

TEACHERS' CPD PROGRAMME IN FOSTERING COMPETENCES – SUPPORT THROUGH COMMUNITIES OF PRACTICE

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Abstract: *The key competence acquisition 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, 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. The difficulty is in all cases translating these policies into practice. TRANSIt is a European project that aims to contribute to the enhancement of transversal key competences of students through building teachers capacity for competence oriented education. This paper presents the outcomes from the needs analysis survey on key competence acquisition in Greece, as well as the design and localisation of the TRANSIt Training Framework and environment based on the collected responses and the specifications set from the Greek Curriculum, the community support mechanisms that have been developed with synergies with the Open Discovery Space project developed in order to facilitate TRANSIt services.*

Keywords: *Competences, professional development, communities of practice, assessment, ePortfolios*

1. INTRODUCTION

Key competence acquisition (KCA) is one of the long term objectives of the updated strategic framework for European cooperation (Official Journal of the European Union, 2009). The concept of key competence originated with the adoption of the Lisbon Strategy in 2000 and it resulted in the European Reference Framework (European Commission, 2006). Key competences in the EU framework are those that 'all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment'. The Framework identifies and defines eight (8) key competences, among which the five (5) are considered as transversal. Most of the EU Member States are beginning to implement policies that move their school systems from being predominantly subject-oriented towards curricula which include competences, active and individual learning, as well as a focus on learning outcomes. One such example is Greece, where in the school year 2011-2012, pilot curricula for competence driven education have been introduced. In Austria however, the promotion of holistic teaching methods has been supported at policy level for several years. In other countries (e.g. France, Netherlands) innovative policies are already embedded in national strategy documents and in some cases these have already led to major structural changes, such as the introduction of new qualifications frameworks or the reform of the curriculum around the Key Competences (European Commission, 2009a). In general, there are a variety of different models of competences in European countries (European Commission/EACEA/Eurydice, 2012).

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. The difficulty is in all cases translating these policies into practice. 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. One more obstacle regarding KCA is the lack of effective assessment practices. Assessment of competence is one of the vehicles that can be used to support teachers in making this paradigm shift (Black & William, 1998). This places new demands on the competences of teachers and trainers and therefore on the structure and content of initial and continuing teacher education (European Commission, 2009b). "TRANSIt - TRANSversal key competences for lifelong learning: TraIning teachers in competence based education" approach aims to support teachers at bridging the gap between policy and practice on a European scale. In this paper we present the current state of Competence-Based Learning (CBL) policy and practice in Greece, the results from the needs analysis study, the design and localisation of the Training Framework and Environment based on the collected responses and the specifications set from the Greek Curriculum, the user/community support services that have been developed, as well as indicators from the user exploitation of these services and feedback collected by users with the use of online questionnaires and interviews.

2. STATE OF THE ART

According with TALIS Report 2013 (OECD, 2014) the types of professional development activities undertaken 12 months prior to the survey in descending order are:

courses/workshops with a percentage of 71%, participation and presentation in education conferences (44%) and the third highest rate surprisingly enough is through participation in a network of teachers formed specifically for the CPD of teachers (37%). These data needs to be considered in the design of teachers CPD Programmes. Below follows a short description of two current initiatives active in the field of teachers' CPD under which the specific research has been undertaken.

Current initiatives

In line with the EU objectives the improvement and quality of teacher education can have a positive impact on the development of students' competences (Official Journal of the European Union, 2007). In order to achieve this, a pilot teachers training methodology has been developed on the didactics and e-assessment of key transversal competences following a holistic view of students learning, going beyond subject boundaries and finding application in a wide spectrum of curriculum subjects. The TRANSIt approach contributes to the development of creativity, intercultural and multilingual competences, social development, and "learning to learn" competences. TRANSIt aims to contribute towards the improvement of the quality of competence education by improving teachers' awareness and professional skills regarding the didactics and e-assessment of the key competences with the use of ePortfolios, and supporting them to bring European and national policies into practice. The overall approach is based on the methodological principles of participatory design with the user groups in the development of the training framework. To this end, stakeholders' needs analysis was performed in order to identify the obstacles in the process of introducing innovative approaches in teaching practice and to identify enablers that will effectively support such interventions.

