

Teaching Coding and Mobile Devices in Telecentres



- Teaching
- Coding
- Mobile Devices

Toolkit & Implementation
Guidelines

CodeMob Toolkit

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Table of Contents

INTRODUCTION	4
CHAPTER 1: OVERVIEW OF THE CURRICULA	5
1.1 OVERVIEW OF THE CODING CURRICULA	5
1.2 OVERVIEW OF THE EFFECTIVE USE OF THE MOBILE DEVICES CURRICULUM	11
CHAPTER 2: GUIDELINES AND TIPS ON HOW TO IMPLEMENT THE CURRICULA	18
2.1 PARTICIPANTS	18
2.2 LOCALIZATION PROCESS	19
2.3 CURRICULA DEVELOPMENT	20
2.4 COBEMOB PLATFORM	21
CHAPTER 3: GOOD PRACTICES AND TIPS	27
3.1 ATTRACTIVENESS	27
3.2 ENGAGEMENT	27
3.3 PROMOTION	29
CHAPTER 4: CODEMOB PROJECT	30
CONCLUSION	32

Introduction

Fast technological changes transformed modern society at an accelerated pace during the last decade. Nowadays, individuals should acquire new skills to follow society's digital transformation. Digitalisation has also entered in the labour market, therefore the transformation of the existing needs is indispensable.

According to the European Commission, nowadays, job profiles increasingly require digital competences (93% of European workplaces use desktop computers with access to internet)¹ both in order to satisfy routine activities but above all, to developed complementary skills. It is also a fact that 21% of European citizens have no digital skills and that only 55% have sufficient digital competences. Similarly, only 64% of the workforce have adequate digital skills. ²The existing lack of e-skilled workforce affiliate with the high percentage of unemployment. A significant number of unemployed people has lack of digital skills in relation with the employed ones, which could lead them to a long-term situation of unemployment. Consequently, e-skilled individuals have more chances to get a job.

CodeMob – *teaching coding and mobile devices in telecentres* – aims to become a new tool for young people to tackle unemployment through means of digitalisation. By strengthening digital skills through training courses, CodeMob enhances the employability of young people.

CodeMob supports e-facilitators, as well as, unemployed young people in terms of ICT knowledge and digital skills. On one hand, the project aims to develop digital competences of unemployed youth on coding and mobile devices through trainings, while on the other hand, aims to enhance e-facilitators' competences by training them how to deliver courses related to coding and mobile devices.

Moreover, CodeMob by choosing coding and mobile devices combines the development of several skills. Firstly, coding courses develop computational and catalyst thinking combined with structured approach, efficiency and planning skills. In addition, they foster other transversal potential skills: problem-solving, analytical skills, understanding of the digital world and ability to take full advantage of it, entrepreneurship, thinking in an organised way, empowerment and autonomy in using digital technology. While the added value of mobile devices courses is the acquisition of the myriad opportunities that a mobile device offers in a structured and comprehensive way.

¹ European Parliament (2017), Digital skills in the EU labour market

² European Commission (2016), ICT for work: Digital skills in the workplace.

Chapter 1: Overview of the curricula

This chapter presents an overview of the curricula for both coding and mobile aiming to provide guidelines to other similar organisations on how to use the courses developed. Both trainings on coding and on effective use of mobile devices consist of two curricula, which meet end-users and e-facilitators' needs considering society's requirements.

1.1 Overview of the coding curricula

Training courses on coding consist of two parts: 1. Training curriculum for end users in telecentres and 2. training curriculum for the e-facilitators to train them to how to teach coding in telecentres.

The e-facilitators' curriculum is similar to end users' one in terms of technical content. Nevertheless, tools and methodologies are covered more in-depth to lead trainers to acquire deeper level of knowledge than trainees. The end-users' curriculum is structured on a module to lead participants to acquire basic digital knowledge in coding and motivate them to follow more advanced trainings that allow them to use their skills in a professional context.

a. Overview of the coding curriculum for e-facilitators

JavaScript (JS) Web Programming

E-facilitators acquire new and improve existing ICT programming skills as well as learn skills necessary to work with young people.

Learning methods

- Face to face
- Blended training (using online platforms)
- Flipped classroom

Learning content

- World Wide Web - HTML, CSS, JavaScript - Web languages
- Step-by-step instructions, Mind mapping
- Basic markup tags, HTML syntax, HTML elements, Editors
- Stands for Cascading Style Sheets - CSS syntax, Adding style, CSS Selectors
- Dynamic programming language, JavaScript syntax

Assessment of the learning outcomes

- ICT skills
- Social skills
- Communicative skills
- Team working skills

Evaluation of the learning activities

- Process checks with the instructor.
- Peer to peer feedback session after each training session (presentation).
- Training evaluation questionnaire filled out by participants upon completion of training (using online platforms).

Content of the curriculum

- **Welcome – Introduction (World Wide Web - HTML, CSS, JavaScript - Web languages)**

Trainers welcome the participants and present the topic of Web technologies. Participants learn how WWW works and get some basic information about Web technologies - servers, protocol, domain www address, basic World Wide terminology as well as, what is hypertext markup language, how can we use html and the structure of web pages using markup. They also get familiar with website layout definition (website components), different web languages (differences between programming languages, markup languages and style languages).

The outcomes are:

- Define (Knowledge): basic web technologies
- Identify (Knowledge): differences between web languages
- Define (Knowledge): basic World Wide Web terminology
- Identify (Knowledge): online threats
- Name (Knowledge): differences between programming languages markup languages and style languages
- Define (Knowledge): website layout
- Define (Knowledge): HTML code

- **Algorithms, Step-by-step instructions, Mind mapping**

In this part of the curriculum, participants are taught what is an algorithm, how to define instructions, inputs and outputs. Moreover, participants learn how to use the Mind Map tool to make step by step planning (making instructions).

