IO1 – Open-AE Curriculum

Final Analysis Report

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Project n°: 2018-1-BE02-KA204-046848

Project Acronym	Open-AE
Project Title	Promote Open Source Technologies in non-formal Adult Education
Intellectual output	IO1 – Open-AE Curriculum
Deliverable Title	Final Analysis Report
Dissemination level	Public
Version	1.0
Implementation period	M6 (April 2019)
Delivery date	08/05/2019
Keywords	Final Analysis Report
Abstract	This documents reports the results of the desk and field research carried out in the four partner countries.
Authors	Associazione Centro Studi Città di Foligno with the contribution of all partners.
Project n°	2018-1-BE02-KA204-046848

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Introduction

This report outlines the results emerging from the desk and field research on the four partner countries plus the contribution of the Open Call published by ALL DIGITAL.

Before presenting the compared analysis from the four countries, we briefly introduced what were the aims of the research and what has been the methodology put in place to investigate the state of the art in teaching open source technologies and the training needs of trainers working in the field of Adult Education with reference to the DigCompEdu framework.

During the desk research phase partners were requested to fill in two questionnaires, namely the one related to the state of the art and the available resources in the field. When analysing the state of the art in teaching, partners agreed that it was worth to broaden the scope of the research studying not only what is the current situation and use of FOSS technologies and resources within the educational framework but also to provide an overview of the FOSS movement as a whole. This allowed partners to have a better picture and analyse the obstacles to the development of open technologies and resources.

The second phase of the research described in this document presents the results from the field research where partners involved trainers working in the field of Adult Education to investigate their training needs. Through the organization of focus groups in each country, we were able to collect data useful to draft a common picture: what are the most important areas of competence trainer would like to upskill? The answer to this question is of the key result we present in this report as it constitutes the basis for the design of the Open-AE Curriculum.

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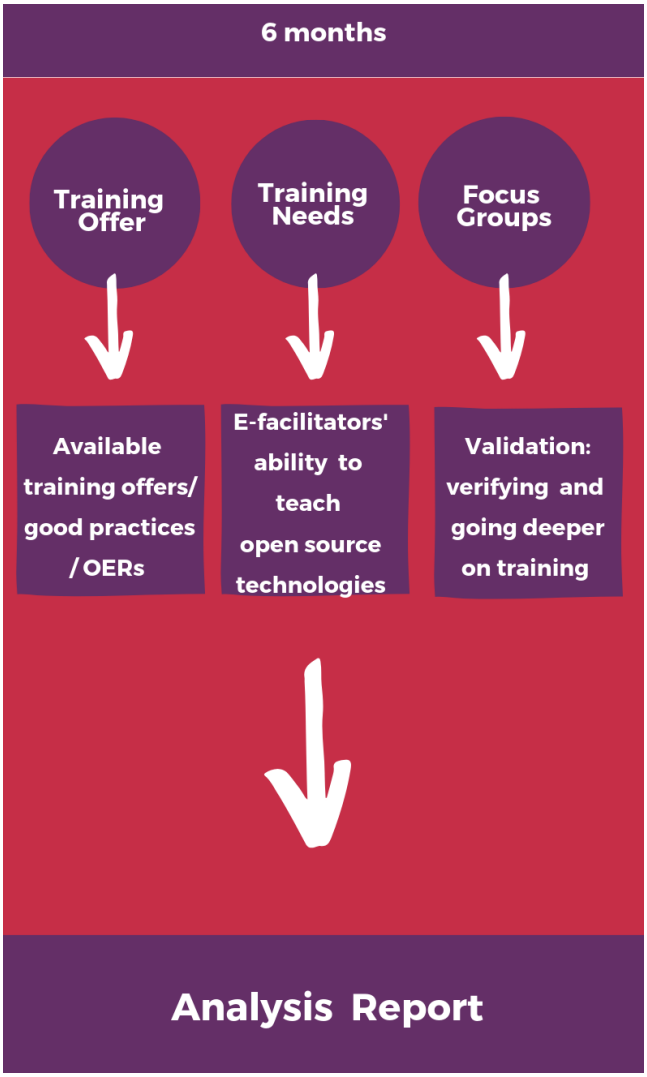
Objective and structure of the research

The design of the training methodology or Internal Output 1(IO1) is meant to establish a foundation for the development and contextualization of the Open-AE curriculum and the Open-AE Toolkit, and for the delivery of the training itself providing an adequate contextualization of the expected methods and tools. The whole scope of the research lies on EU flagship initiatives such as *Opening up Education: Innovative teaching and learning for all through new Technologies and Open Educational Resources* and the brand new *Digital Education Action Plan*[1].

