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Combating Digital Exclusion

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Combating Digital Exclusion
Children educate digitally illiterate adults in safe and creative web

September 2017

EduWeb: Combating Digital Exclusion - Children educate digitally illiterate adults in safe and creative web

O3A2: Educational Material

Teachers' training booklet

Created by: Anastasia Economou, Cyprus Pedagogical Institute

Version 0.1

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Contents

1. Introduction

Purpose of this booklet and contents

This booklet is addressed to the EduWeb project teachers who are called to support and coach their students to become Young Trainers for adults for the creative and safe use of the internet. The booklet aims to introduce teachers to the EduWeb approach and to provide a resource material for the EduWeb critical aspects. More specifically, the booklet discusses the following:
- EduWeb project
- Adult learning
- Training young coaches
- Digital learning
- Internet safety

At the same time, the booklet suggests a training approach for the students' training and teaching implementation and provides some examples for students' training adults on internet issues, based on the case of the training of students of the Lykeio Aradippou. Lastly, a number of examples of short educational courses are given for teaching adults the creative and safe use of the internet, as these were developed by the students involved.

The EduWeb Project

The **EduWeb (Combating Digital Exclusion - Children educate digitally illiterate adults in safe and creative web)** project is a Key Action 2 project, funded by the European Commission via the Erasmus+ programme. The EduWeb project aims to train students to become Young Trainers for adults for the creative and safe use of the internet. This includes the training of teachers to support and coach their students during the development and implementation of educational scenarios, the training of students to become young trainers, as well as educational resources and tools to support the whole process.

Moreover, *EduWeb* aims to enhance the cooperation between schools and educational institutions across Europe, in order to combat the digital exclusion of adults in terms of Internet use by training students to be the young educators of the digitally illiterate adults. For that purpose, 5 countries participate in the project (Bulgaria, Cyprus, Greece, Italy and the United Kingdom), which is implemented between 1 October 2016 until 30 September 2018.

More information on the EduWeb project can be found at http://eduweb-project.eu .

2. Theoretical background

This section aims to provide a brief theoretical perspective of the critical elements of this project, including: adult learning, training young coaches, digital learning, and internet safety.

Adult learning

Adult Education is an important element of people's lives. Lifelong learning provides the opportunity to people of every age to continue constructing knowledge and developing skills in all aspects of life. The *European Agenda for Adult Learning* report refers to how important Adult Lifelong Learning is to the individuals, but also to the public, describing how people achieving their personal goals can be more efficient at work, and healthier and happier in their everyday lives.

A lot of work can be found on Malcolm Knowles (1980) term *Andragogy*, as the education of adult learners. A more relevant to EduWeb analysis, is one by Christoforos Pappas (2013) posted in the *eLearning Industry* portal

("The Adult Learning Theory - Andragogy - of Malcolm Knowles" and "9 Tips to Apply Adult Learning Theory to eLearning"). Pappas (2013) claims that Knowles' Andragogy learning theory, with 5 assumptions concerning the characteristics of adult learners and 4 principles concerning adult learning (see diagram 1), despite the fact that it was introduced in the 1980's, it can be utilized today to create more meaningful eLearning experiences for adult learners.

Knowles' 4 Principles Of Andragogy	Knowles' 5 Assumptions Of Adult Learners
• Adults need to be involved in the planning and evaluation of their instruction. • Experience (including mistakes) provides the basis for the learning activities. • Adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life. • Adult learning is problem-centered rather than content-oriented. (Kearsley, 2010)	1. **Self-Concept** As a person matures his/her self concept moves from one of being a dependent personality toward one of being a self-directed human being. 2. **Adult Learner Experience** As a person matures he/she accumulates a growing reservoir of experience that becomes an increasing resource for learning. 3. **Readiness to Learn** As a person matures his/her readiness to learn becomes oriented increasingly to the developmental tasks of his/her social roles. 4. **Orientation to Learning** As a person matures his/her time perspective changes from one of postponed application of knowledge to immediacy of application. As a result his/her orientation toward learning shifts from one of subject- centeredness to one of problem centeredness. 5. **Motivation to Learn** As a person matures the motivation to learn is internal

Diagramme 1: Presentation of Knowles' assumptions and principles on adult learning

Based on this discussion, Knowles (1984) provides an example of applying andragogy principles to the design of personal computer training:

1. There is a need to explain the reasons specific things are being taught (e.g., certain commands, functions, operations, etc.)
2. Instruction should be task-oriented instead of promoting memorization -- learning activities should be in the context of common tasks to be performed by the others.
3. Instruction should take into account the wide range of different backgrounds of learners; learning materials and activities should allow for different levels/types of previous experience with computers.
4. Since adults are self-directed, instruction should allow learners to discover things and knowledge for themselves without depending on people. However, learners should be offered guidance and help when mistakes are made.

Furthermore, nine tips are provided in the *eLearning Industry* portal (see diagram 2)

Applying Knowles' 5 Adult Learning Theory Assumptions to eLearning	Applying Knowles' 4 Adult Learning Theory Principles to eLearning
1. Self-Concept: Create learning experiences that offer minimum instruction and maximum autonomy. 2. Adult Learner Experience: Include a wide range of instructional design models and theories to appeal to varied experience levels and backgrounds. 3. Readiness to Learn: Utilize social media and online collaboration tools to tie learning to social development. 4. Orientation to Learning: Emphasize how the subject matter is going to solve problems that an adult learner regularly encounters. 5. Motivation to Learn: There must be a valid reason behind every eLearning course, module or educational activity.	1. Principle of Andragogy1: Adults must have a hand in the design and development of their learning experience. 2. Principle of Andragogy2: Experience should be at the root of all eLearning tasks and activities. 3. Principle of Andragogy 3: Real life applications and benefits must be tied to the eLearning course. 4. Principle of Andragogy 4: Give adult learners the opportunity to absorb information, rather than memorizing it.