The outcomes are:

- Clarify (Comprehension): (web) project ideas
- Estimate (Comprehension): the time for project
- Define (knowledge): project needs
- Explain (Comprehension): project work flow

- **Basic markup tags, HTML syntax, HTML elements, Editors**

The participants learn how to create HTML file, HTML tags and syntax using HTML editor, as well as, creating and using basic html tags (body, paragraph, head title), links in HTML, inserting pictures in HTML and comments and also previewing HTML document in browser.

The outcomes are:

- Define (Knowledge): basic HTML tags
- Reproduce(Knowledge): basic HTML structure
- List component parts of (Analysis): parts of HTML code
- Recognise (Knowledge): working HTML code
- Clarify (Comprehension): HTML structure
- Describe reasons for (Comprehension): reasons for using editors
- Specify (Knowledge): basic HTML elements
- Produce (Application): working HTML document
- Describe reasons for (Comprehension): using inline frames
- Specify (Knowledge): url and src elements
- Produce (Application): working HTML document, identify error in HTML

- **Stands for Cascading Style Sheets - CSS syntax, Adding style, CSS Selectors**

During this part of the curriculum, participants learn what is cascading style sheets and why someone should use it. Furthermore, participants are taught how CSS works, as well as, rules for using styles sheets. The participants also learn how to apply CSS style inline, HTML document and how to use external CSS document, as well as, what is a selector and how to work with selectors id.

The outcomes are:

- Describe reasons for (Comprehension): using forms
- Name (Knowledge): submit purpose (Information flow), recognise potential security threats.

- Demonstrate (Application): advantages of responsive design.

- **Dynamic programming language, JavaScript syntax, JavaScript Where To**

The trainers introduce to participants the JavaScript programming language and syntax. The participants learn the difference between static and dynamic programming languages. Moreover, in this part participants learn how to write "instructions" for JavaScript, how to use JS : script type (Html) , <head> or <body> and external document.

The outcomes are:

- Define (Knowledge): programming language
- Identify (Knowledge): JS code
- Name (Knowledge): difference between programming and markup language
- Recognise (Knowledge): working JS code
- Clarify (Comprehension): JS basic structure
- Name (Knowledge): JavaScript extension
- Name (Knowledge): difference between inline and external JS code
- Identify (Knowledge): benefits of using mobile app for learning
- Find out/ discover (Knowledge): types, methods and usage of CMS system.

b. Overview of the coding curriculum for end-users

Programming JavaScript (JS)

The object of the coding curriculum for end-users is JavaScript. The duration of the training is 10 days and the teaching method is blended (face-to-face + e-learning).

The JavaScript course has been chosen because it allows participants to build interactive websites. JavaScript becomes an essential web technology along with HTML and CSS because most of the browsers implement JavaScript. Furthermore, JavaScript usage is now extended to mobile app development, desktop app development and game development. It is a very useful skill to learn.

At the end of the training, participants should be able to make a game (e.g. memory) in JavaScript, add a GUI (graphical user interface) with HTML5 & CSS3 and understand and explain the basic programming concepts.

Specifically, a face-to-face session lasts 3,5 hours, in which half of the time includes theory and the other half practice. Students should follow step by step the order theory-practice-theory-practice to understand and familiarize themselves with the theory. In the last 30 min

of each session, participants ran an exercise in which they put into practice everything that they have learned during the session. This motive applied to all the sessions.

The choice of JavaScript

Technical

- JavaScript works on all operating systems (thus also Linux)
- Everything can be emulated (generated) locally
- JavaScript adapts itself to all mobile platforms
- With JS, responsiveness applies to everything
- Ease of implementation
- No costs bound to the material (no purchase of smartphone ...) more accessible to all.

Educational

Starting from pure code (vs generated code) opens more possibilities. JavaScript is a reasonable choice for trainers and end-users as it is a 'simple language', without too many functions. Since it is an interpreted language, there are no difficulties associated with compiling. However, JS is a high-level language that leads to a good coding logic.

It is provided a simple course in which trainers suggest to participants to explore further this field. This is a gateway to web technologies that nowadays everyone needs to have. For example, if you like programming, you should keep practising in JavaScript. There is also the possibility to explore Node.js and work cross-platforms.

Content of the curriculum

- **Welcome - Information - Algorithmic**

Trainers welcome and explain the objectives of code initiation to the participants, as well as, the importance of the algorithms in programming. Then, participants learn the basics of algorithmic logic. Following the demonstrations and explanations to demystify computers, the trainers show to participants which will be the curricula's aim and how it will be achieved. In parallel, the trainers show examples of JavaScript applications.

- **Introduction to Programming JavaScript**

This part starts with a short description of JS, its benefits and disadvantages. It is also presented JS history, as well as, the process of installation, tips and tricks. Moreover, mathematical operations, constants, variables and their data type are taught. Micro

exercises and familiarization with the environment (simple logs of mathematical operations or string concatenation) are included.

- **Programming JavaScript**

During the JavaScript part the participants get familiar with: conditions, logical operators, loop, functions, the DOM and events. Then logical exercises are followed.

- **Introduction to Programming HTML5 and Introduction to Programming CSS3**

To create a website, it is necessary to use a language that computer understands. HTML and CSS are, indeed, precisely used to create websites, and they have been created to be simple to use. Both are designed for a specific use and they complement each other naturally to finally give a website.

The role of the HTML is to manage and organise content. Here, there are the parts that participants are taught:

- HTML Basic tag structure
- Attributes
- Links
- Available Tools
- HTML tag list
- Forms
- Buttons

- **Introduction to Programming CSS3**

CSS is used to define styles for web pages, including the design, layout and variations in display for different devices and screen sizes.

The course includes:

- CSS Goal
- The CSS Stylesheet and the basic syntax
- CSS selectors
- Properties

- **E-learning**

During this part of the curriculum, the topics (e.g. JS, HTML and their interaction), which interests students, are further developed. In programming, participants find all their answers thanks to a simple search on the web.