The analysis of all the national contexts represented in the partnership has been conducted during the first five months of the project (M1 November 2018 – M5 March 2019) thanks to the combination of quantitative and qualitative research methods. It has allowed setting up a consistent and qualified pedagogical and didactic framework for the resulting curriculum and the following intellectual outputs, at both implementation and transversal level. CSF led IO1 research based on project application and work programme timeline. This document reports and summarizes the main results emerged from both the desk and field research in Belgium, Italy, Switzerland and Spain. The four partner countries conducted the research using the research framework and the tools initially elaborated by Associazione Centro Studi Città di Foligno.



[1] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52013DC0654

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The desk research has been the first step implemented both at a national level (CSF in Italy, YNTERNET.org in Switzerland, COLECTIC SCCL in Spain, MAKS vzw in Belgium) and at a European level (thanks to the networks represented by ALL DIGITAL). The desk research has been implemented in M3 to M5 (January 2019 – March 2019) after the framework, the guidelines and the tools were discussed and approved by the partnership during the KoM in Brussels in M2. M5 and M6 (March - April 2019) have been dedicated to the organization of a focus group aimed at verifying and going deeper on the training needs in the field of open source technologies.

The research was developed on a two-fold dimension and partners were responsible for investigating on:

a) the current skills and training needs of e-facilitators to be able to teach open source technologies
b) define the "state of the art" in teaching open source technologies by mapping available training offers and available OERs

Moreover, ALL DIGITAL published an open call for contributions on the project's website, which has been disseminated thorough social networks and dedicated platforms for adult learning. This was a complementary research tool aiming at collecting additional resources, even from countries different from those in the partnership, as well as to build a community of interest around the project. The results from the Open Call are presented in the following sections.

Therefore, such a research approach permitted to get a better understanding of the main e-facilitators' training needs in relation to the use of open source technologies and define the "state of the art" in teaching open source technologies by mapping available training offers and available OERs at country level, but it also contributed to:

- involving the target group and key stakeholders at an early stage of the project's implementation as a strategic factor for the sustainability of the project
- Make the target groups aware of the project's objectives and activities

CSF is responsible for the comparative analysis of all the collected data and the related production of this final report in M6 (April 2019), which represents the first milestone of the Open-AE project and will be made freely available through the project's website. This analysis report will lead to identify the Open-AE Curriculum (training scheme) for e-facilitators which will be mapped on

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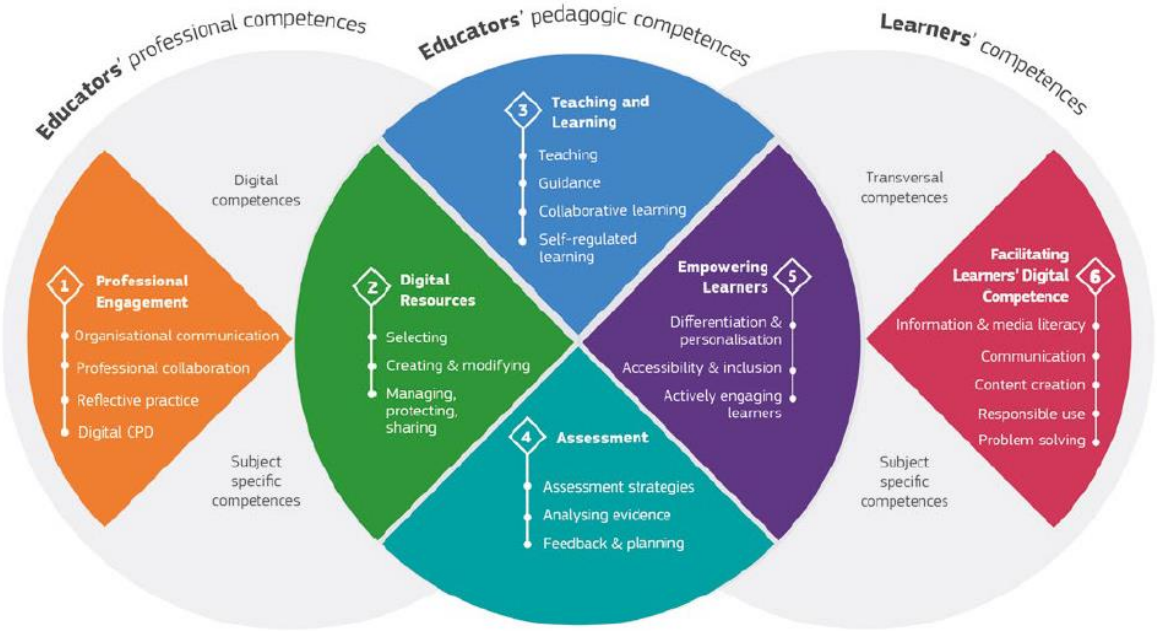
DigCompEdu [2], in terms of course objectives and learning outcomes, representing the framework needed for the development of the implementation phases that follow.

