities will be examined. Similarly, peer recommendation of activities and discovery of resources and work will also form part of the assessment process.

6.3 Tutor Assessment (verification)

The role of TRANSit Tutor is to verify the peer review, i.e. check its accuracy and validity. The activities and resources produced by the individual and collaborative groups. The e-portfolio of the learner will offer the main opportunity for the Tutor to assess the competency acquisition. There will be tutors assigned to learning groups. Learning Groups are learner's collaboration on specific projects.

A Peer Reviewer wishing to be assessed and get the TRANSit Open Badges will have reviewed at least two Portfolios. The review of those Portfolios will contribute towards the recognition of their assessment competencies and may lead to a Level 4 Badge. However, if the trainee does not review two or more Portfolios, while they may use the TRANSit learning environment, they will not have the opportunity to gain the specific TRANSit Competency-Based Learning Open Badges.

6.4 Open Badges Awarding process

6.4.1 Open Badges

As participants in the course develop the competences required to teach and assess the acquisition of key competencies of learners, it is intended to recognise teacher's achievements and the activities they complete by implementing an open badges infrastructure award for teachers. This will apply at various levels throughout the course.

A badge is a visual representation of an accomplishment, such as skill competency, knowledge competency, participation, project completion, or a professional credential. The 'badge' approach is innovative in the context of teaching competencies. The concept of 'Badge' is begin-

ning to be integrated into undergraduate curricula and is also emerging as a way for working professionals to document their professional development and accomplishments. A teacher can display their badges on web sites, resumes, and eportfolios.

6.4.2 Awarding Open Badges

A process for awarding of the learning outcomes achievements with a TRANSIt Open Badge is envisaged. Recognition for acquiring the competencies in the TRANSIt framework will be rewarded by obtaining Open Badges.

The badges will be awarded once teachers demonstrate the competencies acquired from participation in and completion of the course modules. As there are different stages of competency offered within the TRANSIt modules an open badge system is used to reward teachers who meet the competency criteria of each stage. TRANSIt awards badges for the skills and knowledge attitudes and values that are learned and shared through the online professional learning community at a personal level in collaborative events, and in school communities at a national level.

Badge Level	Competency Stage	How it' s achieved
Level 1 Badge	Stage 1	Introduce themselves and create a profile indicating their competences.
		Participate in Question and Answers sessions where peers and tutors acknowledge the quality of the feedback
Level 2 Badge	Stage 2	Share good ideas and resources which have helped teachers develop competencies.
		Share teaching resources and have them approved by the TRANSIt tutor.
		Participate in collaborative teaching other learners in the group
Level 3 Badge	Stage 3	Participate in the development and implementation of Competency standards in their schools
		Conduct at least one training with teachers (regional or national) following the training framework.
		Show evidence of engagement in regional or national competency development in the teaching of the Transversal key competencies.
Level 4 Badge	All stages Plus	Show evidence of engagement in regional, national or international competency development in the teaching of the Transversal key competencies.
		Review peers (at least two eportfolios as part of the course using standards on eportfolio review)

Table 3 Open Badges hierarchy and awarding standards

Badges are awarded to trainees when certain activities are undertaken and completed. To receive Badges learners will perform activities under the following headings:

- Profile and e-Portfolio Creation
- Selection of Modules and Working groups
- Learning and Review Activities
- Receiving Award

Profile and ePortfolio Creation

Initially when the learner engages with TRANSit programme the following must be performed:

- Prepare Planning Learning & Assessment
- Initial review of competencies
- Create an Introductory Portfolio
- Skills Check (checklist of competencies / TRANSit Framework)
- Add other competencies they feel they have to in their e-portfolio
- Collect and add evidence to Introductory Portfolio
- Write an introductory narrative relative to the evidence collected
- Publish the Introductory Portfolio
- Invitation to Support Peers
- If interested in acting as a peer reviewer, add name to the Reviewers list.

Selection of modules and working groups

Next the user decides what competencies they want to focus on and if they wish to engage in higher stage competencies, such as peer tutoring. So the user engages in the following:

- Explore the Learning Groups
- Look at examples of portfolios that have successfully achieved the Learning Groups
- See the profiles (Introductory Portfolio) of the people that are currently active in the Learning Groups
- Browse through the Learning Groups activity logs, posts, etc.
- Explore the learning resources
- Register with one (or more) Learning Group
- Share Introductory Portfolio with the Learning

Group

- Define the assignments/work/artefact/deliverables to submit and achieve in the module
- Competences check:
 1. Set a time-table:
 2. Learning periods
 3. Assignments ready
 4. Portfolio Reviews
 5. Peer Review

Learning and Review Activities

Working on the assignments/deliverables example

Learners will use the learning resources in the Learning Group(s). They may identify material and interesting resources not referenced in the Learning Group and submit them to the Learning Group.

Learners will work with the forum: If the learner has questions relative to the module they are working on they refer to the relevant Learning Group Forum. If no satisfactory response available they post questions in the relevant Forum (regularly scanned by participants and tutor) use the Learning Group chat

Get feedback

Learners share progress and interactions with their peers and share posts with Learning Groups / tutor / selected participants

Prepare a Review on ePortfolio

Write a narrative connected to evidence and competency Framework. Evidence will include posts, files and pages. Learners must encourage feedback from at least 2 peers. If the narrative is accepted the learner will submit it to the Learning Group Tutor, if not, revise material again. If the narrative is accepted the learner will get the corresponding Learning Group Open Badge, if not, revise.

The TRANSit Training Modules

For competency based teaching and learning to be effective it must:

- List Competencies to be developed
- Include a level of acceptable performance
- Describe the Context in which this will happen
- Include Key Teaching Procedures such as:
 - Generate interest and teaching approach
 - Presentation of Subject Matter
 - Application
 - Evaluation and Assessment

The following represents the layout of the content of the online modules available on the TRANSit portal page. Three stages of competency are listed for many of the sub-modules. These stages are linked with the Open Badges which are optionally offered for participation in the course.

For each Module there is a description of the aims and objectives of the module followed by the sub-module titles contained in it. The Tutorials associated with the Module are listed for reference.

Each sub-module lists information on the learning activities and a description of the context and success criteria outcomes associated with completing it. Competency criteria are specified and associated with the sub-module to help the teacher to target a specific competency

stage. Any pre-requisite necessary before a sub-module is commenced are also shown. This is very important for teachers to identify where to begin their journey on the roadmap. Also listed with each sub-module are resources for further studying; documents, articles, videos, podcasts or examples of best practice.

Teachers are encouraged to add resources as they participate in the course particularly in the stage 2 and stage 3 competencies. Other resources will also be available which could include documents relating specifically to the Key Competences, the portal, or other technical information which the teacher may need regarding e-portfolio management and creation. Finally, examples of evidence which the TRANSit tutors are seeking for the purposes of awarding badges are mentioned.

The TRANSit modules are:

- Module 1: Design Learning
- Module 2: Prepare Learning
- Module 3: Run Learning
- Module 4: Review Learning
-

7.1 Module 1. Design Learning / Learning Design Description:

At the first stage of the voyage of discovery the teacher

will derive learning objectives from the Key Competency Framework. The teacher will use an online journal throughout the modules as part of the development of their e-portfolio. The journal will list the chosen Key Competencies the teachers wants to teach and it will contain a description of how it will be linked to the national curriculum and associated subjects.

Module 1 contains four sub-modules. It aims to build competency in designing learning plans for teaching Transversal Key Competencies, deriving assessment, monitoring and reporting.

The sub-modules in this module are:

- 1.1 Derive Learning Objectives from the Key Competency Framework
- 1.2 Design a Learning Sequence/Scenario/Programme for Acquisition of Key Competencies
- 1.3 Derive Assessment Plan from Learning Objectives
- 1.4 Plan Monitoring and Reporting

During this module, the dimensions that will be in evidence are: Facilitating Student Learning, Assessing and Reporting Student Learning Outcomes and Establishing Partnerships and Collaborations.

Selecting your stage of Competency

Three stages of competency are listed for many of the sub-modules. These stages are linked with the open badge awards which are offered for participation in the course. Teachers taking each sub-module decide which competency stage is most appropriate to their individual circumstances and learning environment. For example, initially teachers may commence Stage 1 competency for each sub-module and complete a later stage based on their experience and the learning from the first stage. Some teachers may attempt stage 3 in the first instance.

Tutorials/Resources

Recommended tutorials in MS PowerPoint format and other documents are available to assist in completing the work of the sub-modules. Additional reading and reference material associated with each sub-module are

available, if required. It is estimated that the minimum amount of time required to complete module 1 is 2 - 3 hours. This will depend on the complexity of the work and the experience and competence level of the teacher. The following MS PowerPoint presentations are recommended to support Module 1.

1. What are the Transversal Key Competencies
2. Transversal Key Competency Criteria Breakdown
3. The Assessment of Key competencies in Schools
4. Design Competency based Training using Bloom
5. Teaching Approaches Planning for Instruction

The following documents are available for reference for Module 1:

1. Document describing the Transversal Key Competencies
2. Templates for lesson plans and educational scenarios (e.g. project based learning, storyline approach, inquiry-based learning, Guided discovery, Action learning, Problem based learning, Co-operative learning available on the ODS Glossary of teaching approaches)

The following additional resources will be developed during the course of training and/or at a later stage of the TRANSit Project.

1. Competency standards design
2. Rubrics
3. Report writing and journaling
4. Online authoring tool (for designing lesson plans and educational scenarios)

Sub-Module 1.1 Derive learning objectives from the Transversal Key competences or from the national curriculum guidelines for use in the classroom

In completing this module the teacher will identify the key competencies to be taught and include them in the lesson plan design and his online journal. The teacher will define the context in which the competencies will be developed, taking into consideration how the competency acquisition by the students will be monitored.

Specific Objective	1.1. Derive Learning Objectives from Key Competency Framework or from your National Curriculum
Context	You need to develop learning objectives to support the learning and assessment of student competencies
Main Outcome(s)	Criterion-based Learning Objectives
Pre-requisite(s)	none
Success Criteria	<ul style="list-style-type: none"> At least 1 different criterion-based objectives With clearly expressed success criteria Well defined context to support learners' performance/activities
Activities	<ul style="list-style-type: none"> Identify the key competencies you want students to develop from a Key Competency Framework Define the context in which the competencies will be developed Define how you will measure whether or not the acquisition of a competency is successful (criteria definition)
Links and Supporting References:	<p>What is a competency framework?: http://participatoryartslearning.wordpress.com/the-framework/what-is-a-competency-framework/ Developing a Competency Framework: http://www.mindtools.com/pages/article/newISS_91.htm The European framework for key competences: http://ec.europa.eu/education/lifelong-learning-policy/key_en.htm KeyCoNet 2012 Literature Review: Key competence development in school Education in Europe: http://keyconet.eun.org/c/document_library/get_file?uuid=3aa9009c-cb63-494f-81fe-024fde000111&groupId=11028 Derive Learning Objectives from a Key Competency Framework</p>
Example of evidence	<ul style="list-style-type: none"> Written objectives Feedback from TRANSit tutor Feedback from peers or colleagues Reflections from your journal on the process of writing objectives

Sub-Module 1.2 Design a Lesson Plan/Scenario/Programme for Acquisition of Key Competencies

Three stages of competency acquisition are available to the teacher taking this module. The dimensions focused on are:

- Facilitating Student Learning and
- Establishing Partnerships and Collaboration.

General Objective	1.2 Design a Learning Sequence/Scenario/Programme for Acquisition of Key Competencies		
	Stage 1	Stage 2	Stage 3
Specific Objective	Design a Lesson Plan/Learning Sequence for Acquisition of Key competences in your classroom	Design a <u>Cross-Curricular Learning Scenario</u> for Acquisition of Key Skills	Design an <u>integrated Learning Programme</u> for Acquisition of Key Skills at Institutional Level

Context	You want to develop a sequence to teach key skills in your classroom	You want to integrate the development of key skills across two or more courses or disciplines suitable for diverse learning styles and with a consistent application of a wide range of teaching strategies	You want to make the acquisition of key competences an integral component of the institution's learning strategy across all teaching
Main Outcome(s)	A lesson plan	A cross-curricular learning scenario	An integrated learning programme
Pre-requisite(s)	1.1. Derive Learning Objectives from a Key Competency Framework 1.3 Derive Assessment Plan from Learning objectives	Stage 1 competencies	Stage 2 competencies
Success Criteria	One Lesson Plan <ul style="list-style-type: none"> Covering at least 1 Competence from Transversal key 	One Cross-Curricular Learning Plan covering more than 1 courses or	One integrated Institutional Learning and Assessment Programme
	competency framework <ul style="list-style-type: none"> Clearly describing the learning outcomes Identifying the skills, knowledge and values required to achieve the learning outcomes Exploiting naturally occurring opportunities in regular (disciplinary) teaching Reviewed and accepted by the TRANSit tutor and/or at least 2 peers operating at the same or higher stage 	disciplines <ul style="list-style-type: none"> Reviewed and accepted by the TRANSit tutor and or at least 2 peers operating at the same or greater stage 	<ul style="list-style-type: none"> covering <ul style="list-style-type: none"> the whole institution all Key Competencies Reviewed and accepted by the TRANSit tutor and or at least 2 peers operating at the same stage
Activities	<ul style="list-style-type: none"> Identify the key competencies you want to develop from a Key Competency Framework Derive Learning Objectives Derive Assessment Methods Define the relevant practice necessary to support the essence of the learning objective Derive <i>knowledge and understanding</i> required to achieve mastery of key competencies Design a Lesson Plan with a clear and transparent Assessment strategy Get feedback from peers 	<ul style="list-style-type: none"> ibid Establish Learning and Assessment strategy across disciplines/classes Develop relevant practice across disciplines 	<ul style="list-style-type: none"> Ibid Develop an integrated learning programme

Resources	<p>ODS Toolbox, Glossary of teaching approaches, http://portal.opendiscovery.space.eu/tr-activity/22-glossary-teaching-approaches-669764 (of particular interest are the approaches: project based learning, storyline approach, inquiry-based learning, Guided discovery, Action learning, Problem based learning, Co-operative learning)</p> <p>Let seniors teach sense of initiative and entrepreneurship through innovative multimedia storytelling approaches: http://letsenterprise.eu/images/newsletter/REGNO%20UNITO/LET'SNewsletter2%20UK.pdf</p> <p>Raising Cultural Awareness: http://www.misd.net/bilingual/CulturalEtiquette.pdf</p> <p>Acquiring Key Competences through Heritage Education (Manual): http://the-aqueduct.eu/download/Aqueduct-Manual_EN.pdf</p> <p>How Does Project-Based Learning Work? Seven Essentials for Project-Based Learning: http://www.edutopia.org/project-based-learning-guide-implementation</p> <p>Badges (MozillaWiki): https://wiki.mozilla.org/Badges</p> <p>Educators Hail Launch of Makebadges—New Web Tool for Creating Digital Badges: http://www.digitaljournal.com/pr/1483276</p>		
Example of evidence	<ul style="list-style-type: none"> Lesson plan feedback from a TRANSit tutor Feedback from peers or colleagues Reflections from your journal 	<ul style="list-style-type: none"> Learning Scenario Feedback from a TRANSit tutor Feedback from peers or colleagues Reflections from your journal and the journals of the other authors of the Learning Scenario 	
Remarks on the assessment process		If the participants are from different institutions, the integration plan can refer to a fictitious institution (simulation)	

Module 1.3 Derive Assessment Plan from Learning Objectives

Three stages of competency acquisition are available to the teacher taking the module.

General Objective	1.3 Derive Assessment Plan from Learning Objectives		
	Stage 1	Stage 2	Stage 3
Specific Objective	Derive Assessment Plan from Learning Objectives	Derive Cross-Curricular Assessment Plan from Learning Objectives	Derive Integrated Assessment Plan from Learning Objectives

Specific Objective	Derive Assessment Plan from Learning Objectives	Derive Cross-Curricular Assessment Plan from Learning Objectives	Derive Integrated Assessment Plan from Learning Objectives
Context	You want to develop an Assessment Plan from Learning Objectives to recognise the key competencies acquired during the learning sequence or in another context (recognition of prior learning and experience)	You want to develop with colleagues and/or <u>members of the own and/or other school communities</u> a Cross-Curricular Assessment Plan from Learning Objectives	You want to develop an Integrated Assessment Plan at institutional level from Learning Objectives <u>which includes teamwork with the school community, nationally and internationally.</u>
Main Outcome(s)	Assessment Plan	Cross-Curricular Assessment Plan	Integrated Assessment Plan
Pre-requisite(s)	1.1. Derive Learning Objectives from a Key Competency Framework	Stage 1 competencies	Stage 2 competencies
Success Criteria	One assessment plan <ul style="list-style-type: none"> Using at least 2 different assessment strategies[F1] , one of them being learner-centred (e.g. self- or peer-assessment) Encouraging the recognition of prior learning and experience Covering at least 3 different key competencies 	One Cross-Curricular Assessment Plan covering at least <ul style="list-style-type: none"> 2 courses or disciplines 4 Key Competencies Reviewed and accepted by the TRANSit tutor and or at least 2 peers 	One Integrated Assessment Plan, covering: <ul style="list-style-type: none"> the whole institution all Key Competencies Reviewed and accepted by the TRANSit tutor and or at least 2 peers
	<ul style="list-style-type: none"> Reviewed and accepted by the TRANSit tutor and or at least 2 peers 		
Activities	<ul style="list-style-type: none"> Using Criterion-Based Learning Objectives, explore possible assessment strategies Define the activities during which learners will produce the evidence required to know whether or not the criteria have been met Select the most relevant assessment strategies in relation to your learning context, e.i.it is about Key Competencies 	<ul style="list-style-type: none"> Using Criterion-Based Learning Objectives, explore possible cross-curricular assessment strategies Define the activities during which learners will produce the evidence required to know whether or not the criteria have been met 	<ul style="list-style-type: none"> ibid
Resources	Competency-based learning (Wikipedia): http://en.wikipedia.org/wiki/Competency-based_learning Implementing Competency-Based Learning: http://blog.ecollege.com/WordPress/?p=21 Recognition of prior learning (Wikipedia): http://en.wikipedia.org/wiki/Recognition_of_prior_learning		

	<p>Recognition of Prior Learning (Asset Project): http://www.assetproject.info/learner_methodologies/before/recognition.htm</p> <p>Self and peer assessment: http://sydney.edu.au/education_social_work/groupwork/docs/SelfPeerAssessment.pdf</p> <p>Why should I use peer assessment?: https://www.reading.ac.uk/engageinassessment/peer-and-self-assessment/peer-assessment/eia-why-use-peer-assessment.aspx</p> <p>Peer and self-assessment: http://www.teachingexpertise.com/articles/peer-and-self-assessment-2867</p> <p>Using Peer Assessment to Develop Skills and Capabilities (USDLA Journal): http://www.usdla.org/html/journal/JAN03_Issue/article04.html</p> <p>Assessment for, as and of Learning (Australian Curriculum): http://syllabus.bos.nsw.edu.au/support-materials/assessment-for-as-and-of-learning/</p> <p>Assessment for Learning: http://www.assessmentforlearning.edu.au/default.asp</p> <p><i>Implementing ePortfolios for the Assessment of General Education Competencies (International Journal of ePortfolio)</i>: http://www.theiiep.com/pdf/IJEP62.pdf</p> <p>How to use ePortfolios to Support the Assessment of Competencies? Jafari, Ali, and Catherine Kaufman. Handbook of Research on ePortfolios. Ali Jafari & Catherine Kaufman. IGI Global, 2006.</p> <p><i>Torrance, Harry, and John Pryor. Investigating Formative Assessment: Teaching, Learning</i></p>		
	<p><i>and Assessment in the Classroom. Taylor & Francis, Inc., 7625 Empire Dr., Florence, KY 41042 (hardback: ISBN-0-335-19735-3, \$85; paperback: ISBN-0-335-19734-5, \$28.95), 1998.</i></p> <p>Black, Paul et al. <i>Assessment for Learning-Putting it into practice.</i> Open University Press, 2003.</p> <p>Voorhees, Richard A. "Competency-Based Learning Models: A Necessary Future." <i>New Directions for Institutional Research</i> 2001.110 (2001): 5-13.</p> <p>Stefani, Lorraine AJ. "Peer, self and tutor assessment: relative reliabilities." <i>Studies in Higher Education</i> 19.1 (1994): 69-75.</p> <p>Stiggins, Richard J. "Assessment crisis: The absence of assessment for learning." <i>Phi Delta Kappan</i> 83.10 (2002): 758-765.</p> <p>Hanrahan, Stephanie J, and Geoff Isaacs. "Assessing Self-and Peer-assessment: the students' views." <i>Higher education research and development</i> 20.1 (2001): 53-70.</p> <p>Greenberg, Gary. "The digital convergence: extending the portfolio model." <i>EDUCAUSE review</i> 39.4 (2004): 28-37.</p>		
Example of evidence	<ul style="list-style-type: none"> Assessment Plan Feedback from TRANSit tutor Feedback from peers or colleagues Reflections from your journal on the process of writing an Assessment Plan 		

Sub-Module 1.4: Plan Monitoring and Reporting

Three stages of competency acquisition are available to the teacher taking the module. All 3 stages in this module are concerned with Assessing and Reporting Student Learning Outcomes.

General Objective	1.4. Plan Monitoring and Reporting		
	Stage 1	Stage 2	Stage 3
Specific Objective	Plan Monitoring and Reporting in your classroom	Plan Monitoring and Reporting Across Classrooms and/or Disciplines	Plan Monitoring and Reporting at Institutional Level
Context	You need to monitor learning achievements in your classroom and need to report to your institution	You need to monitor learning achievements in a cross-curricular programme	You need to define an institutional strategy to monitor learning achievements in relation to key competencies
Main Outcome(s)	A monitoring plan	A cross-curricular monitoring plan	An integrated monitoring plan
Pre-requisite(s)	1.1 Derive Learning Objectives from a Key Competency Framework 1.3 Derive Assessment Plan from Learning Objectives	Stage 1 competencies	Stage 2 competencies
Success Criteria	One Monitoring and Reporting Plan describing: <ul style="list-style-type: none"> o Data collection methods o How the data collected is being exploited o Reporting methods • Reviewed and accepted by the TRANSit tutor and or at least 2 peers	One Cross-Curricular Monitoring and Reporting Plan describing: <ul style="list-style-type: none"> o Data collection methods o How the data collected is being exploited o Reporting methods • Reviewed and accepted by the TRANSit tutor and or at least 2 peers operating at the same or greater stage	One Institutional Monitoring and Reporting Plan describing: <ul style="list-style-type: none"> o Data collection methods o How the data collected is being exploited o Reporting methods o Integration in the Quality Assurance policy • Reviewed and accepted by the TRANSit tutor and or at least 2 peers operating at the same stage

Activities	<ul style="list-style-type: none"> Identify the events and sources of data that can be used to monitor learning Define collection methods and monitoring processes Define reporting process 	<ul style="list-style-type: none"> Identify the events and sources of data that can be used to monitor learning Define collection methods and monitoring processes Define reporting process 	<ul style="list-style-type: none"> Identify the events and sources of data that can be used to monitor learning Define collection methods and monitoring processes Define reporting process
Resources	<p>Monitoring Student Learning in the Classroom; http://educationnorthwest.org/webfm_send/541</p> <p>Between the Ideal and the Real World of Teaching; http://fcit.usf.edu/assessment/classroom/st0032november97.pdf</p> <p>Accommodating All Children in the Early Childhood Classroom; http://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/Disabilities/program%20planning/accessibility/accommodatingall.htm</p>		
	Guidelines for project assessment		
Example of evidence	<ul style="list-style-type: none"> Monitoring plan (at different stages) Feedback from a TRANSit tutor Feedback from peers or colleagues Reflections from your journal 	<ul style="list-style-type: none"> Ibid 	<ul style="list-style-type: none"> Ibid

7.2 Module 2. Prepare Learning

Description

Having completed the first stage of the voyage of discovery the next stage is to prepare the learning material. This module is made up of three sub-modules all of which help Prepare a Learning Environment for Acquisition of Key Competencies. Its focus is on the areas of facilitating student learning and establishing partnerships and collaborations.