- **Project**

In this part of the curriculum, trainers guide participants to define what they will develop, how and when, according to the basic instructions. It is followed the below structure:

- Individual project
- Preparation of presentation
- Presentation of projects

- **Further information**

- Tracks, recourses, existing courses to deepen the learning of the code are introduced.
- Trainers provide individual coaching.
- Trainers' feedback session.

1.2 Overview of the effective use of the mobile devices curriculum

“Effective use of the mobile devise” is the second of the two trainings courses, which developed during the project. The curriculum consists of two parts: 1. Training curriculum for end-users focused on unemployed youth and 2. Training curriculum for the e-facilitators on how to teach effective use of mobile devices in telecentres.

The e-facilitators' curriculum is similar to end users' one from a technical point of view. Tools and methodologies cover more in-depth to lead trainers to acquire a stronger level of knowledge. The end-users' curriculum is structured on modules to lead them to acquire knowledge of the different aspects of using a mobile device for finding a job and being efficient. The aim of training is to strength the job finding skills of young jobseekers through their mobile devices.

a. E-Facilitators mobile devices curriculum

The aim of the training is to approach the world of mobile learning through the exploration of certain open and collaborative methodologies on one side and the analysis and implementation of the Common Framework for Digital Competence, also known as DigComp, on the other, in order to improve the digital competence of the citizens.

In practice

The training action, that addressed to e-facilitators and digital teachers, has a very practical approach. Along with this action, learners will become protagonists, authors of educative material and designers of teaching-learning dynamics.

Goals

The participants would be able to:

- teach young people in using mobile devices for productivity and employability in the framework of DigComp.
- generate new proposals and develop new content and apply new methodologies.

Framework

The framework of the training is:

- **Personalising the learning process**
We are experiencing a new educational revolution that shakes the areas of teaching and learning with the need (and also the opportunity) to personalize learning to allow participants (who are more proactive than ever) to improve their own lives.
- **Social constructivism**
Nowadays, we are experiencing a revolution in the theories regarding how people learn. This teaching proposal builds on a social constructivist approach.
- **Building a Personal Learning Environment (PLE)**
The construction of a PLE is personal and individual, and it takes time. Thanks to new technologies, it is achieved in a more continuous and progressive way. The student does no longer depend on the presence of a teacher, since the PLE acts as a continuous reference system.
- **Lifelong Learning**
Just like technologies —in a constant process of evolution and change—, chances to learn using mobility never end. Mobile devices facilitate a lifelong learning.
- **Edupunk concept**
The “Edupunk” concept is growing stronger, relating the teaching-learning world with a DIY (Do It Yourself) approach.

Training

During the training, the follow methodologies and DigComp’s competence areas of were explored:

Methodologies

1. **Gamification:** it involves the application of game mechanisms to the process of formation/learning in order to promote motivation, effort and engagement towards the process. The aim is the acquisition of certain skills that, otherwise, would be more complicated to achieve, especially all those related to the habits and customs, but also to attitudes and the need to cover certain objectives. The power of the game can be used to promote very positive social and cultural changes, reinforcing the desired habits and attitudes.

2. **Problem Based Learning:** it is a methodological strategy that allows the teacher and the student to settle a milestone in the learning process, where the students is the principal actor. It is aimed to develop several competences: knowledge, abilities and skills and attitudes. During the Problem Based Learning dynamics, the teachers lays out a question or a problem and the students should give an answer or find the way to solve it. In order to solve the problem, the students have to identify (independently but with the help of the teacher) what they need to learn to be successful in the learning process.
3. **Flipped Classroom:** it “is a pedagogical model that moves the work of certain learning processes outside of the classroom and invests the class session time, along with the teacher experience, to promote and boost other pro-cesses of acquisition and knowledge practice inside the classroom”. Students learn new content online by watching video lectures while the as-signed problems are done in class with the help of the teacher with a personalised guidance and interaction among students.
4. **Project Based Learning (similar to the Problem Based Learning):** it is a methodology that places the student at the centre of the learning process, in which the person becomes capable of generate solutions in response to the different opportunities and challenges posed by the society. It promotes initiative, proactivity, independence and innovation in professional, social and personal areas.

DigComp’s competence areas³

1. **Information and data literacy:** To articulate information needs, to locate and retrieve digital data, information and content. To judge the relevance of the source and its content. To store, manage, and organise digital data, information and content.
2. **Communication and collaboration:** To interact, communicate and collaborate through digital technologies while being aware of cultural and generational diversity. To participate in society through public and private digital services and participatory citizenship. To manage one’s digital identity and reputation.
3. **Digital content creation:** To create and edit digital content To improve and integrate information and content into an existing body of knowledge while understanding how copyright and licences are to be applied. To know how to give understandable instructions for a computer system.
4. **Safety:** To protect devices, content, personal data and privacy in digital environments. To protect physical and psychological health, and to be aware of digital technologies for social well-being and social inclusion. To be aware of the environmental impact of digital technologies and their use.
5. **Problem solving:** To identify needs and problems, and to resolve conceptual problems and problem situations in digital environments. To use digital tools to innovate pro-cesses and products. To keep up-to-date with the digital evolution.

³ <https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework>.

Content of curriculum

A. Contextualisation and introduction

B. Methodologies

1. Gamification
2. Problem based learning - PBL
3. Flipped Classroom
4. Project Based Learning (PBL)

C. Working on competences

1. Introduction
2. The acquisition of the digital competence through mobile devices
3. Digital competence and employability
4. New technologies, new methodologies:
 - Information and data literacy
 - Communication
 - Content-creation
 - Safety
 - Problem – solving

Module 1: Introduction and Safety competence

Topics:

- The relevance of the new methodologies.
- The most important digital skills for citizenship.