Diagramme 2: 9 Tips to Apply Adult Learning Theory to eLearning

Further reading on adults' learning can be found in the project deliverable "Report on the best practices for adults' education on Internet use in the educational process throughout Europe" (http://eduweb-project.eu/index.php/en/eduweb-en/documents-en).

In addition, an important portal dealing with the education of adults is the EPALE platform, an initiative of the Directorate-General for Education, Youth, Sport and Culture of the European Commission, which aims at sharing content related to adult learning, including news, blog posts, resources, and events. (https://ec.europa.eu/epale/en/about).

Training young coaches

Educating young students to become trainers incorporates a variety of modern learning approaches aiming at the students' constructing knowledge on the subject matter, while at the same time developing the necessary skills to deliver and share that knowledge. Through an emphasis given both on *the process of learning* as well as the *outcome (product) of learning*, teachers are required to apply pedagogy that supports the students' active engagement in their own learning.

Working in groups under the teachers' coaching and facilitation, mutual learning on issues that are of interest to students, requires first and foremost their understanding on the issues, grasping the knowledge, and finally the ability to transmit the knowledge acquired to others. Through this process, students do not only acquire knowledge on the matter, but they develop at the same time significant competencies for their personal and social development, like: Collaboration skills, Ability to develop an action plan with objectives and activities, Problem solving skills, Reflection and self-evaluation, Communication, Sharing and dissemination of knowledge, and Cultivation of attitudes and values (Economou et al, 2013).

In order for teachers to be able to train their students to become trainers of adults, they need to undertake the role of a coach than the role of an instructor. Students need to be facilitated to discover the knowledge required, while to be coached through the design and implementation process. The use of digital technologies to facilitate the access to multiple resources, the processing of information, group work, sharing and communication is highly recommended through the whole process.

An essential approach to be undertaken by the teachers involved is *Constructivism*, which suggest that learners actively construct new mental models as a result of their interactions and experiences. Constructivists also propose that learners are particularly likely to construct new knowledge when they are actively involved in creating external artifacts (a learning design or delivery of a course, for example) that causes them to reflect upon what they are learning and share that learning with others. Constructivism views learning as a process, during which learners construct meaning rather than memorizing information.

In engaging students as *Young Trainers* for adults, it is expected that (Economou et al, 2013):

- The dissemination of knowledge, ideas and experiences among children enriches and widens their understanding on the subject.
- By educating others, students are actively involved in the learning process as they need to explore and explain their ideas to others.
- Students develop organizational and design skills when preparing for their activities. They also have the opportunity to improve their communication skills and take responsibility of their own learning.
- Through collaboration with other students at their school (and other schools) and the support from experts, young coaches will have the opportunity to give and receive feedback while also evaluate their learning.
- Parents are more likely to be interested in participating in training courses, since their children have a central role in these activities, while students are in parallel intermediaries to raise awareness of parents.

Further reading on training young coaches can be found in the project deliverable "Report on the best practices for adults' education on Internet use in the educational process throughout Europe" (http://eduweb-project.eu/index.php/en/eduweb-en/documents-en) and the Young Coaches for the Internet programme (http://youngcoaches.pi.ac.cy).

Digital learning

Digital learning is learning facilitated by technology that gives students some element of control over time, place, path and/or pace.

Today's teaching abounds with diversity as students bring a multitude of life experiences, represent a variety of cultural backgrounds and demonstrate different learning abilities (Aud, Hussar et al, 2010). Teachers face challenges of educating every student, whether they are students with different language, background, home stability or special needs. In every case, each student requires educational resources that are unique to their own personal character. A way to tailor classroom instruction to the needs of individual students and abilities is described as differentiated instruction (Tomlinscon, 2000).

Digital learning offers methods to provide differentiated instruction to a diverse learner population. The use of individualised computer instruction in the classroom results in students learning more, acquiring content faster and having a deeper understanding of the lesson (Schacter & Fangano, 1999). Nowadays, learning can be achieved outside the classroom and in a real-life environment by using the latest technological trends. As per Jan Hylén's review (2015) summarizing the research on the use of digital learning in adult learning as a basis for the Education and Training Working Group on Adult Learning, 20 separate EU surveys held in 2010 demonstrated how the introduction of ICT in learning led to increased motivation and fewer discipline problems in students (Hylén & Grönlund; 2011). However, it seems that computers can never substitute the teacher, since there needs to be a balance between investments in technology, in teachers' competence to use the technology, and in digital learning content (Kennisnet, 2012).

Some examples of digital learning can incorporate, include:

Mobile and continuous learning
Currently 90% of the EU population owns a mobile device (Spring, 2015), while the expansion in mobile learning is expected to continue to grow as the content authoring takes under consideration mobile and wearable devices. With *mobile learning* anywhere and anytime learning is encouraged. More and more people nowadays need access to learning materials while they are on the go and continues learning is a necessity for today's people who are literally born with a connected personal device.