The DigCompEdu framework



The DigCompEdu framework has been the reference for both the designing of the research framework and the analysis conducted through the questionnaires. For the desk research partners were requested to attempt to provide a preliminary mapping of the training offers and the available resources according to the six areas of the DigCompEdu. With regards to the field research and the focus groups the framework has been used to investigate what of the six areas and related competences trainers believe the should improve in or upskill according to the context and learners they work with.

Moreover, the reference to DigCompEdu allowed the Open-AE project to verify the concrete application of the framework in the field of Adult Education and check against the research results how widely known and used is the framework among trainers and organizations.

2 https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/european-framework-digital-competence-educators-digcompedu

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The desk research

Implementation period: M2-M5 (December 2018 – March 2019)

Responsible partners: CSF in Italy, YNTERNET.org in Switzerland, COLECTIC SCCL in Spain, MAKS vzw in Belgium, ALL DIGITAL at European level

Taking advantage of the extensive experience of project partners in Adult Education and digital literacy, as well as according to the institutional and geographical scope of each partner organisation, the desk research consisted of the detailed analysis of:

- State of the art and existing training offers in the participating countries and on pan-European level
- Available resources (OERs) in the field

Moreover, ALL DIGITAL published an open call for contributions on the project's website. This is a complementary research tool aiming at collecting additional resources, even from countries different from those in the partnership, as well as to build a community of interest around the project.

Analysis of the state of the art in using and teaching open technologies and resources

When analysing the existing training offers the Open-AE partnership agreed to investigate the wider spectrum of the state of the art in teaching and using open technologies in each country taking into account not only training offers but also initiatives, policies, communities, movements and existing networks dealing with education and training. The main reason for this being the need in each country to analysis the current situation, active movements promoting open technologies, policies and initiatives. It is indeed quite common that within those initiatives it was possible to find training offers, conceived as learning material and opportunities, rather than in structured courses offered by training organizations.

The compared analysis highlighted common aspects when studying the general situation in each country: the existence of communities and networks, initiatives and events, policies and the situation in the education field. Besides that, we were also able to group the existing training offers according to their topic (operating system, CMS, coding, content creation, ect.) that will be described in the next section.

In all the four countries, we observe a positive proliferation of initiatives and the enlargement of networks and communities in the last years.

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- CIVIC LABS
- HACK YOUR FUTURE

