Creative Emotional Reasoning Computational Tools Fostering Co-Creativity in Learning Processes

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C²LEARN USER PILOTS

C²LEARN PROJECT DELIVERABLE NO. D5.3.4

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Abbreviations used

A) Abbreviated names of the project consortium partners

Abbreviation	Explanation
EA	Ellinogermaniki Agogi, Greece (coordinator)
UEDIN	The University Of Edinburgh, UK
OU	The Open University, UK
NCSR-D	National Center For Scientific Research "Demokritos", Greece
UoM	Universita ta Malta, Malta
SGI	Serious Games Interactive, Denmark
BMBF	Bundesministerium für Bildung und Frauen, Austria (Formerly BMUKK)

B) Other abbreviations in alphabetical order

Abbreviation	Explanation
C^{2}Learn	Acronym of the project (full title: Creative Emotional Reasoning Computational Tools Fostering Co-Creativity in Learning Processes)
CER	Creative Emotional Reasoning
CTP	Computational Tools Palette
DLT	Diagrammatic Lateral Thinking
DoW	Description of Work (Annex I of the Grant agreement no. 318480)
EC	European Commission
ELT	Emotive Lateral Thinking

Abbreviation	Explanation
FP7	The Seventh Framework Programme for Research and Technological Development (2007-2013)
ICT	Information and Communications Technologies
LTC²	C²Learn's Lateral Thinking
M#	#th month of the project (M1=November 2012)
RWG	Random Word Generator
SLT	Semantic Lateral Thinking
TEL	Technology-Enhanced Learning
WHC	Wise Humanizing Creativity

Executive summary

C^{2}Learn at a glance

C^{2}Learn (www.c2learn.eu) is a three-year research project supported by the European Commission through the Seventh Framework Programme (FP7), in the theme of Information and Communications Technologies (ICT) and particularly in the area of Technology-Enhanced Learning (TEL) (FP7 grant agreement no 318480). The project started on 1st November 2012 with the aim to shed new light on, and propose and test concrete ways in which our current understanding of creativity in education and creative thinking, on the one hand, and technology-enhanced learning tools and digital games, on the other hand, can be fruitfully combined to provide young learners and their teachers with innovative opportunities for creative learning. The project designs an innovative digital gaming and social networking environment incorporating diverse computational tools, the use of which can foster co-creativity in learning processes in the context of both formal and informal educational settings. The C^{2}Learn environment is envisioned as an open-world 'sandbox' (non-linear) virtual space enabling learners to freely explore ideas, concepts, and the shared knowledge available on the semantic web and the communities that they are part of. This innovation is co-designed, implemented and tested in systematic interaction and exchange with stakeholders following participatory design and participative evaluation principles. This happens in and around school communities covering a learner age spectrum from 10 to 18+ years.

About this document

In this document we report the activities of the second and third main pilot cycles, which have just been completed (end October 2015). Their end concides with the completion of the C^{2}Learn project overall, as foreseen by the C^{2}Learn User Evaluation Plan (deliverables D5.2.1 and D5.2.2). The current final iteration of this deliverable is an update of the previous iteration, D5.3.3, which in April 2015 reported on just the second main pilot cycle.

The aim of piloting was to provide updated input to the iterative design, development and evaluation processes of the project, by testing the C^{2}Learn technological solution in real-life educational settings.

The present report on the pilot activities focuses more on the procedures and conditions of the pilot activities. The outcomes and user feedback informs all relevant processes and deliverables of the project, and among them predominantly D5.4.2 'Co-creativity Evaluation Analysis'.

1   Introduction

Pilots in the C^{2}Learn project (www.c2learn.eu) are conducted in close collaboration with communities of educators and students in the three countries, which the research teams of EA (Greece), OU (UK), and BMBF (Austria) have started building since the very early stages of the project. Utilizing these communities and in close collaboration with schools and teachers the research teams have negotiated, planned and implemented pilot activities structured around the concept of testing the introduction of the proposed C^{2}Learn innovation in various real-life learning settings, for the purposes of evaluation and input to the various design and development processes of the project. The details of the organisation of this piloting process can be found in deliverables D5.2 'C^{2}Learn User Evaluation Plan'.

The present document constitutes a report on the activities realized within the 2nd and 3rd main pilot cycles of the C^{2}Learn project, which were implemented in the three countries and completed in April 2015 and October 2015 respectively, as foreseen by the C^{2}Learn User Evaluation Plan. The end of the piloting activities concides with the completion of the C^{2}Learn project overall. The current final iteration of this deliverable is an update of the previous iteration, D5.3.3, which in April 2015 reported on just the 2nd main pilot cycle.

This report focuses on the procedures and conditions of the pilot activities. The outcomes and user feedback collected inform all relevant processes and deliverables of the project, and among them predominantly D5.4.2 'Co-creativity Evaluation Analysis'.

In the background of the current piloting activities lies the 1st main pilot cycle which formally took place in the period of February 2014 – July 2014, as planned, and was preceded by even earlier testing and piloting activities. The purpose of that previous cycle was to expose the interim outcomes of the project up to that time to real use in educational settings. User feedback from those activities informed adaptations in the designs and the corresponding development as well as providing some first indications of the impact of the innovation in terms of co-creativity assessment. The report on the 1st main pilot cycle was included in the previous iteration of this deliverable, D5.3.2, and its outcomes and findings were discussed in deliverable D5.4.1 'Co-creativity Evaluation Analysis'.

2   Activities realised in the 2nd and 3rd main pilot cycles

 The aim of the 2nd main pilot cycle was to provide updated input to the iterative design, development, and evaluation processes of the project, and in particular test the C^{2}Learn technological solution in real-life educational settings. With the outcomes of the project maturing and the timing of this cycle providing a convenient time window in the heart of a school year, the pilots at this stage provided rich feedback for the validation of the C^{2}Learn technology and pedagogical interventions as well as rich insights into co-creativity evaluation.

Following a period of intensive work across the project, researchers returned to field trials in autumn 2014 and more intensively in winter 2014-2015, covering and exceeding the six-month period of pilots foreseen by the User Evaluation Plan (M25-M30). To provide a wider time window that would allow the research teams to make use of the whole school year, collaborating schools were involved already in October 2014, earlier than originally anticipated, so that the use of any technological products available for testing could be piloted without delay. Following developments in autumn 2014 linked to technology availability and readiness for use in classrooms, eventually the greatest part of the 2nd main pilot cycle activities fell in the period of M27-M30 (January 2015 – April 2015). In April

2015, a potential extension of the pilot into May, June and July 2015 was decided to secure the longest possible availability of young users for trials of emerging technological outcomes, provided of course that pragmatic conditions in classrooms (given restrictions such as end-of-school year exams and other school activities in summer) allowed further piloting of C^{2}Learn. In this way, the 2nd and the 3rd pilot cycles eventually merged into a continuous process.

In the 3rd main pilot cycle, as foreseen by the User Evaluation Plan, as soon as the whole solution produced by the project became available towards the end of summer / early autumn 2015, the remaining piloting activites served as the last opportunity for interaction of the design and development teams with the end user communities, so as to finely adjust, finally shape and deliver the project products. This last pilot cycle was shorter, effectively taking place in September and October 2015, last months of the project. This final validation of the project products is accompanied by the final conclusions of co-creativity evaluation and evidence for the potential for exploitation of the results of the project.

The short nature of the last pilot cycle, which could not be altered due to overall restrictions of the time plan of the project as well as due to the short distance between summer school holidays 2015 and the end of the project, required inventive solutions that allowed exposure of a number of users to the final C^{2}Learn solution in the little available time. This was achieved in coordination with rich dissemination and exploitation-oriented activities aiming at attracting users far beyond the immediate user access spheres of the consortium.