With mobile learning, we can improve twenty-first century social interactions. Video sharing, especially through Youtube, Vimeo and other video-sharing services, provides users a vast number of educational material (such as tutorials and full lessons) that can be viewed and learned easily in mobile devices. Availability to touched-enabled phone devices has changed the way that elderly interact and communicate with their families, and even allows them to take online courses for fun. In addition, mobile devices that enable students and adults to access educational material, provide the opportunity to capture and share knowledge in return, by exchanging roles, with students becoming teachers to other adults or fellow students. Finally, mobile and continues learning can enable a personalized learning experience that complements and extends existing education and schools, not only by digitising current educational systems but allowing students to choose their own paths in learning, in their own pace and follow their passions and talents.

Gamification – Make learning fun
Knowing that 5 million people spend an average of 45 hours a week on games, games can be used as an important tool in education. The idea for gamification was born in 1980s in a growing games market, with games taking a more educational based route with real-life aspects becoming part of game play. Gamification is the use of game

design and mechanics to enhance non-game contexts. In general, games in any form, increase motivation through engagement. There are a variety of ways to introduce gamification of education, such us:

1. Personalise learning experience by creating unique pathways for each learner, so that the training is performed per individual needs. For the learning designer, this means abandoning the linear approach that presents learners with one route along the learning path and thinking of ways to tailor the course to each person, based on the decisions they make when posed with challenges. By using branching scenarios, learners branch down different pathways through the course. To take adaptive game one step further, multiple variables can be used in each question or challenge, so the learners must weigh up options and make tradeoffs, consider cause-and-effect relationships, weigh multiple options and prioritize their efforts.

2. Gamify grading by abandoning grades and introducing experience points systems. Using experience points allows alignment of levels with skills.

3. Award students with budges for each assignment completed, to track progress and encourage perseverance. It is important to add value to badges, like bonus points, skill levels etc.

4. Integrate educational video games into curriculum in which the students are allowed to fail, overcome and persevere. Students control the choice they make in the games with instantaneous feedback and rewards given by the game itself.

5. Create competition. Learning is motivational when its social and fun, so appeal to learner's competitive instincts and create opportunities to challenge them against some else. Adopting "tournament" modules gives incentives to students to learn the material and practice to compete other students for recognition in the leaderboard.

6. Gamify homework to encourage informal learning. Ultimately educators are hoping that games translate learning into informal environments, due to the fact that the hours in the day for educators are not enough. Games allow the curiosity on a subject and learning to continue after class hours.

Learning analytics

Today learning analytics are more accessible than ever. Detailed data can tell a lot about the learners and the courses. They can also reveal learner preferences, which can help decide on other learning that should be offered or existing to be enhanced. Data gathered over time for individuals or for a complete course or institutions can help understand the learning process and uncover learning patterns that have a major impact to the stakeholders. While different EU legislations protect personal data access, new types of data can be captured and mined. In terms of learning analytics, the growing trend of capturing how learners interact with content, is driven by the increased attention on online learning. Data is essential for better understanding the learning process, the inputs, outputs and factors that contribute to learner success, and for informed decisions to be taken supported by evidence.

Social media

Social media is everywhere in society and its usage is expanding at a fast pace all around the world, especially among the students. In the last years, professional social media platforms are being used alongside authoring tools and learning management systems. Digital learning professionals are beginning to see the benefit of using social media platforms to encourage peer collaboration and support learning initiatives. Teamwork can increase those skills, as students can learn how to communicate, cooperate and compromise on decisions together.

Fernandez-Villavicencio (2010), in his book *Helping students become literate in a digital, networking-based society: A literature review and discussion* highlights the importance for all individuals to become information and media literate in the digital world. Additionally, he states that social networking tools, including the rich portfolio of applications they encompass, can substantially assist people in achieving this goal.

Augmented Reality

Augmented Reality (AR) is defined as an on-demand learning technique where the learning environment adapts to the needs and inputs from the learners (Klopfer, 2008). The environment does not have to be constrained into the physical learning environment, such as a classroom, but could also refer to digital learning environments,

through which learners can stimulate discovery and gain greater understanding, and meaning. Merging the real environment with virtual information in real-time is becoming easier to achieve. Simple online tools can help digital learning teams create highly engaging and interactive experiences for their users easily and at very little cost. *Augmented Reality* has great potentials in education, by redefining, eLearning. As AR advances, there could be significant benefits from the perspective of pedagogical effectiveness of experiential and collaborative learning processes. Pedagogical principles that are addressed by AR include physicality, embodied cognition, situated learning, and mental action. AR offers an innovative learning space by merging digital learning materials into the format of media with tools or objects, which are direct parts of the physical space, therefore creating "situated learning." Augmented Reality applications can also make textbooks "alive," which is thus defined as AR books. They are normally accessed in front of a computer's webcam, with digital information appearing. In AR learners control their own learning, through the active interactions with the real and virtual environments. AR-based eLearning can run on normal mobile devices such as smartphones, tablets, etc. using a downloadable application. AR is now revolutionizing the way we teach and learn, making these experiences more entertaining and rewarding.

Further reading on *Digital Learning* can be found in the project deliverable "Report on the best practices for adults' education on Internet use in the educational process throughout Europe" (http://eduweb-project.eu/index.php/en/eduweb-en/documents-en).