The sub-modules are:

- 2.1 Prepare the Learning Environment for Acquisition of Key Competencies
- 2.2 Identify / Select / Adapt / Develop Learning Material and Technologies Supporting Relevant Practice for Acquisition of Key Competencies
- 2.3 Identify / Select / Adapt / Set-up Technologies Enhancing Learning and Assessment

Choosing your stage of Competency

Three stages of competency are listed for the sub-modules. These stages are linked with the open badge awards which are offered for participation in the course. Teachers taking each sub-module decide which competency stage is most appropriate to their individual circumstances and may for example only work in stage 1 competency for each sub-module on a first run through and may return later and complete another stage given the experience gained in the first attempt. Alternatively teachers may attempt stage 3 in all cases where possible.

Tutorials

The following resources may be accessed from the Open Discovery Space Training Academies <http://portal.opendiscovery.space.eu/training-academies>

1. Introduction to ICT and WWW for educational uses
<http://portal.opendiscovery.space.eu/tr-activity/>

introduction-ict-and-www-educational-uses-210

2. Strategies for searching information online, online resources and repositories <http://portal.opendiscoveryspace.eu/tr-activity/strategies-searching-information-online-online-resources-and-repositories-212>
3. Introduction to the concept of learning objects
4. Popular social tools and scenarios for their use in the classroom
5. Designing a web community for collaborative authoring of open educational resources

Sub-Module 2.1 Prepare Learning Environment for Acquisition of Key Competencies

This module is made up of three sub modules all of which help Prepare a Learning Environment for Acquisition of Key Competencies. Its focus is on Dimensions 1 and 4 Facilitating student learning and Establishing partnerships and collaborations. At this stage the trainee will have designed an Integrated Learning and Assessment Strategy for Acquisition of Key Competencies.

General Objective	2.1 Prepare Learning Environment for Acquisition of Key Competencies		
	Stage 1	Stage 2	Stage 3
Specific Objective	Prepare the Learning Environment for your Classroom	Prepare Cross-Curricular Learning Environment	Prepare an integrated Learning Environment in an Institution
Context	The competencies you will be teaching, how they will be assessed as well as the required knowledge and understanding have been defined. You need to define the resources supporting the learning process, such as learning material, reference material and technologies.	You need to develop a cross-curricular learning environment for the acquisition of key competencies.	You need to develop an institutional learning environment for the acquisition of key competencies.
Main Outcome(s)	A learning environment supporting a <i>learning plan</i>	A learning environment supporting the <i>cross-curricular learning scenario</i>	A learning environment supporting an <i>integrated learning programme</i>
Pre-requisite(s)	1. Design an Integrated Learning and Assessment	Stage 1 competencies	Stage 2 competencies
	Strategy for Acquisition of Key Competencies 2.1 Identify / Select / Adapt / Develop Learning Material Supporting Relevant Practice for Acquisition of Key Competencies		

	2.2. Identify / Select / Adapt / Set-up Technologies Enhancing Learning and Assessment		
Success Criteria	<p>An operational learning environment comprising</p> <ul style="list-style-type: none"> o Learning resources o Learning technologies <ul style="list-style-type: none"> • There is a clear relationship between the learning resources and the acquisition of key competencies • With a view for the learners and a view for the teacher (notes, recommendations, etc.) 	<ul style="list-style-type: none"> • A cross-curricular learning environment 	<ul style="list-style-type: none"> • An institutional learning environment
Activities	<p>Define the resources supporting the learning process, such as learning material, reference material and technologies. Consideration must be given to the resources and technologies available to teacher, students and school. Activities include:</p> <ul style="list-style-type: none"> • Searching and collating resources online • Identifying the technologies and tools best suited to utilize the resource • Search learning repositories • Search the web 	Ibid	Ibid
Resources	<ul style="list-style-type: none"> • Entries from 		
	<ul style="list-style-type: none"> participants 		
Example of evidence	<ul style="list-style-type: none"> • Personal eportfolio 		

Sub-Module 2.2. Identify / Select / Adapt / Develop Learning Material Supporting Relevant Practice for Acquisition of Key Competencies

General Objective	2.2. Identify / Select / Adapt / Develop Learning Material Supporting Relevant Practice for Acquisition of Key Competencies		
	Stage 1	Stage 2	Stage 3
Specific Objective	Identify / Select / Adapt / Develop Learning Material Supporting Relevant Practice for Acquisition of Key Competencies	Identify / Select / Adapt / Develop Learning Material Supporting Relevant Practice for Acquisition of Key Competencies in a <u>Cross-Curricular Learning Environment</u>	Identify / Select / Adapt / Develop Learning Material Supporting Relevant Practice for Acquisition of Key Competencies <u>in a School/ Institution</u>
Context	You have a learning plan [F1] and you need to select / adapt / develop relevant resources to support the acquisition of Key Competencies		
Main Outcome(s)	An integrated set of learning resources: lessons, online references, assignments, simulations, games, etc. with a view for the learners and a view for the teacher (notes, recommendations, etc.).	An integrated and <u>shared</u> set of learning resources with a view for the learners and a view for the teacher	An integrated, updatable, institutional set of learning resources with a view for the learners and a view for the teacher
Pre-requisite(s)	none	Stage 1 competencies	Stage 2 competencies
Success Criteria	Learning resources <ul style="list-style-type: none"> o covering at least 2 key competencies 	Learning resources covering <ul style="list-style-type: none"> o at least 5 key competencies o one of them is adapted from an existing resource 	Learning resources covering <ul style="list-style-type: none"> o 8 key competencies
Activities	<ul style="list-style-type: none"> • Search learning resources 	<ul style="list-style-type: none"> • Prepare a 	
	<ul style="list-style-type: none"> repositories • Search the web • Ask sources and feedback from experts and colleagues • Prepare a synthetic view for learners and self 	<ul style="list-style-type: none"> synthetic view for learners and teaching staff 	
Resources	Resources provided by participants		
Example of evidence	List of learning resources in the ePortfolio		

Sub-Module 2.3 Identify / Select / Adapt / Set-up Technologies Enhancing Learning and Assessment

General Objective	2.3. Identify / Select / Adapt / Set-up Technologies Enhancing Learning and Assessment		
	Stage 1	Stage 2	Stage 3
Specific Objective	Identify and Select Technologies Enhancing Learning and Assessment for your Classroom	Identify, Select, Adapt and Set-up Technologies Enhancing Learning and Assessment for a cross-curricular learning programme	Identify / Select / Adapt / Set-up Technologies Enhancing Learning and Assessment for an Institution
Context	You have defined the competencies you will be teaching and how they will be assessed. You now need to define the technologies supporting the learning and assessment process, such as equipment (e.g. tablets, mobile phones) software (e.g. ePortfolios).		
Main Outcome(s)	A technology enhanced learning environment	A technology enhanced learning environment	An institutional ICT plan
Pre-requisite(s)	none	Stage 1 competencies	Stage 2 competencies
Success Criteria	<ul style="list-style-type: none"> A relevant selection of digital technologies <ul style="list-style-type: none"> one of them to support learners with building an ePortfolio reviewed and accepted by the TRANSit tutor and or at least 2 peers 		
Readings/viewing	<p>Effective Assessment in a Digital Age: http://www.jisc.ac.uk/media/documents/programmes/elearning/digiassass_eada.pdf Technology-enhanced assessment: http://www.jisc.ac.uk/whatwedo/programmes/elearning/assessment.aspx e-Portfolios - An overview: http://www.jisc.ac.uk/whatwedo/programmes/elearning/eportfolios.aspx 'Effective Practice with e-Portfolios' (JISC publication): http://www.jisc.ac.uk/whatwedo/programmes/elearning/eportfolios/effectivepracticeeportfolio.aspx Tools for 21st century learning: http://www.jisc.ac.uk/news/e-portfolios-tools-for-21st-century-learning-09-sep-2008 How can we use ePortfolios to help students reflect upon and improve their learning?: http://www.slideshare.net/dcambrid/how-can-we-use-eportfolios-to-help-students-reflect-upon-and-improve-their-learning Spanish resources: ePortfolio and competences (CAT): https://e-portfoli.wikispaces.com/ </p>		

7.3 Module 3. Run Learning

Description

The module involves running a lessons or scenarios by teachers to teach the Transversal Key Competencies. It will also focus on the use of digital technologies to support learning and assessment in the classroom. The process of monitoring and assessing learning to inform further learning in a learning scenario is also tackled.

There are 3 sub-modules:

- 3.1 Run a Lesson Plan/Learning Scenario/Programme for Acquisition of Key Competencies
- 3.2 Use Digital Technologies to Support Learning and Assessment

3.3 Monitor and Assess Learning to Inform Further Learning

Choosing your stage of Competency

Three stages of competency are listed for the sub-modules. These stages are link with the open badge awards which are offered for participation in the course Teachers taking each sub-module decide which competency stage is most appropriate to their individual circumstances and may for example only work in stage 1 competency for each sub-module on a first run through and may return later and complete another stage given the experience gained in the first attempt. Alternatively teachers may attempt stage 3 in all cases where possible.

3.1 Run a Learning Scenario/Programme for Acquisition of Key Competencies

General Objective	3.1 Run a Lesson Plan/Learning Scenario/Programme for Acquisition of Key Competencies		
	Stage 1	Stage 2	Stage 3
Specific Objective	Run a Lesson Plan for Acquisition of Key Competencies	Run a cross-curriculum Scenario for Acquisition of Key Competencies	Run an Integrated Learning Programme for Acquisition of Key Competencies within the School/Institution
Context	You are running a learning sequence for the acquisition of Key Competencies based on a <i>learning plan</i> . For that, you will call for the support of <i>learning technologies</i> , to support, monitor and assess learning key competencies.	You are running a cross-curriculum learning scenario for the acquisition of Key Competencies. For that, you will call for the support of <i>learning technologies</i> , to support, monitor and assess learning key competencies.	You are running an Integrated learning programme for the acquisition of Key Competencies.
Pre-requisite(s)	Use Digital Technologies to Support Learning and Assessment (Teach, Monitor, Assess, Provide Feedback) Monitor and Assess Learning to Inform Further Learning		
Success Criteria	During the running of the learning sequence, you:		

	<ul style="list-style-type: none"> • Provide support and guidance to learners • Monitor learning progress • Provide Informed feedback 		
Activities	Activities include running a learning scenario for the acquisition of Key Competencies based on a learning plan. Use learning technologies, to support, monitor and assess learning key competencies. This could include a single class or cross-curricular approaches or instruction wide		
	activities.		
Readings/viewing	<p>To improve student learning through technology: http://www.calvertnet.k12.md.us/departments/diit/documents/fulltechplan.pdf Integrating Technology with Student-Centered Learning: http://www.nmefoundation.org/getmedia/befa9751-d8ad-47e9-949d-bd649f7c0044/integrating Critical Issue: Using Technology to Improve Student Achievement: http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te800.htm Developing Lessons with Technology: http://www.pearsonhighered.com/assets/hip/us/hip_us_pearsonhighered/samplechapter/0136101259.pdf What is e-learning? (Webopedia): http://www.webopedia.com/TERM/E/e_learning.html Transforming Assessment: http://www.transformingassessment.com/ Classroom Technology Explained: eAssessment (Youtube Video): http://www.youtube.com/watch?v=bxXITkDqnnA</p>		

3.2 Use Digital Technologies to Support Learning and Assessment

General Objective	3.2 Use Digital Technologies to Support Learning and Assessment		
	Stage 1	Stage 2	Stage 3
Specific Objective	Use Digital Technologies to Support Learning and Assessment in the classroom	Use Digital Technologies to Support Learning and Assessment in a <u>cross-curricular programme</u>	Use Digital Technologies to Support Learning and Assessment at <u>institutional level</u>
Context	You want to use digital technologies to support the implementation of a learning sequence	You want to use digital technologies to support the implementation of a cross-curricular learning sequence	You want to use digital technologies to support the implementation of an integrated learning programme
Main Outcome(s)	Classroom Digital Technology Plan	Cross-curricular Digital Technology Plan	Institutional Digital Technology Plan

Pre-requisite(s)	None	None	None
Success Criteria	Digital technologies are used to: <ul style="list-style-type: none"> Collect Evidence to Monitor learning Support individual learners Assess key competencies 	Ibid, in the context of a cross-curricular programme	
Activities	This module involves using digital technologies to support learning and assessment in the classroom.	-	
Resources	Competency-based Learning (1/3), What is Competency-Based Learning?: https://dl.dropboxusercontent.com/u/52732975/CBL1.pdf ; https://dl.dropboxusercontent.com/u/52732975/CBL1.mov Competency-based Learning (2/3), What is the place of assessment?: https://dl.dropboxusercontent.com/u/52732975/CBL2.pdf ; https://dl.dropboxusercontent.com/u/52732975/CBL2.mov Competency-based Learning (3/3), How do we assess competencies?: https://dl.dropboxusercontent.com/u/52732975/CBL3.pdf ; https://dl.dropboxusercontent.com/u/52732975/CBL3.mov Integrating Technology with Student-Centered Learning (Nellie Mae Education Foundation): http://www.nmefoundation.org/getmedia/befa9751-d8ad-47e9-949d-bd649f7c0044/integrating		

3.3 Monitor and Assess Learning to Inform Further Learning

General Objective	3.3 Monitor and Assess Learning to Inform Further Learning		
	Stage 1	Stage 2	Stage 3
Specific Objective	Monitor and Assess Learning to Inform Further Learning in a Learning Sequence	Monitor and Assess Learning to Inform Further Learning in a Cross-Curricular Programme	Monitor and Assess Learning to Inform Further Learning at Institutional Level
Context	You need to monitor and Assess Learning to Inform Further Learning in the classroom		You need to implement a quality assurance strategy to monitor learning, assess the outcomes and inform future practice and strategy
Main Outcome(s)	<ul style="list-style-type: none"> Analysis of monitoring data Assessment decisions regarding learners' acquisition of key competencies Open Badges delivered Revised Learning Sequence 	<ul style="list-style-type: none"> Analysis of monitoring data Assessment decisions regarding learners' acquisition of key competencies Open Badges delivered Revised cross-curricular Learning 	

		Programme	
Pre-requisite(s)	None		
Success Criteria	<ul style="list-style-type: none"> • Learners successfully achieving the demonstration of key skills at the end of the learning sequence • Sufficient quantity and range of data is being collected to monitor and assess learning • review of the monitoring and assessment process by at least 2 peers and/or one TRANSIt tutor 		
Activities	<ul style="list-style-type: none"> • Collect evidence to monitor learning • Review evidence and take action accordingly • Provide informed and supportive feedback to learners • Celebrate learning achievements (e.g. by providing Open Badges to the participants) • Inform peers and management 		
Resources:	<p>Critical Issue: Using Technology to Improve Student Achievement: http://www.ncrel.org/sdrs/areas/issues/methods/technology/te800.htm</p> <p>Transforming Assessment Rethinking assessment in a participatory digital world - Assessment 2.0: http://www.transformingassessment.com/</p> <p>Classroom Technology Explained: e-Assessment (Youtube Video): http://www.youtube.com/watch?v=bxXITkDqnnA</p> <p>What is an e-Portfolio? (Regis University): http://academic.regis.edu/LAAP/eportfolio/basics_what.htm</p> <p>What is an ePortfolio? (Clemson University): http://www.clemson.edu/academics/programs/eportfolio/about</p> <p>Electronic portfolio (Wikipedia): http://en.wikipedia.org/wiki/Electronic_portfolio</p> <p>What is an ePortfolio? University of Derby (YouTube): http://www.youtube.com/watch?v=YZsfvBqBrcY</p> <p>How to Build Better ePortfolios: http://www.guide2digitallearning.com/tools_technologies/how_build_better_eportfolios</p> <p>Introducing Open Badges: a new online standard to recognize and verify learning: http://openbadges.org/</p> <p>A Short Story About Open Badges (video): http://www.youtube.com/watch?v=Xc4xDgNbl6Y#t=10</p> <p>Getting started issuing Open Badges: http://openbadges.org/issue/</p> <p>Developing Lessons with Technology: http://www.pearsonhighered.com/assets/hip/us/hip_us_pearsonhighered/samplechapter/013_6101259.pdf</p> <p>Spanish resource:</p> <p>Good practice (Primary education): Competence based-learning activity around a sportsman (CAT) http://blocs.xtec.cat/gransrellinars1213/files/2013/03/KILIAN-JORNET-2-baixa-resoluci%C3%B3-Modalitat-compatibilitat.pdf</p>		
Example of evidence	<ul style="list-style-type: none"> • Reflections • Artefacts • ePortfolio excerpts • Feedback from learners on their learning experience 	<ul style="list-style-type: none"> • Ibid 	Ibid

7.4 Module 4. Review Learning

4.1 Review a Learning Scenario/Programme for Acquisition of Key Competencies

Description

Review a Learning scenario for Acquisition of Key Competencies. This module involves the teacher reviewing their own performance and that of the learners. It will involve noting and report your findings and plan further action. This will involve a sharing of findings and discoveries with colleges other learners on the course or at an intuition wide basis.

There is one module in this course.

General Objective	4.1 Review a Learning Sequence/Scenario/Programme for Acquisition of Key Competencies		
	Stage 1	Stage 2	Stage 3
Specific Objective	Review a Lesson Plan for Acquisition of Key Competencies	Review a Learning Scenario for Acquisition of Key Competencies	Review a Learning Programme for Acquisition of Key Competencies
Context	After running a lesson plan for the acquisition of Key Competencies, you need to review your own performance and that of the learners, report your findings and plan further action	After running with colleagues a learning scenario for the acquisition of Key Competencies, you need to review your performance, share your findings with your colleagues and plan further action	Based on the collection of data from colleagues, review the institutional strategy, report findings and plan further action
Main Outcome(s)	<ul style="list-style-type: none"> • Review of the lesson plan • Revised professional development plan 	<ul style="list-style-type: none"> • Review of the cross-curricular learning scenario • Recommendations for improvement • Revised professional development plan 	<ul style="list-style-type: none"> • Review of the institutional learning programme • Recommendations for a revised institutional strategy for the teaching of Key Competencies
Pre-requisite(s)	None		
Success Criteria	<ul style="list-style-type: none"> • -Recommendations for improving professional practice in relation to the acquisition and assessment of key competencies • -Revised professional development plan • -Feedback from at least 2 peers on the recommendations and revised plan 	<ul style="list-style-type: none"> • Recommendations for improving professional practice and the cross-curricular learning scenario 	<ul style="list-style-type: none"> • -Recommendations for improving professional practice and the institutional learning scenario

Activities	<ul style="list-style-type: none"> • Reflect on professional experience in relation to running a learning sequence on key competencies • Report findings and get feedback from peers • Plan further professional development 	<ul style="list-style-type: none"> • Ibid as Stage 1 	<ul style="list-style-type: none"> • Ibid as Stage 1
Resources	Review Strategies: http://www.mindtools.com/pages/article/newlSS_05.htm Discovery Learning for the 21st Century: What is it and how does it compare to traditional learning in effectiveness in the 21st Century? (Joyce A. Castronova); http://teach.valdosta.edu/are/Litreviews/vol1no1/castronova_litr.pdf Elements of Effective e-Learning Design: http://www.irrodl.org/index.php/irrodl/article/view/217/300		
Example of evidence	<ul style="list-style-type: none"> • Data collected during monitoring, e.g. example of things that went well and not so well, feedback from learners, etc. • Revised lesson plan, learning scenario • Revised continuing professional development plan 		

Training Scenarios

Training Scenarios have been developed in order to be deployed during the seminar based training, as well as be available online for interested trainees to work at their own pace. A learning scenario is a complete description of an educational activity. The scenarios are provided as examples of learning strategies and material content that could be adapted to educational situations and regional particularities. In order for the training to take place successfully it is important to appreciate the context in which it will take place and the enablers and inhibitors that exist. In this chapter, indicative Guidelines / Training Resources are introduced on how users can upload their competence based resources on the teacher communities created on ODS portal around the theme of competence based learning, as well as how to design their competence based cross-curricular learning scenarios following the ODS templates describing didactic approaches adapted for TRANSIt (including the description of competences).

8.1 Example 1: Learning Design Use Cases: Design & Share your educational resources regarding competence development using the ODS Authoring Tool

The ODS Repository

The ODS Repository is a harvester of Educational Re-

sources, as well as a platform hosting teachers communities. The first step has been the instantiation of a digital community on the portal of the affiliated project Open Discovery Space in the thematic area of Competence Based Learning (CBL). Multilingual sub-communities have been created for users' support in partner countries (EL, NL, ES, FR, AU). Moreover, with an aim to support the engagement of teachers as learning designers a series of online, as well as offline events have been designed and delivered (contests, webinars). Here follows the list of the various multilingual TRANSIt Communities and sub-communities on Open Discovery Space portal that you might want to register and access the resources:

- [EN] Training teachers in competence based education: TRANSIt <http://portal.opendiscoveryospace.eu/beta/community/training-teachers-competence-based-educationtransit-73929>
- [EL] Κατάρτιση εκπαιδευτικών στην εκπαίδευση για ανάπτυξη ικανοτήτων <http://portal.opendiscoveryospace.eu/beta/community/katartisi-ekpaideytikon-stin-ekpaideysi-gia-anaptyxi-ikanotiton-184334>
- [AU] TRANSIt - Lehrer/innen in Österreich, (<http://portal.opendiscoveryospace.eu/el/community/transit-lehrerinnen-osterreich-299877>)

- [EN] Training teachers in competence based education: TRANSit in Ireland (<http://portal.opendiscoveryospace.eu/el/community/training-teachers-competence-based-educationtransit-ireland-669947>)
 - [NL] TRANSit: Competentiegestuurd onderwijs (<http://portal.opendiscoveryospace.eu/beta/community/transit-competentiegestuurd-onderwijs-79281>)
 - [ES] Educación basada en competencias (proyecto TRANSit) (<http://portal.opendiscoveryospace.eu/el/community/educacion-basada-en-competencias-proyecto-transit-299895>)
 - [FR] TRANSit France (<http://portal.opendiscoveryospace.eu/el/community/transit-france-369605>)
 - 2013 summer school, Training teachers in competence based education: TRANSit @ the Crete Summer School 2013, (<http://portal.opendiscoveryospace.eu/el/community/training-teachers-competence-based-educationtransit-crete-summer-school-2013-1167>)
 - 2014 winter school, Training teachers in competence based education: TRANSit @ the Vilnius Winter School 2014, (<http://portal.opendiscoveryospace.eu/el/community/training-teachers-competence-based-educationtransit-vilnius-winter-school-2014-568584>)
 - 2014 summer school, (<http://portal.opendiscoveryospace.eu/el/community/ods-summer-school-2014-673531>)
- Here follows figures with the various multilingual TRANSit Communities on ODS portal on the theme of competence based learning.

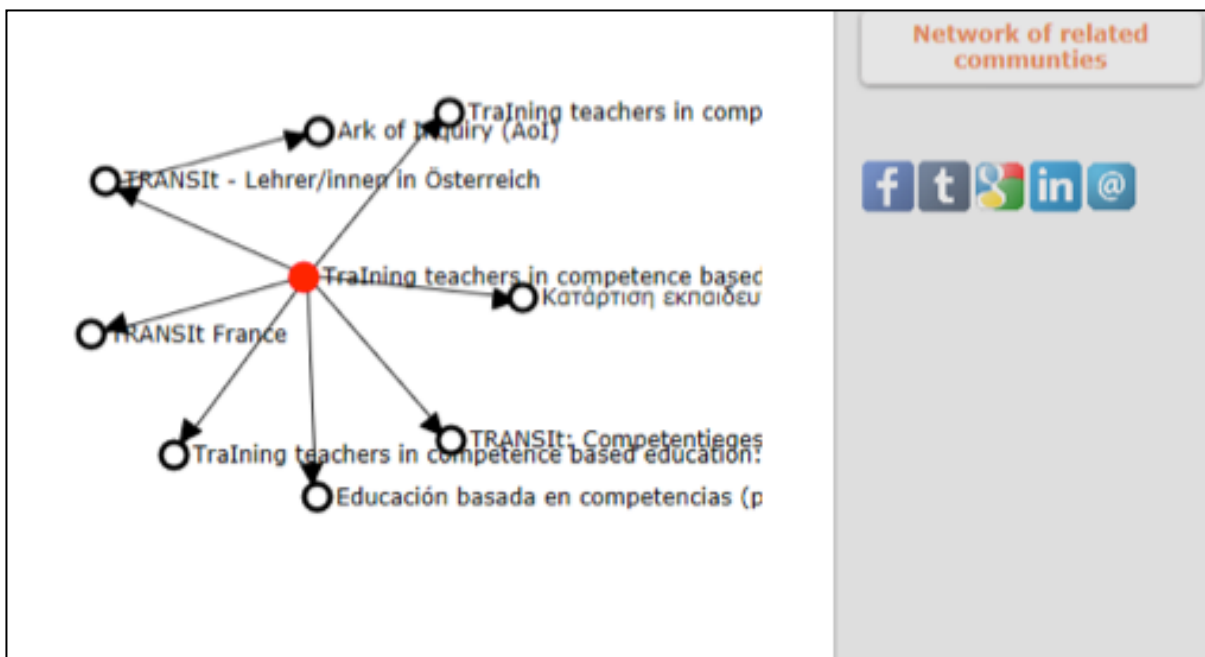


Figure 3 TRANSit multilingual communities & sub-communities on Open Discovery Space portal regarding competence development


You will have access to the Learning Resources developed by members of the Community, as well as the ability to upload your own educational content, lesson plans or learning scenarios promoting KCA. You can create your own content into a Community that you are member by selecting one of the three options "Educational content", "Lesson Plans" and "Learning Scenarios" of the menu "Search Community Resources". Each one of


these options will lead you to a new page that includes all content created into this Community by all members and also provides you the possibility to create your new content.