In the following sections, the details of the pilot activities that took place in each of the participating countries, Austria, Greece and UK, are presented.

2.1 PILOT ACTIVITIES IN AUSTRIA

Austria hosts one of the four C^{2}Learn case studies. The code name for this is: **AT-CS**. BMBF has been building a community of teachers around C^{2}Learn since the first stages of the project. The Austrian pilots concentrate on the age groups of 13-15 year-olds and 16-18 year-olds.

Plans in Austria foresee one pilot per main pilot cycle, each of them lasting about 20-25 hours. These hours may be distributed across a number of weeks of lessons, or concentrated in just one week (a 'project week'), depending on local school circumstances and availability. As background to the current report, pilot activity in Austria for the 1st main pilot cycle took place in May 2014, following the 'project week' format. The overall duration of the activities was 25 hours. The activities were structured into five daily 5-hour sessions.

Within the currently reported 2nd and then 3rd main pilot cycles, the Austrian research team initially realised intensive pilots in Autumn 2014. Beyond April 2015, time of formal ending of the 2nd main pilot cycle, the Austrian research team decided to carry out further pilots to take place in summer and autumn 2015 so as to be able to bring mature, near-to-final project outcomes to the collaborating classrooms.

More precisely, in 10th-14th November 2014 a 'project week' pilot took place in the Cooperative Middle School Vienna 18, located at Schopenhauerstraße 79, 1180 Vienna.

The duration of the pilot was 25 hours distributed into five days (5 hours/ day).

A group of 23 male and female students aged 13-15 years from class 4B took part, with their teacher Gerda Reissner. Overall, the project team involved in this pilot included Alexander Schmölz, Markus Jastraunig, Tony Lardge, Gerda Reissner, and Bettina Felzmann.

The pilot was based on the scenario of 'Cultural Diversity', which offered a large variety of possible approaches and topics. In this context, from the C2Learn applications students and their teacher used Creative Stories, Iconoscope and 4Scribes.

Further information on this pilot can be found in the website of the Middle School Schopenhauerstraße:

http://www.schop79.at/index.php?option=com_content&view=article&id=230:c2learn&catid=35:projekte

as well as in the following YouTube-video: https://youtu.be/l0J9P-id9x4.

In addition, an extra one-day mini-pilot, without full use of the co-creativity assessment methodology, was organised in Higher Secondary School Klosterneuburg (BRG Klosterneuburg, Buchberggasse 31, 3400 Klosterneuburg) in February 2015. It involved 24 students in the pilot use of Constellations, Creative Stories, Iconoscope, and 4Scribes.

In the extension of the 2ⁿᵈ main pilot cycle and in the 3ʳᵈ main pilot cycle, in summer and autumn 2015 the Austrian research team realised further intensive pilots in schools, aiming to bring mature, near-to-final project outcomes to the collaborating classrooms.

More precisely, on 24ᵗʰ-30ᵗʰ June 2015 a 'project week' pilot took place in the Higher Secondary School Klosterneuburg (BRG Klosterneuburg, Buchberggasse 31, 3400 Klosterneuburg).

The duration of the pilot was 30 hours distributed into five days (6 hours/ day).

A group of 19 male and female students aged 16-18 years from class 7A took part, with their teachers Dr. Mag. Sigfried Kopelka and Mag. Barbara Simons. Overall, the project team involved in this pilot included Markus Jastraunig, Amélie Aichhorn, Carla Almeida Weissmann, and Alexander Schmoelz.

The pilot was based on the scenario of 'Digital Diversity', as an interdisciplinary framework involving the subjects of English, Computer Science, Geography, History, Sports, and Music. This offered a large variety of possible approaches and topics. In this context, from the C2Learn applications students and their teachers used Creative Stories, Iconoscope and 4Scribes.

Finally, on 12ᵗʰ-22ⁿᵈ October 2015 a pilot took place in the School of Vienna Boys Choir (Schule der Sängerknaben, 1020 Wien).

The overall duration of the pilot was 25 hours, with 2-4 hours per day.

A group of 12 students aged 13–18 years from various classes took part, with their teachers Mag. Lora Autischer and Mag. Martha Gumhold. The project team involved in this pilot included Rebekka Dober and Alexander Schmoelz.

The pilot was based on the scenario of 'Students as Experts for Change', as an interdisciplinary framework involving the subjects of English, Computer Science, Ethics, History, Philosophy, Psychology, and Music. This offered a large variety of possible approaches and topics. In this context, from the C2Learn applications students and their teachers used Iconoscope and 4Scribes.

Further information on this pilot can be found in the website StudentsAsExperts4Change:

http://studentsasexperts4change.org

as well as in the YouTube-channel 'sangerknaben4change':

https://www.youtube.com/channel/UCk4fbXcb11Wq7CL9akpbXHQ

In addition, in several occasions the Austrian research team used opportunities that arose to conduct mini-pilot activities with teachers, teachers-to-be, and students, in combination with dissemination in the context of conferences and workshops.

Thus, utilising the context of ENIS, the European Network of Innovative Schools (www.enis.at), the Austrian research team organised mini-pilots on the use of Creative Stories, Iconoscope, and 4Scribes, in Bad Hofgastein in October 2014 and January 2015, involving 30 and 35 teachers respectively.

Similarly, in September 2015 the research team conducted one more mini-pilot on the use of Creative Stories, Iconoscope, and 4Scribes in the context of the ENIS meeting in Bad Hofgastein, involving another 55 teachers, while plans are also in place for repeating this in the ENIS meeting in January 2016.

In the context of the KidZ Conference in Linz in March 2015 in collaboration with ELSA Association, the Austrian research team organised a mini-pilot on the use of Iconoscope and 4Scribes, involving 9 teachers.

In addition, in the context of a two courses for pre-service teachers on 'Digital games, simulation and virtual worlds for teaching and learning' and on 'Wise Humanising Creativity: Learning experienced as transformational agency' at the University of Vienna in Spring 2014, the Austrian team in collaboration with project partner OU conducted mini-pilots on the use of Creative Stories, Iconoscope, and 4Scribes, involving 22 and 6 pre-service teachers respectively.

2.2   PILOT ACTIVITIES IN GREECE

Greece officially hosts two of the four C^{2}Learn case studies. The code names for these are: **GR-CS1** and **GR-CS2**. The working definition of these two main Greek case studies is the division between primary and secondary education: GR-CS1 in primary school and GR-CS2 in secondary school. These two case studies are carried out within EA's school in Pallini, Athens.

In addition, an extrovert approach followed in conjunction with the dissemination and exploitation efforts has attracted the attention of educators in Greece who are willing to contribute to piloting C^{2}Learn in their teaching contexts as volunteers motivated by the strong pedagogical innovation and value of the project approach. This movement has grown to form an additional, third Greek case study, encoded as **GR-CS3**.

The overall plan and intention in Greece is to cover the whole age range falling within schooling, as follows:

- 10-12 year-olds: mainly year 5 and year 6 in primary school, and possibly year 7 (1st grade of lower secondary school)

- 13-15 year-olds: mainly year 8 or year 9 (2nd and 3rd grades of lower secondary school), and possibly year 10 (1st grade of upper secondary school)

- 16-18 year-olds: years 11 and 12 (2nd and 3rd grades of upper secondary school).

2.2.1   PILOTING WITHIN THE SCHOOL OF EA

EA has been building a community of teachers around C^{2}Learn more widely in Greece as well as particularly within EA's school, since the first stages of the project.

