

EU3DIGITAL - ENSURING THE SUCCESS AND SUSTAINABILITY OF THIRD SECTOR ORGANISATIONS AND SOCIAL ENTERPRISES BY BOOSTING DIGITAL SKILLS AND COMPETENCES USING TRAINING RESOURCES

A. Aguiar¹, A. Soeiro¹, C. Jacklin-Jarvis², T. Foster²

¹Universidade Porto (PORTUGAL)

²Open University (UNITED KINGDOM)

Abstract

To support citizens to become digitally competent, the European Commission has established a Digital Competence Framework for Citizens ('DigComp'). To date, there has been no similar framework to support the third sector's (TSOs) and the social enterprises' (SEs) digital maturity journey. In this paper, it will be introduced the project and outputs of EU3Digital (EU3D), a transnational project to support the training and education about the digitalisation of TSOs and of SEs. Digital development leverages and fosters many opportunities for TSOs and for SEs, as digital technologies and skills offer increased efficiency, outreach and growth and are vital for their capacity to innovate and deliver their social mission. Project started by identifying a framework of specific competences and by gathering and developing learning resources and materials to improve those competences in individuals and in organisations. EU3D project second stage consisted in synthesising the background knowledge, the research work, the design principles and the set of common decisions to propose a competence framework as the basis for developing a proper curriculum and associated training resources. It was followed by the consequent design of a curriculum and of a set of competence assessment tools and techniques identified as adequate to be used in relation with the specific framework. Third phase consisted in the creation of training materials and resources for selected competences of the framework. In the fourth stage the training resources were tested during three pilot training sessions held in Portugal, Spain and Croatia. These training sessions evaluation helped tuning the training resources, the teaching methods and the training materials to allow a more effective use of the training resources and materials. These activities were accompanied by the development of a training kit to be used in emergency situations, like the one motivated by the recent pandemia, and by the dissemination actions among stakeholders like the training, the SEs and the TSOs sectors. Several difficulties and obstacles were identified along the project implementation concerning the training and education of the SEs and of the TSOs staff. First, it is very challenging to address every element of a competence framework in a single training output, so the breadth of the task may need to be concentrated on the most pressing needs. Second, competences are largely associated with individual rather than organisational development. Research during project implementation affirmed the value of a more distributed understanding of the organisational processes of digitalisation and of related training and assessment. Third, the SEs and TSOs sectors are diverse, with different forms and cultures across Europe. Training and developing competences for a diversified target group with limited resources are challenging, especially in different training and operational contexts. The design and use of the proposed training modules are presented and analysed, while suggesting several scenarios according to needs. In conclusion, recommendations are made to use the existing developed tools and resources with the inclusion of online and face to face modules and with related training effectiveness assessment.

Keywords: digital skills, third sector, social enterprises, framework, competences, training

1. INTRODUCTION

To support citizens to become digitally competent, the European Commission has established a Digital Competence Framework for Citizens — DigComp [1]. Other digital competence frameworks followed, namely DigCompOrg for educational organisations [2] and DigCompEdu for educators [3]. However, no equivalent framework has been used to support the third sector's journey to digital maturity.

Digital development leverages many opportunities for third-sector organisations (TSOs) and social enterprises (SEs), as digital technologies and skills offer increased efficiency, outreach and growth and are vital for their capacity to innovate and deliver on their social mission.

EU3Digital is an Erasmus+-funded project that explicitly supports TSOs and SEs to make progress in digital transformation. It identified a framework of competences and developed training resources to improve those competences in individuals and organisations. The project partners are from Portugal, Croatia, Spain, the United Kingdom and The Netherlands.

Digital technologies are developing fast and offer tremendous opportunities to social enterprises across Europe. For this reason, EU3Digital has been developed over the last years learning resources specific to the needs of European social enterprises to develop their digital competences, advance their digital strategies, help these to engage with existing digital support, and software, and thereby build capacity. Being a pilot project, EU3Digital has created a framework of competences for digital skills and has provided an open-access knowledge center for current and future social enterprise professionals to navigate through e-learning materials and strategic tools to develop specific digital skills for a swift adaptation of digital technologies to ensure the success, impact, and sustainability of their organization [4].

The project EU3Digital [5] is financed by the Erasmus+ program of the European Commission with reference 2020-1-PT01-KA204-078846. Consortium has five partners coordinated by Eslider [6] and with partners University of Porto [7], Open University [8], DKolectiv [9], [4]and ABD [10]. It is a two year financed project and it is expected to finish in mid 2023.

2. METHODOLOGY

Based on the EU3Digital Competence Framework [11],(Intellectual Output 1 (IO1)), the Intellectual Output 2 (IO2), aims to synthesise the background knowledge, research work, design principles and decisions, and the rationale behind the processes followed to design a curriculum, training plans, materials and assessment for all competences identified in the framework. In addition, we provide examples of specific training courses for the competences addressed by the three pilot exchange training sessions held in Portugal, Spain, and Croatia (C1, C2, and C3). These materials act as examples for trainers creating materials for the other competences.