- ITALIAN LINUX SOCIETY
- ITALIAN OPENSOURCE NETWORK
- RIOS ACADEMY

- DECIDIM BARCELONA
- BARCELONA OPEN SOFTWARE

- SWISSLINUX.ORG
- ASSOCIATION SUISSE POUR LA PROMOTION DES LOGICIELS LIBRES ET DES STANDARDS OUVERTS
- ITOPIE

- FOSDEM EVENT
- CELEBRATING OPEN DATA

- LINUX DAY
- RED HAT OPEN SOURCE DAY

- PUBLIC CODE
- CONGRES DE SOBIRANIA TECNOLOGICA

- LES RENCONTRES HINVERNALES DU LIBRE
- LIBRE ET VOUS
- OPENDATA.CH ANNUAL EVENT

- FOSDEM

- OPEN SOURCE SOFTWARE IN PUBLCC BODIES

- APODERAMENT DIGITAL

- E-VOTING

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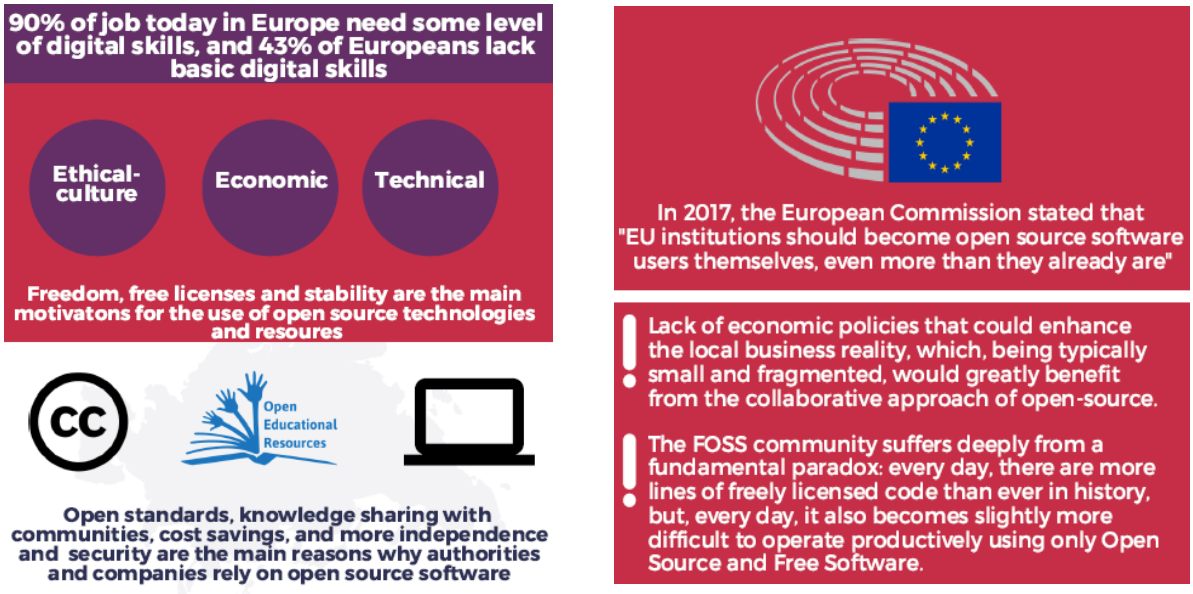
The table on the previous page[3] shows some the most important initiatives and organizations active in promoting open source technologies in each partner countries. As mentioned before, and shown later on this document, we can observe a tight relationship between those organizations, the development of FLOSS and OERs, the existing training offers and the commitment on influencing regional, national and European policies. On the other hand, it is clearly visible that the promotion and development of open technologies and resources seems to rely mainly on individual organizations' efforts rather than on a systematic and structured intervention at economic and policy level. The general growth of FLOSS technologies and open resources suffers from a huge paradox: although their development is promoted throughout several and different channels, their use in the real world, both in the labour market and the educational field for example, encounters many obstacles. This aspect has been highlighted in all the four countries, showing on one side that the competences on the labour market are still too often mapped onto proprietary technologies and on the other that public bodies such as schools face many issues when attempting to systematically assimilate in their practice the use of open technologies and resources. The image below summarizes where the FLOSS movements stands today, treading a fine line between pros and cons, promotion and lack of policy support.



[3] The complete lists of communities and networks, initiatives and events, policies, etc. taken into account in each country when implementing the desk research can be found in the national reports in the ANNEXES to this document.

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Analysis of existing training offers

The compared analysis of the actual existing training offers focus on open technologies and resources highlighted four main findings:

1. The shortage of training offers directly addressed to educators and trainer in the field of adult education;
2. The shortage of structured courses exclusively based on open resources;
3. The scarce or often missing reference to DigCompEdu;
4. existence of trainings focused on specific tools (for coding, 3d, photo editor to name few) or generic courses on operating system such as Linux, IT literacy, or multimedia;

Given the aims and purposes of the Open-AE project, those general findings represent on one side a limit to the use or integration of existing resources but on the other they prove the necessity of a structured response to an educational deficiency. The Open-AE outputs will then be measured against this deficiency, providing a concrete background and tool to educators and training organizations. In addition, taken into account partners researches, it will be an early attempt to use DigCompEdu as a framework given the missing reference to it in the curricula addressed to educators and trainers in the field of adult education. Those general findings can be translated and summarized as the lack of three elements: educational strategy, holistic approach, common vision.

Going into details we can observe and group the main training offers analysed by project partners in each country and divide them according to their type[4] and content of the training. As stated in the previous section, it is immediately clear that most of the courses, working groups, tutoring activities and trainings are delivered by the same associations or movements that usually promote open technologies and resources or organize these events within their network. Some of the trainings focus on specific tools (for coding, 3d, photo editor to name few), others offer generic courses on operating system such as Linux, IT literacy, or multimedia. In many cases we can see that the training offer is conceive as a public space for sharing and learn going from free business to community and civic life. In the image below we attempted to represent in the most relevant training offers partners identified in the four countries and the organization delivering them or offering their resources for the ICT promotion and free access.

[4] The complete lists of training offers taken into account in each country when implementing the desk research can be found in the national reports in the ANNEXES to this document.