Within EA, twelve teachers have been closely following C^{2}Learn from the very early stages engaged in co-design and piloting activities, working in two independent groups, one in the primary school, and one in the secondary school.

EA's central role in C^{2}Learn makes access to a variety of classrooms an immediate, very helpful possibility, which allows for considerable flexibility to address testing and piloting needs as these are emerging or changing in the course of the project.

Pilots in EA relate to various curricular areas serving as starting points for cross-curricular work, implementing a variety of the developed scenarios.

Following a very active 1st main pilot cycle, the activities of which were reported in D5.3.2, the 2nd main pilot cycle, falling in the heart of a full school year, included rich testing and piloting activity in EA, involving significant numbers of students and teachers. A short extract of this activity was observed by the project reviewers, the Project Officer and the consortium during the second project review meeting, which took place in the premises of EA on 22nd – 23rd January 2015.

EA purchased hardware (tablets) and mobilised its IT resources, infrastructure and staff, to realise full-scale pilot application of the C^{2}Learn intervention in whole classes, in the classrooms actually used in everyday school life. This involved a variety of technical tasks, from the hosting of the system on EA's servers, to adjustments of the wifi network of the school, setting up the tablets used by the students and keeping them updated with the latest versions of the applications, as well as reporting and addressing all technical problems when they arose.

On the pedagogical side, the rich testing and piloting activity required intensive collaboration of EA's research team with the teachers and students involved, including various tasks, from informing and training on the applications introduced each time, to the negotiation and development of scenarios fine-tuned to the needs of the classes, and the realisation of a significant number of classwork sessions of C^{2}Learn use. In these sessions, the co-creativity assessment methodology was applied extensively as possible within the pragmatic conditions, yielding very rich data for analysis. In cases where the co-creativity assessment methodology could not be formally applied, or complementarily to it, EA's researchers administered additional data collection tools, such as self-reflection sheets to be completed by students, so as to maximise the level feedback received from the field of trials. Annex I includes indicative samples of materials and feedback collection tools produced by EA and used in various instances during the pilots.

Pilots with students in EA's classrooms included the following activities:

In the context of History lessons in primary school: 24 students of year 6 (11-12 year-olds) and their teacher were involved in five hours in total of focused piloting of C^{2}Learn, including the application of the co-creativity assessment methodology, using C2Space and 4Scribes based on scenarios developed through the collaboration of EA's researchers with the teacher.

In the context of Geography lessons in primary school: 24 students of year 6 (11-12 year-olds) and their teacher were involved in five hours in total of focused piloting of C^{2}Learn, including the application of the co-creativity assessment methodology, using C2Space and 4Scribes based on scenarios developed through the collaboration of EA's researchers with the teacher.

In the context of History lessons in primary school: about 120 students of year 6 (11-12 year-olds) and their teachers were involved in four hours in total of less formal trials of C^{2}Learn without the application of the co-creativity assessment methodology, using C2Space and 4Scribes based on scenarios developed through the collaboration of EA's researchers with the teachers.

In the context of a cross-curricular project inspired by C²Learn, involving the subject areas of literature, religious education and home economics, in secondary school: 24 students of year 8 (13-14 year-olds) and their teachers were involved in fourteen hours in total of C²Learn pilots, including some elements of application of the co-creativity assessment methodology, using C2Space, 4Scribes, Iconoscope and Creative Stories, based on scenarios developed through the collaboration of EA's researchers with the teachers.

In the context of two creative writing classes in secondary school: 10 students of year 9 (14-15 year-olds) and 10 students of year 12 (17-18 year-olds) and their teacher were involved in ten hours in total of less formal trials of C²Learn without the application of the co-creativity assessment methodology, using C2Space, 4Scribes, Iconoscope and Creative Stories, based on scenarios developed through the collaboration of EA's researchers with the teacher.

Indicatively, Annex II provides a concise overview of the approach followed in the classroom-based pilots in EA on the basis of the example of activities in primary school.

In addition to work with students and teachers in classrooms, the research team installed and tested the various applications and games as soon as they became available, providing the design and development teams with feedback on adjustment and improvement requirements. Translations, playtesting, fine-tuning and additional user-driven design were also part of the ways EA's researchers contributed through concrete input to the refinement and final shaping of the C²Learn solution in this pilot period. Indicative samples of such input are provided in Annex III.

Overall, the testing and pilot activities in EA were realised flexibly, with a priority to providing direct input to the design and development processes of the project.

2.2.2 PILOTING IN SETTINGS OUTSIDE EA

Besides offering its staff and classrooms for the pilots, since the start of the project EA has enabled the involvement of more teachers and schools in Greece in the pilot activities, drawing from a wide network of education professionals with whom EA has strong collaboration links.

In this context, there have been numerous instances in which the C²Learn pedagogy and technologies have been exposed to teachers and learners beyond the immediate school context of EA. Already the 1st main pilot cycle included rich piloting activity in settings outside the immediate school context of EA, which provided user feedback from places of non-formal and informal learning (e.g. museums, creativity clubs and summer camps) as well as from the 18+ age group, and which were reported in the previous iteration of his deliverable, D5.3.2.

The 2nd main pilot cycle in EA consisted predominantly of rich focused work with trials and evaluation within the school, so as to provide the design and development processes of the project consistently with rich feedback, in-depth insights into the workings of the whole intervention proposed by C²Learn, and rich data sets for co-creativity assessment.

Starting in summer 2015, as part of the 3rd and final main pilot cycle up to the end of the project, EA put strong emphasis on exposing the -by then, almost final- outcomes of the project to wider audiences reaching far beyond the consortium. All dissemination activities were utilised as opportunities for such presentation and trials of the project products by the public, thus enabling one final cycle of interaction of the design and development teams with the end user communities, and allowing that the project products be finely adjusted, finally shaped and delivered. The relevant

activities are reported in deliverable D6.3.3 'Report on Dissemination and Exploitation Activities Year 3' in more detail. Among the various activities, it is worth highlighting here:

- networking with and demonstration to a large international educationalist audience in Madrid utilizing the participation in The Learner Conference (9-11 July 2015);

- a four-hour hands-on workshop in Attica, Greece on 16th July 2015 involving 40 teachers from many different European countries in the context of the Open Discovery Space Summer School 2015 organised in collaboration with the Open Discovery Space project;

- demonstration to 30 adult participants and networking during the Make2Learn workshop on 'Making as a Pathway to Foster Joyful Engagement and Creativity in Learning' which EA co-organised in Trondheim, Norway on 29th September 2015 within the International Conference on Entertainment Computing (ICEC 2015);

- EA's active involvement in the organisation of the C^{2}Learn challenges and contests which are already attracting larger numbers of users; and

- the rich final project workshop of C2Learn in EA's premises in Athens, Greece, on 30th October 2015.

2.3   THE CASE STUDY IN UK

UK hosts one of the four C^{2}Learn case studies. The code name for this is: **UK-CS**

OU has been building communities of students and teachers around C^{2}Learn since the first stages of the project. Decisions about the details of each pilot activity are generally made closer to the start of the pilot so as to cover the relevant needs of the project as these emerge and take into account the possibilities offered in the collaborating school communities. The curricular areas to be used as possible starting or reference points for cross-curricular work are also defined closer to the start of the pilots, after the schools and particularly the teachers within them are recruited. The selection of scenarios for the UK use cases is based on the ongoing close collaboration with the teachers involved as well as depending on which parts of the games and environment are ready to pilot and which scenarios might house those best.