Internet safety

In a continuing growing economy and society, such as the one in Europe, digital technologies and the Internet are playing a major role. Cheaper and higher broadband quality provides accessibility to more and more households and individuals to the internet. The Digital Agenda for Europe along with the Digital Single Market promote and provide online technologies and bring down the barriers for online opportunities, so as citizens, businesses, and governments can fully benefit from online digital tools. The education of EU citizens and their preparation for the Digital Information Society are included in the eight indicators set out in the European framework of key competences for lifelong learning. It is crucial to improve knowledge and understanding of how media function in the digital world, as well as new opportunities and challenges that can be offered with the use of new digital media (CYberSafety-Cyprus SIC, 2016-2018).

The latest Internet World Statistics for 2016, are indicating the increasing number of internet users on all continents, ranking Europe second after Asia with an estimated 17,9% of the world internet usage. However, a significant number of countries within the European Union, among them Cyprus, Greece, Bulgaria and Italy, are indicating a low internet usage. Over 50% of Europeans use the internet daily, but 30% have never used it at all! Moreover, person with special needs face particular difficulties in benefiting fully from new electronic content and services. As ever more daily tasks are carried out online, everyone needs enhanced digital skills to participate fully in society.

Information literate people are able to access information about their health, their environment, their education and work, empowering them to make critical decisions about their lives, e.g. in taking more responsibility for their own health and education.

Moreover, in a digital world, *Media and Information Literacy* requires users to have the skills to use information and communication technologies and their applications to access and create information. For example, the ability to navigate in cyberspace and negotiate hypertext multimedia documents requires both the technical skills to use the Internet as well as the literacy skills to interpret the information (ITU,2015).

At the same time, building the knowledge and developing the skills to use the affordances of the Internet is essential, so as to avoid possible risks. Consequently, Internet safety becomes of paramount importance. The European programme *Safer Internet*, supports all European and national level activities, so as to create digital citizens that use the online technologies with creatively, responsibly and safely. Furthermore, it promotes the

European Commission's *Better Internet for Kids* strategy, under which the recent Safe Internet Forum 2016 discussed with all stakeholders the latest trends, risks and solutions related to online safety.

Furthermore, the Paris Declaration on Promoting citizenship and the common values of freedom, tolerance and non-discrimination through education, by the European Union Education Ministers in March 2015, focus on "Strengthening children's and young people's ability to think critically and exercise judgement so that, particularly in the context of the Internet and social media, they are able to grasp realities, to distinguish fact from opinion, to recognise propaganda and to resist all forms of indoctrination and hate speech".

As a final point, a number of policies, initiatives and projects not only in the EU but worldwide, highlight the importance of internet safety towards digital literacy and aim to support digital citizenship with a safer internet.

You can find information about the creative and safe use of the internet, along with existing resources and tools such as videos, presentations, and tips to help you with your work in the following portals:
- http://internetsafety.pi.ac.cy
- http://youngcoaches.pi.ac.cy
- http://www.cybersafety.cy
- http://saferinternet4kids.gr
- https://www.betterinternetforkids.eu

3. Students' training to become *Young Trainers* for adults for the safe and creative web use of internet

Introduction to students' training

The training approach suggested by the EduWeb project for the participating students' is based on the case implementation of the Lykeio Aradippou (LA) in Cyprus. The Lykeio Aradippou is the school involved in Cyprus for the development and implementation of the EduWeb model. The Cyprus Pedagogical Institute (CPI) designed and planned an implementation model for the school and implemented it in close collaboration with the school EduWeb team.

The students' trainings were designed involving two training elements: *Process* and *Content*.

In terms of content, trainings covered the following areas:
- EduWeb approach and scope
- Digital literacy skills
- Adult learning
- Creative and safe use of the internet
- Learning design for the development of short educational courses

In terms of the training process, the following steps are proposed:
- Students submit their participation interest
- Students are introduced to the EduWeb basic elements
- Students analyse the needs of their target audience and decide on the activities to develop
- Students adapt and/or create new learning activities and courses based on the EduWeb learning design guidelines
- Students implement the adults' trainings in f2f workshops
- Students reflect on their work

The school teachers were firstly introduced on the scope of their work for the EduWeb implementation. During this phase, an action plan was also agreed to be followed with the aim to maintain the best possible results, acknowledging:

- The adults' needs, regarding content and learning styles
- The young trainers' involvement in the needs analysis and educational material development
- The teachers' support

Based on this case, the proposed EduWeb approach for teachers' trainings in order to train and coach EduWeb Young Trainers for adults for the safe and creative web use of internet is shown in Diagramme 3.

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f2f (and/or online) workshop

Before the students' trainings, teachers go through a preparatory phase, with:
- Introduction to the EduWeb model and its critical aspects
- Discussion of the scope of work
- Development of an action plan

Implementation phase

During the implementation phase the teachers follow the students' training model and they have:
- Continuous support (school visits and/or online)
- EduWeb teachers' community access
- EduWeb educational resources portal access

Reflection phase

After the delivery of the students' trainings, the teachers meet to share and reflect on their experience

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Diagramme 3: Proposed approach for teachers' trainings in order to train and coach EduWeb young trainers for adults for the safe and creative web use of internet

Following the awareness and training meetings with the school team, students were invited to submit their interest of becoming young trainers for adults for the safe and creative web use of internet.

The school ICT teacher along with the CPI trainer, introduced the students to the programme and the scope of work. The work was taking place partly during the ICT lessons and during extracurricular hours within and outside school hours. The CPI prepared a *Students' training booklet* to support the students' trainings and work to be done (Appendix 1).