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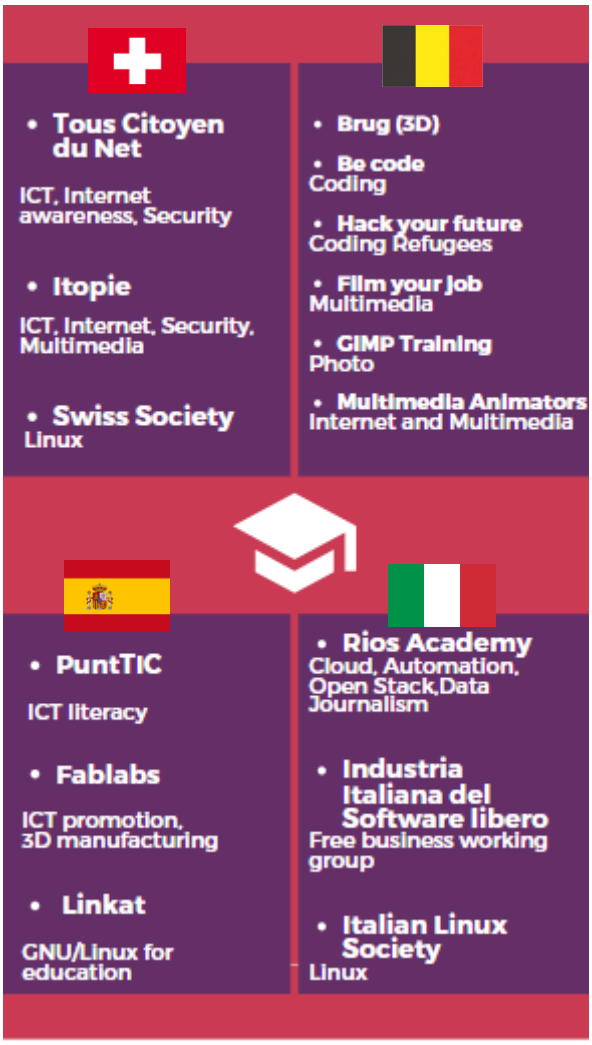

In order to select the most relevant and adequate training offers, as well as to ensure that their analysis will be beneficial to the following implementation activities of the Open-AE project, responsible partners were requested to respect the following criteria:

- the research focuses on elements/activities of adult education in non-formal settings. Formal settings to be taken into account only if highly relevant and/or inspiring;
- to take into account updated material/literature and if possible it can be used to obtained information on registered impact and evaluation results;
- the research mentions, when applicable, the adoption of DigCompEdu for the design of training offers, tools and/or materials related to open educational content and open source
- when possible to attempt to produce a preliminary clustering of units/modules with reference to DigCompEdu framework (i.e.

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selection of the training offers or part of them mapped on DigCompEdu competences/areas).

Moreover, while conducting a preliminary investigation on the national training offers that positively respond to all the criteria mentioned above, responsible partners were requested to give preference to those interventions that had the following characteristics:

- are directly addressed to digitally e-facilitators, educators and trainers in non-formal contexts;
- have interested a large number of beneficiaries;
- are provided also in English;
- have used the latest available version of DigCompEdu;
- have been conducted by or in partnership with public bodies
- have used DigCompEdu as a reference for the design and implementation of part or the whole educational process;
- have been already transferred to other socioeconomic and geographical contexts.

Given those preconditions, the main results summarized in the table on the previous page show how the available training offers are designed to deliver courses or workshops on specific tools to the general public (Linux, ICT literacy) or specific methodologies (see the Belgian case) often organized within EU funded project. As underlined in this section opening, it seems also clear that none of the training offers analyzed by partners are directly addressed to adult learners or trainers working in the field of Adult Education. They instead address the general public to provide basic or specific competences but it is hard to find reference to educational aspects from the perspective of trainers and how to use those offers for didactic purposes. It is again possible to link this analysis on training offers to the general situation outlined in the previous section: a general shortage of structure and support to the development of open technologies and resources.

Analysis of available OERs in the field

The desk research on the available resources (OERs and open technologies) aimed at collecting, selecting, organizing and exploiting the available open resources, material and good practices in the widest possible way. According

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to UNESCO[5], OERs are "*teaching, learning and research materials in any medium – digital or otherwise – that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions.*" The importance of OERs has been set forth by the 2012 Paris OER Declaration[6] which among its recommendations endorses "*…the production and use of OER in local languages and diverse cultural contexts to ensure their relevance and accessibility. Intergovernmental organizations should encourage the sharing of OER across languages and cultures, respecting indigenous knowledge and rights."*[7]

The main objective of this part of the research has been on one hand to attain an up-to-date overview of the available OERs used in adult education in each of the project country represented by the partnership, particularly focusing on how this material, good practices, tools, software are employed with reference to DigCompEdu. On the other hand, the partners contributed to list possible useful resources that can be taken into account in the Open-AE curriculum and the resulting toolkit (IO2).