Overall, pilot activities in the 2nd and 3rd main pilot cycles in the UK were shaped by the readiness of the project outcomes for use with teachers and students, as well as by changing circumstances in some of the schools involved. The research team actively addressed all technical and resource-related issues which arose, in close collaboration with the project coordinator and technical partners. The following pilots were eventually realised:

- Primary School SE1 (South East England)[1]: three sessions, two research visits, in February-March 2015, involving 24 students (10-year-olds) using 4Scribes. A teacher interview was conducted and audio and video data was collected for analysis.

- Secondary School MID1 (Midlands, England), two sessions, in February-March 2015, involving four and nine students (17-19-year-olds) respectively, using 4Scribes. A teacher interview was conducted and audio and video data was collected for analysis.

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[1] School names are pseudonyms, detailed information in deliverable D 5.1.1

- Primary School SW1 (South West England), five sessions, two research visits, in May-June 2015, involving 16 students (10-year-olds) using 4Scribes. A teacher interview was conducted and video data was collected for analysis.

- Secondary School MID2 (Midlands, England), two sessions, two research visits, in May-June 2015, involving five students (15-16-year-olds) respectively, using Creative Stories and Explore and Expand. Audio data was collected for analysis.

Finally, the UK research team used the opportunity of the dissemination workshop organized at the Graduate School of Education, University of Exeter (SW England) on 9th October 2015 for the purposes of further piloting 4Scribes, Iconoscope, and Creative Stories. Eight adult participants (university staff and students from the MA Education Creative Arts and MA Education Technology, Creativity and Thinking Skills courses) were involved in that session. Video data was collected for later analysis, the self-assessment tools were used, and a brief Socratic Dialogue took place.

The outcomes and findings of these pilot activities are reported and analysed in deliverable D5.4.2 'Co-creativity Evaluation Analysis'.

The UK research team also got actively involved in playtesting the various games and applications as they became available, providing feedback to the design and development teams. Indicative examples include a trial of the Constellations paper-based prototype conducted by the research team in Exeter in December 2014, involving three participants. In another case, external players (friends of one of the researchers, unlinked to the project or education), playtested 4Scribes in Exeter in May 2015, developing a new scenario linked to colonising a new world.

While the output of all playtesting, i.e. the continuous rich feedback provided to the design and development teams working on the various games and applications, is reflected in the technological outcomes and the corresponding deliverables, for indication purposes Annex III provides examples of feedback provided by the UK team based on the trial of the Constellations paper-based prototype in Exeter in December 2014.

3   Conclusion

This document reported on the activities realized within the 2nd and 3rd main pilot cycles of the C²Learn project, which were implemented in the three participating countries, Austria, Greece, and UK. The piloting activities were completed in April 2015 and October 2015 respectively, as foreseen by the C²Learn User Evaluation Plan. The end of the piloting activities concides with the completion of the C²Learn project overall. This report focused on the procedures and conditions of the pilot activities, while the outcomes and user feedback collected have informed all relevant processes and deliverables of the project, and among them predominantly D5.4.2 'Co-creativity Evaluation Analysis'.

Overall, the pilots constituted a crucial contribution to the C²Learn project from early on, having provided continuous input to the iterative design, development, and evaluation processes by testing the C²Learn technological solution in real-life educational settings. With the outcomes of the project gradually maturing and the careful timing of piloting in the covered school years, the pilots eventually provided evidence for the validation of the C²Learn technology and pedagogical interventions. While the present document predominately serves as a technical report, a reader-friendly summary of the outcomes and findings of pilots and C²Learn overall can be found in the final Knowledge Kit of the project (deliverable D6.4.2).

Annex I: Samples of additional materials and feedback collection tools (EA)

Μια περιπέτεια τρελών ιδεών και σοβαρής δράσης

Είμαστε ομάδες, αποτελούμενες από υπεύθυνα άτομα.

Είμαστε ομάδες, που όλες μαζί αποτελούν την κοινότητα της τάξης – τη δική μας κοινότητα!

Στην κοινότητά μας, είμαστε ίσοι. Είμαστε υπεύθυνοι. Είμαστε ο εαυτός μας, ο καθένας από μας.

Δεν κρυβόμαστε, δε φοβόμαστε – σεβόμαστε!

Ψάχνουμε για πρωτότυπες ιδέες, για διαφορετικές προσεγγίσεις σε προβλήματα που δε φαίνεται να έχουν εύκολη λύση.

Συνεργαζόμαστε, για να βρούμε τέτοιες έξυπνες, πρωτότυπες, διαφορετικές λύσεις.

Ρωτάμε, φανταζόμαστε:

→ *Και τι θα γινόταν αν...;*
→ *Πώς θα έβλεπα τα πράγματα αν ήμουν...;*

Όμως, πολλές φορές, τα πράγματα φαίνονται γνωστά, οι λύσεις συνηθισμένες – ή αδύνατες...

Και τότε τι κάνουμε; Παίζουμε! Να γιατί:

→ *Για να ανατρέψουμε τα συνηθισμένα!*
→ *Για να ανοίξουμε νέους δρόμους στη σκέψη και στη δράση μας!*
→ *Για να περάσουμε όμορφα, αλλά πάντα με σεβασμό στη δουλειά μας και τους κανόνες της!*

Από όλες τις πιθανές πρωτότυπες λύσεις και ιδέες,
για μας προτεραιότητα έχουν εκείνες
που υπηρετούν τις αξίες μας,
εκείνες που θα έχουν θετικό αντίκτυπο
σε μας, στην ομάδα μας, σε ολόκληρη την κοινότητά μας.

Όλοι μαζί κι ο καθένας από μας,
μπορούμε να αλλάξουμε τα πράγματα,
να πετύχουμε εκείνο στο οποίο εμείς πιστεύουμε.

www.c2learn.eu

QUEST: Το μέλλον της Ανατολικής Γαλιφρυίας στα χέρια σας!

Λένε ότι τα παιδιά είναι το μέλλον κάθε κοινωνίας. Εσείς έχετε την τύχη να μπορείτε να διαμορφώσετε απ' την αρχή μια νέα κοινωνία. Το νησί της Ανατολικής Γαλιφρυίας μόλις απέκτησε πλήρη ανεξαρτησία. Εσείς καλείστε να λάβετε όλες τις αποφάσεις για τα σχολεία του νέου κράτους. Τα σχολεία, που θα μορφώσουν τα σημερινά παιδιά και τους αυριανούς πολίτες της ιδανικής νέας πατρίδας σας. Τα ιδανικά σχολεία. Οι προκλήσεις είναι μεγάλες και τα διλήμματα πολλά…

MISSION 1: Οι προτεραιότητές σας! *Ποιο είναι το σημαντικότερο δίλημμα στο οποίο πρέπει να απαντήσετε, τώρα που ξεκινάτε να διαμορφώσετε από την αρχή το ιδανικό σχολείο στο νησί της Ανατολικής Γαλιφρυίας;*

Creative Stories: Η πρώτη απόφαση που θα πάρετε: Η Επιτροπή Παιδείας συνεδριάζει σε λίγες ώρες για πρώτη φορά. Πρέπει να αποφασίσετε ποιο ζήτημα θα προτείνετε ως το πιο σημαντικό, εκείνο που θα πρέπει να αποτελέσει την πρώτη βασική απόφαση για το νέο, ιδανικό σχολείο. Από το μυαλό σας έχουν περάσει πολλά διλήμματα:

- Αξιολόγηση - με ή χωρίς;
- Αναγνώριση και επιβράβευση της αριστείας, ή όχι;
- Σχολείο που ετοιμάζει άτομα, ή ομάδες και κοινωνία;
- Ελευθερία ή έλεγχος;
- Ποια η θέση απέναντι στη βία;
- Ποιος ο ρόλος της οικογένειας;…

Διατυπώστε την εισήγησή σας προς την Επιτροπή Παιδείας, θέτοντας ένα πραγματικά μεγάλο δίλημμα!