With an aim to foster innovation in the classroom Open Discovery Space (ODS) project tries to engage teachers, parents, content designers, policy makers in numerous meaningful online communities of peers who create, share, discuss and rate resources, ideas and experiences. Furthermore, a crucial development would be to bring the ODS Communities of Practice to the next level: to the formation of the Virtual Schools on different thematic areas and strong networks of practitioners and teachers-as-content-designers, working in similar fields. Below we will present the synergies between the two initiatives towards the delivery and creation of a community around CBL.

Current state of CBL in Greece

In this section we focus on specific aspects about current policy and practice regarding CBL activities in Greece. First, we give an overview of the features from the educational system that may have an impact in current practice. Then, we present the results of needs analysis.

Policy

The method by which competences have been introduced in the education system varies among countries. Some have introduced these approaches through adaptations of the curriculum, whilst others have done it through legislative change (Gordon, et al. 2009). Greece is such an example, where in the school year 2011-2012, pilot curricula for competence driven education based on the

National Life Long Learning Strategies for the 'New School' of the Greek Ministry of Education have been introduced.

Needs analysis

LimeSurvey was used for the administration of the online questionnaire aimed at identifying the profiles of the possible participants in training activities, the current implementation of CBL teaching and assessment, as well as training needs. The link for the survey was made available through the etwinning mailing list by the National Contact Service. In the survey 648 responses were collected in total. The survey is analytically presented in Riviou & Sotiriou (2013).

User profile

From the participants, 196 (30%) were men and 452 (70%) women with the majority in the age range of 41-51 years old. Respondents are mostly teachers in secondary education (74,80%) and primary education (48,60%). The next group of participants with highest representation are School leaders (11%), Teachers' trainers (10,40%), Pre-service Teachers with percentage of 3,60%, Curriculum developers and Educational Policy Makers (1%), each, whereas other roles were 3,40%. The majority of respondents have a more than 15 years' experience in their profession. Regarding usage of ICT, the highest percentage defines themselves to be "Enthusiastic on the use of ICT" (56,64%), while those claiming to have taken part in continuing professional development (CPD) activities on the theme of competence acquisition was (55,25%). There is a wide and varied spectrum of training activities, mostly around technology enhanced learning; use of Web2.0/social media tools, training for implementing projects, and creative drama activities/creativity techniques.

Current implementation of didactics and assessment of key competences

Throughout the survey, participants reflected on their own competence on teaching and assessing transversal key competences. Participants feel most confident about teaching digital competence (49%). Additionally, a great percentage of participants mention the collaboration with colleagues for the design and implementation of cross-curricular projects, as crucial factor. Regarding the assessment tools/methods that teachers mostly use ePortfolios and Rubrics have the lowest levels of use with percentages of 57% and 52% respectively. In general, teachers report a lack of knowledge about competence-based assessment techniques.

Training needs

Data collected on training needs is consistent with the current implementation of CBL. The most important item is "Didactics and teaching methods" and most particularly regarding the themes applied throughout competences: critical thinking, creativity, initiative, problem solving, risk assessment, decision taking, and constructive management of feelings. The second most required training need is competence-based assessment. Participants are particularly interested in learning about specific tools to assess competences. Regarding the activities/methods to be incorporated in training workshops, participants expressed their high interest primarily for Demonstrations of tools and instruments (60,80%), Practical assignments (56,20%) and then

Examples of good practices (53,90%), demonstrating the need to undertake hands-on training.