While the research conducted on training offers has shown poor results in terms of elements directly related to Adult Education, this part of the analysis shows an incredible number of open resources that partners identified as relevant for the Open-AE project. We attempt to provide here a list of resources in a structured way, dividing them according to their type, use and the reference to what areas of DigCompEdu they could be related to when drafting the Open-AE curriculum in order to upskill trainers' competences. Six main categories have been identified in order to group all the resources and tools:

- Content creation and editing
- Learning platforms
- Communication & Information
- Programming
- Content Management
- Transversal resources for education

The tables below show some concrete examples and the related areas of competence.

[5] https://en.unesco.org/themes/building-knowledge-societies/oer
[6] http://unesdoc.unesco.org/images/0024/002466/246687e.pdf
[7] Ibid.

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We can observe that the six areas of competence as described in the DigCompEdu Framework, whose content has been briefly summarized below, are fully covered excepted for Area 4 – Assessment that we can find included mainly in the learning platform category. The 6 six areas are related to three domains: subject-specific competences, digital competences and transversal competences:

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Area 1: Professional Engagement

Using digital technologies for communication, collaboration and professional development.

Area 2: Digital Resources

Sourcing, creating and sharing digital resources.

Area 3: Teaching and Learning

Managing and orchestrating the use of digital technologies in teaching and learning.

Area 4: Assessment

Using digital technologies and strategies to enhance assessment.

Area 5: Empowering Learners

Using digital technologies to enhance inclusion, personalization and learners' active engagement.

Area 6: Facilitating Learners' Digital Competence

Enabling learners to creatively and responsibly use digital technologies for information, communication, content creation, wellbeing and problem-solving.

Open Call for contributions

Responsible partners: ALL DIGITAL in Europe

In order to extend the scope of the research, ALL DIGITAL launched an Open Call for contributions through its European network. The call has been published online in English, widely disseminated throughout Europe and it will remain available for the duration of the entire duration of the project even though preliminary have been gathered and analysed during IO1 implementation.

The research conducted at Pan-European level showed that there is a general consent that free and open source alternatives and options should be included, and in fact some principles of this movement are being supported to mandate policy, and advice policy in the field. The GDPR regulation in Europe allowed for more control in the hand of citizens. European projects and results must comply with creative commons attributions allowing content to be redistributed. There is also increased funding for open source software projects funded by the European Research council a branch of the EU. In 2017, the European Commission stated that "EU institutions should become open source

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software users themselves, even more than they already are" and listed open source software as one of the nine key drivers of innovation, together with big data, mobility, cloud computing and the internet of things. Free and Open Source technologies are also seen conducive to realizing the digital single market.

On a whole, European countries are making shifts to Free and Open software a few examples are listed on an ad hoc basis wherein certain departments and cities may make a transition to using free and open source software, but these at the moment appear to be standalone cases which are not large enough to be demonstrative of a greater movement. Furthermore, some of such cases may in fact return to using propriety software, the city of Munich is one example wherein a migration to open source programmes and linux servers was decided upon. However, the transition was never fully realised, and the city voted to migrate to windows software and devices by 2020. The European Commission has an open source strategy, but windows programmes are still often used in day to day work. An overview of the history of the European Commission open source strategy can be found here.

The question posed here is more so focused on using FOSS resources to address training need of low and under skilled citizens. In this respect there appears to be a challenge to the movement. The branding of digital skills is often tied to/benchmarked against competences in propriety software. A basic skill needed in most offices these days is using word processing software, however this skill is often identified through the proficient use of propriety software. The Microsoft office package is often identified as the "status quo" of basic digital skills proficiency. Frameworks like the European Digital Competency framework, The Digital competency framework for educators (DigCompEdu) can help counter the hegemony of propriety software in being used to identify proficiency of digital skills and competencies, as they work to identify and map out competences regardless of software. Open standards are also increasingly being a policy recommendation by European Institutions.

Proprietary software has been very deeply integrated into the market. It is apparent that those well integrated into the FOSS movement have a hard time living day to day life without using propriety software. The banking sector is one example of a sector that increasingly depends on citizens to use propriety software to use their everyday services. Thus, citizens needing to securely access their back account may need in some cases to use apps that only run on non-FOSS systems. In other sectors such as education and training the FOSS movement has gained some ground and awareness especially as

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continuous reliance on proprietary software now needs institutions paying for yearly licenses.