MISSION 2: Ποινή και επιβράβευση στο ιδανικό σχολείο. *Ποια είναι η θέση του σχολείου της Ανατολικής Γαλιφρυίας απέναντι στην ποινή και την επιβράβευση;*

Iconoscope: Ας κοιτάξουμε λίγο βαθύτερα. Τι κρύβουν οι έννοιες " βραβείο", " τιμωρία", "βελτίωση"; Μήπως βλέπεις κάτι που δεν βλέπουν οι άλλοι; Για να δούμε, ποιος θα ξεγελάσει ποιον!
Iconoscope: Ας κοιτάξουμε λίγο βαθύτερα. Τι κρύβουν οι έννοιες "περηφάνια", "δώρο", "κίνητρο"; Μήπως βλέπεις κάτι που δεν βλέπουν οι άλλοι; Για να δούμε, ποιος θα ξεγελάσει ποιον!
Iconoscope: Ας κοιτάξουμε λίγο βαθύτερα. Τι κρύβουν οι έννοιες "εξευτελισμός (διαπόμπευση)", "παράδειγμα", "στέρηση"; Μήπως βλέπεις κάτι που δεν βλέπουν οι άλλοι; Για να δούμε, ποιος θα ξεγελάσει ποιον!
Creative stories: «Η καλύτερη ανταμοιβή»: Η δική σου πρόταση για έναν εναλλακτικό τρόπο επιβράβευσης στο σχολείο.
Creative stories: «Η πιο δίκαια ποινή»: Η δική σου πρόταση για έναν εναλλακτικό τρόπο προσέγγισης της τιμωρίας και της ποινής στο σχολείο.

MISSION 3: Ώρα για πραγματικά ελεύθερη επιλογή! *Ελευθερία ή έλεγχος, επιλογή ή επιβολή; Ποια θέση παίρνει το σχολείο της Ανατολικής Γαλιφρυίας; Ώρα για τη δική σας ελεύθερη επιλογή. Ώρα ευθύνης!*

Iconoscope: Ας κοιτάξουμε λίγο βαθύτερα. Τι κρύβουν οι έννοιες "ελευθερία", "οικογένεια", "επιλογή"; Μήπως βλέπεις κάτι που δεν βλέπουν οι άλλοι; Για να δούμε, ποιος θα ξεγελάσει ποιον!
4Scribes: Σύμφωνα με μία επαναστατική καινοτομία που θα δοκιμασθεί φέτος για πρώτη φορά, στην ηλικία των 14 ετών τα παιδιά έχουν το δικαίωμα να επιλέξουν πραγματικά ελεύθερα: είτε θα συνεχίσουν να είναι μαθητές, παραμένοντας υπό την προστασία αλλά και τον έλεγχο του σχολείου και της οικογένειας, είτε θα ξεκινήσουν να εργάζονται, αποκτώντας πλήρη ανεξαρτησία και αναλαμβάνοντας την ευθύνη για κάθε τι που τους αφορά. Θέσεις και ανθρώπινες συνθήκες εργασίας έχουν διασφαλισθεί για κάθε ενδιαφερόμενο, στις φυτείες και τη βιομηχανία παραγωγής σοκολάτας του νησιού της Ανατολικής Γαλιφρυίας. Η ομάδα σας μόλις σήμερα άκουσε την είδηση και… Συνεχίστε την ιστορία!

QUEST: Το ταξίδι της σοκολάτας
Ξέρεις τι κρύβεται πίσω από τη σοκολάτα; Ανακάλυψέ το μαζί μας! Είμαστε εθελοντές και θέλουμε να προσφέρουμε στην κοινωνία την απόλαυση ενός σωστού γλυκίσματος - την απόλαυση, έτσι, όπως θα έπρεπε να είναι!

MISSION 1: Το μυστήριο της διατροφικής αξίας

Λύνουμε το μυστήριο της πραγματικής διατροφικής αξίας της σοκολάτας.

Iconoscope: Ας κοιτάξουμε λίγο βαθύτερα. Τι κρύβουν οι έννοιες "Αξία", "Απόλαυση", "Εξαπάτηση"; Μήπως βλέπεις κάτι που δεν βλέπουν οι άλλοι; Για να δούμε, ποιος θα ξεγελάσει ποιον!

MISSION 2: Πόσο μας στοιχίζει πραγματικά μια σοκολάτα;

Το μακρύ ταξίδι της σοκολάτας, από τη συλλογή των καρπών του κακαόδεντρου μέχρι να φτάσει σε μας το γλύκισμα, δεν είναι δίχως κόστος… Αξίζει πράγματι αυτή η διαδρομή; Ας βρούμε καλύτερους δρόμους προς την απόλαυση που μας προσφέρει!

Iconoscope: Ας κοιτάξουμε λίγο βαθύτερα. Τι κρύβουν οι έννοιες " Κόστος ", " Όφελος ", "Εναλλακτικός δρόμος"; Μήπως βλέπεις κάτι που δεν βλέπουν οι άλλοι; Για να δούμε, ποιος θα ξεγελάσει ποιον!

Creative stories: «Το εναλλακτικό απολαυστικό μανιφέστο»: Η δική σου πρόταση για μια εναλλακτική απόλαυση, δίχως τις "σκοτεινές" διαδρομές της σοκολάτας!

MISSION 3: "Μια σοκολάτα για τα παιδιά"… ή μήπως όχι;

Πόσος παιδικός πόνος, πόση εκμετάλλευση παιδικής εργασίας κρύβεται πίσω από μια αθώα «σοκολάτα για τα παιδιά»;

Iconoscope: Ας κοιτάξουμε λίγο βαθύτερα. Τι κρύβουν οι έννοιες "Πόνος", "Εκμετάλλευση", "Ευθύνη"; Μήπως βλέπεις κάτι που δεν βλέπουν οι άλλοι; Για να δούμε, ποιος θα ξεγελάσει ποιον!

Creative stories: Ένα παιδί από το αγρόκτημα με τα κακαόδεντρα γράφει αυτό το γράμμα: "Καλέ μου φίλε που κρατάς στα χέρια σου αυτή τη σοκολάτα,…"

Το C²Learn στο Β3 του Γυμνασίου της Ελληνογερμανικής Αγωγής!

Η συνεργασία μας στις δοκιμές που κάναμε μαζί, ήταν εξαιρετική. Σας ευχαριστούμε πολύ! Ιδιαίτερα μας βοήθησαν τα σχόλιά σας, γραπτά και προφορικά, τα οποία διαβάσαμε και ακούσαμε με προσοχή. Με αφορμή αυτά, θα θέλαμε σήμερα να σας παρακαλέσουμε να απαντήσετε στα παρακάτω ερωτήματα – με λόγια καθαρά, απόλυτα ειλικρινά και, βέβαια, χωρίς καμία αρνητική συνέπεια για σας. Πιστεύουμε ότι η ειλικρινής και εποικοδομητική κριτική είναι που σπρώχνει κάθε προσπάθεια ακόμα πιο πάνω, ακόμα πιο μπροστά!

Όνομα μαθητή: _____

Συμπληρώστε τις παρακάτω φράσεις με τις πρώτες σκέψεις που σας έρχονται στο μυαλό:

Τελικά, έπειτα από την εμπειρία που είχα με την εφαρμογή του C²Learn στην τάξη μου, σκέφτομαι ότι ....
....
....
....