Training Framework

The TRANSIt Teacher Competency Framework defines the criteria from which it will be possible for a teacher to determine how competent they are in didactics and e-assessment of transversal key competences (using rubrics). A competence framework is a model that broadly defines the blueprint for 'excellent' performance within an organisation or sector. The frameworks that influenced its design were the UNESCO ICT Competency Framework for Teachers (United Nations, 2011) and the Western Australia Teacher Competency Framework (Western Australia Department of Education, 2009). The TRANSIt Competency Framework comprises of four dimensions and three stages. The four 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 stage identifies standards in the use of skills, knowledge and attitudes/values according to the dimension being used by the teacher. Teachers at any stage in their career may operate in different stages or parts of all stages. As teachers identify areas for improvement in particular competencies, it is recommended that they seek CPD to address a specific competency or part of a competency, visiting the respective areas of the TRANSIt training course.

Based on the needs analysis survey the Training Framework has been designed in a modular format, so that it could be localised with an approach inspired by constructivist methodologies. Teachers taking the course or course modules will be handled as learners participating in authentic learning activities; also creating and using e-Portfolios as part of their learning process. This is supported by the tools and features of the TRANSIt learning environment. A combination of open source tools has been chosen; Moodle for delivering the training resources and Mahara as eportfolio tool. In addition, collaboration is supported as teachers have access to the Open Discovery Space (ODS) portal to access and publish learning resources and competence based learning scenarios created in the course of the TRANSIt program. Below follows the suggested assessment process for CBL.

Regarding assessment in order to be authentic, TRANSIt proposes the use of eportfolio with a rubrics combination, in two levels, in teachers' training, as well as for the classroom practice. Eportfolios is a means where learners might collect the evidence of their choice in order to demonstrate the achievement of the educational goals and desired competences. Rubrics are suggested for peer and self-assessment. Mahara is suggested to be used in two levels for teachers' training/competence development, as well as students' projects in Upper Secondary School. Teachers are trained and supported to use the Mahara eportfolio tool with their students working on projects, e.g. upper secondary school as set by the national curriculum. Rubrics are suggested to be used by teachers for evaluating the teams, as well as students' eportfolios and activities, according with the guidelines set by Matsagouras (2011). The approach towards supporting

teachers in designing learning scenarios is to provide exemplar templates or descriptions which can be shared, re-used and adapted to different contexts. Below follows short description of the approaches for KCA.

3. DIDACTIC APPROACHES PROMOTING COMPETENCE BASED LEARNING

According with the literature among the didactic approaches that promote competence acquisition are: project based learning, the storyline approach, guided discovery, action learning, Problem based learning, Co-operative learning and Inquiry learning. A review by the EPPI-Centre at the Institute of Education, University of London (2005), found that and collaborative professional development was linked with a positive impact upon teachers' repertoire of teaching and learning strategies, their ability to match these to their students' needs, their self-esteem and confidence, and their commitment to continuing learning and development. They also found evidence that such professional development was linked with a positive impact upon student learning processes, motivation and outcomes. On the other hand, recent studies highlight the value - in terms of professional development - of engaging teachers as learning designers (Sagi & Kali, 2014; Voogt et al, 2012; Voogt et al, 2013). To this end, in order to support the design and sharing of user generated scenarios, suggested templates describing pedagogical approaches promoting KCA, as well as specific cross-curricular competence based scenarios and lesson plans have been developed as demonstrators and a source of inspiration for teachers.

Development of templates, scenarios and lesson plans

The most of the approaches have been already described in the format of a template therefore the Storyline approach was documented as a template by Riviou (ODS D4.3) and became available on the ODS Authoring Tool in order for teachers to be supported in the development and sharing of their own competence oriented educational resources, with an aim to ensure that all above approaches are provided to the community in the form of a template. As a next step, templates have been populated with resources leading to the production of scenarios. Such example of Scenario is the "3d printing of a minoic vase"¹ with linkage with the National Curriculum. Numerous e-Resources have been used as active links, for the facilitation of community members.

Supporting the community

The key to effective professional development is finding a way to organise qualified teachers, so they can collaborate with their colleagues. Collaboration and exchange of practices needs to be encouraged through training. The specific Parent Community is a Professional Development and Innovation Seeking one. Multilingual sub-communities have been created for users support (EL, NL, ES, FR). Moreover, with an aim to support the engagement of teachers as learning designers a series of online, as well as offline events have been delivered. A short description follows as well as the dates of events delivery, since these events have a great impact on the community (fig. 1-7).