During the module, it is presented open methodologies. Firstly, the trainers introduce DigComp and focus on the one of the key competences of DigComp: Safety.

During the training the participants:

- work in a team.
- explore their creativity.
- explore Internet and different kind of APPs.
- share their previous experience.
- be productive and create their own content (activities).

At the end of the training, participants would be able to:

- have a general idea of what the open methodologies can facilitate.
- design a small activity based on an open method.

- know the different components of the competence area " Safety".
- design different kind of activities to improve the different competences in this area, using mobile devices.

Module 2: Gamification and problem solving

In this module participants learn two different elements:

- Gamification. (methodology).
- Problem solving (DigComp's competence area).

At the end of the training, participants would be able to:

- have a general idea of the gamification methodology: how it works, technical aspects, etc.
- design a small activity based on this method.
- know the different components of the competence area "problem solving".
- design different kind of activities to improve the different competences in this area, using mobile devices.

Module 3: Problem Based Learning (PBL) and Communication

In this module participants learn two different elements:

- Problem Based Learning (PBL) (open methodology).
- Communication (DigComp's competence area).

At the end of the training, participants would be able to:

- have a general idea of the Problem Based Learning methodology: how it works, technical aspects, etc.
- design a small activity based on this method
- know the different components of the competence area "communication".
- design different kind of activities to improve the different competences in this area, using mobile devices.

Module 4: Flipped Classroom and Information Literacy

In this module participants learn two different elements:

- Flipped Classroom (methodology).
- Information Literacy (DigComp's competence area).

At the end of the training, participants would be able to:

- have a general idea of the gamification methodology: how it works, technical aspects, etc.

- design a small activity based on this method
- know the different components of the competence area "Information Literacy".
- design different kind of activities to improve the different competences in this area, using mobile devices.

Module 5: Project Based Learning and Content Creation

In this module participants learn two different elements:

- Project Based Learning (methodology).
- Content Creation (DigComp's competence area).

At the end of the training, participants would be able to:

- have a general idea of the gamification methodology: how it works, technical aspects, etc.
- design a small activity based on this method.
- know the different components of the competence area " Content Creation".
- design different kind of activities to improve the different competences in this area, using mobile devices.

Module 6: explore the new curriculum

During this module, participants work a new extended version of the official CODEMOB M-LEARNING CURRICULUM for end-users.

At the end of the training, participants would be able to:

- have a general idea of the contents of the curriculum
- use this extended version of the curriculum to prepare and design the activities you will use during your classes.
- improve some activities that are already designed.
- start to prepare your training course.

b. End-users mobile devices curriculum

Curriculum plan

The training focus on IOS and Android, which nowadays are more attractive than Windows Phones. Both operating systems' basic function were introduced. The preparation of the curriculum was organised by a team of well-experienced e-facilitators. Articles, tests, experiences have been considered during the pre-discussions.

The curriculum consists of different topics and starts with an introduction, in which all the upcoming terms are explained. Each topic includes an application and good examples aiming to help participants to familiarize themselves with the programmes.

The main aim of the curriculum is to develop of end-users' problem-solving skills, meet the expectations of society's needs in terms of digital skills, as well as, strength the job-finding skills of young jobseekers through their mobile devices.

Content of curriculum

The trainers, after having explained the history and the development of the mobile phone, present the definitions of all types of digital technologies, such as smartphone, phablet, tablet, eBook. The presentation starts with the explanation of all basic elements of the mobile devices both from a technical point of view and from a visual one. Therefore, the participants reach a more advance knowledge and particularly, they familiarize themselves with all the mobile device's aspects.

Another module of the training presents the available applications and mobile websites to create a professional profile (how to make a Europass CV and a cover letter). Moreover, participants learn to interact with companies, receive notifications, stay informed about the latest job offers, schedule tasks, meetings and job interviews by using a mobile device and its Apps.

At the end of the training, the participants focus on programming part of mobiles, in which they familiarize themselves with basic tools to create mobile apps.

Chapter 2: Guidelines and tips on how to implement the curricula

This chapter presents guidelines and tips on how similar organisations out of the project consortium could use the curricula after the project's end. Moreover, it includes the process of the participants' selection and then localization process in order to get a first-hand experience coming from the trainers.

2.1 Participants

Criteria

Participants were selected with different kind of criteria that apply through different requirements and needs of each curriculum. The demands of each participant were also taken into consideration.

Moreover, e-facilitators should have had a basic programming experience, as well as, an educational, social and media interest. Their motivation to participate in the projects, as well as, the skill to know how to connect and motivated young people was important. Other criteria were their personality and teaching skills. An intermediate level of English was an asset.

The end-users' age and motivation were the basic criteria. They also were selected with different criteria depending on the coding and the mobile session. On one hand, coding requires a good logic, as well as, a real interest in ICT. On the other hand, training course on effective use of mobile devices is more accessible, therefore the main criterion was participants' motivation. For example, some participants were planning to follow a sale training after the mobile lessons, thus they needed to learn more information about mobile devices. Besides on the above criteria, organisations tried to reach young people from disadvantage groups.

Needs

The needs of the participants on coding and the use of mobile devices were different. Related to the training course on coding, the participants need to learn how to create a webpage and get familiar with coding. General, their needs depended if they want to become a programmer in the future or just being interested in the topic for several reasons, such as personal development. On the other hand, e-facilitators need guidance on how they will effectively teach the creation of a well-designed webpage, as well as, a mentor to introduced them new teaching methods on this topic in order to attract young people.

Moreover, as regards the training course on effective use of mobile devices the end- users wanted to learn about the features and possibilities of the smartphones. They need to learn that a mobile device is not only a communication tool but its use could be useful to improve our daily life. End-users should understand the possibilities offered by technologies, and how they can improve their lives. Nevertheless, e-facilitators need to be informed about the newest and well-known application overworld, as well as, they should get familiar with new methodologies and learn new resources in order to use them as examples. All in all, e-facilitators should be taught methods to emphasize, during their activities, the importance of mobile devices.