Το γεγονός ότι το παιγνίδι μού πρότεινε λέξεις, ενώ έγραφα, με κάνει να σκεφτώ ότι ....
....
....
....
....

Το γεγονός ότι το παιγνίδι με έβαλε να ζωγραφίζω έννοιες, με κάνει να σκεφτώ ότι...............................
....
....
....
....

Αν μπορούσα, αυτό που σίγουρα θα άλλαζα, είναι...
....
....
....
....

Όμως, αυτό που σίγουρα δε θα άλλαζα με τίποτα, είναι ....
....
....
....
....

Αν σχεδίαζα εγώ ένα παιγνίδι με σκοπό την προαγωγή της δημιουργικότητας στο σχολείο, ...
....
....
....
....

Ευχαριστούμε πάρα πολύ ☺

Annex II: Overview of approach followed in classroom-based pilots in EA

An indicative example of the approach followed in classroom-based pilots in EA, based on the activities in primary school

The involvement of teachers for the preparation of the current pilots in EA started early in school year 2014-2015 (October 2014). In the primary school, four teachers participated in fortnightly training and activity design meetings with the research team. Sessions included playtesting of the games and brainstorming for appropriate educational scenarios and activities. Teachers reacted positively to this procedure. They were actively involved, shared ideas and expressed themselves about the games and their potential uses in the classroom, providing critical feedback to EA's research team and through it to all design and development teams of the project. Teachers eventually created two different scenarios as frameworks for students to get involved in creative thinking and learning in the context of their History and Geography lessons.

In each of the subject areas, all 24 students of one year-6 class played the games in two lesson sessions, using mainly digital, but where necessary (e.g. earlier on in the school year and due to technical failure) also paper prototypes. The class was divided into 4 groups sitting around one table each. Each group consisted of 6 children divided into 3 teams, so that each team consisted of two players. The co-creativity assessment methodology was applied in full involving one randomly selected focus group of 6 children. In addition, observation was conducted and comments were collected involving all other groups too.

The first cycle of piloting activity in this particular year-6 classroom took place in two rounds, in March and April 2015. Students played the 4Scribes-basic version game in the context of the History scenario ('How can you live under the social and economic rules of the Ottoman Empire?') and in the Geography scenario ('You are lost in a mountain and you are seeking how to go back home'), for two hours in each case. In addition to these play sessions, researchers also attended two further sessions in the classroom applying the co-creativity assessment methodology. Students used pseudonyms to complete the various research forms, but used their real names during game play.

In the first round, the teacher introduced the activity in the previous lesson, and then the 24 students played the game in the context of the history-oriented scenario. On the first day of play, the teacher announced the history quest and students expressed themselves about how they interpreted the quest and how they felt about it. During game play, students were actively involved. Some of them asked about the "missing ending" of the story and its role in the game. The teacher reinforced and highlighted students' remarks and requests. The session ended with the children feeling impatient for the next game-play session. On the second day, students played another two-hour session in which they were able to create their own stories. Those students who initially had problems to understand or follow the game rules eventually easily adjusted themselves. The following day students attended a session devoted to a Socratic Dialogue conducted by the teacher and the researcher, in which they discussed the outcomes of their play and any difficulties that had emerged during it.

The second round followed the same procedure, based on the Geography scenario. Fewer problems were observed this time and the whole process ran faster and more smoothly. Problems related mainly to misunderstandings of the quest and the need for short reminders of the game procedure. This time the Socratic Dialogue also included a discussion of students' preference between the History and the Geography scenario.

Annex III: Indicative input and/or feedback to design and development

Indicative feedback from the OU research team based on a trial of the Constellations paper-based prototype in Exeter in December 2014

The premise for storytelling was:

'Christmas. Caribbean. Tragedy. Tree. Sharks. Sailing. Food'.

The game generated interesting discussion, which was sometimes unrelated to the story.
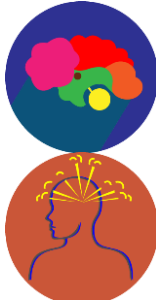
Considerations for design:

- Accessibility for primary schools may need consideration as the meanings of some of the cards may be difficult to understand, e.g. 'Changing of perspective'.

- It would be better for teachers to set the game up first to save time – Maybe this can be suggested in Instructions?

- Explanation of first turn not clear i.e. Instructions to use the words which are placed on the board to start game.

- Consideration needed in the timings of when to take next turn – when to stop the dialogue which occurs naturally during each turn?

- Digital version will need limited word count for post-its.

- Ethics - Adding reflection triggers in the game to allow players to think about the ethics of the story? Or making it part of the teacher's pedagogy?

Questions:

- How do cards relate to C2Space card design meeting decisions? What is the core card set?

- Will descriptors on people cards be on the cards in the pack?

- Do we have to use all of the characters and themes in the story?

- How much can you change the premise i.e. can we change the ending to be not to do with time?

Input from the EA research team, in collaboration with OU and BMBF, for the design of tagging in C2Space

Integrated Suggestions

English		Greek		Icon
Short	Long	Sort	Long	
A mind shift!	Something that is surprisingly different, that changed my thinking or made me see things from a different perspective.	Μου άλλαξε οπτική!	Ξαφνιάστηκα, μου προκάλεσε έκπληξη, είναι πολύ διαφορετικό από ό,τι έχω σκεφτεί, με έκανε να σκεφτώ διαφορετικά, με έκανε να δω τα πράγματα αλλιώς.	
Let's discuss it!	I am not sure about this, I have questions and thoughts I would like to share	Σηκώνει κουβέντα!	Δεν ξέρω σίγουρα γι' αυτό, έχω ερωτήσεις και σκέψεις που θέλω να συζητήσουμε μαζί	
This is funny!	Something delightful, engaging or humorous, it put a smile in my face.	Τι αστείο!	χαριτωμένο, ελκυστικό ή χιουμοριστικό, μ' έκανε να χαμογελάσω	
This matters!	Something that is good to our values, that can have valuable impact on our community.	Έχει ουσιαστική σημασία!	Ταιριάζει με τις αξίες μας, μπορεί να έχει πολύτιμη συνεισφορά στην κοινότητά μας.	
I can relate!	Something that resonates with me, that gives an expression to my own thoughts or feelings.	Καταλαβαίνω!	Με αγγίζει. Εκφράζει σκέψεις και συναισθήματα που είναι και δικά μου.	
A spur to act!	Something that motivates me to take charge or engage in my community. Something I feel I need to do something about.	Έμπνευση για δράση!	Με κινητοποιεί να αναλάβω πρωτοβουλίες και να έχω ενεργή συμμετοχή στην κοινότητά μου. Με κάνει να θέλω να κάνω κάτι γι' αυτό.	

| Idea I can use! | Something that can help me in what I am trying to accomplish or lead me to new ideas that make a positive difference. | Χρήσιμη Ιδέα! | Μπορεί να με βοηθήσει σε αυτό που προσπαθώ να κάνω, ή να με οδηγήσει σε καινούργιες ιδέες με θετικό αντίκρισμα. | |

All Suggestions

EA
Surprisingly different!
(Meaning/alternatives: This is different from the usual thing! That's different to what I have seen/known! This is different from what I expected! Very unusual!)
A challenge to my mind!
(Meaning/alternatives: That's a new perspective! This makes me think differently! This helps me see things from different perspectives! Mind-boggling! You're teasing my mind!)
A and B might best be seen as two aspects of just one category – or maybe not?
An idea that matters!
(Meaning/alternatives: Good to our values! This serves our values/the values of our community! This has got some positive value for us! This can have valuable impact on our community!)
Consequences?
(Meaning/alternatives: I am thinking of the consequences of this… This makes me think about what might happen because of this new idea!)
Hmm… let's discuss this!
(Meaning/alternatives: This makes me wonder… I'm not sure… This raises questions/makes me want to ask questions. Sorry, I don't get this. I wouldn't do it like that. It makes me feel uncomfortable.)
I can see the common ground between D and E above. We might just as well keep e only… But then we do want to highlight and encourage thinking on the consequences of novelty, don't we?
Good teamwork!
(Meaning/alternatives: This was the result of some good dialogue and collaboration among us! Proud of our team! It makes me think of collaboration/working with others.)