¹ <http://portal.opendiscoveryspace.eu/el/educational-scenarios/270>

Events/Community support mechanisms

In the case of Greece at the time of writing the following programme has been designed and delivered: provision of the online pilot course, as well as face to face training workshops that would take place in Athens, as well as in Patras. Participants in every case were given instructions on the dedicated TRANSIt Greek Community on ODS portal².

Face to face training events

The summer school 2013 (July 2013) focused on practices fostering competences. Best practices on CBL were presented and ICT tools were used. The participants developed their own learning scenarios with the Octopus learning design tool³ and uploaded them to the summer school community, a sub-community of TRANSIt. Moreover, workshops have been implemented in the following dates, 24th June 2014, 1 & 3 July 2014. Invitation for participation in the online as well as the offline events has been delivered through the etwinning mailing list. The dates that the newsletters have been circulated are: 17/6/2014, 6/8/2014, 4/9/2014. The impact of these activities is depicted in the following graphs.

Online training events

The webinar “Evaluation and ICT integration in project based learning” was held on 23/06/2014. Guidelines for the conduction of the webinar have been announced on the TRANSIt Greek Community on ODS Portal. More than 170 people have registered on the event page of the webinar and the webinar recording on YouTube has currently more than 1.150 views. This shows the value of such activities as well as the great flexibility that online CPD offers.

Contest

As the NESTA Challenge Guide states “Prizes are thriving in the context of opportunities for connection and collaboration offered by the internet and social media⁴. To this end, a Contest has been organised among the members of the TRANSIt Greek Community the period 1/6-9/7/2014. The contest winner has been granted the attendance of the five-days Summer Course 2104.

4. INDICATORS

In the following section indicators about the TRANSIt Greek Community that currently has 555 members are presented. The tools providing analytics data developed by the portal developers has been used with the use of specific queries. The Analytics tool, that is developed in the context of the ODS project, provides the necessary and proper mechanisms and user tools for following, collecting and analysing statistical information for the ODS portal and supports monitoring of four main elements: (a) the importance of the resources, (b) the user engagement and participation, (c) the community progress and “status” and (d) the evolution of the portal. In the following figures the dates of the events have been marked with an asterisk, showing the impact on the community lifetime.