Obstacles during the trainings

The participants faced several difficulties during both trainings. In the coding course participants had different backgrounds related to ICT sector and most of them had lack of basic knowledge about coding and software building. Moreover, participants could not easily be familiarized with the basics of programming languages, the commands and system. Consequently, more time was needed. The participants also faced difficulties during some parts of the curricula, such as learn coding (javascript or html).

There were also difficulties to engage participants for trainings on effective use of mobile devices compared to trainings on coding. A significant number of participants had a basic knowledge related to smartphones, thus extra time was spent to learn the basic functions. Moreover, the use of Apps required a very high-performance device. Indeed, some participants did not have any mobile devices while others had low-performance ones. Also, the lack of smartphone's available space was a problem. There were some parts of the curricula that participants faced difficulties, like removing bad practices in some apps and data protection.

2.2 Localization process

Steps

The first step in localization process is to build up the trainings based on the countries and participants' needs. In some cases, it is useful to organise offline courses before or during the trainings in order to get a picture of the participants' knowledge and aims. Those courses would be useful to adapt better the courses into their needs and interests.

During the trainings, there were also provided offline courses to participants, in which the basic theory was taught. After those courses the participants were motivated to attend the trainings.

The materials of both courses were translated in each country national languages and were localized to each country's specific context. The translated materials were also used as a basis

for the preparation of online trainings. Also, it was used some other tools, such as tutorials on YouTube or app inventor.⁴

Tips

During the trainings, an important obstacle was the participants' different levels of interest and prior knowledge in the topics. Therefore, it should be measured the participants' prior knowledge before the beginning of the trainings and perhaps it should be offered two levels of courses (beginners and experienced).

Moreover, if any task seemed to be difficult to participants, for example how to use programming languages, the trainers should give them an easier one to motivate them.

Equipment

During both trainings, participants used their own laptops or smartphones and in some cases, they were given some by trainers. A projector was used in some courses.

The participants also had to registered in CodeMob training platform and on Facebook, in which closed groups were created. Moreover, they registered on several social media, like Twitter, Instagram and Google account.

Translated Curricula

Both coding and mobile curricula translated into national languages of partner's countries and localized to each country's specific context. The translated curricula are on **CodeMob website** in English, Spanish, Catalan, Hungarian, French and Croatian.

2.3 Curricula Development

Tips and Tricks

This part presents some tricks and tips by trainers related to curricula development.

- **IT story**

By telling an interesting story of IT history can keep the participants more easily excited.

- **"Clever" brochure**

During the trainings, trainers were adapting the courses in participant's needs in order to keep them motivated and decrease the gap of participants' knowledge.

- **Time**

Trainings' time should be organised considering the participants' needs and previous knowledge. In some cases, more time is needed depending on participants' background.

⁴ <http://www.mit.appinventor.org/>

- **Empower participants**

When a task is difficult for a participant do not hesitate to change it with an easier one, for example WYSIWYG program and AppInventor. Another tip is to tell an uplifting story from the history of IT. The most important thing is to make all the participants active.

- **Internet**

Internet is full of teaching materials. Trainers could show to participants how to choose from the myriads of options that are online, for example in case of a practical issue how to find the solution through internet.

- **Apps**

Trainers should add apps that are famous in each country and among the employers. Do not hesitate to show other applications more used in your country. Trainers can also use apps to measure the level of the knowledge of the participants, such as Flickers or Kahoot apps.

- **Interactive courses**

The trainers should create more interactive courses in order to get participants' attention. For example, the mobile course had to be very animated and the coding courses should be considered as a game, a challenge.

- **Groups**

Working in groups is more efficient. The trainers should ensure that there will be a non-competitive atmosphere.

2.4 CobeMob Platform

The CodeMob platform⁵ serves a space for the online part of the blended learning for the e-facilitators. There they would be able to build on their learning experience during face to face training course by studying the online resources, attending live e-learning events with weekly telephone conferences and receiving support from the partners who developed the respective curriculum.

The platform aims to be used by other e-facilitators, outside of those who already participated in the face-to-face part of the blended learning. The platform also fosters the exchange between e-facilitators from different countries, which provide them with direct feedback and motivate them to participate.

Moreover, the platform is well-designed, catchy, well structured, user friendly, and it complies with the latest W3C standards in order to set the grounds for further exploitation of the two courses developed beyond the project's ends. The two training courses and related curricula are translated and localised in the languages of the partners. The publicity of the platform has

⁵ <http://learning.codemob.eu/>

as a result to attract other local e-facilitators to make use of these material in order to improve their activities.

Guidelines for CodeMob eLearning platform



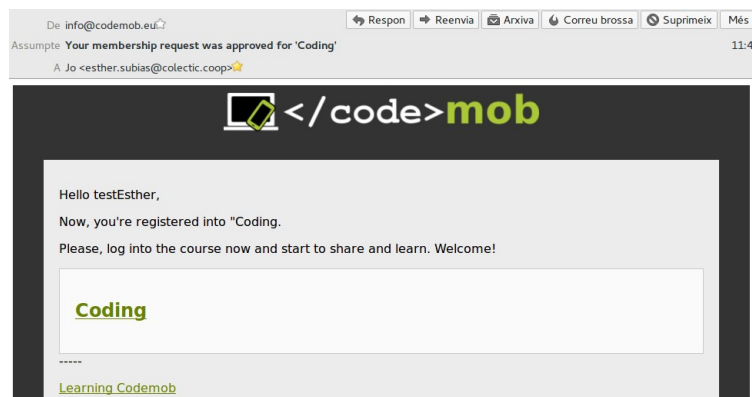
Register into the platform. Go to <http://learning.codemob.eu/user/register> and fill up the data.