It is very important to stress here that the role of the teacher is one of a coach and facilitator. During the whole process, the students work collaboratively in smaller groups and shared their work with the rest (f2f and on their online space). The trainer and teacher give continuous guidance and feedback on students' work.

The teachers' role through the whole process is mainly coaching and facilitating their students towards their role as Young Trainers.

Students' training activities

The proposed students' training approach covers the following phases:

- the Preparatory phase
- the Training phase
- the Development phase
- the Implementation phase
- the Reflection phase

In each phase a number of activities, suggested in meetings, are described (Diagramme 4), while supporting educational material has been developed and is available.

Proposed approach for students' trainings to become the EduWeb young trainers for adults for the safe and creative web use of internet

Preparatory phase
- EduWeb presentation to the school community (teachers, students, parents)
- Invitation for students' participation
- Parents' letters of consent

Training phase
- 1st meeting:
  - Introduction to EduWeb and scope of work.
  - Examples of the *Young Coaches for the Internet* work.
  - Examples of educational material (the ones that have been already developed)
  - Reference to the *internetsafety.pi.ac.cy* portal for information on Internet safety
  - Reference to the *EduWeb* portal for the learning material
- 2nd meeting:
  - Discussion of *DigComp framework* for content areas to cover for the adults' trainings
  - Prepare a survey to be delivered to identify adults' needs for the trainings (optional)
- 3rd meeting:
  - Discussion of the survey results (if applicable)
  - Identify the content areas to be covered
  - Formation of working groups
  - Assign to each group one content area to decide on the aspect to be developed in a short educational course
  - Discuss adults' characteristics and learning styles
  - Organisation of groups on how and when to collaborate to do the work
- 4th meeting:
  - Group presentations on their first thoughts on the aspect they want to approach and develop as a course
  - See examples of already developed material (visit the EduWeb portal)
  - Decide on whether they want to use already developed material (from the EduWeb portal) or whether they want to develop new ones
  - Discussion on the Learning Design elements (if applicable)
  - Agree on the work timeframe
  - Formation of an online space to host the work of the groups

Development phase
During the development phase the groups work independently, they share their work on their online space and the teacher give feedback on their work. If they decide not to develop new material they will describe how to use the existing material. They may have a couple of meetings, as necessary, so as:
- Each group present their work and get feedback from the whole team
- Groups finalise their work
- Students decide on the strategy of delivering the lessons (how many, to whom etc)

Implementation phase
During the implementation phase the students deliver the trainings to the adult groups and take notes of the adults' self-evaluations. They keep a report of their offered trainings.

Reflection phase
After the delivery of the trainings with the adults, the students meet to share and reflect on their experience.

Diagramme 4: Proposed approach for students' trainings

Educational material to support students' training activities

The development of the educational material was based on the proposed training approach and adapted to the needs of the target audience for both the content and its format.

The educational material for the teachers and students was designed and developed by the Cyprus Pedagogical Institute and includes:

- Teachers' training booklet (this document)
- Students' training booklet (Appendix 1)
- The EduWeb content framework for the adults training on the creative and safe use of the internet with examples (Appendix 2)
- A reference to the DigComp framework by JRC (Appendix 3)
- A template with guidelines for the learning design of the adults' educational courses (Appendix 4)
- *Webbie – the EduWeb coach* graphics in editable format (Appendix 5)
- A reference to an educational course example (developed by the LA students) (Appendix 6)
- Reference to more examples of EduWeb short educational courses for adults, hosted on the projects eLearning portal at http://eduweb-project.eu/index.php/en/courses-en

The first examples of the EduWeb short educational courses for the adults were designed and developed by the LA students, who were trained from the beginning in the learning design process. The LA students had already some experience on training adults through their involvement as *Young Coaches for the Internet*.

It is important to note that the students identified the areas to be tackled and they chose the topic under each area to develop as a short course for their trainings for adults, based on a needs analysis survey they had conducted. Through their EduWeb training to become young trainers for adults for the creative and safe use of the internet, the students went through the concepts of adults' education, digital learning, learning design and educational material development, creative and safe use if the internet, and finally their role as trainers. Their initial involvement in the design and development of educational material introduced them to further knowledge and skills, as well as the ownership of the whole adults' training process.

It is expected that your students will have the opportunity to go through this experience and produce their own examples for additional EduWeb short educational courses for adults, to be hosted on the projects eLearning portal at http://eduweb-project.eu/index.php/en/courses-en

4. **Contact**

For further information and support on the implementation of EduWeb in your school you can contact

- Anastasia Economou, Cyprus Pedagogical Institute (email: economou.a@cyearn.pi.ac.cy)

or your country coordinator as follows:

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Appendix 1 - Students' training booklet

You can also find it online in the following link
https://drive.google.com/drive/folders/0Bwacpv6CImj3OGc0Y1BRcHNXeUk

Left page

In Diagram 2, some examples of content are given within each area:

Communicate	activities	tools
	- Email (...to an office) - Chat (...with someone abroad) - Talk online (...with their children) - ...	- Outlook - Viber - Facebook - ...
Be informed	activities	tools
	- Search for information on the web (...for gardening) - Read a newspaper/ a magazine - Watch the news online - ...	- Search engines - Newspaper apps - You tube, media apps - ...
Entertain one' self	activities	tools
	- Watch a tv programme - Listen to music - Read a novel - Play a game - ...	- You tube - eBooks ... - apps - ...
Shop	activities	tools
	- Buy a ticket - Pay a bill online - Book a hotel - ...	- Websites - Mobile apps ... (booking.com, skyscanner, amazon...) - ...
Protect one's self and others	activities	tools
	- spam emails - fishing - virus - ...	- Antivirus - Filters - ...
Create	activities	tools
	- Presentation - Picture - Photo album - ...	- Ppt, prezi - Photobox (... and other online apps) - Video editor - ...
Resolve Technical problems	activities	tools
	- Connect peripherals	- ...