Visit one of the above communities that you are member and access the educational material or create and share your own resources.

**Members:78**

**Groups: 3**

**Events: 28**


**Discussions: 6**

**Activities: 17**


**Blogs: 2**

**Resources: 43**


What you can share/create is Educational Objects/resources, Lesson Plans or Educational Scenarios.



Educational Content



Lesson Plans

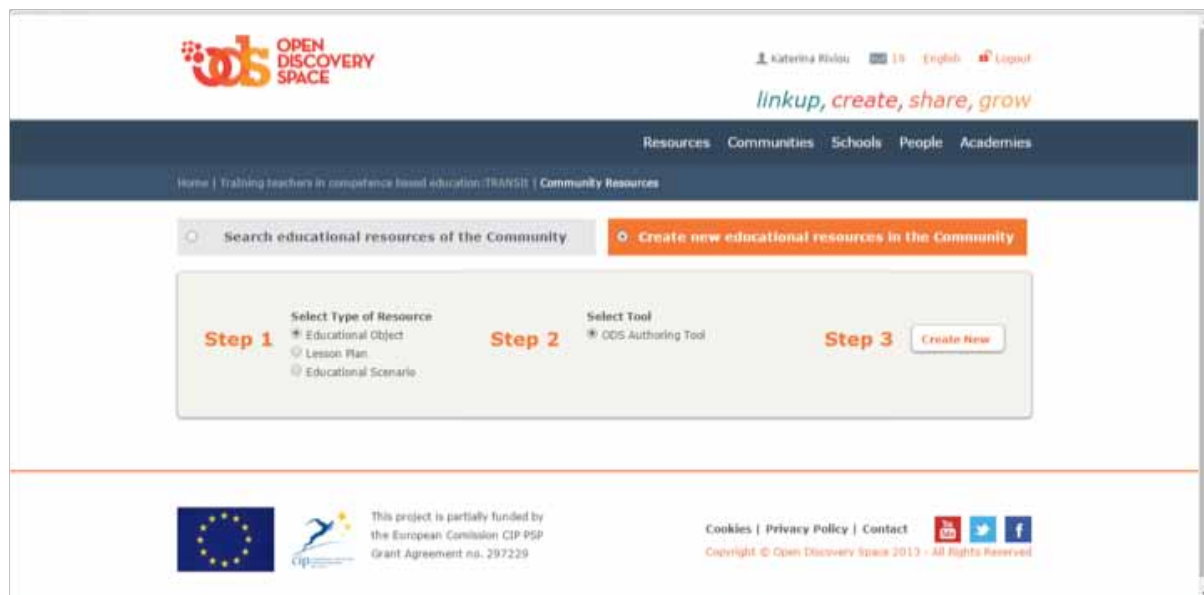


Learning Scenarios

Educational resources are typical digital materials, such as video and audio lectures (podcasts), references and readings, workbooks and textbooks, multimedia animations, simulations and demonstrations.

Lesson Plans provide teachers with **guidelines for conducting a lesson** and contain information on educational resources and tools that should be used, as well as educational objectives, teaching methods and assessment. Lesson plans can be (re) used by the same teacher, as well as by other teachers.

The learning scenarios are of **more extended duration** than lesson plans and they are not necessarily intended to be used inside the classroom.

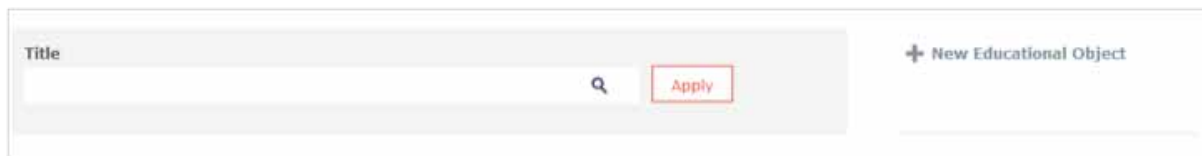


Create Educational Content



Upload an educational object

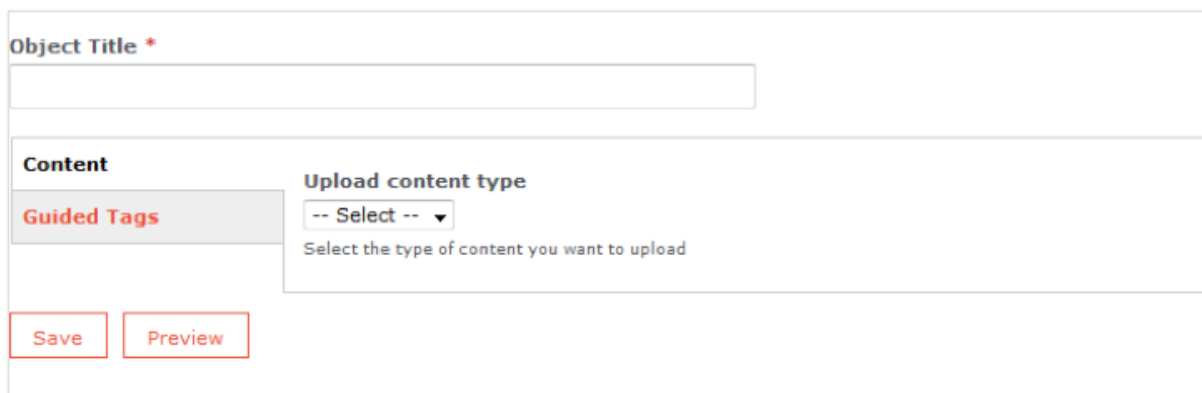
The new page that is presented by selecting “Educational Content” will lead you in a page that includes all the educational objects that are created by the members of the community. You can filter the objects of the list by entering your keywords to the search box



The screenshot shows the top section of a web interface. On the left, there is a search bar with the placeholder text "Title". To the right of the search bar is a magnifying glass icon and a red-outlined button labeled "Apply". Further to the right, there is a link that says "+ New Educational Object".

You can create a new educational object by selecting “New Educational Object”.

Create first your object by introducing the title of it and selecting the Guided Tags that characterize your object.



The screenshot shows a form for creating a new educational object. It has a title field labeled "Object Title *". Below the title field is a section titled "Content". Inside the "Content" section, there is a tab labeled "Guided Tags" and a dropdown menu labeled "Upload content type" with the text "-- Select --". Below the dropdown menu is a hint text: "Select the type of content you want to upload". At the bottom of the form, there are two red-outlined buttons: "Save" and "Preview".

Press Save and then you can edit the metadata of your object by a sequence of 10 forms presented as following. The first four forms include required fields (*). Please, fill them to proceed with the submission of the forms.

After saving your object you can access through the community or through your Area in the “Educational Objects” tab. Clicking the title you will see the Summary Page of the object. The “View Resource” option presents the URL or the file that you attached / added to the object (if you have added one). You can edit your object by selecting “Edit”.

Upload your own **lesson plans** and/or **educational scenarios**



9

Upload your resource in three steps

- Step 1** Define the scenario / lesson plan
Set the languages, the title, the description and all the main information that describes your scenario and its use
- Step 2** Relate it to a specific domain
Indicate the domain / thematic area where our resource is referenced to (e.g. Science, ICT, etc.)
- Step 3** Create
Upload or edit the phases and activities of your scenario / lesson plan

Step 1. Define your scenario / lesson plan

... select the language(s) of your resource

... set the title of the resource in each selected language

... define the author(s)

... provide the description

... for which age is your resource applied?

... provide the keywords that describe the resource

... select the educational objectives of your scenario / lesson plan and describe shortly how these are achieved

11

Step 2 Relate your resource with a specific domain

... define as many domains and levels you need

1 Define the Scenario

2 Relate

3 Create

Domains

Be sure to press the ADD button to confirm a selection

Business Studies
Foreign Language Learning
ICT
Languages
Music
Religious Education, Language & Literature, History
Science
Social Studies
Special Educational Needs

Algebra and Number Theory
Arithmetic
Applied Mathematics
Differential and Difference Equation
Discrete Mathematics
Geometry
Logic and Foundations
Numbers and Computation
Statistics and Probability
Topics from Subjects

Complex Analysis
Functional Analysis
Global Analysis
Harmonic Analysis
Integral Transforms
Numerical Analysis
Real Analysis
Signal Analysis


ADD

☒ Mathematics
☒ Mathematics -> Analysis

1 2 3

Step 3 Create the content of your scenario / lesson plan

Decide and select the way you want to create the scenario / lesson plan. Uploading a file or editing each phase and activity individually?



Simple Editing **Advanced Editing**

1 Define the Scenario 2 Relate 3 Create

Select how to create your Learning Scenario

Upload a scenario using an existing pdf file or Edit your Learning Scenario by adding the phases and their activities.

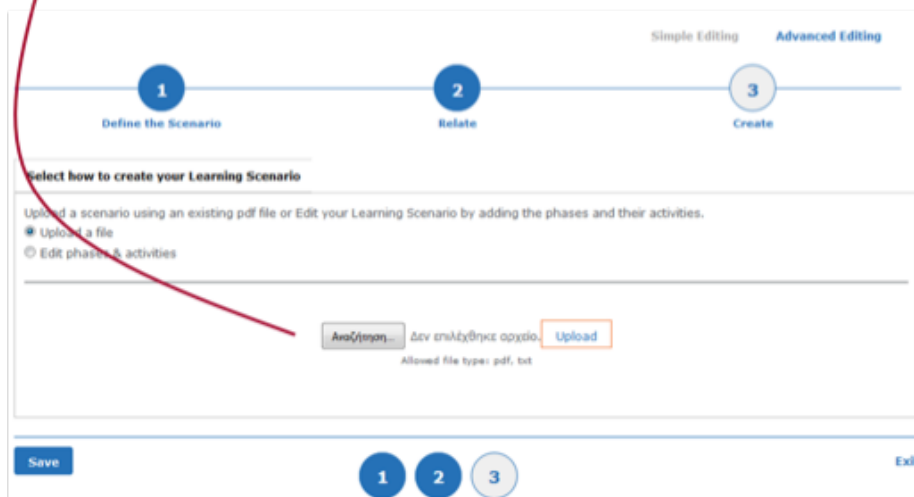
☒ Upload a file

☐ Edit phases & activities

Save 1 2 3 Exit

Step 3 Create the content of your scenario / lesson plan ...uploading a file

Select a file from your computer and upload it here



Simple Editing **Advanced Editing**

1 Define the Scenario 2 Relate 3 Create

Select how to create your Learning Scenario

Upload a scenario using an existing pdf file or Edit your Learning Scenario by adding the phases and their activities.

☒ Upload a file

☐ Edit phases & activities

Αναζήτηση... Δεν επιτρέπονται αρχεία. Upload

Allowed file types: pdf, txt

Save 1 2 3 Exit

Create the content of your scenario / lesson plan ...editing the phases & activities
 Choose one of the available templates! ...before decide, preview the available templates. Some of the options are:
ODS generic template: choose this to create a lesson plan using a blank template
Your templates: choose this to create a lesson plan based on a template that you created

In our case you can have a look at the templates used for promoting competence based learning (project based learning, storyline approach, inquiry-based learning, Guided discovery, Action learning, Problem based learning, Co-operative learning available on the ODS Glossary of teaching approaches).

General public templates

This is a blank template

Public OR Domain-oriented templates

Scenarios / lesson plans that you have already created

Click here to see the preview of the template

Cancels the authoring process / exits the tool

15

Edit all the phases and activities in all languages that you selected

Provide the title and the description of all phases

Provide the title of all activities for each phase

Edit the content for each activity

Add more activities if necessary

Add more phases if necessary

16

Phases and activities editing

The screenshot shows a software interface for editing training phases and activities. On the left, a list of phases is visible, including 'Phase #1: Bringing up the phenomenon as a problem' and 'Phase #2: Suggestions for confrontation with the problem'. The 'Activities of Phase #1' section is expanded, showing a list of activities: 'Presentation', 'Presentation of alternative theories/ideas', and 'Discussion'. A cloud diagram is overlaid on the right side of the interface, with arrows pointing from it to specific elements in the interface. The arrows are labeled with the following actions:

- View the description**: Points to the 'Activities of Phase #1' section.
- Edit**: Points to the 'Presentation' activity.
- Delete**: Points to the 'Presentation of alternative theories/ideas' activity.
- Move up**: Points to the 'Presentation' activity.
- Move down**: Points to the 'Discussion' activity.

Activities editing

The screenshot shows the 'Activities editing' interface. The 'Description' tab is selected, and the text area contains the instruction: 'Describe what the students should do in this learning activity (task type) and how these actions should be performed (technique). Make sure the students' actions are consistent with the information specified under 'Theoretical framework''. Below the text area, there is a language selection dropdown menu with 'English' and 'Greek' options. A red arrow points from the text 'Describe the activity in all languages that you selected' to the language selection dropdown.

Below the text area, there is a 'Switch to plain text editor' link. At the bottom, there is a 'Learning Resource Type' dropdown menu with a 'Select' button and an 'Add' button.

Download educational resources

View here all the content, material and description of the scenario / lesson plan

Learning Scenario
Guided research model

Last updated: 30/10/2014, by Noortje Janssen
Language(s): 
Domain: Social Studies, Science, Mathematics, Business Studies

 [Download](#)  [Edit](#)

Information	Description	Phases & Activities
Learning objectives	Cognitive - Knowledge: Procedural Cognitive - Process: To apply Affective: To respond and participate Psychomotor: To perform independently, skillfully and precisely	
Keywords/subject	 inquiry learning, science, experimenting, alternative theories	
Teaching approach	Cognitivist: Inquiry learning	

Download your scenario /lesson plan
here in pdf file and in all languages



✓ Your Learning Scenario have been saved as 'draft'.
View your Learning Scenario [here](#).

Simple Editing **Advanced Editing**

1 Define the Scenario 2 Relate 3 Create

Select how to create your Learning Scenario Select Template **Add Phases & Activities**

Edit your scenario by adding the phases and their activities.
English Expand All Collapse All

Phase #1: bbbgl khh lk  

+ Add Phase

Save 1 2 3 Exit

Have you saved your
scenario / lesson plan?

You can view it and
further process it from
here

Saving your scenario/lesson plan

The screenshot shows the 'Add Phases & Activities' interface. At the top, there are tabs: 'Select how to create your Learning Scenario', 'Select Template', and 'Add Phases & Activities'. Below the tabs, it says 'Edit your scenario by adding the phases and their activities.' and 'English'. There are buttons for 'Expand All' and 'Collapse All'. The main area shows a list of phases: 'Phase #1: Working', 'Phase #2: Introduction', 'Phase #3: Bringing ideas together', and 'Phase #4: Evaluation'. Each phase has a list of activities. For 'Phase #1: Working', there are three activities: 'Activity 1 Title: Executing tasks', 'Activity 2 Title: Department meeting', and 'Activity 3 Title: Recapitulation'. A 'Select Status' dialog box is open over the activities, asking 'Do you want to save the Learning Scenario as "Draft" or as "Final".' with buttons for 'Final' and 'Draft'. At the bottom, there is a 'Save' button and a progress indicator with steps 1, 2, and 3.

Save the scenario / lesson plan in final or draft version.

*** only the “final” resources are accessible from the rest visitors / members of the community. The “draft” resources are only available through your profile

20

Saving your scenario/lesson plan (final, draft version)

The screenshot shows the 'Your educational resources' section. It has tabs for 'Description', 'Resources', 'Duration', and 'Tools'. Below the tabs, there are buttons for 'Your educational resources', 'Search ODS portal', 'Community's educational objects', 'Upload a file', and 'Add an external link'. The 'Search ODS portal' button is highlighted with a red line. Below the buttons, there is a 'Title' search bar and a 'Keywords' search bar. The 'Keywords' search bar has a placeholder text 'Search using keywords separated by comma (,)'. There is a 'Search' button and a 'Number of Search Results : 0' display. At the bottom, there is a 'Save' button.

Attach educational resources by selecting one or more of the available options

Attaching educational resources to your scenario/lesson plan

You can attach resources created by you (by uploading them if you haven't done it already), or search the ODS

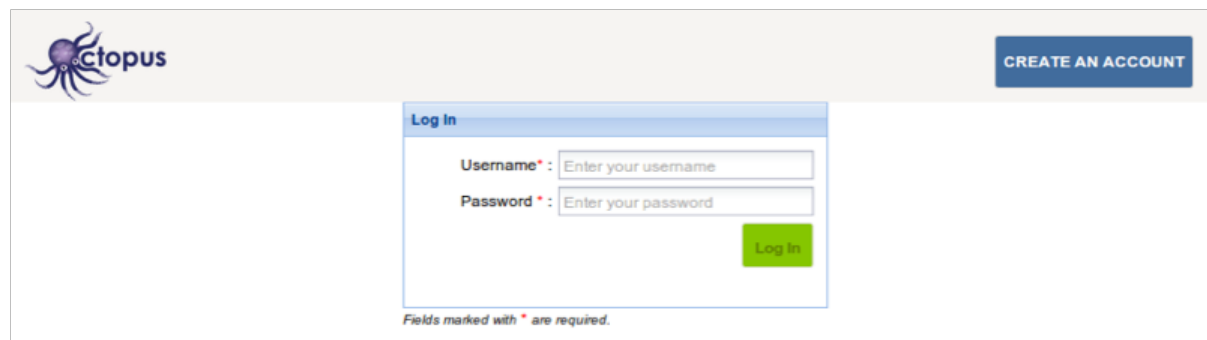
portal using key words, search the community for resources, or add external resources adding them as files or via using the URLs.

8.2 Example 2: Learning Design Use Cases: Demonstration of designing a CBL Lesson Plan/Learning Scenario with use of the Octopus Authoring Tool

Octopus is a web-based tool for authoring learning scenarios, aligned on ODS portal and has been used in TRANSIt trainings. Here we will see how to use it in order to author CBL Learning Scenarios.

1. Sign-in, login and account settings

To access the tool, go to: <http://learn.ced.tuc.gr/octopus>. The following screenshot depicts the initial page of the tool:



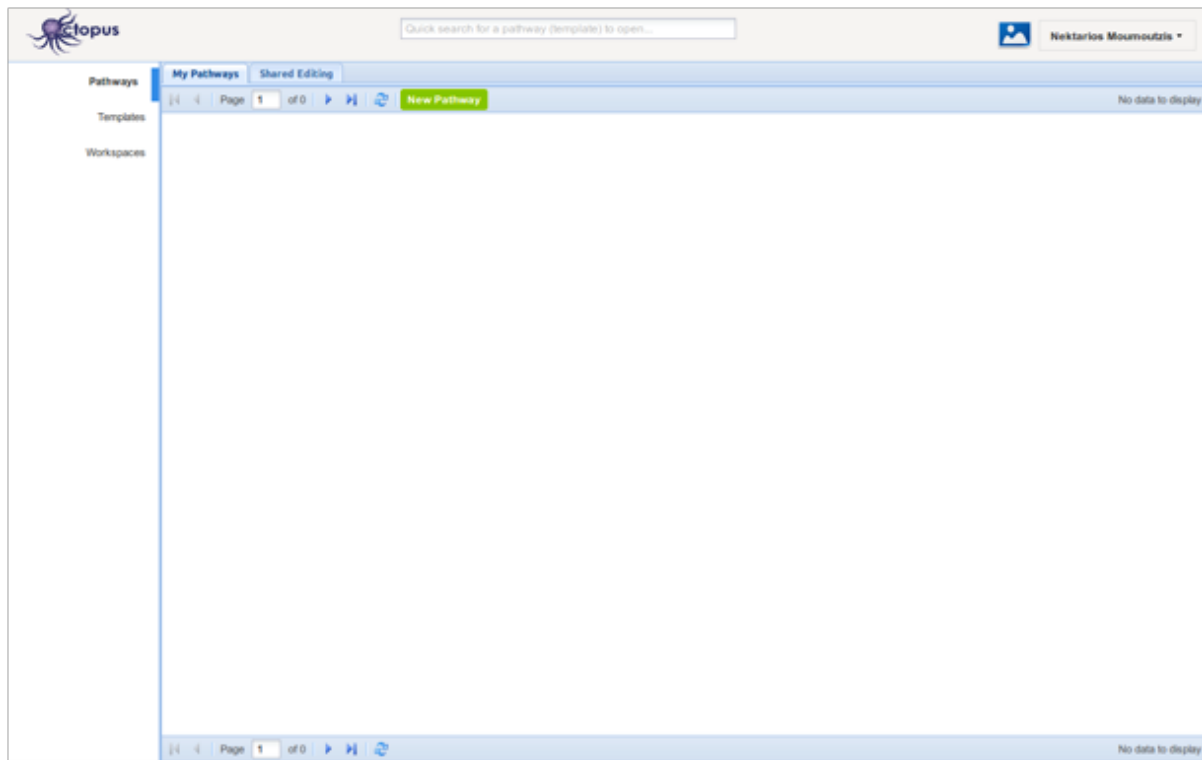
The screenshot shows the initial page of the Octopus tool. At the top left is the Octopus logo, and at the top right is a blue button labeled "CREATE AN ACCOUNT". Below the logo is a "Log In" form with two input fields: "Username*" and "Password*", both with placeholder text "Enter your username" and "Enter your password" respectively. A green "Log In" button is positioned to the right of the password field. Below the form, a note states "Fields marked with * are required."

Assuming you have no account in the tool, the first thing to do is to click the 'CREATE AN ACCOUNT' button on the top right of the page. A pop-up form shows up so that you could provide the necessary information for the creation of the account. Type all necessary information and click the 'Create Account!' button when you finish.



The screenshot shows a "Create a New Account" pop-up form. It contains several input fields: "First Name*" (filled with "Nektarios"), "Last Name*" (filled with "Moumoutzis"), "Email*" (filled with "nektar@ced.tuc.gr"), "Username*" (filled with "nmoumoutzis"), "Password*" (filled with "*****"), and "Confirm Password*" (filled with "*****"). There are also dropdown menus for "A.M." (filled with "Enter A.M. (optional)"), "Organization*" (filled with "MUSIC/TUC"), and "Language*" (filled with "English"). At the bottom, there are radio buttons for "Female" and "Male", with "Male" selected. A "Change Photo" button is located to the right of the form. At the bottom right, there are two buttons: "Create Account!" and "Close". A note at the bottom left states "Fields marked with * are required."

After clicking the 'Create Account!' button your account is created and your inventory of pathways is presented, which is empty at this point as shown in the following screenshot. Templates and Workspaces are empty as well.



Before exploring how you could start creating your own content in the tool, let us see how you could inspect and change your account details. Click on your name at the top-right of the Octopus page. A pop-up menu shows up. Click on the 'Account Options' item as shown in the next screenshot.