The screenshot displays the 'User account' registration page. It includes a sidebar with a home icon and a menu icon. The main form area has a title 'User account' and three buttons: 'Create new account', 'Login', and 'Request new password'. The form fields are: 'Username' (with a hint 'test' and a note about allowed characters), 'E-mail address' (with a hint 'esther.subias@colectic.coop' and a note about email usage), 'Confirm e-mail address' (with the same hint), 'Password' (with a strength indicator 'Strong'), and 'Confirm password' (with a match indicator 'yes'). A final note states: 'Provide a password for the new account in both fields. Password must be at least 6 characters.'

Are you a robot? No? Mark the option. This question is for testing whether you are a human visitor or not and to prevent automated spam submissions.

The screenshot shows a CAPTCHA verification step. It features a green header with the word 'CAPTCHA'. Below it, a text box explains: 'This question is for testing whether or not you are a human visitor and to prevent automated spam submissions.' There are two radio buttons: 'I'm not a robot' (which is selected with a green checkmark) and 'I am a robot'. To the right of the radio buttons is a CAPTCHA image showing a blue robot icon. At the bottom, there is a 'Create new account' button.

You're in! You will receive a confirmation email, but you do not need to take action.



On the e-learning platform, you can browse the navigation bar, on your left, to see the available options:

To get into a training proposal, you should go to the training catalogue. There, you will find the option on the left side of your screen (the navigation bar could be minimized).




When you make click on the button “training Catalogue” you go to the Training Catalogue ;)

Training catalogue

Course category


- Any -



Coding

Description: Coding course in HTML / CSS / Javascript.

[Subscribe to group](#)

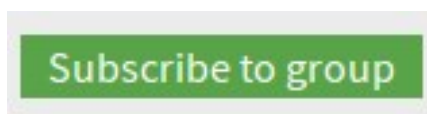


Effective use of mobile devices for e-facilitators


Description: This course for e-facilitators introduce them in some methodologies and knowledge about the disired skills in digital matters that they can use to work with their students at the time to teach the "Effective use of mobile devices" curricula.

[Subscribe to group](#)

You can choose the course that you want to visit and then click on the “Subscribe to group” option.



If you want to test the “Coding” training, for example, and you intend to subscribe to the group, you should answer the question: Are you sure you want to join the group Coding?

 </code>mob

welcome testEsther

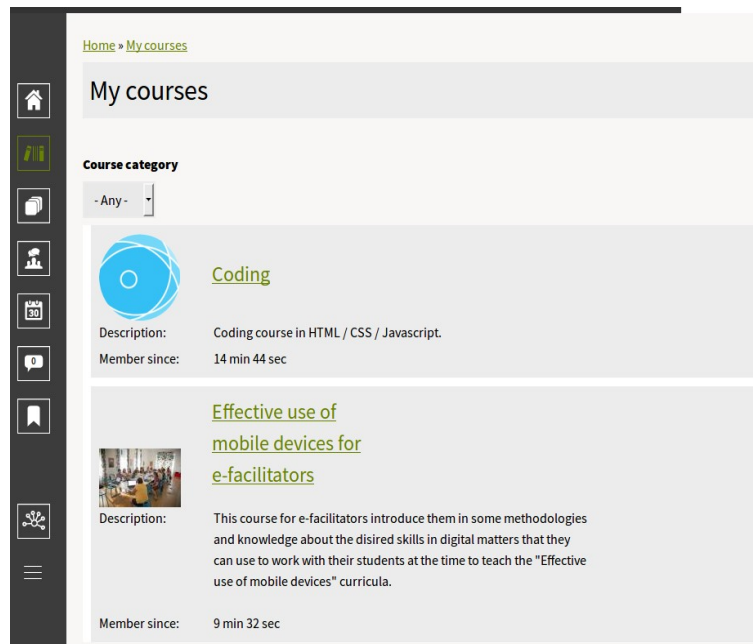
LOGOUT

Home

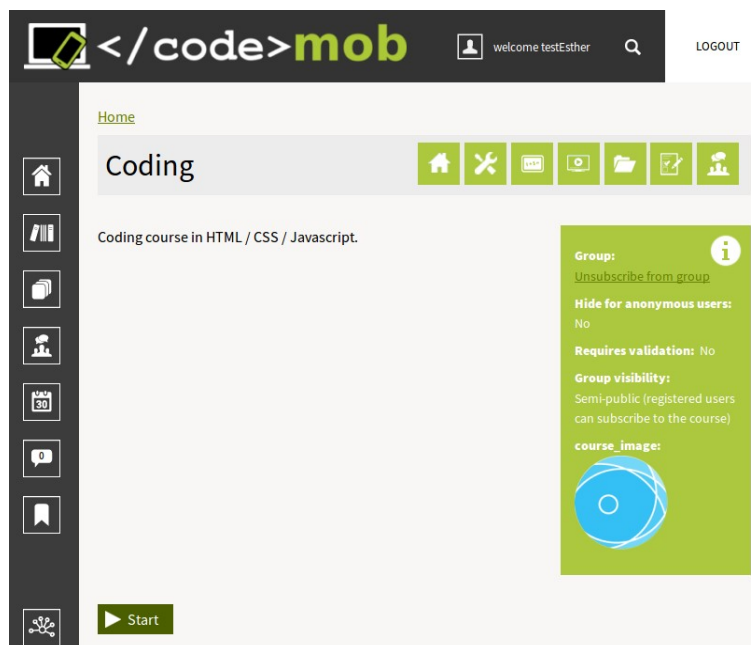
Are you sure you want to join the group *Coding*?