Diagramme 2: EduWeb areas of content with examples

How do adults learn?

Adults usually learn when they need to accomplish a goal or tackle a problem which they are trying to find the solution to. Therefore, when trying to teach them, you need to be able to identify what they need. Giving them realistic problems in authentic situations will activate the need for learning. Moreover, teaching adults is more effective if done as an exercise, where they can instantly explore the new skills. Once they see what they can achieve it motivates them to continue. You should build on the adult's experience (negative or positive) on a subject aiming to build a positive attitude and outcome.

In addition, adults are better learners when you let them figure out possible solutions to their problems and take decisions by themselves. You keep them engaged and motivated to learn by giving them the autonomy they need. Lastly, when they are being taught, adults don't like people who instruct them; they prefer people guiding them towards a way to a solution.

Don't take for granted that adults have basic ICT skills. Explain to them basic concepts and make sure that they can easily access the device they use (e.g. make sure that the screen is bright enough and letters big enough for them to read).

Be patient!

Enjoy the time you spend with your parents, grandparents and other adults that you work with.

Right page

Where can I find information on the creative and safe use of the internet?

Digital and online technologies are very important tools in our lives. Building the knowledge and developing the skills to use the affordances of the Internet is essential, so as to avoid possible risks. You can find information about the creative and safe use of the internet, along with existing resources and tools such as videos, presentations, and tips to help you with your work in the following portals:

- http://internetsafety.pi.ac.cy
- http://youngcoaches.pi.ac.cy
- http://www.cybersafety.cy
- http://saferinternet4kids.gr
- https://www.betterinternetforkids.eu

How can I design and develop my own learning scenarios?

The process to develop a learning scenario refers to learning design. The EduWeb learning design approach complies with the guidelines in diagram 3.

Structure (vertical)
- Activity Description
  - Short description
  - Category it belongs to
  - Topic under the category
  - Audience
  - Level of difficulty
- Learning Objectives
- Digital Competences (DigComp)
- What is needed (hardware, software, accessories)
- Time needed
- Before we start we need to ensure
- Similar applications
- Activities (step by step)
- Assessment (self-assessment)

Cross references
- Tips: Risks / opportunities
- Videos and other resources

Presentation approach
- Activities
  - Approach
    - Explain
    - Screen shot
    - Graphics (arrows)
  - Video (capture)
  - Language: First plural
- Overall
  - Character – Webbie
    - Per area Webbie (eg YouTube, Skype)
    - Per role (eg guidance, tips, questioning etc)

Aesthetics
- Colors (EduWeb colors – green/orange)
- Different colors per category and topic

Diagramme 3: EduWeb Learning Scenario template

Where can I find EduWeb educational activities that I can use?

Students from the schools that participate in the EduWeb project developed educational scenarios that are available for all of you to use. In Appendix 1 you can find an example of an educational scenario that you can follow and use. You can find more educational activities on the project portal http://eduweb-project.eu/index.php/en/courses-en in different languages.

Appendix 2 - The EduWeb content framework for the adults training on the creative and safe use of the internet with examples

Communicate	activities	tools
	- Email (…to an office) - Chat (…with someone abroad) - Talk online (…with their children) - ….	- Outlook - Viber - Facebook - ….
Be informed	activities	tools
	- Search for information on the web (…for gardening) - Read a newspaper/a magazine - Watch the news online - ….	- Search engines - Newspaper apps - You tube, media apps - ….
Entertain one' self	activities	tools
	- Watch a tv programme - Listen to music - Read a novel - Play a game - …	- You tube - eBooks …. - apps - …
Shop	activities	tools
	- Buy a ticket - Pay a bill online - Book a hotel - …	- Websites - Mobile apps ….. (booking.com, skyscanner, amazon…)
Protect one's self and others	activities	tools
	- spam emails - fishing - virus - ….	- Antivirus - Filters - …..
Create	activities	tools
	- Presentation - Picture - Photo album - …	- Ppt, prezi - Photobox (… and other online apps) - Video editor - …
Resolve Technical problems	activities	tools
	- Connect peripherals	- ….

Appendix 3 - The DigComp Conceptual reference model

You can also find DigComp publication in the following link: https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework

The DigComp Conceptual reference model

Competence areas Dimension 1	Competences Dimension 2
1. Information and data literacy	**1.1 Browsing, searching and filtering data, information and digital content** To articulate information needs, to search for data, information and content in digital environments, to access them and to navigate between them. To create and update personal search strategies. **1.2 Evaluating data, information and digital content** To analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content. To analyse, interpret and critically evaluate the data, information and digital content. **1.3 Managing data, information and digital content** To organise, store and retrieve data, information and content in digital environments. To organise and process them in a structured environment.
2. Communication and collaboration	**2.1 Interacting through digital technologies** To interact through a variety of digital technologies and to understand appropriate digital communication means for a given context. **2.2 Sharing through digital technologies** To share data, information and digital content with others through appropriate digital technologies. To act as an intermediary, to know about referencing and attribution practices. **2.3 Engaging in citizenship through digital technologies** To participate in society through the use of public and private digital services. To seek opportunities for self-empowerment and for participatory citizenship through appropriate digital technologies. **2.4 Collaborating through digital technologies** To use digital tools and technologies for collaborative processes, and for co-construction and co-creation of resources and knowledge. **2.5 Netiquette** To be aware of behavioural norms and know-how while using digital technologies and interacting in digital environments. To adapt communication strategies to the specific audience and to be aware of cultural and generational diversity in digital environments. **2.6 Managing digital identity** To create and manage one or multiple digital identities, to be able to protect one's own reputation, to deal with the data that one produces through several digital tools, environments and services.
3. Digital content creation	**3.1 Developing digital content** To create and edit digital content in different formats, to express oneself through digital means. **3.2 Integrating and re-elaborating digital content** To modify, refine, improve and integrate information and content into an existing body of knowledge to create new, original and relevant content and knowledge. **3.3 Copyright and licences** To understand how copyright and licences apply to data, information and digital content. **3.4 Programming** To plan and develop a sequence of understandable instructions for a computing system to solve a given problem or perform a specific task.

Competence areas Dimension 1	Competences Dimension 2
4. Safety	**4.1 Protecting devices** To protect devices and digital content, and to understand risks and threats in digital environments. To know about safety and security measures and to have due regard to reliability and privacy. **4.2 Protecting personal data and privacy** To protect personal data and privacy in digital environments. To understand how to use and share personally identifiable information while being able to protect oneself and others from damages. To understand that digital services use a "Privacy policy" to inform how personal data is used. **4.3 Protecting health and well-being** To be able to avoid health-risks and threats to physical and psychological well-being while using digital technologies. To be able to protect oneself and others from possible dangers in digital environments (e.g. cyber bullying). To be aware of digital technologies for social well-being and social inclusion. **4.4 Protecting the environment** To be aware of the environmental impact of digital technologies and their use.
5. Problem solving	**5.1 Solving technical problems** To identify technical problems when operating devices and using digital environments, and to solve them (from trouble-shooting to solving more complex problems). **5.2 Identifying needs and technological responses** To assess needs and to identify, evaluate, select and use digital tools and possible technological responses to solve them. To adjust and customise digital environments to personal needs (e.g. accessibility). **5.3 Creatively using digital technologies** To use digital tools and technologies to create knowledge and to innovate processes and products. To engage individually and collectively in cognitive processing to understand and resolve conceptual problems and problem situations in digital environments. **5.4 Identifying digital competence gaps** To understand where one's own digital competence needs to be improved or updated. To be able to support others with their digital competence development. To seek opportunities for self-development and to keep up-to-date with the digital evolution.

Appendix 4 - A template with guidelines for the learning design of the adults' educational courses

Structure (vertical)
- Activity Description
  - Short description
  - Category it belongs to
  - Topic under the category
  - Audience
  - Level of difficulty
- Learning Objectives
- Digital Competences (DigComp)
- What is needed (hardware, software, accessories)
- Time needed
- Before we start we need to ensure
- Similar applications
- Activities (step by step)
- Assessment (self-assessment)

Cross references
- Tips: Risks / opportunities
- Videos and other resources

Presentation approach
- Activities
  - Approach
    - Explain
    - Screen shot
    - Graphics (arrows)
  - Video (capture)
  - Language: First plural
- Overall
  - Character – Webbie
    - Per area Webbie (eg YouTube, Skype)
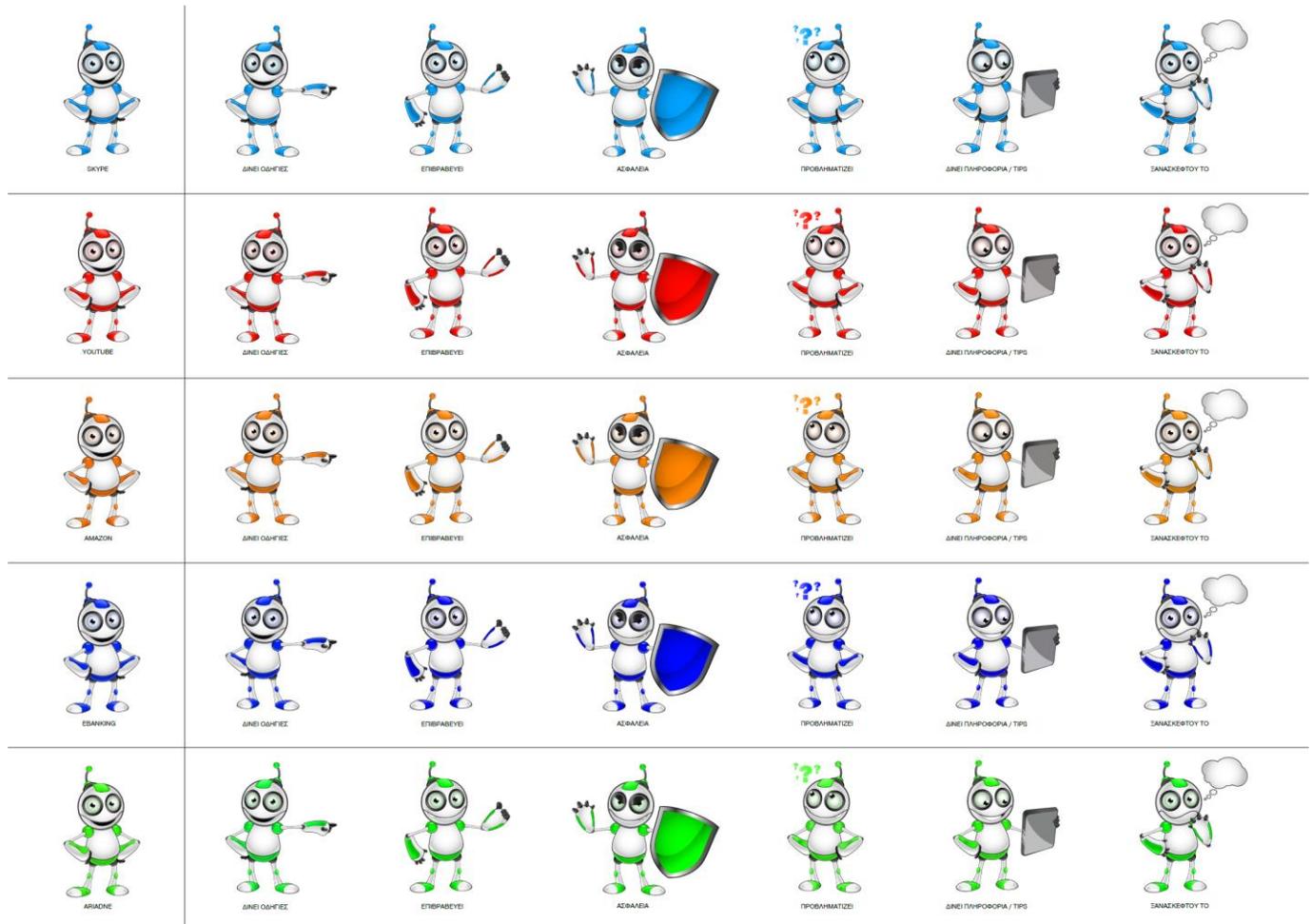   - Per role (eg guidance, tips, questioning etc)