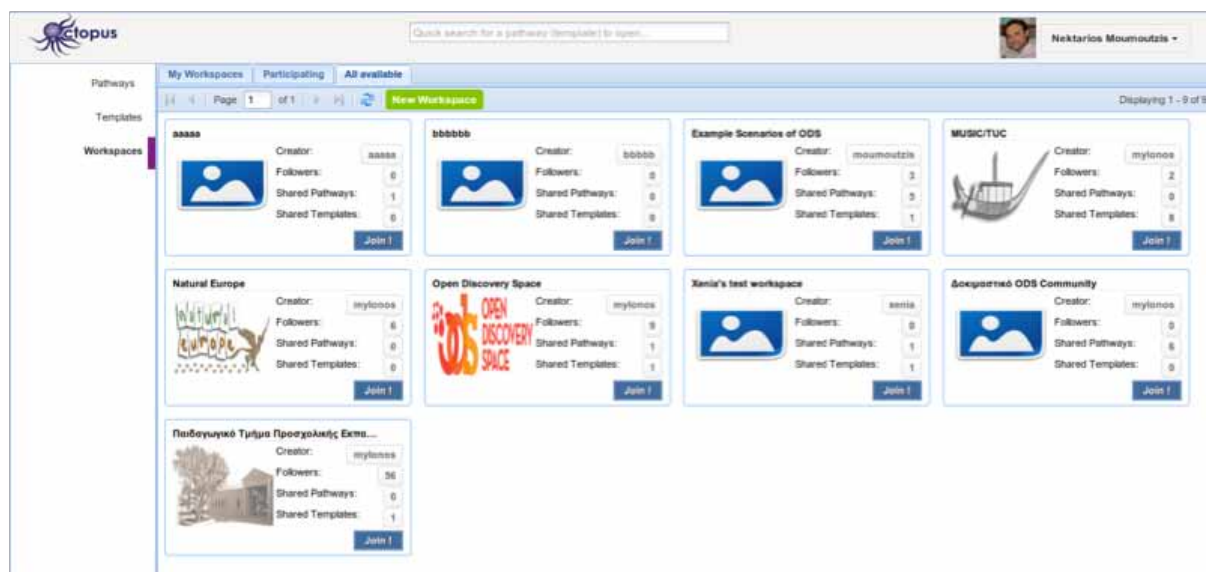


2. Creating a pathway using a template

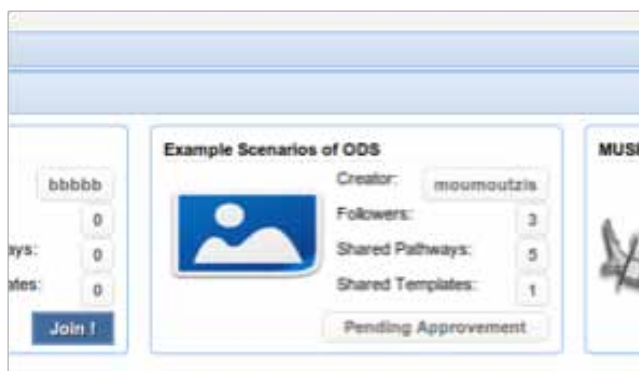
You are now ready to create your first pathway. In Octopus terminology, a pathway stands for a pedagogical scenario or a lesson plan that prescribes how to teach a certain topic. We will see that a pathway consists of a number of learning activities that are supported by resources. Resources refer to digital content that is to be used by students during the implementation of the pathway.

2.1 Join a workspace

As you have already seen in the previous section, when your account is created, your inventory of pathways is empty. One way to start creating your pathways is to join a workspace where you could find some ready-made pathways that you may modify to suit your needs. You could also find templates to use as a starting point for the creation of your pathways. Templates are essentially generic structures that contain guidance to develop your own pathway in a way that it conforms to some pedagogical approach or best practice.



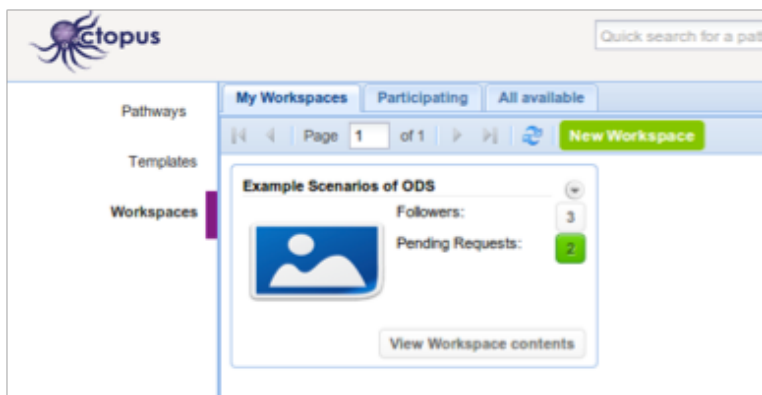
So, let us see how you could join a workspace and use one of its templates to create your first scenario. Select the 'Workspaces' option on the vertical menu on the left of the Octopus main page. Then, select the tab 'All available'. You will see all the workspaces in which you could send a join request, as shown in the screenshot above. Now click the 'Join!' button.



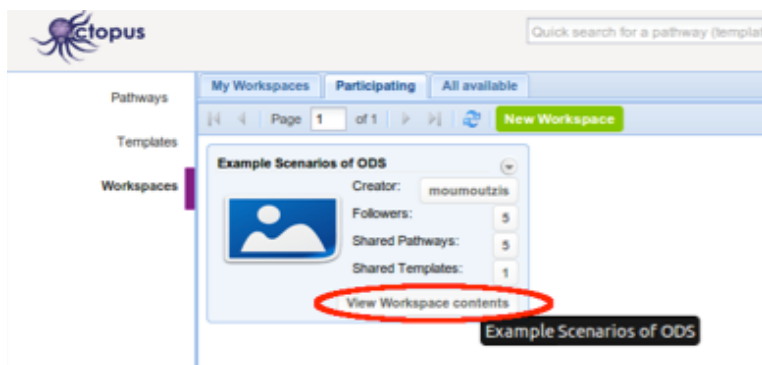
What has happened is that Octopus has sent a notification to the owner of the workspace, i.e. the user that has created it, that a new user, you, is requesting to join the workspace. The owner of the workspace can approve or reject your request.

In the screenshot on the left you can see what is happening on the owner's side. When he/she browses his/her workspaces, he/she can see that there are pending requests in the 'Example Scenarios of ODS' workspace. The number of pending requests is marked with green color.

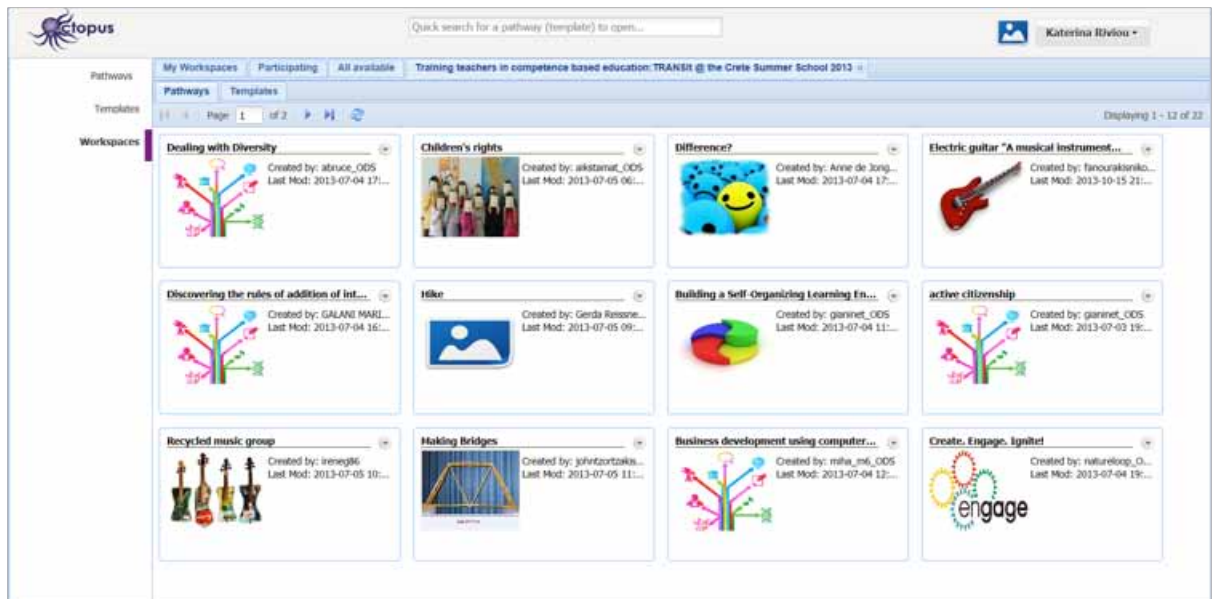
The owner can click on this number and see a list of the pending requests from which he/she could approve or reject each one of the requests. You could see how the list of pending requests is presented in the screenshot on the right. The pending requests are shown in tabular form. Each row corresponds to one request and the owner of the workspace can accept or reject it by clicking on the corresponding button.



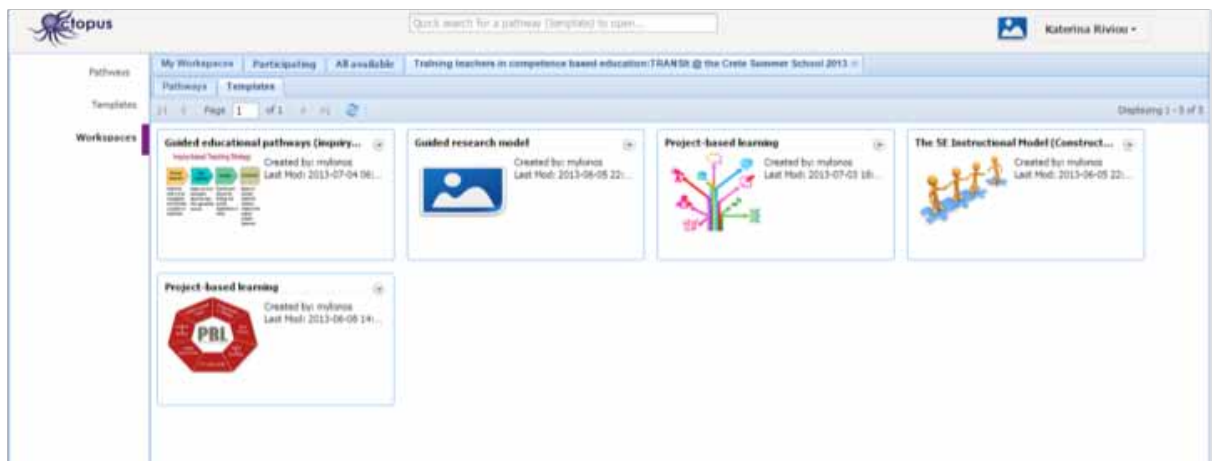
Let us now go back to your own account. After the owner of the workspace has approved your request, you are now offered with the option to 'View Workspace contents' as shown below. Click that button.



You are now able to see the Pathways shared through the **workspace “Training teachers in competence based education”** as shown below.



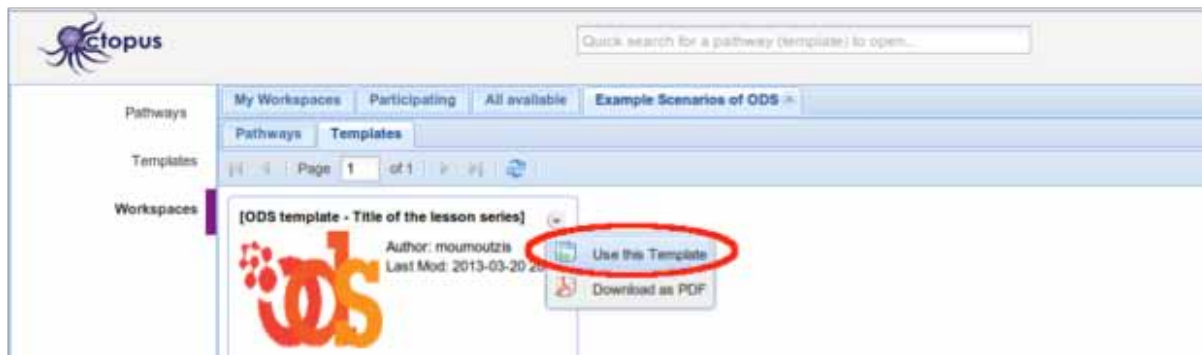
Click on the tab 'Templates'. You can have a look at the available templates for fostering competences adapted for TRANSIt purposes (Project based learning, Guided research, Guided educational pathway, The 5e Instructional Model).



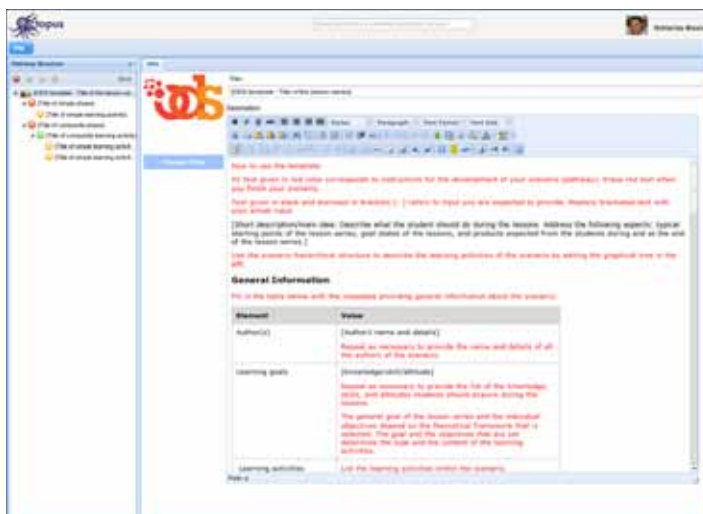
2.2 Creating a new pathway from an existing template

You are now able to see the available templates in the 'Example Scenarios of ODS' workspace. There is only one template available, which is essentially based on the actual template that the ODS project has elaborated to enable the creation of scenarios in a general way that could accommodate any pedagogical approach. Let us use this template to develop a new scenario. We will use the material for the scenario presented in Annex B entitled 'The Design Challenge'. Of course, you are free to work out your own scenario when following this guide.

To start creating the new pathway using the ODS template, click on the small button marked with a small arrowhead pointing downwards, on the right of the template title, to show the pop-up menu depicted in the screenshot below. Select the 'Use this Template' item on the pop-up menu.

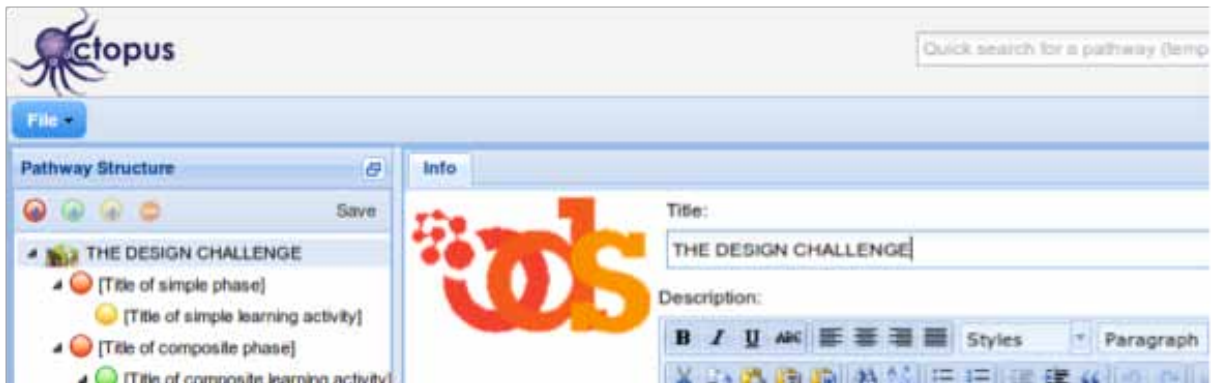


A new pathway is created and the page for editing this new pathway is presented as shown in the screenshot below. On the left side of the page you can see a graphical representation of the hierarchical structure of the pathway (its phases, depicted as red-bulleted items, its composite activities depicted as green-bulleted items and its learning activities depicted as yellow-bulleted items). On the 'info' pane on the middle of the page you can see the title and the description of the selected item in the hierarchy on the left. You are now able to edit this information presented on the 'info' pane.



2.3 Editing the new pathway

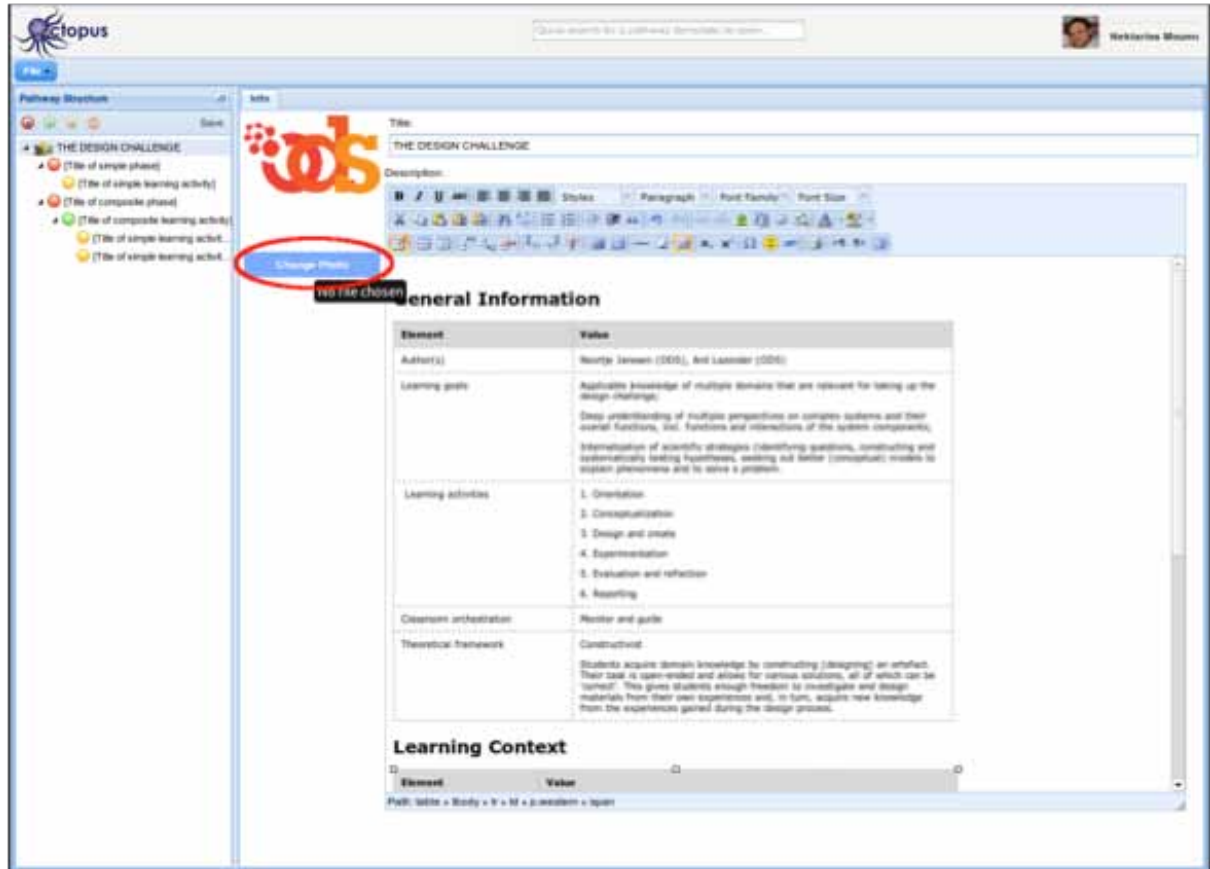
To start with, let us change the title of the new pathway. Be sure that the item representing the whole pathway is selected on the tree view on the left. Then, click on the Title field and change the title to "THE DESIGN CHALLENGE". Notice that the tree view on the left changes to show the new pathway title.



Now, go no to change the description under the title field. The description field supports a simple WYSIWYG editor that allows you to create tables, format the text you enter, change the paragraph justification, and create bulleted or numbered lists and many more. In the following screenshot you can see how the description has been changed to present general information and the learning context within which THE DESIGN CHALLENGE SCENARIO is to be implemented.



Let us see now how you could change the icon of the pathway. To do this, you first have to click on the 'Change Photo' button as shown in the screenshot below:



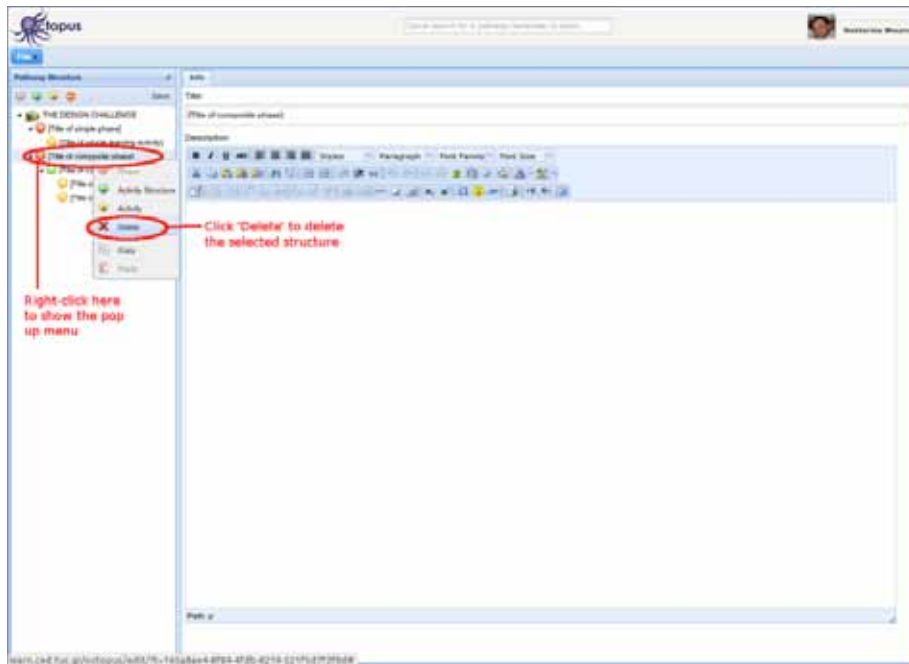
Then, a file dialogue opens (see next screenshot) so that you could browse on your local drive and locate an image to be used as your pathway's icon. Select the desired image and click 'Open'. After selecting the image you want, you can see it in your pathway as shown below. You can change it again whenever you want.

2.4 Editing the learning activities of a pathway

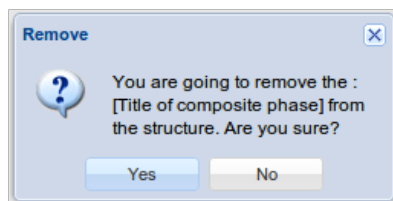
Having finished with the information that refer to the new pathway as a whole, we are now ready to describe how the pathway is to be implemented in terms of the specific learning activities to be done by students. Our example scenario consists of six learning activities as described in Annex B of this document:

1. Orientation
2. Conceptualization
3. Design and create
4. Experimentation
5. Evaluation and reflection
6. Reporting

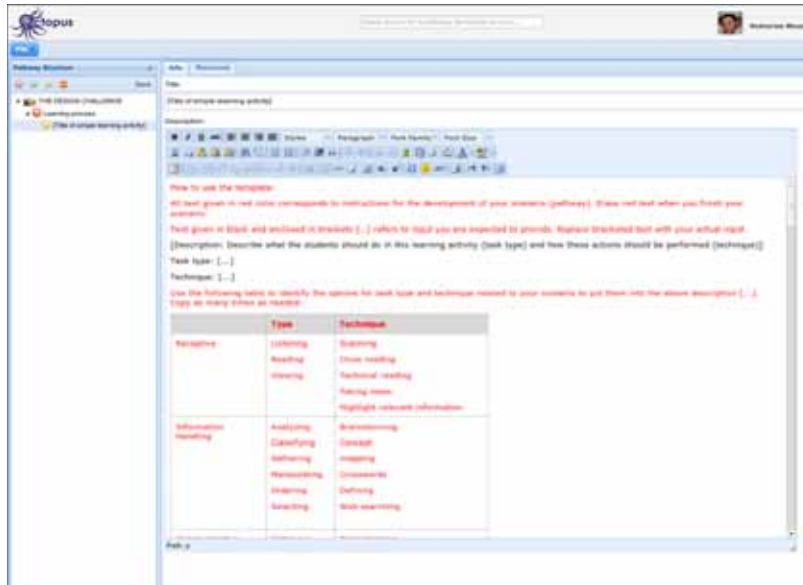
All these activities are simple activities without further structure underneath. Consequently, we would first delete the structures offered by the ODS template that are intended for the description of composite activities. This is shown in the screenshot below: First right-click on the phase that contains the composite activity (green-bulleted item) and then select 'Delete' in the pop-up menu.