Join Cancel

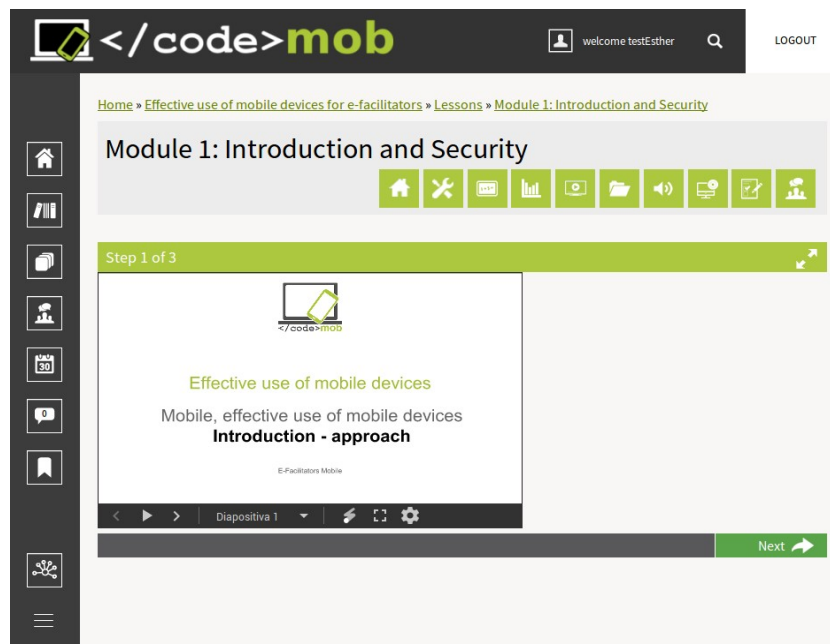
Click on the “join” button, if you are sure. On “my courses” section, you can check the courses you’re enrolled.



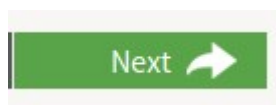
After joining a training, you’re ready to start!



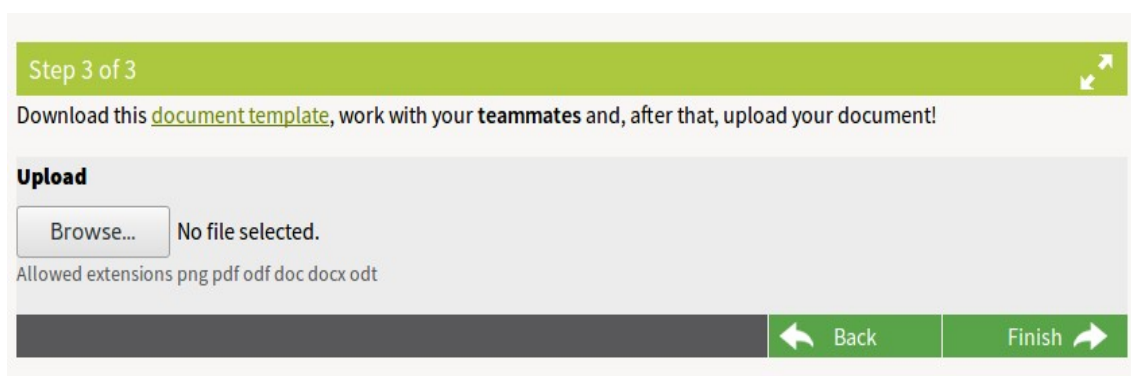
When you start a training, the platform shows your progress.



Click on “next” button to advance and see the new content.



Depending on the training, you can find different kind of activities (offline, online activities, attaching documents, etc.)



Chapter 3: Good practices and tips

This chapter includes tips and tricks for reaching unemployed youth adults coming from project partners' experience. Furthermore, it presents ways on how you could reach and attract young people, as well as, engage different kind of ages in courses on coding and effective use of mobile devices.

3.1 Attractiveness

The “attractiveness” of a project depends not only on its content but also in several conditions related to the participants status, such as the flexibility, age and timetables.

In particular, trainings that are more flexible than in the formal education system attract mostly young people. The flexibility of a training also gives the opportunity to people with limited time to participate in a project. Consequently, a flexible timetable is always an attractive element.

Furthermore, a student-friendly project, which uses different kind of teaching methods than in formal education, such as “Playing studying” method, makes the courses more tempting for people that looking for something different than the classical teaching methods.

By covering the modern needs, a project becomes more attractive to potential participants. Thus, they think that the time that they will spend will be well worth it. Specially, for those that have limited time. A good practice also is to explain them the job opportunities in this sector.

Moreover, a certification is important for the potential participants to add to their C.V., as well as, a pre-work or work format at the end of the courses. It is also a good argument to persuade those that have limited time for several reasons to participate in a project.

The promotion of a project is an essential part to engage participants. Social groups, youth organisations and schools are some areas, where a project could be promoted. The advertising of a training in social media is also crucial, as the majority of young people use social media every day. Overall, a well-structured strategy has always a positive outcome.

3.2 Engagement

Young people

One good practice to engage young people is to be in touch with other institutions, organisations, schools, universities or youth centres. By organising meetings or presentations with them and speaking about your projects and ideas helps you to be in contact with young

people for one specific or an upcoming project. Personal communication is always a better way to engage young people.

Furthermore, working youth are a target group that is not reachable during working hours. A flexible timetable is always more convincing for them.

The continuous contact with associations, in which parents are involved, are good areas to inform and promote your projects. By informing parents about interesting projects might lead them to motivate their children to join them.

Periods

There are several “good” periods to engage young people in trainings or projects. This mostly depends on the participants’ personal situation, status and age.

In the case of students, the best periods are after the end of the school year or during the holidays or the weekends. Also, after the school hours students could be able to participate in trainings.

In case of young unemployment, there are not specific periods, as they are available all periods of the year. On the other hand, young employee adults are better engaging after working hours or during the weekends.

Young adults that are parents could easily be engaged after school classes in the beginning or the end of the school year, as well as, during holidays.