It is clear that education and training need to not only focus on hard skills but soft skills and competences. Personal data protection and competencies have gained higher priority by policy maker as this area has been linked into national security. Users should not merely be trained into using an application or programmes but be better aware of what the application may ask users to agree on. Cases like the Cambridge Analytica scandal highlight this. Better training in the FOSS values, the consequences or risks or propriety software and data protection should be included in basic training. So, citizens would not only be trained in using a word processing software, but be aware of the licenses, cloud services, free software values, data protection and open source values. This is also a case wherein concern for FOSS training programmes or integration of such values ends up taking on values as it is supported more by defence ministries and security institutes of various nation states. In workshops or seminars on fake news and disinformation, it is clear there is as much interest from security and defence ministries as there is from education, employment and non-governmental industries.

A common critic of FOSS alternatives is that general citizens would need slightly higher skills to be more adept at using them, presenting a compound challenge for both trainers and users. The field of digital inclusion has not been fully integrated into the FOSS movement. Major conferences like FOSDEM and OSSEU offer more space for developers in FOSS options and not as much on training or new users to the movement. This is not to say that the FOSS movement is not exclusive, however the resources for inclusion are not present. While, they are inclusive to new users, the focus on accessibility and learning are not as entrenched. Naturally, counter to this FOSS applications and software are more accessible to users. Training unskilled citizens in FOSS applications gives them both the tools and the means to start working and not rely on the purchase of a license. As mentioned, there is a digitals skills gap in Europe, and this is also apparent in FOSS software. While FOSS values are very much conducive to European values and values in the digital single market, there needs to be an increased focus on accessibility.

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The field research

Implementation period: M4-M6 (February 2019 – April 2019)

Responsible partners: CSF in Italy, YNTERNET.org in Switzerland, COLECTIC SCCL in Spain, MAKS vzw in Belgium

The second and last stage for the implementation of the Research Analysis in partner countries consisted in the organization and conduction of a focus groups to understand the specific training needs of e-facilitators in the field of open source technologies and digital skills. Focus group research is a qualitative research method/data collection technique that seeks to gather information that are beyond the scope of quantitative research. Partners were requested to fill in a questionnaire with the results emerging from their local focus groups. The conduction of focus groups was outlined by the script provided by CSF. The full methodology and tools put in place, for both desk and field research used can be found in the Research framework joint as annex to this document.

Focus groups with e-facilitators and AE training providers

In each piloting country, partners were responsible for the organization of one focus group with around 8 representatives selected among e-facilitator and training providers in the field of non-formal adult education.

The overall results from the four countries show many common elements. With regards to the state of the art about using and teaching FOSS technologies and resources we can observe a general lack of awareness, to be analysed on two different level:

- General lack of awareness about Open source technologies and their use even though many of the participants use Open technologies and resources daily (Ynternet, CSF, MAKS)

- Awareness about OST but the feeling to be part of a privileged group (COLECTIC)

The participants in Italy, Switzerland and Belgium seem to share the same feeling when discussing about FLOSS technologies and open resources: they are not really up-to-date concerning them and they are not engaged in FOSS promotion. At the same time, when participants were asked about the activities

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they carry out and implement they realized that often they make use of open resources, often without knowing it.

Participants from the focus group organized by COLECTIC in Barcelona, although showing a higher degree of knowledge and awareness about the opportunities offered by the FOSS resources at the same time confirmed the general lack of awareness. By defining themselves as a 'privileged group', they acknowledged that there is still a hard work to do before open resources can become a reference for users.

This aspect highlighted also the existence of cultural and professional barriers against open resources. As already stated in the first section of this report, users refer to open resources and technologies as an alternative to proprietary software and resources. The reasons for this being the usual reference in the labour market to proprietary software instead of free resources and the weak promotion that results in the poor knowledge of those tools among the wide audience. In addition to this, we have to consider the deficiency in the training offer on FOSS technologies and OERs: most of the participants in all the four countries claimed that their knowledge and expertise is a result of their own curiosity and self-learning.

The focus groups then covered topics related to trainers' skills and competences they would like to improve and consider to be important for the organizations they work with. The first aspect to be taken into account was the type of adult learners they work with. Some of the organizations represented work with jobseekers, others with refugees or migrants and some other with senior people. Despite the diversity of the audience involved, the common element observed is the low level of digital skills of the learners: most of the participants work as e-facilitators in their countries. Learners set then the reference for trainers to identify what are the areas of competence they would like to improve. As a result, not surprisingly, Area 6 (Facilitating Learners' Digital Competence) and Area 5 (Empowering Learners) of DigCompEdu have been selected as the crucial areas on which the Open-AE project should build the curriculum together with Area 1 (Professional Engagement) linked to communication and collaboration for professional development.