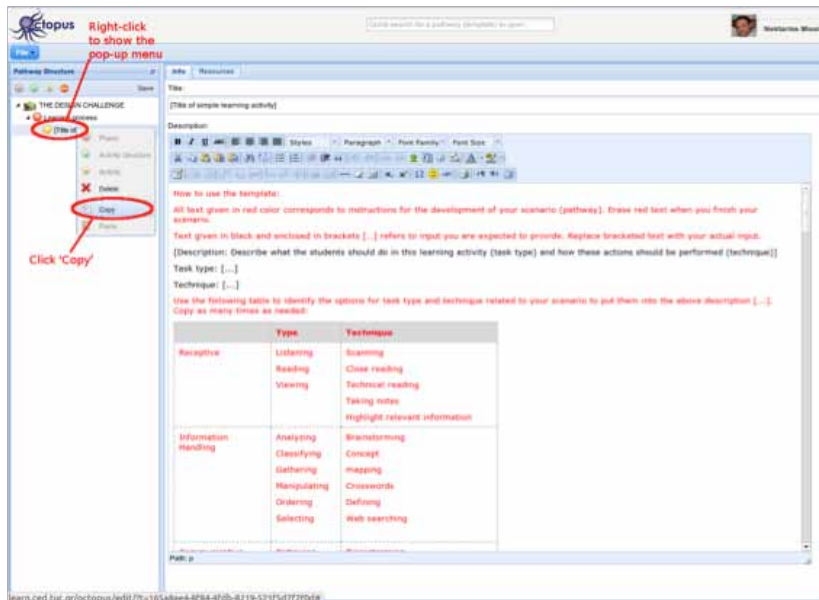
Click yes in the confirmation dialog box that appears next:



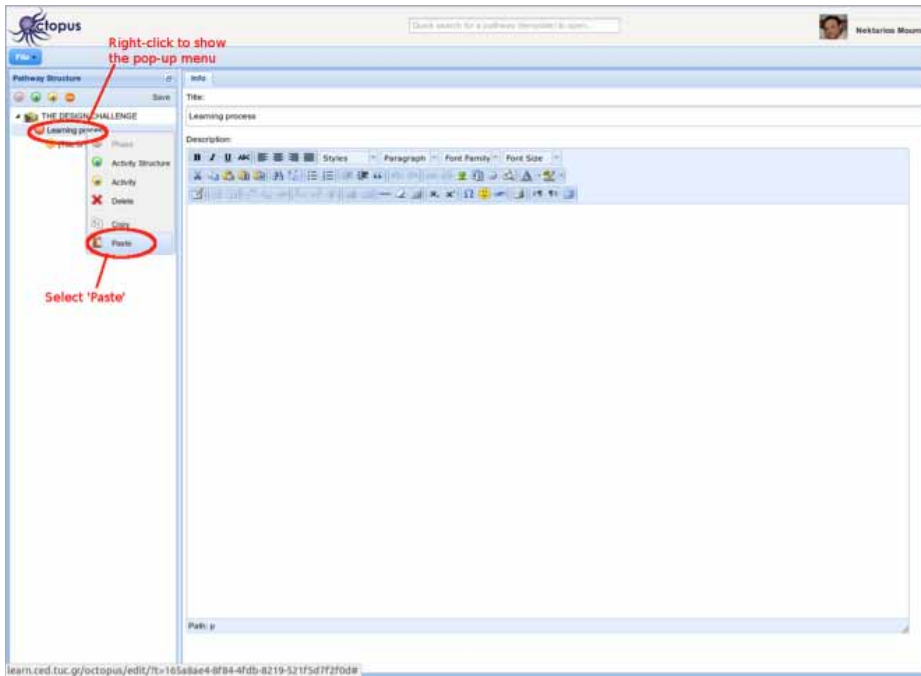
You should see a structure like the one depicted in the following screenshot:



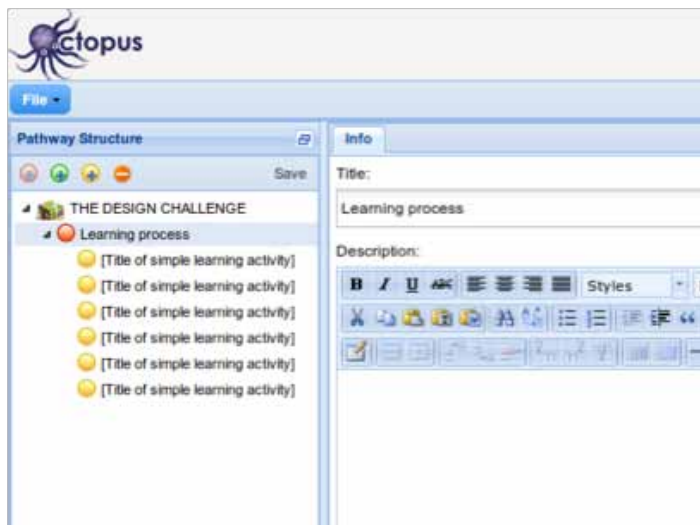
Now we are ready to create the six learning activities in our scenario. To facilitate our work we would first copy the one learning activity of the scenario so that we have six learning activities and then start editing each one of them. To copy a learning activity, you right-click on it on the tree view on the left and you select 'Copy' in the pop-up menu.



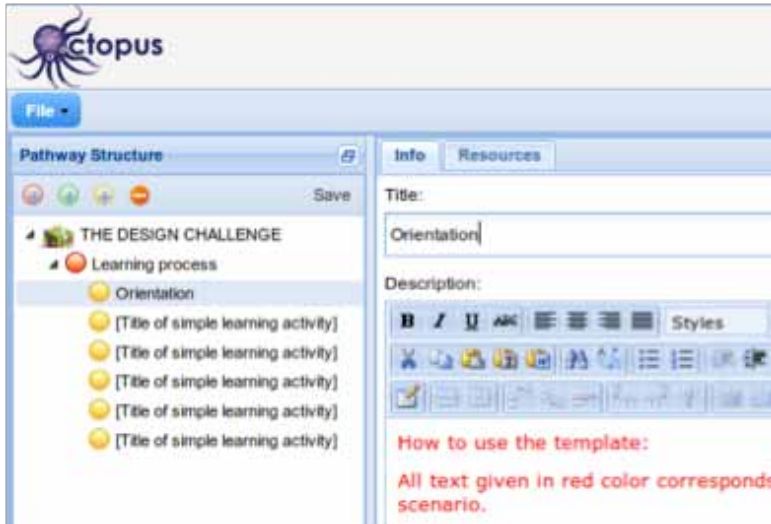
Then you could right-click wherever you want to paste it and select the 'Paste' option on the pop-up menu as shown in the next screenshot.



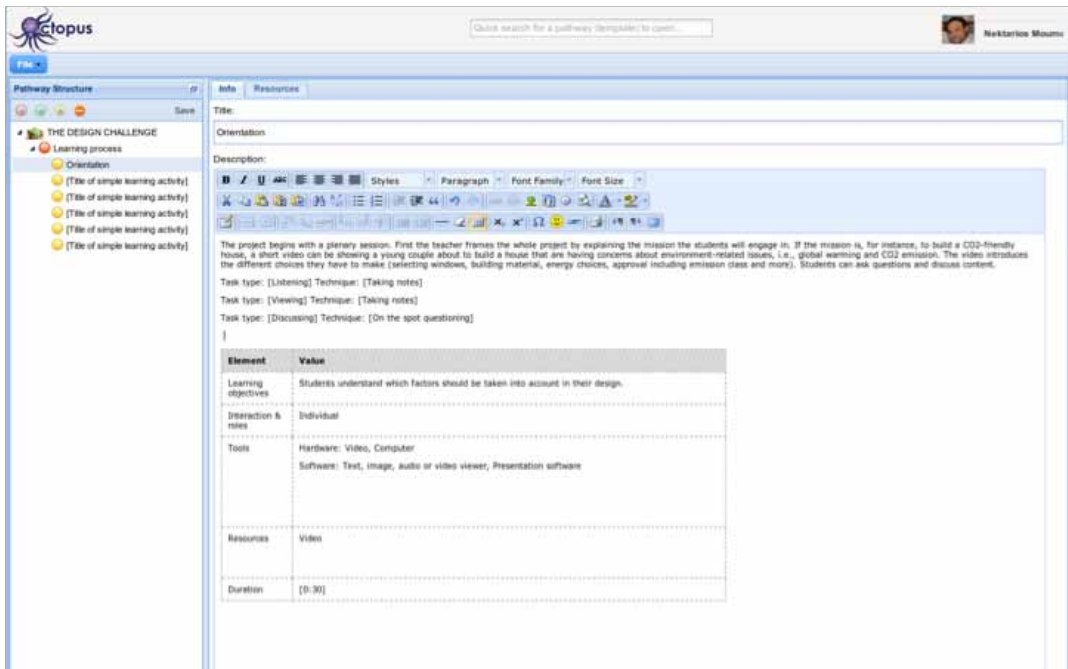
After repeating five times the above copy-paste process, you will have a structure like the one depicted in the following screenshot:



Now, you could start editing one-by-one the learning activities. First you enter the title of the first learning activity (Orientation):



Then, you provide a description for this learning activity as shown in the following screenshot:



You continue with the second learning activity (Conceptualization):

The screenshot shows the Octopus LMS interface. On the left, the 'Pathway Structure' panel lists the learning process steps: Orientation, Conceptualization, Design and create, Experimentation, Evaluation and reflection, and Reporting. The 'Conceptualization' step is selected. The main area displays the details for this activity, including a title, description, task types, and a table of elements and values.

Title: Conceptualization

Description: Here the students will try to identify the different concepts involved in the mission. For instance, what is CO₂, how is it produced, what types of activities in the house can produce it? What is energy, and what is the relation between energy and CO₂? The students will try to link the different elements and concepts together and construct hypotheses that they could investigate. Students will come back to refine their conceptual models in the course of the mission.

Task type: [Gathering] Technique: [Web searching]
Task type: [Selecting] Technique: [Web searching]
Task type: [Creating] Technique: [Modeling]

Element	Value
Learning objectives	Students understand different domain concepts and how they are related. Students are able to construct hypotheses
Interaction & roles	Interaction: Collaboration - small group Rules: Group leader, group participants
Tools	Hardware: Computer Software: Modeling software, mind mapping software
Resources	Application, text
Duration	[00:50]

You continue with the rest of the learning activities and finally you have all six learning activities:

The screenshot shows the Octopus LMS interface with the 'Reporting' learning activity selected. The main area displays the details for this activity, including a title, description, task type, and a table of elements and values.

Title: Reporting

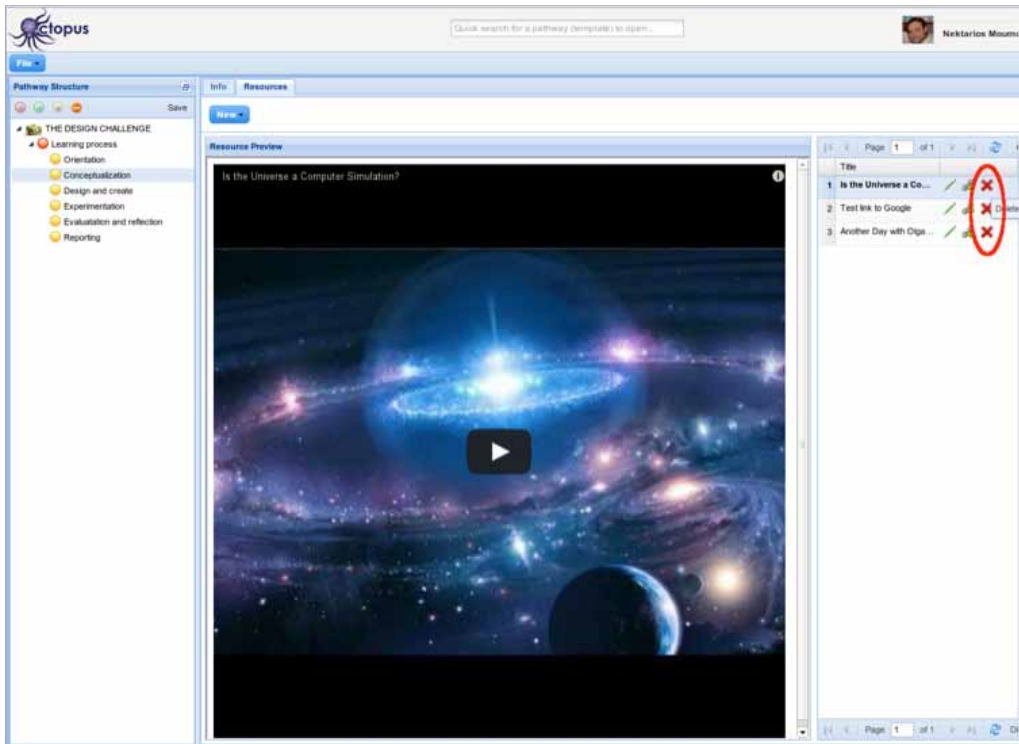
Description: Students will work to get an overview of their accomplishments and prepare a presentation to the class and the teacher.

Task type: [Presenting] Technique: [none]

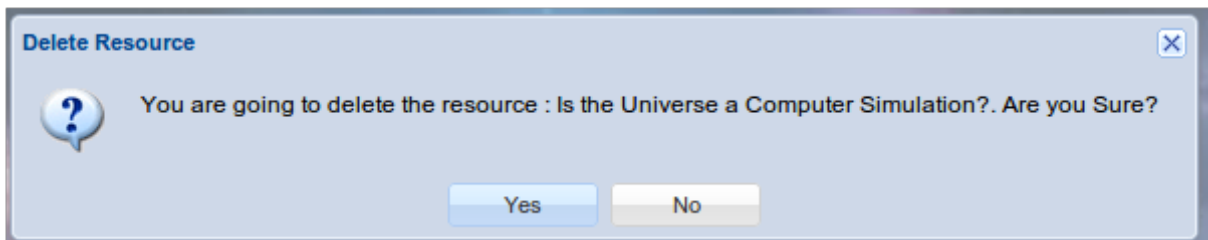
Element	Value
Learning objectives	Students can summarize their findings Students can present their findings to their class.
Interaction & roles	Interaction: Collaboration (small group); Collaboration: class-based Rules: Group leader, group participant
Tools	Hardware: computer, projector Software: Presentation software
Resources	
Duration	[00:50]

2.5 Enriching learning activities with resources

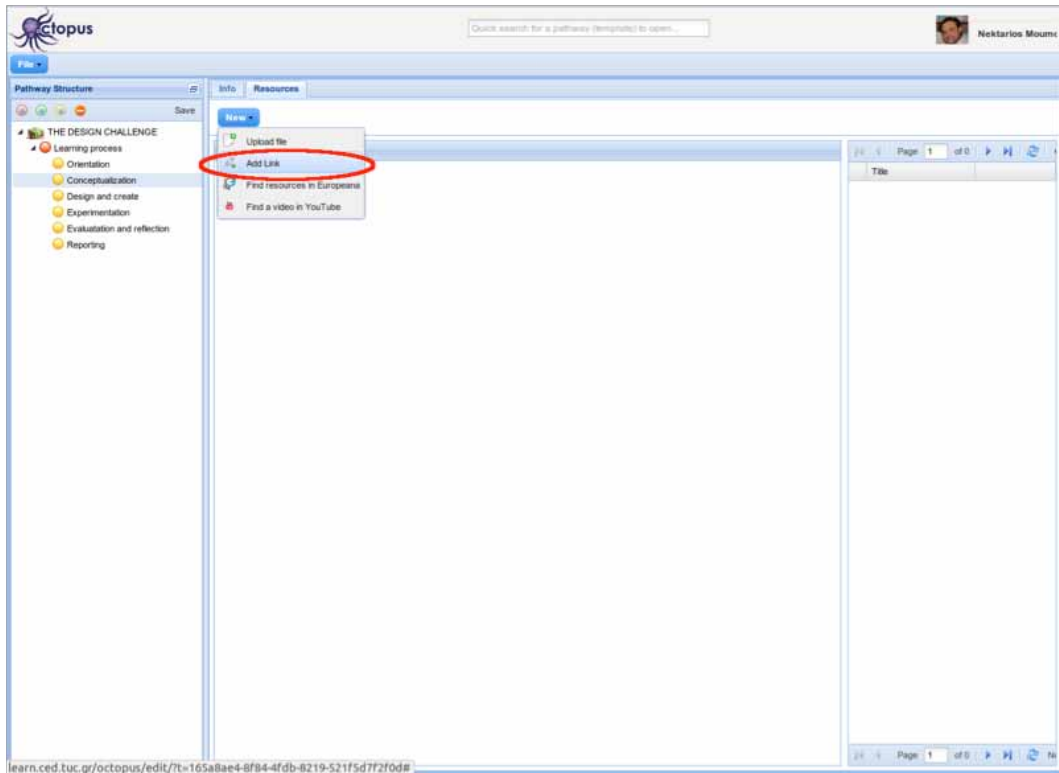
Now, it's time to see how you could enrich the learning activities of your scenario with resources, i.e. digital content that could be used during their implementation by the students. Let us assume that you want to enrich the second learning activity with a new resource. Select the learning activity by clicking on its node in the tree view on the left. Then select the 'Resources' tab on the main page pane. Initially you could see a list of resources that have been defined in the template, as examples. Delete them one-by-one by clicking on the red X's.



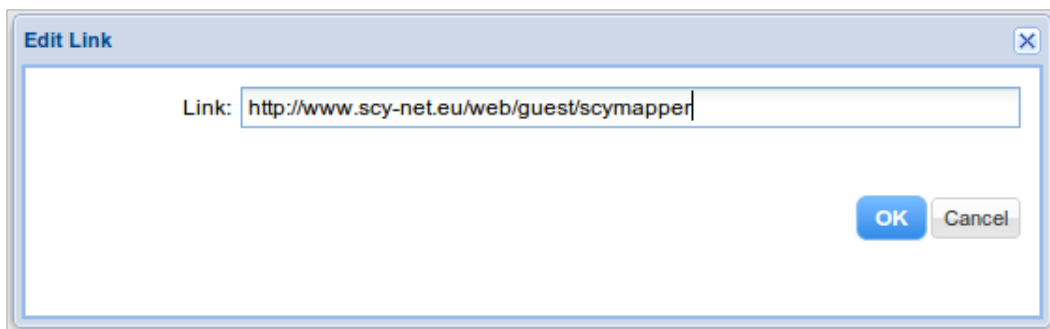
Each time, you have to confirm you delete action by clicking 'Yes' on the corresponding dialogue box:



After deleting all the irrelevant resources, press the 'New' blue button and select the 'Add Link' option in the menu that shows up. We assume here that the resource that we will attach to the "Conceptualization" learning activity is a web page. In case you want to upload a file from your local drive or find digital content from external sources (Europeana, YouTube), you just have to select the corresponding options in the menu.



Assuming that you selected to add a link, the next dialogue box prompts you to provide the link that points to the resource you want to add in the learning activity:

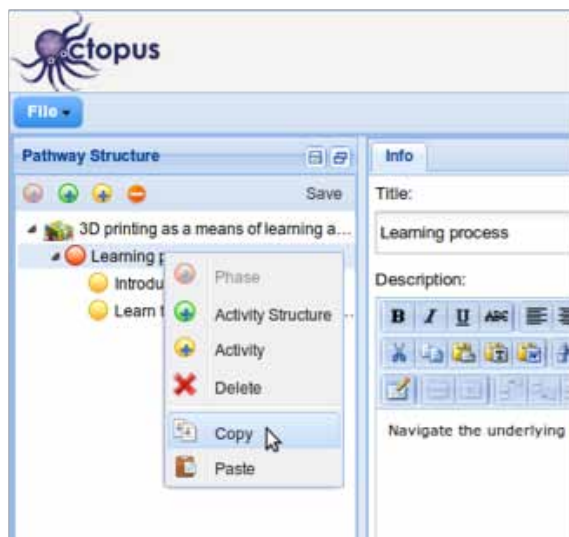


Give the link and click 'OK'. A new dialogue box shows up so that you could provide more information about the resource like its title, the time needed for students to consume the resource and a textual description:

After you finish editing this information, click 'Save'. You are able now to see that the new resource has been added in the list of the resources for the selected learning activity. Furthermore, a preview of the resource is shown in the main pane of the page. Following the same process, you could enrich your pathway with all the resources that are necessary for the implementation of each one of its learning activities. In the following sections we will see that it is also possible to enrich with resources pathways that are created by other Octopus users. Finally, you may share your own pathways within a Workspace and enable other users to enrich them with resources.

3. Reusing parts of a pathway

Octopus supports drag-and-drop reorganization and reuse of activities and activity structures. Within a pathway you could drag the node to be moved and drop it at the point you want to paste it. You could also copy/paste nodes within a pathway. This can be done with the pop-up menu shown when right-clicking on a node.

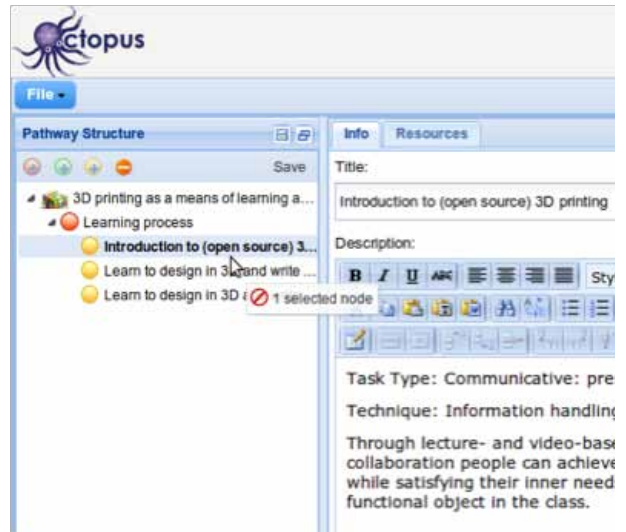


To reuse nodes from other pathways (or templates) you have to open the "Copy structure" pane, find the scenario containing the structure to be copied and then drag-and-drop it to the desired location or copy/paste it. This process is demonstrated in the following screenshots:

3.1 Copy/paste within the same scenario

To copy an activity, you first right-click on it and the pop-up menu shows up. Then select the menu item "Copy". Then we right-click on the node where we want to paste the copied activity and select "Paste" in the pop up menu.

The structure is copied in the new position:

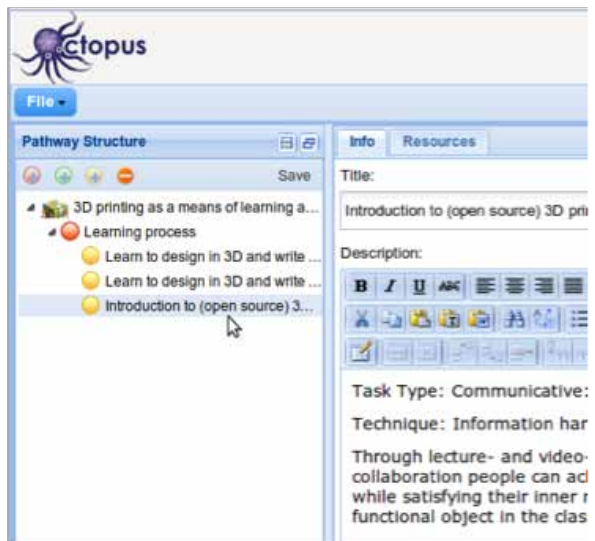
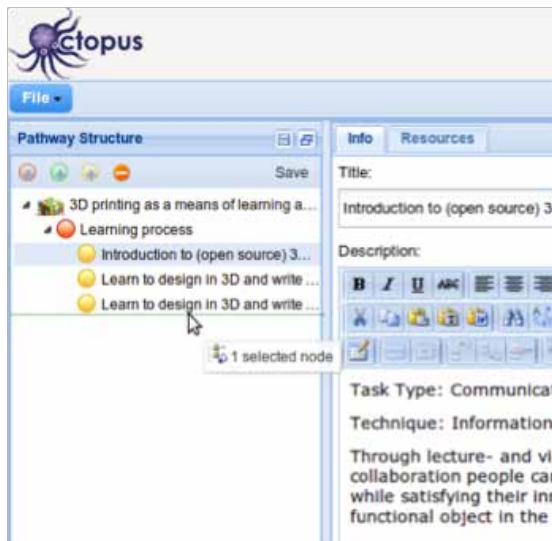


3.2 Drag & drop within the same scenario

First we select a learning activity within a pathway and start dragging it.