OU
Changed my thinking (trying to get at reframing)
Idea I can use (commenting on value of idea)
Makes me laugh (idea is engaging/humorous - humour is often, but not always, an important indicator of engagement)
I really 'got' it OR I understand this! (I know this is slippery, but it's similar to Lilia's suggestion below re relating to an idea - and perhaps gets at a felt or intuitive response to an idea)
Looks good OR visually engaging OR aesthetically beautiful (trying to get at the aesthetic of visual ideas)
I'd like to chat about this OR Let's discuss this OR Chat about this? (a version of this might be a way to get at dialogue within the game space?)

BMBF
This object helps to create new ideas that make a positive difference
This object encourages to work on my own and with other people
This object motivates to take charge of different parts of the creative process
This object engages and immerses me in the experience and in action
This object helps to think in a new way

Input from the EA research team for the development of custom 4Scribe deck cards for the needs of pilots in primary school

Geography Scenario
Cards from the Main Deck
FIRE
[1] Pain, Πόνος
[2] Anger, Θυμός
[3] Confusion, Σύγχυση
[5] Sadness, Θλίψη
[6] Trust, Εμπιστοσύνη
[8] Happiness, Χαρά/Ευτυχία
[9] Pride, Περιφάνια
[10] Fear/Terror Φόβος/ Τρόμος
[11] Certainty Σιγουριά
WATER
[2] Craft/Make/ Build, Δημιουργώ/Φτιάχνω/Κατασκευάζω
[4] Deal/ Do Business Συμφωνία/Συναλλαγή
[5] Defend Άμυνα
[6] Influence Επηρεάζω/Επιρροή
[7] Scheme/Plan, Σχέδιο/Σχεδιασμός
[10] Help, Βοήθεια
[11] Give, Δίνω
WIND
[5] Accusation, Κατηγορία/Μομφή
[7] Disappearance, Εξαφάνιση
[8] Challenge, Πρόκληση
EARTH
[1] Weapon. Όπλο
[3] Vehicle, Όχημα
[4] Food, Φαγητό/Τροφή
[5] Book, Βιβλίο
[7] Companion/ Pet Σύντροφος/Κατοικίδιο
[8] Tool, Εργαλείο
[11] Map, Χάρτης
[12] Plant/ Flora, Φυτό/Βλάστηση
MYTH
 [VIII] Luck, Τύχη
[IX] Strength, Δύναμη
 [XI] Death, Θάνατος
[XII] Cooperation, Συνεργασία
[XVII] Success, Επιτυχία
[XIX] Completion, Ολοκλήρωση

New Cards
EMOTIONS-STATES
Despair Απελπισία/ Απόγνωση
Insecurity, Ανασφάλεια/ Αβεβαιότητα
Security, Ασφάλεια
Hope, Ελπίδα
Relief, Ανακούφιση
Deceit, Δόλος
Thirst-Hunger, Πείνα - Δίψα
MAJOR EVENTS (akin to additional myth cards)
Rescue, Διάσωση
Failure, Αποτυχία

Survival, Επιβίωση
ACTIONS
Agreement, Συμφωνία
Disagreement/Conflict, Διαφωνία/Διχόνοια
Bid/Offer, Προσφορά
Creation, Δημιουργία
Repair, Επιδιόρθωση
Destruction, Καταστροφή
Education, Εκπαίδευση
Swimming, Κολύμπι
Avoidance, Αποφυγή
Communication, Επικοινωνία
Healing, Ίαση
Meeting, Συνάντηση
Wounding, Τραυματισμός
OBJECTS-DEVICES
Boat, Βάρκα
Phone, Τηλέφωνο
Clothes, Ρούχα
Blanket, Κουβέρτα
Net, Δίχτυ
Lens, Φακός
Compass, Πυξίδα
Medication, Φάρμακο
Tent, Σκηνή
Rope, Σκοινί
CHARACTERS
Doctor, Γιατρός
Politician, Πολιτικός
Explorer, Εξερευνητής
Athlete, Αθλητής
Mountaineer, Ορειβάτης
Engineer, Μηχανικός
Ορεσίβιος, Highlander
PHYSICAL SPACE
River, Ποτάμι
Estuary, Εκβολή
Water Spring, Πηγή
Delta, Δέλτα
Canyon, Φαράγγι
Gorge, Χαράδρα
Plateau, Οροπέδιο
Valley, Κοιλάδα
Forest, Δάσος
Lake, Λίμνη
NATURAL PHENOMENA
Blizzard, Χιονοθύελλα
Storm, Καταιγίδα
Fog, Ομίχλη
Rain, Βροχή
Snow, Χιόνι

History Scenario
Cards from the Main Deck
FIRE
 [1] Pain, Πόνος
[2] Anger, Θυμός

[3] Confusion, Σύγχυση

[4]Shame/ Guilt Ντροπή/ Ενοχές

[5] Sadness, Θλίψη

[6] Trust, Εμπιστοσύνη

[7] Obsession, Εμμονή

[8] Happiness, Χαρά/Ευτυχία

[9] Pride, Περιφάνια

[10] Fear/Terror Φόβος/ Τρόμος

[11] Certainty Σιγουριά

[12] Eureka!, Εύρηκα!

WATER

[1] Learn, Μαθαίνω

[2] Craft/Make/ Build, Δημιουργώ/Φτιάχνω/Κατασκευάζω

[3] Flee/Run, Ξεφεύγω/Τρέχω

[4] Deal/ Do Business Συμφωνία/Συναλλαγή

[5] Defend Άμυνα

[6] Influence Επηρεάζω/Επιρροή

[7] Scheme/Plan, Σχέδιο/Σχεδιασμός

[8] Fight, Μάχομαι

[9] Travel, Ταξιδεύω

[10] Help, Βοήθεια

[11] Give, Δίνω

[12] Take, Παίρνω

WIND

[1] Lies, Ψέματα

[5] Accusation, Κατηγορία/Μομφή

 [6] Celebration, Γιορτή/Εορτασμός

EARTH

[1] Weapon. Όπλο

[2] Treasure, Θησαυρός/Πλούτος

[3] Vehicle, Όχημα

[4] Food, Φαγητό/Τροφή

[5] Book, Βιβλίο

[6] Symbol/ Crest, Σύμβολο/Οικόσημο

[7] Companion/ Pet Σύντροφος/Κατοικίδιο

MYTH

[VI] Justice, Δικαιοσύνη

[X] Perspective Change, Αλλαγή Οπτικής

[XI] Death, Θάνατος

 [XII] Cooperation, Συνεργασία

[XVI] Betrayal, Προδοσία

[XVII] Success, Επιτυχία

[XIX] Completion, Ολοκλήρωση

New Cards

MAJOR EVENTS (akin to additional myth cards)