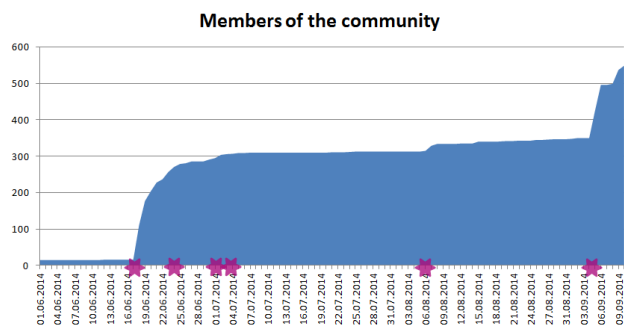


Figure 1: Greek TRANSIt Community members

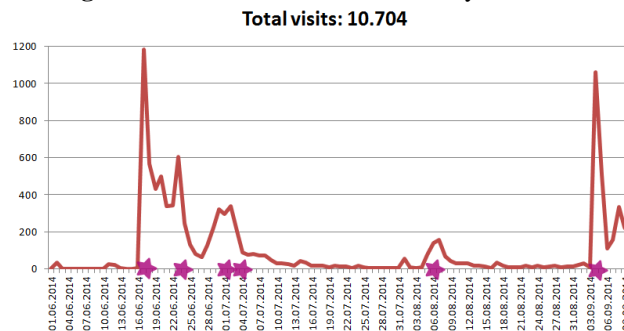


Figure 2: Total visits

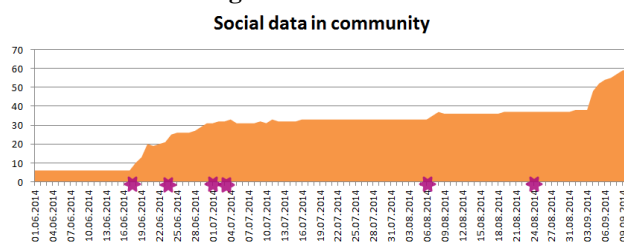


Figure 3: Social data in Greek TRANSIt Community

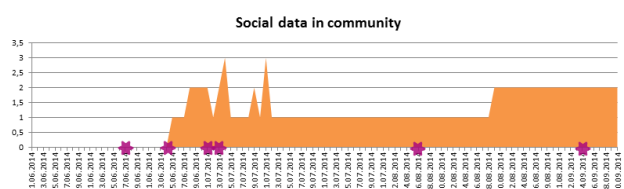


Figure 4: Social data on the resources of the Community (e.g. tags, bookmarks, comments etc.)

Figure 4 presents the impact of the events in the social tagging of the educational resources created and shared by trainees/participants.

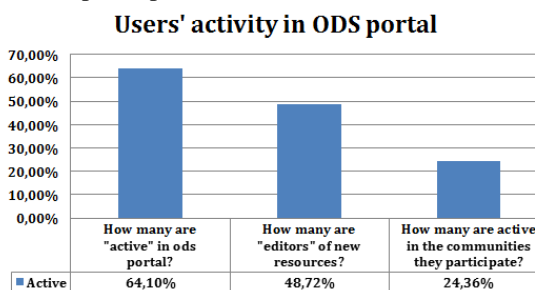


Figure 5: Contributions per registered user

Participants are partly hesitant in sharing their educational resources (fig. 5); therefore such a culture needs to be promoted. Table 1 presents the number of page views in the Community, the average session duration, the number and rate of revisits. The revisit rate is quite high (44%), showing the interest of members in “consuming” data

² Κατάρτιση εκπαιδευτικών στην εκπαίδευση για ανάπτυξη ικανοτήτων, <http://portal.opendiscovery.space.eu/community/katartisi-ekpaideytikon-stin-ekpaideysi-gia-anaptyxi-ikanoiton-184334>

³ <http://learn.ced.tuc.gr/octopus/>

⁴ <http://www.nesta.org.uk/publications/challenge-prizes-practice-guide>

taken the fact under consideration that the analysis timeframe is not the ideal one (summer school break).

Table 1: Community Views

Page	Views	Average Session Duration	Revisits	Rate
TRANSIt Community	Greek 8.429	111,35	3728	44%

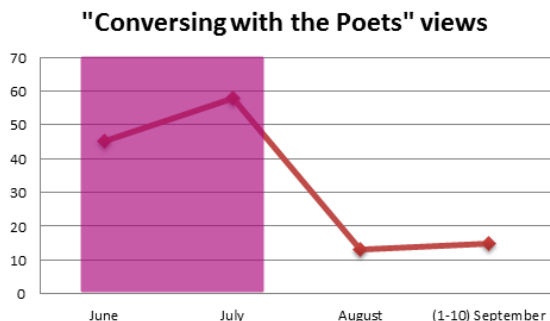


Figure 7: Contest winner scenario views (contest period 01/06-09/07/2014)

Regarding the Contest winner scenario views (fig. 7) the biggest percentage of views is during the contest period, there is a drop during the period that schools are closed, but the encouraging element is that early September with the school year opening the rate is increasing again. Moreover, the submitted learning scenarios are competence based cases and can act as demonstrators for the rest of the community members.

5. EVALUATION RESULTS FROM USERS

Organisational aspects such as the venue, the programme and the materials of the training activities/events, as well as the actual training content have been assessed. The main areas covered were awareness, didactics, and assessment of Transversal Key Competences, as well as the impact of the pilot training activities.