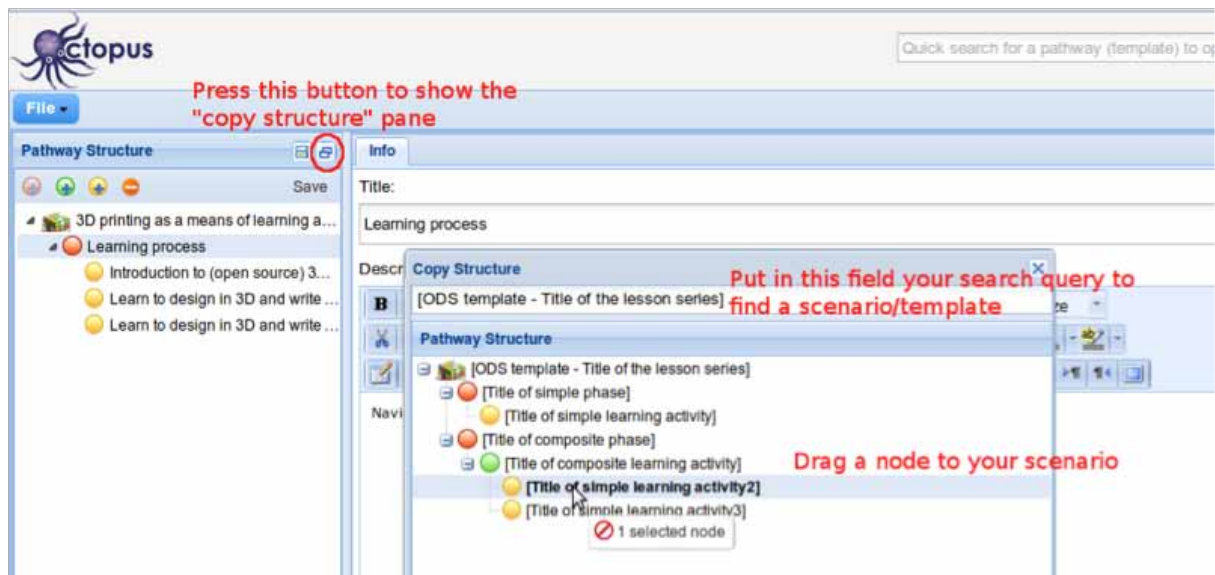
Then we drop it to the desired location:

The new structure of the pathway contains the activity moved to the new position:

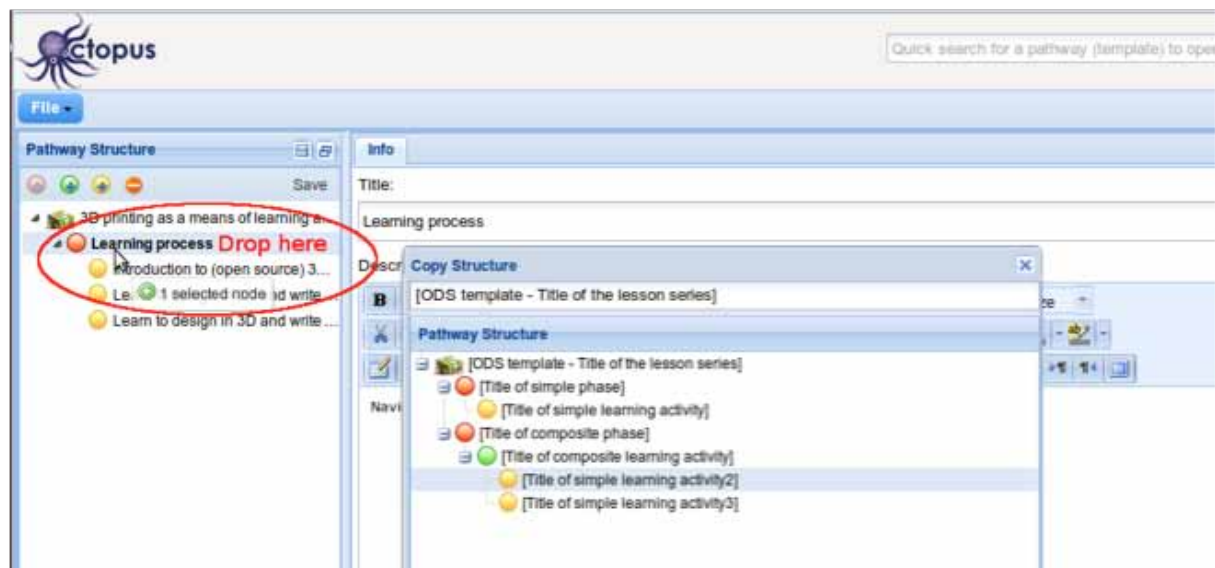


3.3 Reusing activities and activity structures from other scenarios / templates

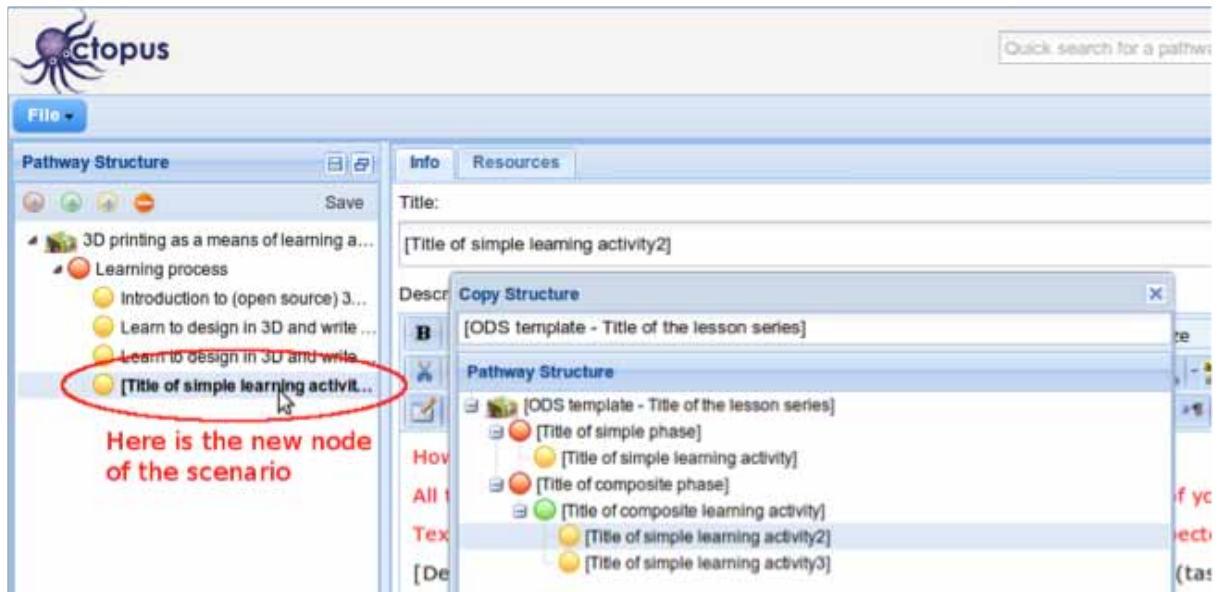
Finally, let us see how structures from other pathways/templates could be reused in the scenario that we are editing: First open the "Copy Structure" pane, find a scenario/template to copy from and then select the structure to drag to the initial pathway:



Drop at the node of your scenario where the structure should be placed.



Finally, the new node is shown in your pathway:



3.4 Copy/paste parts of another pathway

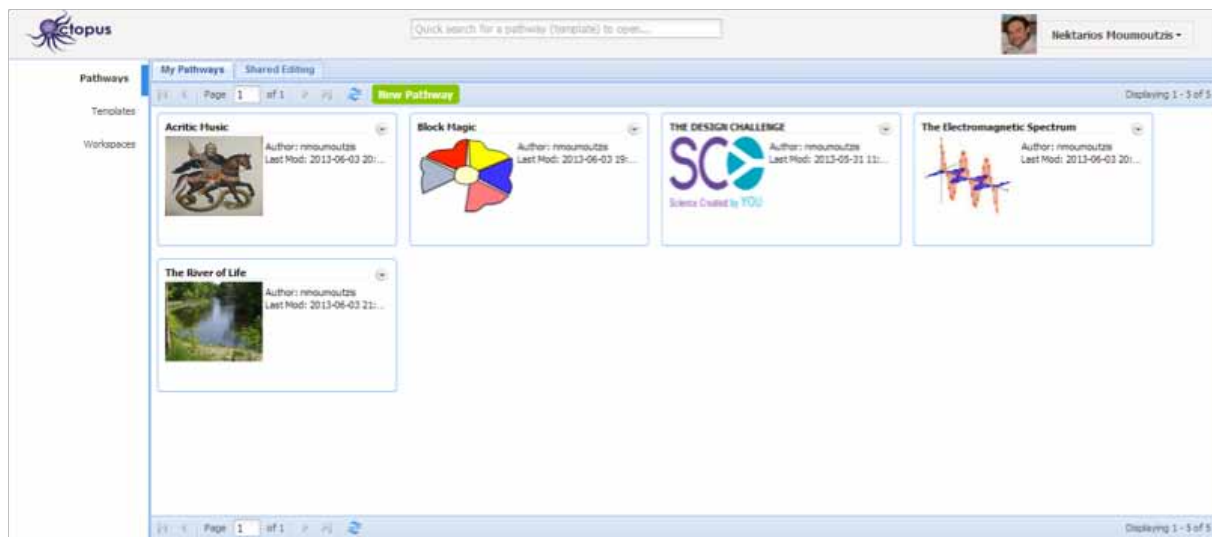
Use the "Copy structure" pane to copy a node and paste it in the pathway you are editing just like you paste structure from the same pathway (see description of copy 4. Access rights to scenarios /paste within the same pathway).

4. Creation and management of workspaces

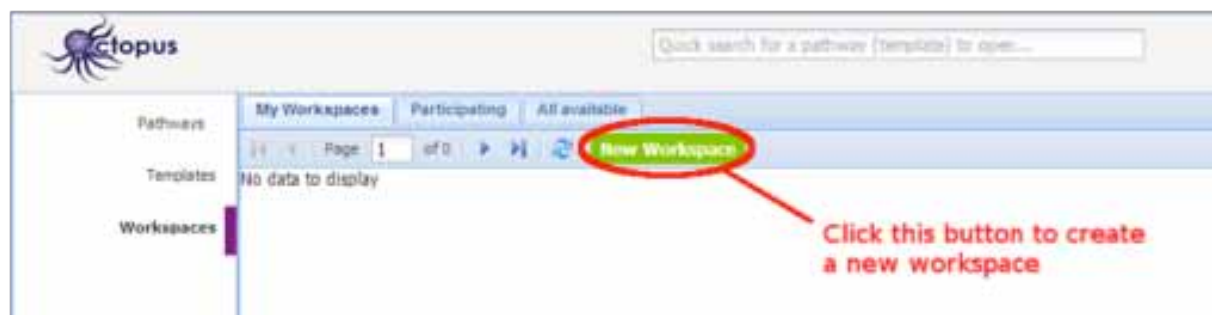
As already presented, a workspace in Octopus offers a way of sharing pathways and templates among a group of users, the members of the workspace. All Octopus users are able to join other workspaces or even create and manage their own workspaces. Workspaces are distinguished into public and private ones. Public workspaces are visible to all Octopus users so that they can send a join request. Private workspaces are visible only to their members. The only way to join a private workspace is through the workspace owner which is able to add and remove members to the workspace. As soon as the owner of the workspace adds a user to it, the user is able to see the workspace and its contents through the Workspace view of his/her personal page. Let us see now in more detail how you could create a workspace and how you could manage its members and contents.

4.1 Creation of a workspace

Let us assume that you have created a number of pathways that you want to share with other users through a workspace. The following screenshot depicts your Pathway view with four pathways already created.



The first thing you have to do to create the new workspace is go to the Workspaces view by clicking on the corresponding item in the views' list on the left of your personal page. Then, click the 'New Workspace' button as shown in the screenshot below.



After clicking the 'New Workspace' button, a dialogue box shows up and prompts you to provide the necessary information in order to create the new workspace. In the screenshot below you may see this dialogue box filled with information including the new workspace name, its description and icon. Let us assume that in this workspace you want to share pedagogical scenarios and lesson plans that refer to Open Discovery Space pilot activities in Greece. A workspace could be 'Open' to any user to view its contents and request to join, or 'Private', i.e. accessible only by its creator. The default option is 'Open' which is the option we want in our example so that every user is able to join.

Create a new Workspace

Workspace Name:
ODS Pilots in Greece

Description:
This workspace gathers scenarios and lesson plans that refer to ODS pilot activities in Greece.

Change Photo

Privacy
☒ Open
Anyone can see the group and may access it after request.
☐ Private
Only Creator may access it.

Click 'Save changes' to save and then 'Close'

Save changes

Close

After you provide all the necessary information, click 'Save changes' to store the information for the new workspace and then 'Close' to close the dialogue box. The workspace has been created and you can see it represented as a box within your workspace under the 'My Workspaces' tab of the Workspaces view of your personal page as depicted below.

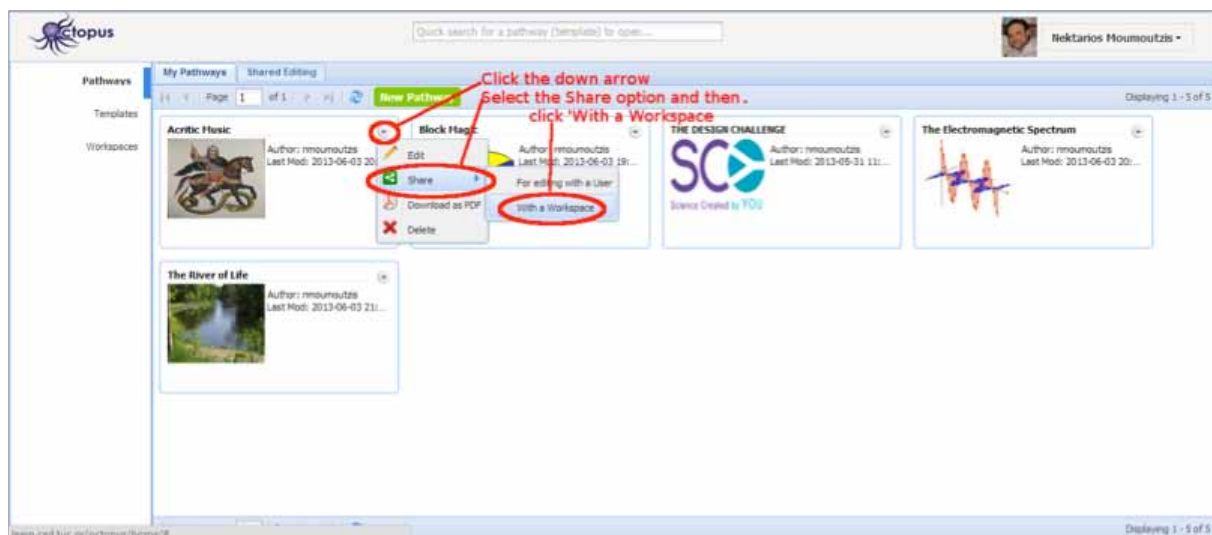


4.2. Approve requests of users to join your workspace

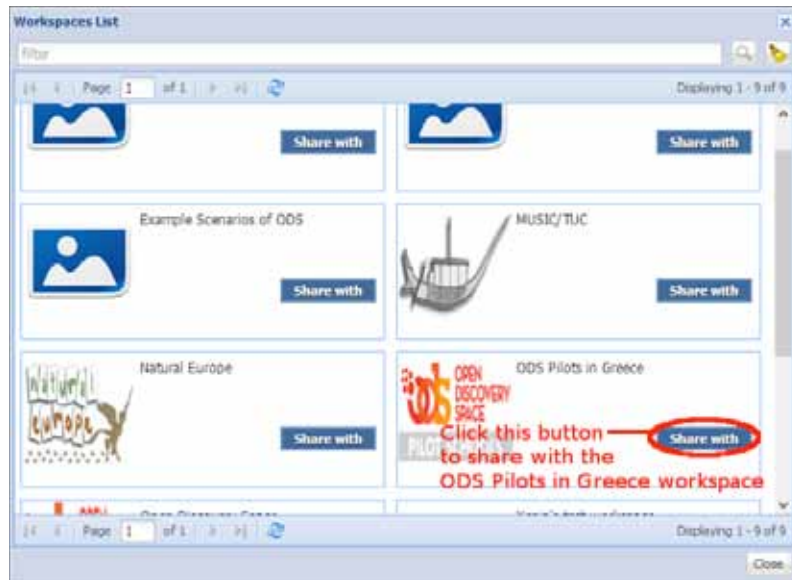
Being an 'Open' your newly created workspace is visible to all users so that they can request to join it. After sending a request to join, you are, as the creator of the workspace, able to review the pending requests and approve or reject them. For a description of this process please refer to section 2.1 of this user guide. In that section we have guided you through the process of requesting to join a workspace in order to be able to use a template for creating your first pathway. We have seen how the creator of that workspace was able to review and approve your request. Now, having created your own workspace, you are the one who manages the join requests of other users.

4.3. Adding/Browsing templates and pathways to a workspace

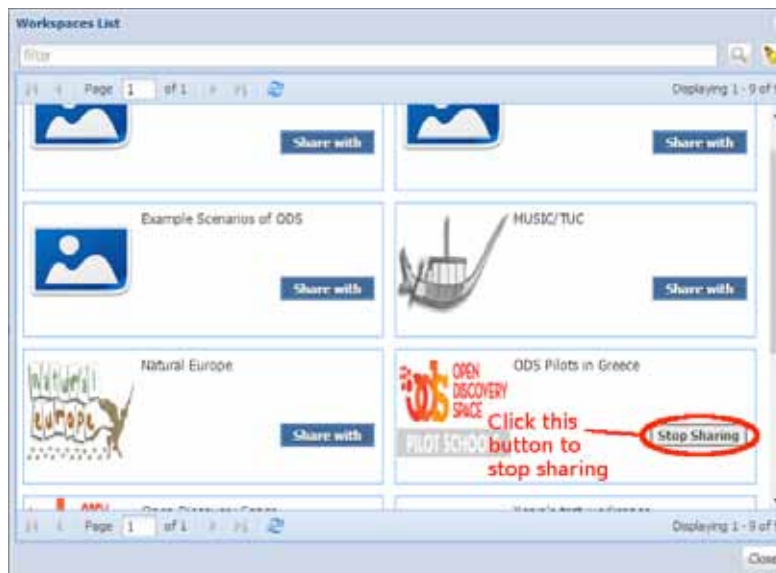
Let us see now how you could share your pathways within the new workspace you have created. Switch to the Pathways view in your personal page as shown below. Using the drop down menu of a pathway you may select to share it with a workspace (see below).



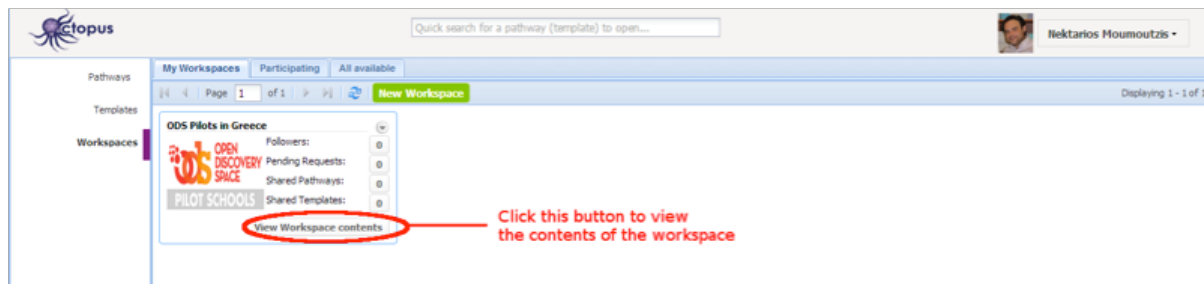
You may select one or more workspaces with which to share your pathway as shown below. In the dialog box you can see a list of the workspaces. Click on the 'Share with' button to share the selected pathway with a specific workspace



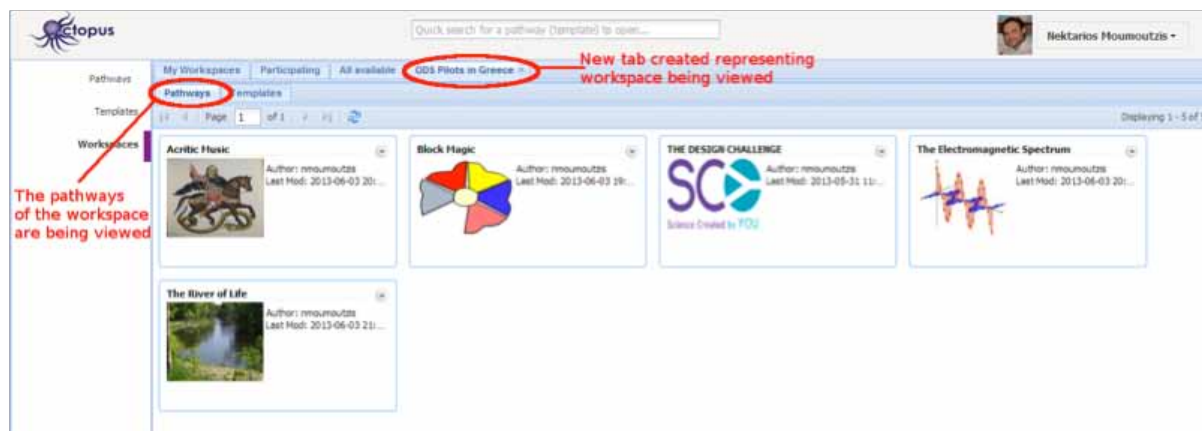
As soon as you select a workspace to share your pathway the corresponding 'Share with' button changes to 'Stop sharing' to offer to you the capability to stop sharing the pathway in that workspace, if you want:



Follow the previous steps for all the pathways that you want to share through the new workspace. After you finish, go back to the Workspaces view of your personal page and click on the 'View Workspace contents' button that corresponds to the new workspace as shown below:

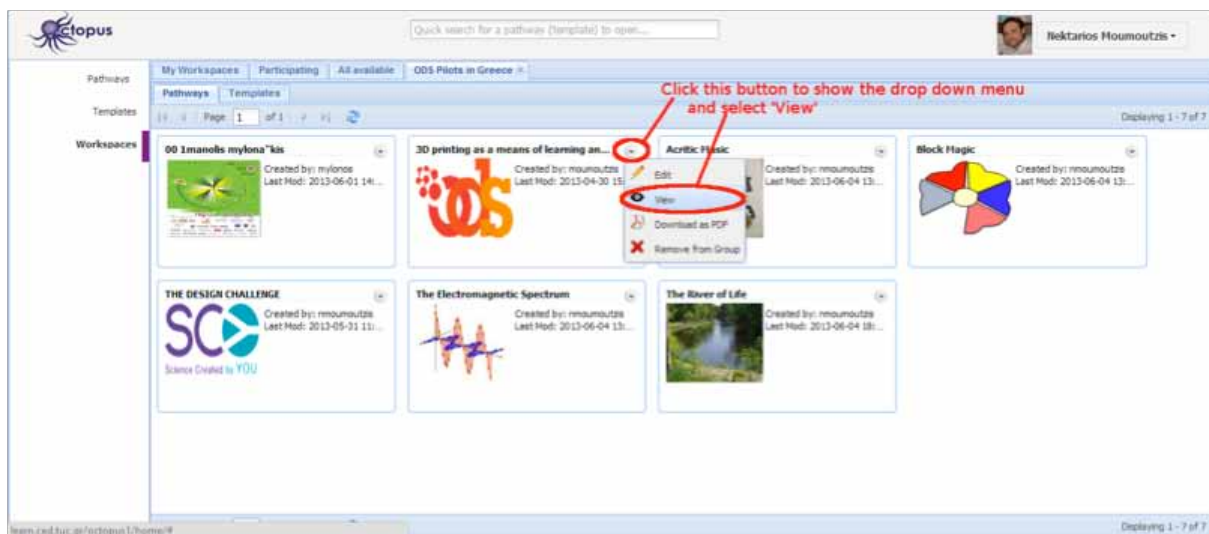


As soon as you click that button, a new tab is created within the Workspace view that represents the new workspace and the pathways shared through this workspace is shown. If you share templates as well, you may see them at the 'Templates' tab. The process is exactly the same as it is for Pathways; the only difference is that you have to go the Templates view of your personal page to find the templates that you want to share.