It is worth mentioning that parents’ permission to allow their children to participate in a project is important. Well-informed parents would leave easier their children to participate in a training. It is also important for the parents their interest and intension towards the topic of the courses, as well as, its professional benefits that a participant might gain.

Obstacles

During the process of reaching out and attracting young people may arise several difficulties, which depend on the status, age and country. For example, in Hungary one of the main obstacles is that studying, participation in trainings or acquisition new knowledge during the free time is not part of the culture.

Specifically, young people do not have spare time for extra activities, therefore organisations should have a flexible timetable. It is worth noting, that other similar organisations or universities offer similar trainings, therefore organisations should consider what is offered in labour market in order to be more competitive.

Sometimes, young people have lack of motive and interest. Organisations, indeed, should talk to them in personal or in groups at youth organisations or in schools in order to “transfer” them enthusiasm and motivation. By presenting training benefits and its positive aspects, such as creative teaching methods, could be easier to engage them into a project.

Lack of time is the most common obstacle that organisations facing. The time is limited, because of schools or work timetables and several obligations, such as children and household.

3.3 Promotion

The call for participants is an essential part of the project's implementation. A well-designed campaign combined with flyers and newsletters is an excellent strategy. The publication of the participants' call on social media, such as Facebook, Twitter, national and local youth websites and portals, is a good practice.

Moreover, a good practice is to be in contact with other trainings centres, youth organisations and schools. Specifically, training centres' databases could be a useful way to reach potential participants and also, are, among others, strategic places to boost a project related to young people.

As regard students, the teachers' or parents' support is useful, because they have a close relationship with students. There were examples of parents and principals that helped in organizing and promoting the project.

Another good practice is to consult available databases, such as unemployment young people's databases and contact with them by phone or email. In addition, it is useful to keep a database of young people who participated in workshops in schools or in other youth centres in order to contact them when it is needed to recruit for future projects.

Finally, it should be noted that personal contact is useful in rural areas to promote a project. The relationship of trust between people of small cities works as a basis to give a chance to spend their free time in a training.

During the promotion of a project, it is important to emphasize in what the participants will gain from it, for example certification or pre-work experience. In this way, the potential participants will join easier a project. Their limited time is always an obstacle for them to participate in several activities.

Below you will find an example of a leaflet with a call for participants. It contains the following information: 1. Project logo, 2 A catchy phrase to attract attention, 3. Explanation about the project, 4. Location of the trainings 5. QR code 6. Partners' logo 7. How interested participants can get more info and 8. Organisation's info.

Extra tips: A brochure or a flyer should be well-designed in a visual and attractive way with icons or pictures. Do not forget to add the logo of the project and the programme funding the training/ project.



Programozd be velünk a jövőd, és okosodj az okos eszközöddel!

TÉRÍTÉSMENTES informatikai képzések

Programozó képzés

(20 + 40 óra)

Helyszín: Szeged, Szent-Györgyi Albert Agóra

Időpont: 2017.03.24-05.31.



Mobil képzés

(20 + 40 óra)

Helyszín: Szeged, Pacsirta utca 3/b

Időpont: 2017.03.29-05.31.

JELENTKEZZ!

További részletek: <http://www.telehaz-del-alfold.hu/node/293>



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<http://www.telehaz-del-alfold.hu/>

A program a Telecentre Europe CODEMOB c. projektjének (2015-1-BE02-KA204-012356) keretében valósul meg. A projektet az Európai Bizottság támogatta.



Erasmus+

Chapter 4: CodeMob project

CodeMob is a continuation of the telecentre movement's long-standing effort in supporting the teaching of digital skills and capacity building of an e-facilitator. In parallel, it is an innovative project, because it develops a new approach for teaching two new concrete competences: coding and using mobile devices effectively.

CodeMob overall objective is to improve the delivery of key digital competences in telecentres. This objective is two-fold: it includes e-facilitators' skills in terms of teaching coding and mobile, as well as, the development of unemployment youth's digital competences in coding and mobile devices. Therefore, it takes into account the latest technological developments on both coding and mobile technology field in terms of available software tools.

The project addresses different topics: ICT new technologies-digital competences, creation new innovative curricula/ educational methods/development of training courses and overcoming skills mismatches.

In summary, CodeMob project introduces new innovative ways of teaching on coding and mobile devices. And, at the same time, it discovers the new needs of its target groups (e-facilitators and unemployment youth) in terms of digital skills.

Table 1: CodeMob Project information

About CodeMob	http://www.codemob.eu/en/about
Curricula (coding & mobile)	http://www.codemob.eu/en/resources
CodeMob learning platform	http://learning.codemob.eu/
Activities	http://www.codemob.eu/en/news

Table 2: Partners' details

ALL DIGITAL	http://all-digital.org/
Foundation for Community Network	http://telehaz.hu/
Teb Youth Association (TEB)	http://colectic.coop/
Interface3	http://www.interface3.be/
Technical University of Dortmund	https://www.tu-dortmund.de/uni/en/Home/
Telecentar	http://telecentar.com.hr/

Conclusion

This document aims to help other organisations to implement the CodeMob curricula in a more effective way having in mind CodeMob partners first-hand experiences.

The CodeMob project has been successfully implemented. The courses brought many young jobseekers at local level in contact with coding and an advantage level of use and development for mobile devices. Moreover, e-facilitators improve their activities in terms of coding and mobile devices through the trainings. The expected impact of the curricula has been achieved: the modernisation and the increasing quality of the service of telecentres.

In terms of the project's target groups: On one hand, e-facilitators increase their capacity for teaching coding and mobile devices and have the opportunity to exchange good practices with other e-facilitators teaching those topics in telecentres. On the other, unemployed young people, who participated in the project, increase their knowledge on the two topics (coding and mobile devices), which would help them to find employment and possibly to motivate them to follow an ICT career.

At the end of the project, the online platform remains as a learning space for e-facilitators, in which they will be able to use the online resources and material. Also, national versions of all the materials are available.