Assessment tools

The tools used were a user satisfaction questionnaire and an interview guide. The questionnaire was filled in by 142 participants and 11 interviews have been conducted.

User profile

Regarding participants' profession, 59% of participants were secondary education teachers, 32% primary education teachers, 5% head teachers, 1% teacher trainers and 1% other (educational psychologists, etc) with 37% having more than 15 years of experience. Participants graded their satisfaction with organisational aspects of the webinar, as well as the face to face workshops on a five-point Likert scale from 1 (very bad) to 5 (excellent). Overall, the mean value of overall assessment of all implemented events completed by 142 teachers is 4.33 in the scale of 5 that is a rather satisfactory result.

Data from interviews

Interviews conducted allowed gaining deeper knowledge on specific aspects of CBL, as well as a way to record the impact of the training programme.

Awareness of Transversal Key Competences

All interviewees state that as a result of the events they have increased their awareness on transversal key competences, the skills/horizontal themes that exist in all

(critical thinking, communication, creativity), as well as the ways that Transversal Key Competences affect their current practice.

Professional skills and knowledge on didactics of Transversal Key Competences

Generally, participants have gained useful knowledge and skills on didactics of transversal key competences. They can see how educational practices based on project-based learning can help them to design and implement learning scenarios that foster students' competences.

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

Two teachers believe that e-assessment of competences is a difficult task and ICT tools are a means for focusing and aiming at competence acquisition for 21st century citizens.

Impact

Participants are rather satisfied about the best practices/scenarios demonstrated, as well as about the skills they developed regarding planning, structuring and sequencing cross-curricular learning activities with ICT tools. Especially, the interviewees highlight the value of learning how to share resources and practices and collaborate with other teachers. More specifically, those that have been interviewed are generally in favour of participating in an online community in which teachers share and collaboratively design competence-based learning scenarios.

6. CONCLUSION

In general, the EU is prioritising the improvement of the quality of teacher education so as to have a direct effect upon levels of students' acquisition of competences. Therefore, the professional development of teachers and their training is a key requirement for the way forward (European Commission, 2010). Our needs analysis confirms that, given the limitations imposed by the official curriculum in Greece, teachers are generally motivated to make a paradigm shift towards CBL. The profile of the participants demonstrates that there is a strong interest especially by secondary education teachers to get trained and exchange practices within peer networks and communities of practice. This is aligned with the literature findings that the situation is even worse for teachers of 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 CBL approaches (European Commission, 2009a).

The preference of teachers and head teachers to learn primarily from demonstration of tools and instruments, practical assignments and examples of good practices, demonstrates the need of stakeholders to undertake hands-on training, and that teachers need support in their everyday practice. TRANSIt training framework and environment designed has been presented. TRANSIt environment has been designed with use of open source tools, as well as the Open Badge Infrastructure, as a mechanism for accrediting teachers. TRANSIt training content includes specific examples/good practices and tries to address the training needs with an emphasis on assessment methods and tools, also by taking into

consideration European reports (Redecker, 2013), as well as the national context requirements set by the Greek Curriculum.

The key to effective professional development is finding a way to organise qualified teachers, so they can collaborate with colleagues. Collaboration and exchange of practices needs to be encouraged through training, let alone since participants refer to the benefits of collaboration with colleagues. Events such as contests and webinars and wide dissemination of such activities have proven to be a valuable tool for the support and population of these communities. The fact that there are many newcomers during the summer period is very encouraging, but it's early enough to come to conclusions regarding the use of the portal. Time is needed so that a new user proceeds from the basis of consuming content to the process of contributing. The feedback we got though from the interviews conducted so far is that teachers would be eager to contribute their resources on the portal. As shown by contributions per user (fig. 5), participants are quite hesitant; therefore such a culture needs to be fostered. Further work remains measuring the impact of the CPD materials with analysis of qualitative and quantitative characteristics of user-generated open educational resources (OER) content uploaded in the dedicated community and sub-communities on ODS portal, as well as teachers' competence development after their participation in pilot training activities and events and being members in professional development communities.

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