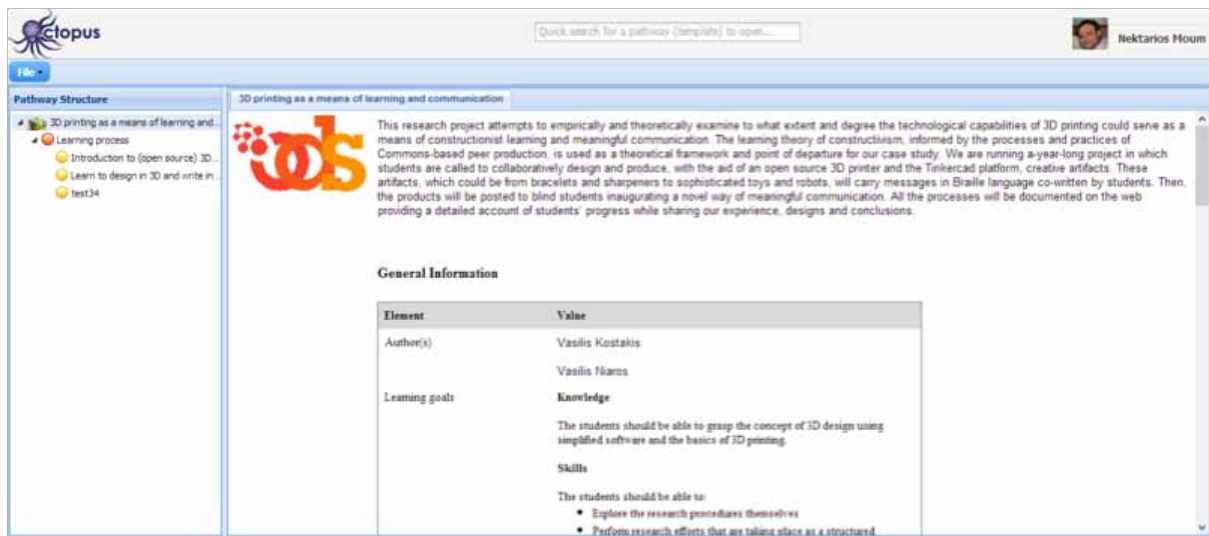


5. Exploiting workspaces to share pathways and enable other users to enrich them with resources

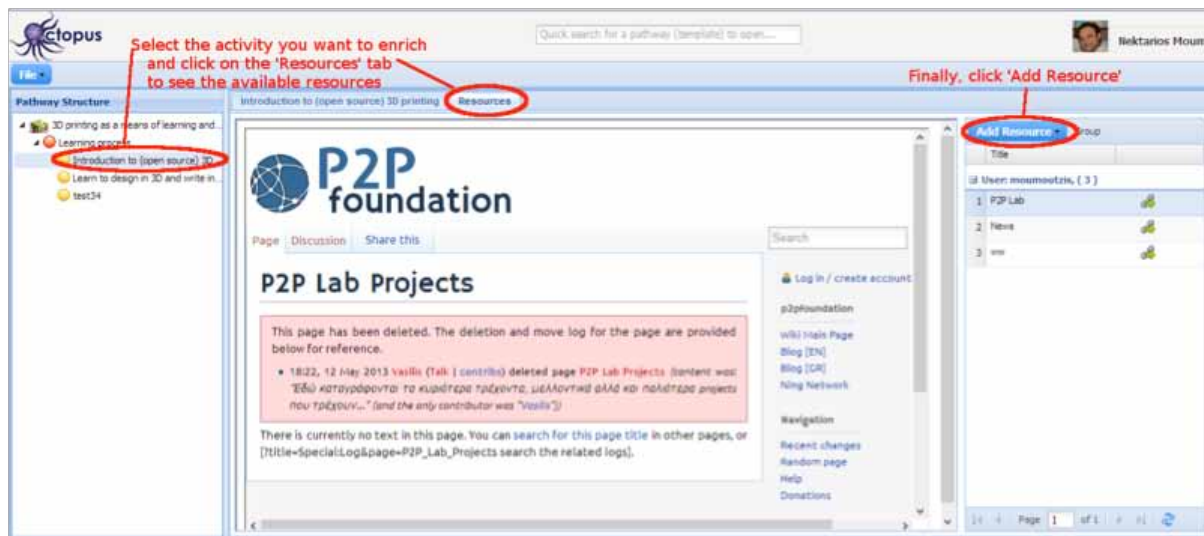
Through workspaces, it is possible to share pathways with other users so that non-owners of pathways are able to view them and enrich them with resources attached to their learning activities. When accessing a workspace, a user is able to select a pathway to view as shown in the screenshot below:



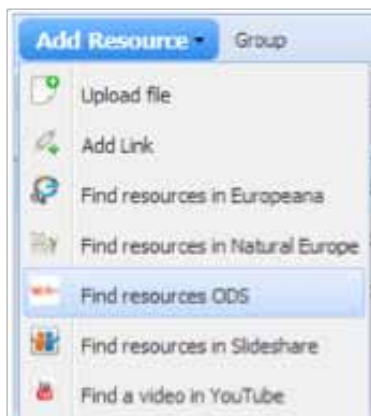
By selecting to view a shared pathway, you are able to see its contents without changing them. You may, however, enrich the learning activities of the viewed pathway with additional resources. Let us see how. The screenshot below shows how the previously selected pathway is presented in view mode.



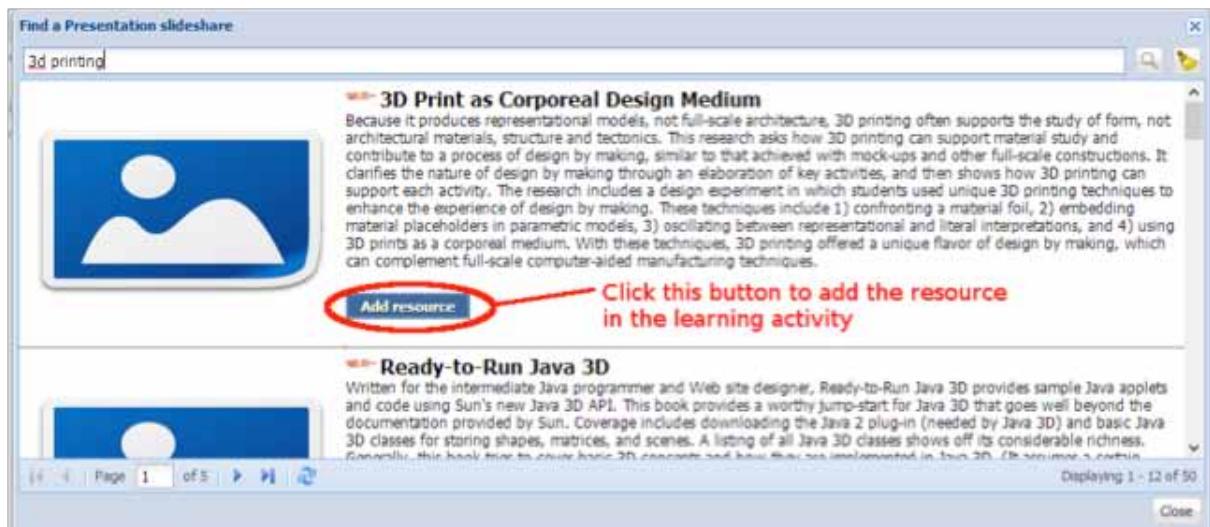
To start enriching its learning activities with additional resources, first select the activity you want to enrich and then go to the 'Resources' tab of this activity and press the 'Add Resource' button as shown in the screenshot below.



As soon as you click this button a drop down menu shows up with a list of the various options you have: You may upload a file from your local storage, add a link in the web of find a resource in various repositories and external content sites such as Europeana, Natural Europe repository, ODS repository, SlideShare or YouTube. Let us assume that you want to find a resource from the ODS repository. Click on 'Find resources ODS'.



A pop up dialogue box shows up where you can give your search keywords and the results that satisfy them are presented. Browse on the list of the resources shown and click the 'Add resource' button to add the desired resource(s) in the learning activity you are working on. When you finish, click the 'Close' button.



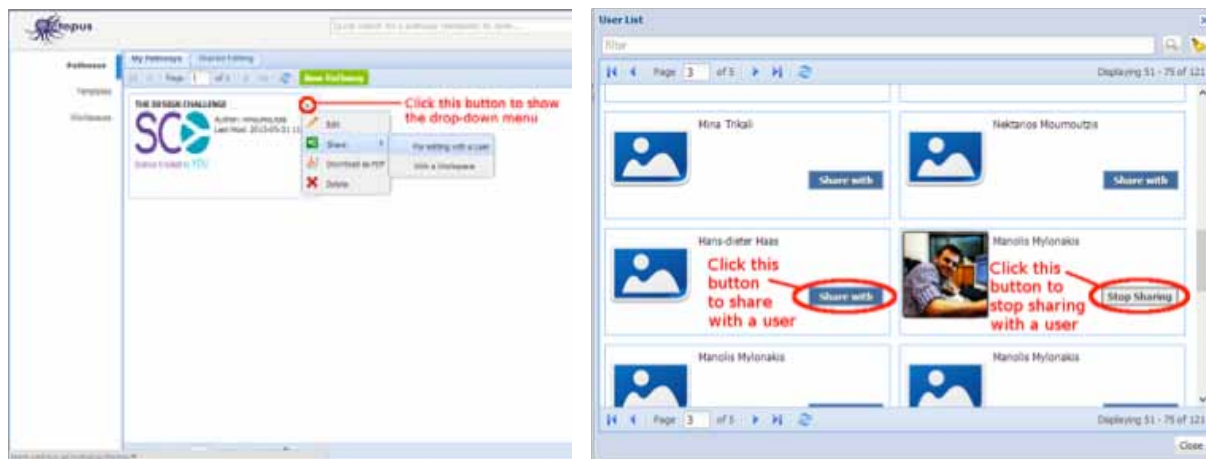
Now you should be able to see the new resource listed within the selected learning activity. To view the resource in the central view pane, click on its title.



You may proceed this way to add more resources or select another learning activity to enrich.

6. Shared editing of pathways

Sharing pathways through workspaces enables other users to view and enrich them with resources. There are cases, however, when you want to collaborate with other users to edit a specific pathway. In such a case, you are able to select the users that you want to have editing access to your pathways. First you go to your Personal Page using the drop down menu available through the button at the upper right part of Octopus labeled with your name. In your personal page you could browse your pathways, your templates and your workspaces. The pathways view is selected when you go to your personal page. Identify the pathway you want to share and click on the small circular button showing a downward arrowhead. A drop down menu is shown as depicted in the following screenshot.



A pop-up window shows up (see screenshot on the right) where you may browse through the set of users (see screenshot below). To share the pathway with a specific user, just click on 'Share with' button inside the box representing the user. As soon you click on this button, the user is able to edit your pathway. The button changes to 'Stop sharing'. In case you want to terminate sharing of your pathway with another user, you just click on the 'Stop sharing' button inside the box representing that user.

The list of pathways that have been shared for editing with you are shown in your Personal Page, at the Pathways view under the table 'Shared Editing' next to the 'My Pathways' tab.

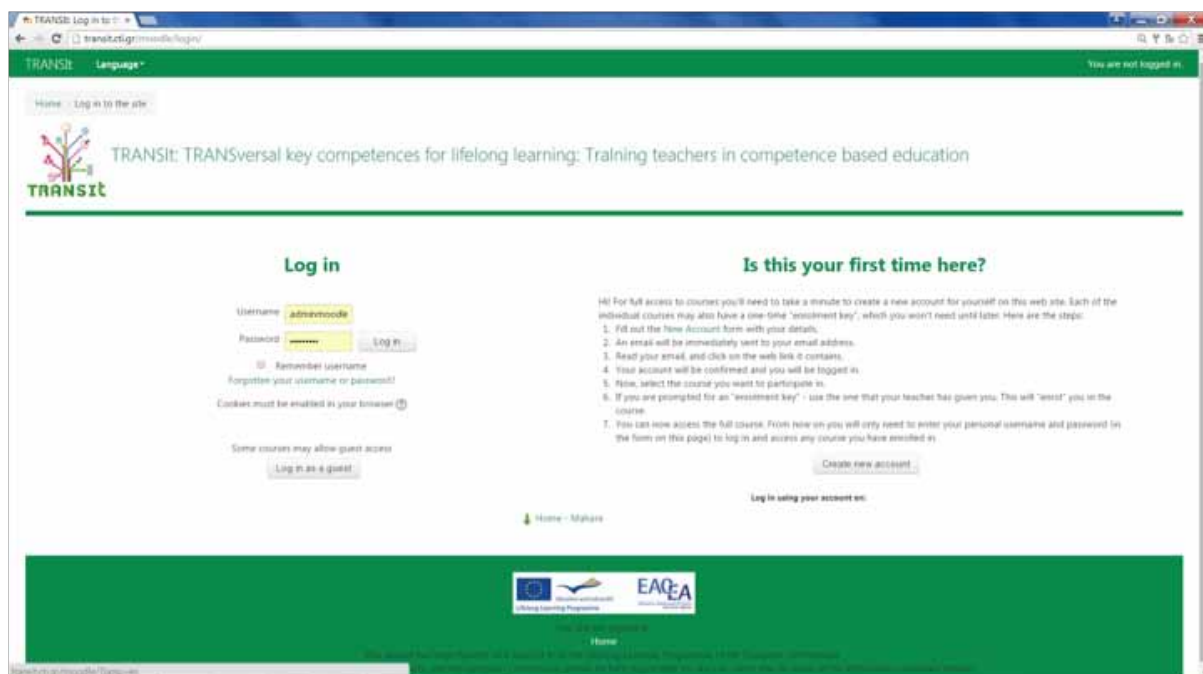
8.3 Example 3: TRANSit teacher training platform & ePortfolio tool

The entry point for the TRANSit teacher training platform is the TRANSit portal which is accessible at the link <http://transit.cti.gr/moodle/>. The TRANSit portal is meant to serve as a web based software platform for training modules and training content developed by the TRANSit project. It aims at covering needs regarding optimal teacher training on KCA issues and serving as the teacher's community infrastructure. The TRANSit portal is based on open source off the shelf software components that are integrated in order to provide a seamless user experience. The two major portal building blocks are Moodle which is utilized as the teacher training platform, and Mahara which serves as the platform that can be used by the involved teachers' students as an e-portfolio showcase.

Moodle and Mahara are integrated with each other and behave as a single portal infrastructure, as users enjoy a seamless experience when switching between the two platforms. Single Sign On, a shared look and feel along with similar navigation logic for both tools ensure that users do not feel a transition between software tools. Moodle is utilized as the portal's learning environment where teachers interact to produce, evaluate and understand knowledge content via sharing artifacts in the specific context. Mahara is used as the portal's e-portfolio environment. Teachers take a dual role, as they are direct e-portfolio users on one hand, but also serve as mentors that foster students to utilize the e-portfolio TRANSit module. School teachers use the TRANSit e-portfolio module in order to provide e-portfolio functionality to their students.

Login

Users gain access to the TRANSit portal through a login process. This is necessary so that a personalized experience is achieved for each user and in order to reduce spam. Guest login is available.



The screenshot shows a web browser window with the URL transit.cti.gr/moodle/login/. The page has a green header with the TRANSit logo and the text "TRANSit: TRANSversal key competences for lifelong learning: Training teachers in competence based education". Below the header, there are two main sections: "Log in" and "Is this your first time here?". The "Log in" section contains a form with fields for "Username" (filled with "admin@cti.gr") and "Password" (filled with "admin"), a "Log in" button, and links for "Remember username" and "Forgotten your username or password?". Below the form, it says "Cookies must be enabled in your browser" and "Some courses may allow guest access" with a "Log in as a guest" button. The "Is this your first time here?" section contains a list of steps for creating a new account and a "Create new account" button. At the bottom, there are logos for the European Union, the Ministry of Education and Religious Affairs, and the European Agency for External Cooperation in the Field of Education (EAQ-EA).

TRANSit login form

Sign up

There are two ways to create new TRANSit portal users.

New user creation by administrator

An administrator can create a new user through the “add new user” page which is available only for the administrator role. The administrator enters information such as username, password, name, role etc.

The screenshot shows the TRANSit administrator interface. The header includes the TRANSit logo and the text "TRANSit: TRANSversal key competencies for lifelong learning: Training teachers in competence-based education". The left sidebar contains a navigation menu with categories like "ADMINISTRATION" and "ANALYTICS". The main content area is titled "General" and contains various input fields for creating a new user, including "Username", "Email", "First name", "Last name", "Role", and "Password". There are also checkboxes for "Active" and "Admin" status.

New user screen, administrator mode

User self sign up

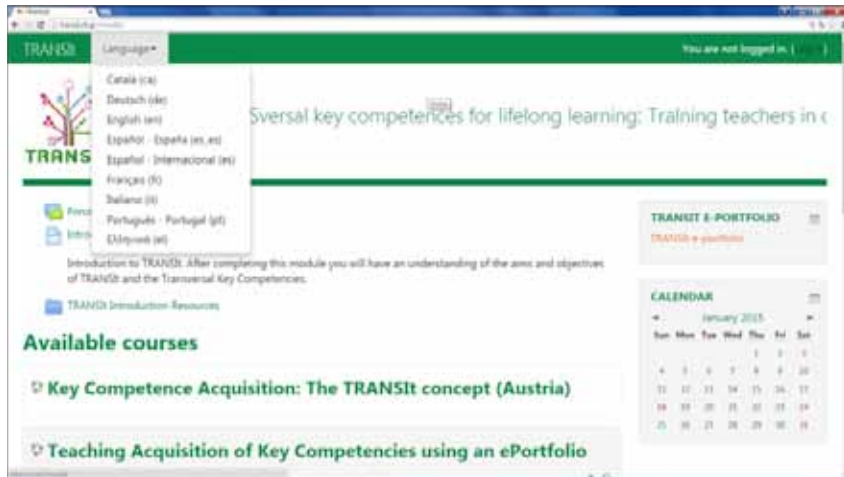
The email-based self-registration authentication method enables users to create their own accounts via the 'Create new account' button on the login page.

The screenshot shows the TRANSit self-registration sign up page. The header includes the TRANSit logo and the text "TRANSit: TRANSversal key competencies for lifelong learning: Training teachers in competence-based education". The main content area is titled "Choose your username and password" and contains input fields for "Username", "Email", "First name", "Last name", "Password", and "Confirm password". There is a "Create new account" button at the bottom.

Self registration sign up page

Languages

The portal supports a superset of all partner country languages regarding user interface and uploaded content. Language packs allow trouble free expansion to other languages if required. Automatic language detection is available, based on the user's browser language setting. One specific language can be selected as default. This setting is overridden by the user's browser setting. A user can change the displayed language. This setting also overrides the portal default language.



Available languages

Users, roles and permissions

The TRANSit learning environment follows a different role/permission scheme compared to the e-portfolio module, in order to meet different user role needs as the prior is aimed at teachers learning and the latter at student displaying and social networking.

Moodle: user roles

Regarding the learning environment, a role is a set of permissions that apply to it vertically. Roles are assigned to users in specific contexts. The combination of roles and context define what a user can and cannot do. Contexts form a hierarchy. Any role with a specific permission for one context inherits this permission to lower level contexts. Roles are defined and edited by the portal administrator, who can assign capabilities to roles. Users on a Moodle platform are always assigned one or more roles – again, just like in a real learning environment. Depending on one's role, one has certain privileges or permissions and is allowed to do (and see) more or fewer things on the platform and within a particular course – or has more duties.

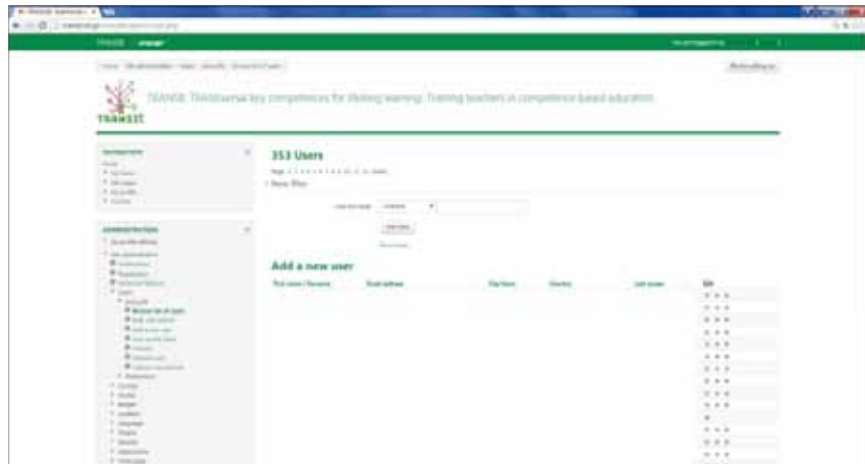
The top role in Moodle is called "administrator role". The person with this role can also install additional modules or plug-ins.

Users granted the "teacher role" have full editing rights for their courses and are in full control of the students enrolled in your course.

Learners are assigned the "student role". "Student role users cannot create or edit Moodle activities or items, and cannot access items hidden by a teacher. Also they do not have access to course reports or statistics.

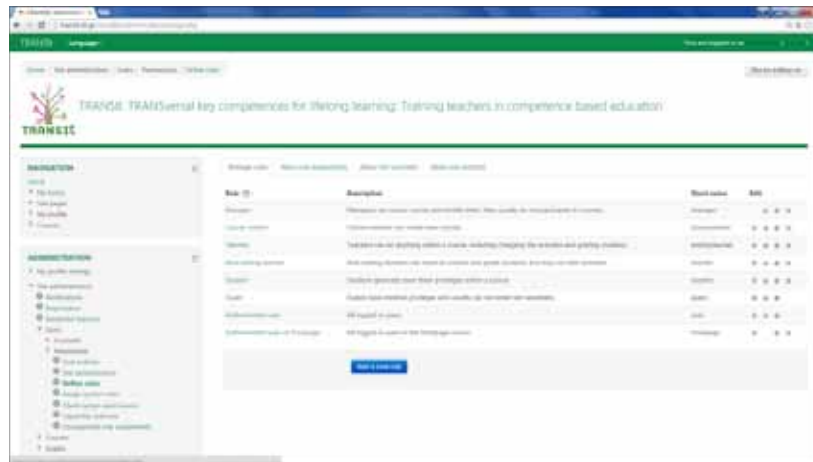
Mahara: user roles

The top role in Mahara is called "site administrator". The person with this role can also install additional modules or plug-ins, create new users and generally execute almost any task on the e-portfolio module.