Revolution, Επανάσταση

Destruction, Καταστροφή

Discord, Διχόνοια

Liberation, Απελευθέρωση

Failure, Αποτυχία

Arrest, Σύλληψη

Hanging, Απαγχονισμός

ACTIONS

Purchase, Αγορά

Initiation, Μύηση

Oath/Pledge Όρκος/Ορκωμοσία

Apportionment/Distribution, Καταμερισμός/Διανομή
Capture/Conquest, Άλωση

OBJECTS-DEVICES
Tax, Φόρος
Letter. Γράμμα/Επιστολή
CHARACTERS
Local Official, Προεστός
Raya/Tributary, Ραγιάς
Pasha, Πασάς
Boy, Αγόρι
Clergyman, Κληρικός
Klepht/Outlaw, Κλέφτης
Armatolos/Militiaman, Αρματολός
Upper Class Phanariot Greek/ Φαναριώτης
Tzar , Τσάρος
Captain, Αρχηγός
Chieftain, Πολέμαρχος
Member of the Secret Society of Friends, Μέλος Φιλικής Εταιρίας
Sultan, Σουλτάνος
Merchant/Trader, Έμπορος
Traveler, Περιηγητής
Janissary, Γενίτσαρος
European, Ευρωπαίος
Girl, Κορίτσι

Input from the EA research team, in collaboration with OU, BMBF and UEDIN, for the definition of concept triplets to be included in the stand-alone version of Iconoscope

Theme: Moving
2 triplets

Theme	Moving	Κινήσεις	Bewegung
Concept 1	Push	Σπρώχνω	Schieben
Concept 2	Pull	Τραβώ	Ziehen
Concept 3	Drag	Σέρνω	Schleifen

Theme	Moving	Κινήσεις	Bewegung
Concept 1	Take	Παίρνω	Nehmen
Concept 2	Bring	Φέρνω	Bringen
Concept 3	Fetch	Πάω και φέρνω	Holen

Theme: Making a change
3 triplets

Theme	Making a change	Φέρνοντας την αλλαγή	Veränderung bringen
Concept 1	By force	Με τη βία	Gewaltsam
Concept 2	Through collaboration	Μέσω συνεργασίας	Gemeinsam
Concept 3	On your own	Μόνος/μόνη μου	Allein

Theme	Making a change	Φέρνοντας την αλλαγή	Veränderung bringen
Concept 1	For myself	Για μένα	Für sich selbst
Concept 2	For my friends	Για τους φίλους μου	Für die Freunde
Concept 3	For humanity	Για την ανθρωπότητα	Für die Menschheit

Theme	Making a change	Φέρνοντας την αλλαγή	Veränderung bringen
Concept 1	Good	Προς το καλύτερο	Verbesserung
Concept 2	Bad	Προς το χειρότερο	Verschlechterung
Concept 3	Unthinking	Χωρίς πολλή σκέψη	Zufällig ändern

(The Greek and German translations for 'Good' and 'Bad' above indicate 'change to make things better' and 'change to make things worse' respectively. In the discussions in Vienna the following alternatives in English came up: 'For a good reason'; 'For a bad reason'. If these meanings are preferred, the equivalents in Greek are: 'Με καλό σκοπό' and 'Με κακό σκοπό'. Alex will need to say what is best for German).

Theme: Accepting people
3 triplets

Theme	Accepting people	Αποδοχή των άλλων	Leute akzeptieren
Concept 1	Tolerance	Ανεκτικότητα	Toleranz
Concept 2	Acceptance	Αποδοχή	Akzeptanz
Concept 3	Solidarity	Αλληλεγγύη	Solidarität

Theme	Accepting people	Αποδοχή των άλλων	Leute akzeptieren
Concept 1	Patience	Υπομονή	Geduld
Concept 2	Kindness	Καλοσύνη	Gefälligkeit
Concept 3	Forgiveness	Συγχώρεση	Versöhnlichkeit

Theme	Accepting people	Αποδοχή των άλλων	Leute akzeptieren
Concept 1	Respect	Σεβασμός	Respekt
Concept 2	Communal responsibility	Κοινωνική ευθύνη	Gemeinsame Verantwortung
Concept 3	Nonviolence	Όχι στη βία	Gewaltverzicht

Theme: Control

2 triplets

Theme	Control	Έλεγχος	Kontrolle
Concept 1	Lead	Καθοδηγώ	Führen
Concept 2	Govern	Κυβερνώ	Regieren
Concept 3	Dominate	Κυριαρχώ	Beherrschen

Theme	Control	Έλεγχος	Kontrolle
Concept 1	Team	Ομάδα	Team
Concept 2	Disciples	Οπαδοί	Anhänger
Concept 3	Slaves	Σκλάβοι	Sklaven

Theme: Stance and action

3 triplets

Theme	Stance and action	Στάση και δράση	Haltung und Aktion
Concept 1	Proactive	Ενεργός δράση	Proaktiv
Concept 2	Reactive	Αντίδραση	Reaktiv
Concept 3	Inactive	Αδράνεια	Untätig

Theme	Stance and action	Στάση και δράση	Haltung und Aktion
Concept 1	Protest	Διαμαρτυρία	Protest
Concept 2	Conform	Συμμόρφωση	Konformismus
Concept 3	Sit on the fence	Ουδετερότητα	Neutralität

Theme	Stance and action	Στάση και δράση	Haltung und Aktion
Concept 1	Passive	Παθητικότητα	Passiv
Concept 2	Aggressive	Επιθετικότητα	Aggressiv
Concept 3	Assertive	Διεκδίκηση	Durchsetzungsfähig

Theme: Diversity

4 triplets

Theme	Diversity	Ποικιλία	Vielfalt
Concept 1	Nature	Φύση	Natur
Concept 2	Mankind	Ανθρωπότητα	Menschheit
Concept 3	Technology	Τεχνολογία	Technologie

Theme	Diversity	Ποικιλία	Vielfalt
Concept 1	Heritage	Καταγωγή	Herkunft
Concept 2	Culture	Πολιτισμός	Kultur
Concept 3	Art	Τέχνη	Kunst

Theme	Diversity	Ποικιλία	Vielfalt
Concept 1	Sexual orientation	Σεξουαλικός προσανατολισμός	Sexuelle Orientierung
Concept 2	Gender	Φύλο	Geschlecht
Concept 3	Human rights	Ανθρώπινα δικαιώματα	Menschenrechte

Theme	Diversity	Ποικιλία	Vielfalt
Concept 1	Collaboration	Συνεργασία	Zusammenarbeit
Concept 2	Participation	Συμμετοχή	Teilnehmen
Concept 3	Engagement	Συστράτευση	Engagement

(We also considered adding this triplet under 'Diversity': 'Racism', 'Ethnicity', 'Equality')

Theme: Digital world

4 triplets

Theme	Digital world	Ψηφιακός κόσμος	Digitale Welt
Concept 1	Possibilities	Δυνατότητες	Möglichkeiten
Concept 2	Power	Εξουσία	Macht
Concept 3	Empowerment	Δύναμη	Stärkung

Theme	Digital world	Ψηφιακός κόσμος	Digitale Welt
Concept 1	Avatar	Άβαταρ	Avatar
Concept 2	Communication	Επικοινωνία	Kommunikation
Concept 3	Expression	Έκφραση	Ausdruck

Theme	Digital world	Ψηφιακός κόσμος	Digitale Welt
Concept 1	Danger	Κίνδυνος	Gefahr
Concept 2	Safety	Ασφάλεια	Sicherheit
Concept 3	Protecting the young	Προστασία των ανηλίκων	Jugendschutz

Theme	Digital world	Ψηφιακός κόσμος	Digitale Welt
Concept 1	Freedom	Ελευθερία	Freiheit
Concept 2	Play	Παιγνίδι	Spiel
Concept 3	Enthusiasm	Πώρωση	Tatendrang