Aesthetics
- Colors (EduWeb colors – green/orange)
- Different colors per category and topic

Appendix 5 – Webbie: the EduWeb coach graphics

You can also find *Webbie* in editable format in the following link
https://drive.google.com/drive/folders/0Bwacpv6CImj3RnhzTklUbm1wNzQ

Appendix 6 – An educational course example (developed by the LA students)

(developed by Aradippou Lyceum students in June 2017)

Category: Communication

Topic: Skype

- **Description**: Skype is an application that allows people to communicate with other people online, trough text, voice, and video. Skype μπορεί can be used wither on a computer or a mobile device such as a smart phone. Through this lesson we will learn how to create a SKYPE account and how to use it.

3

Learning Objectives: By using Skype we will be able to:
○ Remotely communicate using telephone calls between pairs of users as well as conference calling
○ messaging and voice chat
○ send files (photos, links , etc) to each other
○ sharing screens

Digital Competencies :
○ Communication and Collaboration

What do we need;
○ Equipment: Any Personal Computer or smart device.
○ **Application :** Skype
○ Peripherals, accessories: Microphone, camera external or build in.
○ Internet access

Time estimated for account creation:
About 10 minutes

4

Before training we ensure that trainee has:
○ the proper hardware and software.
○ the basic computer skills .
○ email account.
○ the skills to create email account.
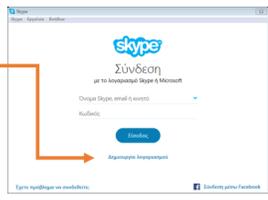○ Internet access.

Similar applications:
○ Viber

○ ooVoo

○ Google Hangouts

5

Skype account setup

Step 1°: On Skype sign in screen, select Create New Account

6

Step 2: In case of using your mobile number to sign up proceed with this step, otherwise proceed to step 3.

On the create account screen, select your country and enter your mobile number. Enter a password for your skype account using at least 8 characters (at least a symbol, a number and a letter) and select Next.
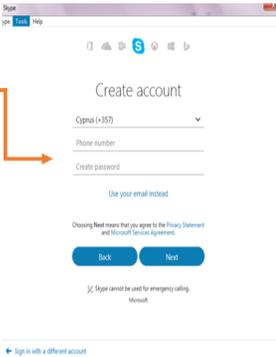
Make sure that you safe your password!

Step 3: If choosing to create a skype account using email enter your email address and password on the screen as shown on your right and select Next.
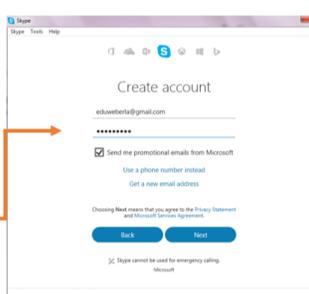
At this point you have created a Skype Account!!! Enjoy it!

10

Internet Safety Issues and Tips when using Skype

- Store your password on a secure location.
- Do not let others know your password.
- Do not accept skype friend requests from strangers.
- Do not receive files without having them scanned with antivirus.
- Be aware when using your camera. Your camera might be hacked. It is recommended to have it covered when it is not in use by you.

11

Self-Assessment

Check (√) the option applied for you

Objectives	Yes	No
Have I installed Skype on my computer or smart device?		
I am capable to text others using skype?		
I am capable to send and receive photos and other files using skype?		
I am capable to configure and test my speakers, microphone and camera on skype?		
I am capable to videoconferencing using skype?		
I am aware of the potential threats when using skype ?		
I can safely use skype and be protected from unwanted threats?		

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