Mahara user administration page

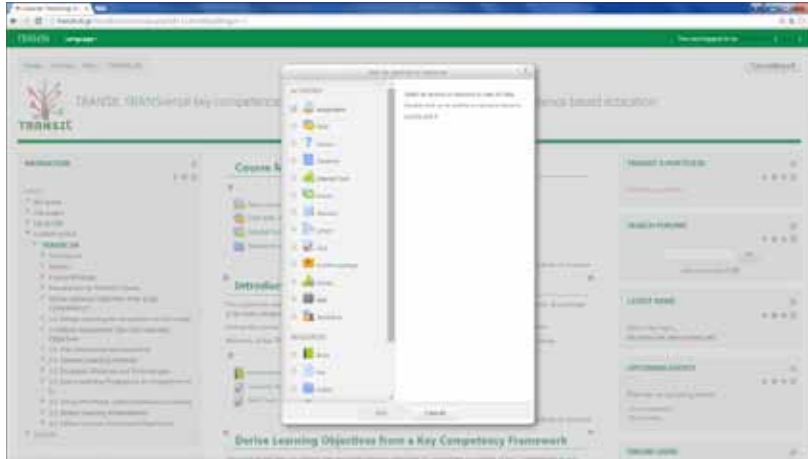
Learners are assigned the user role. They can use the e-portfolio functionality to showcase their artifacts, communicate and connect with other users, join groups etc.



Role creation and permission administration page

Content

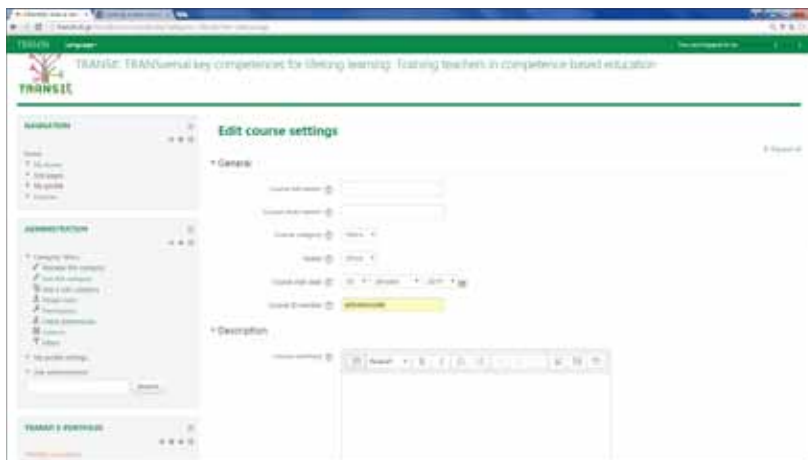
The TRANSit portal is capable of hosting a variety of content formats that are utilized to support teacher training by being added to courses. Content files can be presented as individual items or bundled in folders. Available file formats include pictures, documents, spreadsheets, audio/video files, folders, IMS formatted material, external urls, html files etc. Permissions regarding access to content are derived from role/context combination.



Available upload content types

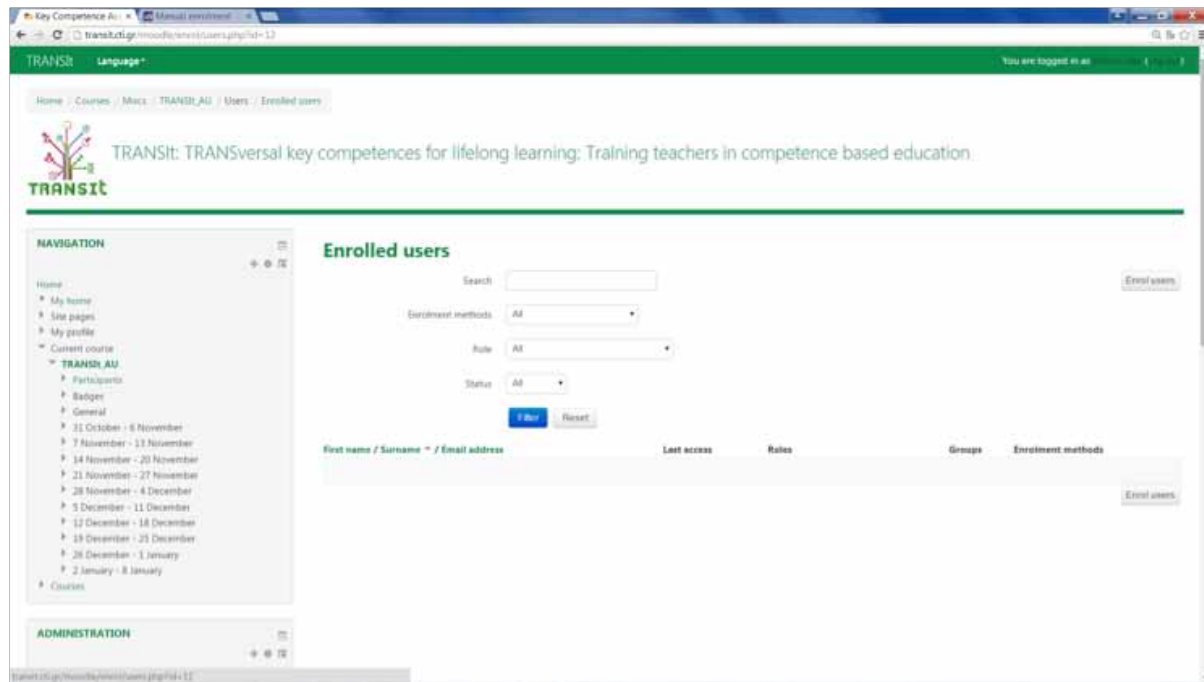
Courses

Courses serve as repositories for specific thematic areas. Essentially it is an area where a teacher places learning materials and activities such as assignments and quizzes for students to complete. Each course has a main page that is managed by the teacher. Various course layouts are available such as weekly format, topics format and social format.



Add new course page

Students can be enrolled manually by the teacher, automatically by the administrator, or they can be allowed to enroll themselves.



Enrolling users to a course

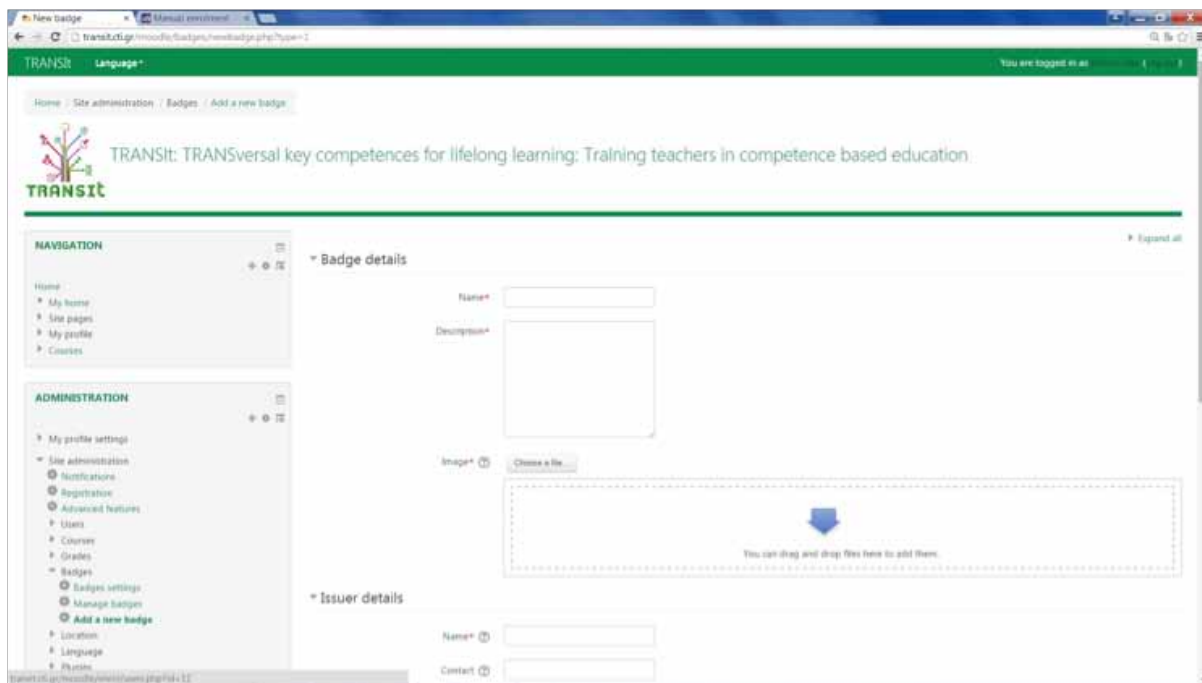
Courses are organized in categories, which can be added/deleted/edited/moved. Users enroll to course categories. Course categories can be nested because sub-categories are supported. For each course various attributes are editable such as a full and short name, course category, start/end dates, description, summary etc.

Workshop

Workshop displays similar functionality as activities, introducing peer assessment options. After submission there are two grades for a student: their own work and their peer assessments of other students' work. The submissions are assessed using a structured assessment form made by the course teacher and which facilitates multi-criteria assessment. Each participant gets two grades, one regarding how well they did on their assignment and another regarding how well they assessed their peers.

Badges

TRANSit offers badge functionality in a way totally compatible with Mozilla Open Badges. Badges created in the TRANSit portal can be displayed on the user's portal profile or can be published to their Open Badges backpack. There are two kinds of badges: TRANSit badges which are available portal-wide and are related to TRANSit wide activities such as finishing a set of courses and, course badges which are offered to users enrolled to a course and are related to achievements accomplished inside a course.



Badge creation page

Badges can be issued automatically upon an event (ie course completion, completion of a course set, assignment completion etc) or manually by a user that has been granted a badge issuing role. Badges can be set to expire after a specific expiration date set by the badge author. If the email address a user has for TRANSit is the same as their Open Badges email address, then they will be automatically connected and may choose to disconnect if they wish. If the email address a user has for TRANSit is not the same, then they can add the email address which will connect them to their backpack. They can then choose to “push” to their backpack badges which they have earned on TRANSit.

e-portfolio functionality

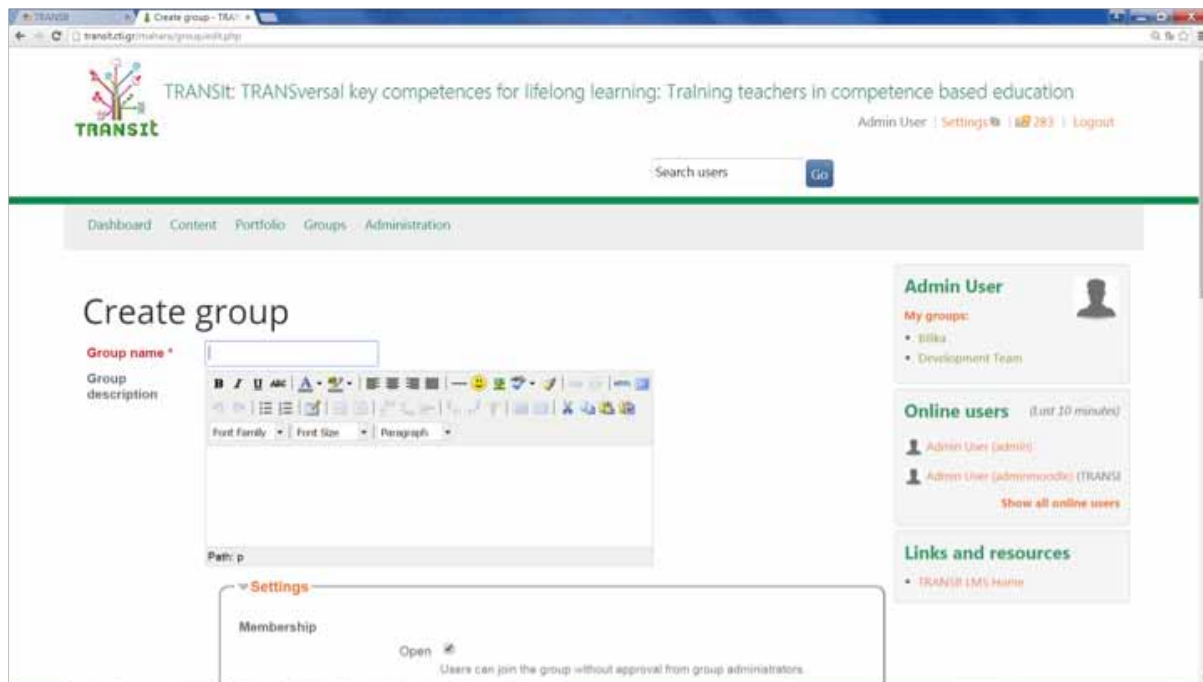
With the TRANSit ePortfolio users can record evidence of lifelong learning – such as essays, artwork or other such things they produce that can be stored digitally. Such things are called artefacts. Each user can control which items and what information (aka artefacts) within their portfolio other users see. To facilitate this access control, all artefacts shown to other users need to be arranged into one area, which is called a page. Each user can have as many pages as they like, each with a different number of artefacts, intended purpose and audience. Audience or the people a user wishes to give access to your page, can be added as individuals or as a member of a group. It can even be made publicly available. A single page or a collection of pages can make up a user’s portfolio. Unless artefacts are placed in a page, they are not visible to anybody but the user they belong to. Users can use files that they uploaded or journal entries they wrote in as many pages as they wish without any need for multiple artefact copies. For example each user could create a page for friends and family that includes holiday photos and a personal journal, a page for a tutor which includes assessments and reflective learning journal or, a page to showcase best pieces of work and

résumé for potential employers. Each TRANSit user can create portfolio pages, create collections to bundle portfolio pages, share pages and / or collections, export their portfolio, give feedback on artefacts and pages or view their tag cloud and change tags.

Social networking

Groups

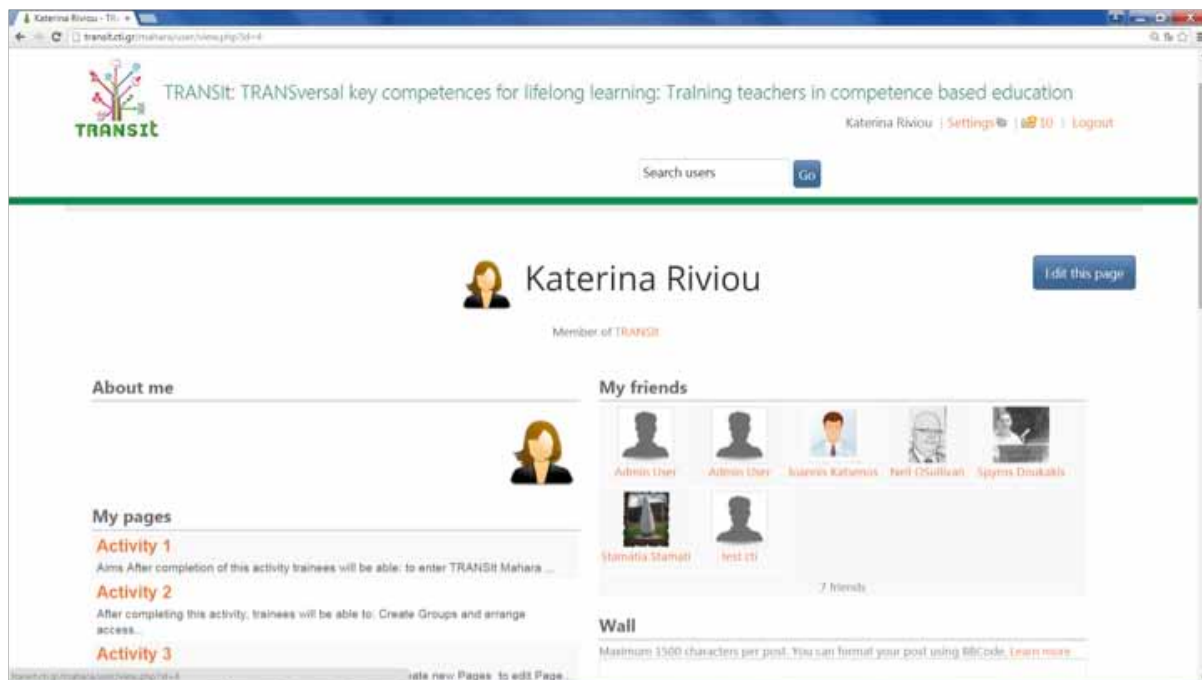
Groups can be used for collaboration among users as they offer the possibilities to discuss topics in fora, create and edit pages and collections together, share files and pages and submit pages for assessment / feedback. Groups can be created by every user, staff or administrators only.



Group creation page

Friends

A user's friends are a special group of users. A user can share portfolio pages or collections easily with them and get in touch with them quickly by going to this page. They differ from a regular group in that they do not have discussion forums, pages or shared files. If a user wishes to have access to those with their friends they have to create a regular group for them. A user can request other users' friendship by going to their profile page and click the Request friendship link or, go to the Find friends page and search for potential friends there.



A typical user's friend page on TRANSit portal

Use Cases/ User generated CBL resources

All training materials used during the pilots, the five days courses (TRANSit summer and winter schools), as well as the user-generated content, that can serve as use cases for interested education stakeholders around the theme of competence based learning can be accessed through the TRANSit portal (<http://transit.cti.gr/moodle/>), as well as the TRANSit EN community (<http://portal.opendiscovery.space.eu/community/training-teachers-competence-based-educationtransit-73929>) and multilingual sub-communities on ODS Portal.

The following table lists indicative user generated learning scenarios covering a variety of subject areas and Transversal Key Competences, created by participants in TRANSit training activities.

Title	Teacher Competency	Curriculum Area(s)	Transversal Competences	Students Age
Children's Rights	<ul style="list-style-type: none"> Facilitating Student Learning Assessing and Reporting Student Learning Outcomes 	<ul style="list-style-type: none"> Social Sciences ICT Art and design Language and Literature 	<ul style="list-style-type: none"> Communication in the mother tongue Digital competence Learning to learn Social and civic competences Sense of initiative and entrepreneurship Cultural awareness and expression 	8-12 years old

Dealing with Diversity	<ul style="list-style-type: none"> Facilitating Student Learning Assessing and Reporting Student Learning Outcomes 	<ul style="list-style-type: none"> Social Studies ICT Literacy Religious Studies 	<ul style="list-style-type: none"> Social and civic competences Cultural awareness and expression 	Various Ages
Electric guitar "A musical instrument made by students"	<ul style="list-style-type: none"> Facilitating Student Learning Assessing and Reporting Student Learning Outcomes 	<ul style="list-style-type: none"> Science Music (as part of Arts) Mathematics ICT History 	<ul style="list-style-type: none"> Mathematical competence and basic competences in science and technology Digital competence Learning to learn Cultural awareness and expression 	16 – 18 years old
Making Bridges	<ul style="list-style-type: none"> Facilitating Student Learning Assessing and Reporting Student Learning Outcomes 	<ul style="list-style-type: none"> Science ICT 	<ul style="list-style-type: none"> Mathematical competence and basic competences in science and technology 	15 years old
			<ul style="list-style-type: none"> Digital competence Learning to learn Sense of initiative and entrepreneurship 	
3d printing of a minoic vase	<ul style="list-style-type: none"> Facilitating Student Learning Assessing and Reporting Student Learning Outcomes 	<ul style="list-style-type: none"> History, Maths, ICT, Design and Technology Linkage with the National Greek curriculum is provided 	<ul style="list-style-type: none"> Mathematical competence and basic competences in science and technology; Digital competence; Learning to learn; Sense of initiative and entrepreneurship; Cultural awareness and expression 	Can be adapted for use in all grades

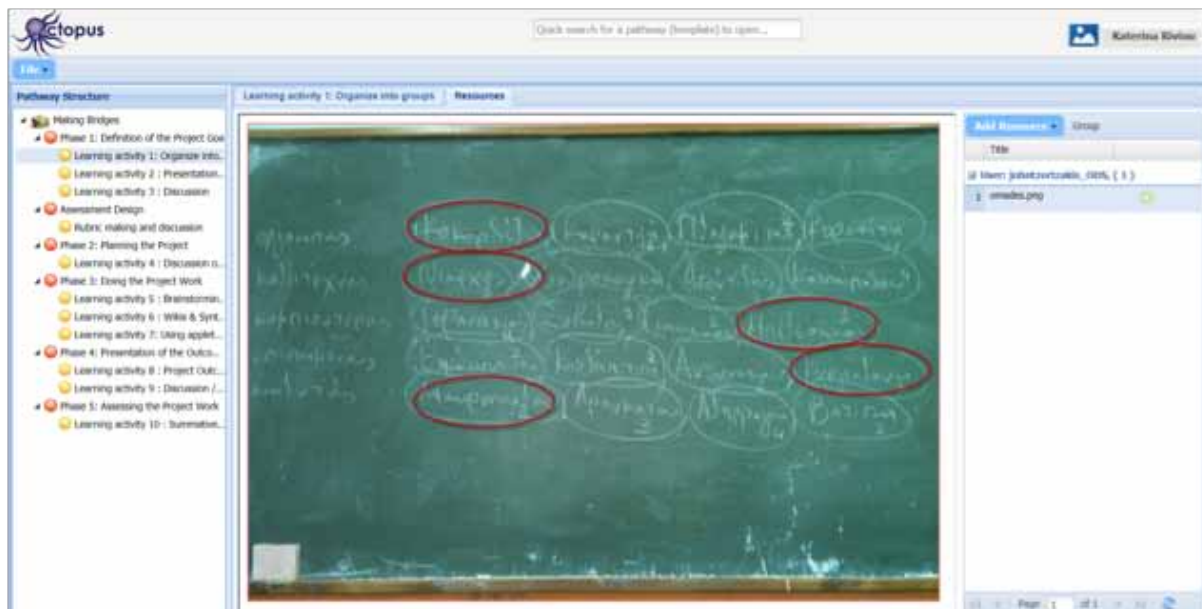


Figure 4 Competence based learning scenario “Making Bridges” uploaded on Octopus Authoring/Learning Design Tool

- Ιστορία Γ' Δημοτικού, Βιβλίο μαθητή, Ενότητα 9: Ο Μινωικός Πολιτισμός, σφ. 5 Η τέχνη των Μινωικών (σελ. 127)
- Ιστορία Γ' Δημοτικού, Τετράδιο Εργασιών (σελ. 50)
- Μαθηματικά Στ' Δημοτικού, Θεματικό Ενότητα 3, Άλγεα-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 επισκέψεις:

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

Figure 5 Example of cross-curricular CBL scenario “3d printing of a minoic vase” - Connection with the National Curriculum, eResources used (also from the National Aggregator/Harvester “Photodentro”), [http://portal.opendiscovery.space.eu/el/scenarios-view/FWq\\$2F\\$2F\\$2F\\$g3aA1Ep5NAYqEPufw\\$3D\\$3D\\$3D\\$](http://portal.opendiscovery.space.eu/el/scenarios-view/FWq$2F$2F$2F$g3aA1Ep5NAYqEPufw$3D$3D$3D$)

Conclusions

The key competence acquisition (KCA) by every young person is one of the long term objectives of the updated strategic framework for European cooperation. Most of the EU Member States are formulating and at least beginning to implement policies that move their school systems from being predominantly input led and subject-oriented towards curricula which include competences, cross-curricular activities, as well as a focus on learning outcomes. Yet, these developments do not necessarily result in significant, widespread changes in practice. The difficulty is in all cases translating these policies into practice. The challenge of supporting such initiatives, harnessing that innovation and bridging the gap between policy and practice on a wide scale is an issue.

The TRANSit approach is in accordance with the above mentioned European Union and national policies and aims at pointing out the significance of their implementation firstly in partner countries and in a second level Europe wide. To this end, the TRANSit project will try to provide a pilot teachers training methodology on the didactics and e-assessment of key transversal competences with use of online content and innovative teaching techniques, which could be adopted by interested stakeholders promoting educational change.

This Trainees' Guide arises from user needs analysis as well as a state of the art review and is summarizing the

generic patterns in the project's training process. The Guide is available both as a printed document, as well as in electronic format. This guide is addressed to project partners and the school teachers all around Europe. This Guide/Report was designed in order to help teachers' Professional development and competence acquisition in:

- Facilitating Student Learning
- Assessing and Reporting Student Learning Outcomes
- Engaging in Continuing Professional Development &
- Establishing Partnerships and Collaboration via engagement in the teacher communities created for the theme of CBL on Open Discovery Space Portal

The training methodology, design as well as the generic training modules that have been designed on the themes of designing, preparing, running and reviewing learning activities are presented, as well as indicative user generated material that could be useful for teachers (example scenarios and strategies for CBL teaching). More specifically, the variety of training resources in digital format, used to support teachers during the implementation of the training activities, guidelines on how to use the TRANSit portal, communities, eportfolio and the ODS learning authoring tools.

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