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From the field research to the curriculum

Based on the result of both phases of the research, and in particular the training needs and areas of interest of trainers, we attempted to draft a preliminary syllabus to serve as a training scheme to the course curriculum. The elements at the basis of the training scheme we identified as crucial when designing the syllabus modules and the linked learning objectives are:

1. Necessity of a reference to the theoretical and political framework of FOSS technologies and resources to cope with the general lack of awareness;

2. Reference to DigCompEdu to support a standardized European framework for trainers upskilling,

3. Design of the modules with a direct link to the area of competences trainers believe to be crucial for their job;

4. Design of the learning outcomes taking into account the available resources on the field.

The tables on the following pages represent a draft of the syllabus with a preliminary clustering of learning objectives and learning outcomes. The draft below represents a model for now simply linked to 3 areas of the DigCompEdu framework considered most relevant for trainer: this model will be further developed and declined in several modules in order to outline a training offer as much comprehensive as possible of the research results.

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SECTION 1 **Introduction to FOSS & OERs**	
Learning Objectives	▪ Provide a theoretical and policy framework of FOSS technologies ▪ Provide background information on OERs, copyright, licenses ▪ Provide background to DigCompEdu framework
Learning Outcomes	1. Identify diverse understandings of the concept Open technologies and OERs
	2. Examine the different goals within the FOSS movement
	3. Explain how they are interrelated through different frameworks
	4. Compare FOSS practices in EU countries
	5. Critically analyse the importance of FOSS and OERs in the field of non-formal AE training
	6. Understand the principles DigCompEdu framework for improving digital competences in teaching

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SECTION 2 **Empowering learners (Area 5)**	
Learning Objectives	▪ Promote the use of open digital technologies to enhance inclusion ▪ Stimulate personalization and learners' active engagement
Learning Outcomes	1. Identify learners' (digital) expectations, abilities, uses and misconceptions
	2. Address learners' diverse learning needs
	3. Ensure accessibility to open learning resources and activities for all learners
	4. Foster learners' active and creative engagement through Open technologies
	5. Explore the potential of open digital technologies as an approach to develop learners' transversal skills, deep thinking and creative expression

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SECTION 3 **Facilitating Learners' Digital Competence (Area 6)**	
Learning Objectives	▪ Enable learners to creatively and responsibly use open digital technologies for information, communication, content creation, wellbeing and problem-solving. ▪ Stimulate digital content creation through Open technologies
Learning Outcomes	1. Find information and resources in digital environments
	2. Organise, process, analyse and interpret information taking advantages of OERs and open technologies
	3. Compare and critically evaluate the credibility and reliability of information and its sources
	4. Use open digital technologies for communication, collaboration and civic participation
	5. Apply copyright and licenses to digital content, how to reference sources and attribute licenses
	6. Use Open technologies for digital content creation
	7. Use open digital technologies safely and responsibly
	8. Support learners to identify and solve technical problems

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SECTION 4 **Professional Engagement (Area 1)**	
Learning Objectives	▪ Use Open digital technologies and resources for communication, collaboration and professional development. ▪ Enable trainers to use Open digital technologies to enhance organisational communication with learners and third parties ▪ Support trainers to use Open digital sources and resources for continuous professional development
Learning Outcomes	1. Use digital technologies to enhance organisational communication
	2. Contribute to collaboratively developing and improving organisational communication strategies
	3. Use digital technologies to engage in collaboration with other educators, sharing and exchanging knowledge and experience
	4. Collaboratively innovate pedagogic practices

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Conclusion

The overall research presented a quite clear picture on FOSS technologies and resources and their application to the educational field. The weak support they receive at political and economic level along with the difficulties in competing with proprietary software and labour market requirements, prevent FOSS full outbreak. Nevertheless, in the four partner countries we witness in the last years a rapid proliferation of initiatives, networks, associations in support of open culture and technologies.

The results of this cultural and professional contrast seems to result in two main effects: on one side educators as well as the general public often have a superficial knowledge and little awareness on open culture topics and resources, on the other the lack of structured support and promotion has pushed to the creation of many networks and associations that independently try to cope with this deficiency. The main positive and tangible effect we can observe is in fact the presence on the market of a huge number of free and open resources.

The educational system appears to be the main sector for the application and use of open resources as well as their support despite the fact that we could not observe a solid and structured approach. Even in those organizations whose members are aware of the potential of open culture, the expertise and knowledge around those resources is often limited to trainers self-learning and interest. Going deeper into the existing training offers also demonstrated this lack of structure: partners were able to analyse several training offers linked to specific tools or methodology but the reference to Adult Education is often missing.

Given our research results, Open-AE purposes seem to meet an educational deficiency and attempt to set some guidelines to produce a structured response to the training needs of educators working in the field of non-formal Adult Education using open technologies and resources.

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