This paper aims to be easily understood by (1) people familiar with designing and implementing training for adults, regardless of their professional background, and (2) anyone willing to improve the digital competences of TSOs and SEs. Whether you are a seasoned trainer or a self-learner, this paper is for anyone who wants to know how to develop digital competences that are key for TSOs and SEs to deliver their mission more effectively and efficiently and to achieve their goals better. Furthermore, Project output IO2 is designed to provide an accessible resource for trainers. It outlines the methodology used to derive the curricula, the training units, and the materials from the competences. It also presents the main dimensions considered in the curricula design, overviews the defined design principles, key concepts addressed, and training and assessment methods involved. Lastly, it sets the target proficiency levels for the curricula designed and concludes by presenting the doing a tour of the document and how to use it.

The aims underlying the EU3Digital project can be seen as threefold. First, it aims to create awareness about the individual and collective essential digital competences through the EU3Digital Competence Framework (IO1). Second, it seeks to guide the development of those competences through a curated set of training resources selected, designed and developed specifically for easy adaptation by trainers in non-formal or informal educational contexts (IO2, IO4). Third, EU3Digital aims to bring insights from the research and pilot training activities and make recommendations to policymakers from different areas, such as education or the economy, to incentivise future initiatives in Europe (IO3).

3. RESULTS

3.1. IO1 Competence Framework

The EU3Digital Competence Framework (IO1) builds on an extensive literature review and interview findings undertaken for this project that highlighted needs and issues specific to TSOs and SEs (e.g., prioritising social mission), justifying the creation of a new digital competence framework. In addressing those specificities, the framework aims to complement, rather than replace or duplicate, well-known existing digital competence frameworks, namely: the DigComp for citizens and the ICT4NGO [12] for Non-Governmental Organisations (NGOs).

Competences are a dynamic combination of cognitive and meta-cognitive skills, knowledge and understanding, interpersonal, intellectual, practical skills, and ethical values [13]. The EU3Digital

Competence Framework identifies the competences that TSOs and SEs need, across the organisation or in a broader context, to benefit fully from digitalisation. Responding to issues highlighted by interviewees, the framework gives specific attention to the ethical dimension of digitalization and to the engagement of stakeholders.

Each framework competence is broken down into requisite knowledge, skills, and attitudes, which can be used to derive learning outcomes and develop training units and assessment approaches. The framework comprises twenty-two competences organised in five areas: digital tools, operational effectiveness, organisational culture and leadership, ethical practices, and participation and connection.

The wide range of training curricula and materials needed to address the full spectrum of competences and the organisation's diversity of scale, digital maturity, and social mission constitutes a major endeavour. Even if enough effort and resources are available, it will risk being outdated fast due to the pace of digital evolution and, most importantly, the need for mandatory case-by-case adaptation for each trainer and learning context. Therefore, it is not claimed that the competence framework constitutes a final statement of the knowledge, skills and attitudes needed withing TSOs and SEs in order to undertake a process of digitalization.

However, the knowledge, skills and attitudes defined for each competence provide a good starting point for training providers to develop detailed training that best addresses the needs of TSOs and SEs in their particular context, drawing on local knowledge. Before developing a specific training curriculum, assessing target learners' competences and identifying the needs and requirements of their job environment and role is helpful and the framework can be used to structure reflective conversations across teams and organisations, .

The competence framework is a valuable guide for individuals, TSOs and SEs to assess their digital maturity first and then define their digital strategy to improve the capacity, effectiveness, and efficiency to better pursue their social mission. The section dedicated to IO2 presents the most relevant work done to derive the EU3Digital Curricula, Training and Assessment from the EU3Digital Competence Framework.

3.2. IO2 Curriculum, Training and Assessment

Curriculum design is concerned with much more than learning materials. It is a holistic plan for learning environments, considering the physical, digital, social, and psychological factors involved. It comprises intentional planning, organisation, and design of learning strategies, processes, materials, and experiences towards defined learning and performance outcomes [14].

A curriculum is a complex structure involving many elements and highly intricate relationships between them. For the human mind, the hierarchical structure is the most accessible vehicle for complex thoughts. Therefore, we tend to see complex designs as hierarchical, but a curriculum design is often more complex than that.

EU3Digital Curriculum Design aims to optimise the learning process to achieve the best effectiveness and efficiency of the training envisioned for the target audience of EU3Digital. The strategy followed for EU3Digital aims at creating curricula that are "open" enough to be quickly evolved and customised by trainers and, at the same time, "closed" enough to be immediately helpful and ready to be used in real training by trainers and trainees.

The curriculum design considered several factors and principles, which involved pondering many significant trade-offs before making the final decisions. This sub-chapter presents the overall strategy with its ten design principles and associated decisions.

3.2.1. Backward Design Approach

The EU3Digital Competence Framework provides a solid foundation for designing generic curricula to support the development of specific training programmes, courses, and sessions addressing the competences identified. Therefore, it was decided to start from the competences to derive the respective learning outcomes and then work backwards to address the content and topics to be covered.

Then, the learning strategies and instructional materials were designed for the associated training units [15]. In addition to starting from competences being the most straightforward way, this design principle aims to ensure efficient and results-focused curricula with an end in mind.

3.2.2. Competence-Based Learning Outcomes

A learning outcome captures what a learner is expected to know, understand, and demonstrate after a learning experience. The main distinction between competence and a learning outcome is that a learning outcome is written to be measured or assessed [16].

Therefore, the EU3Digital Curriculum defines learning outcomes in terms of the competences acquired by the learner and proven after the learning process. Such learning outcomes aim to preserve the curricula' adaptability, anticipative utility, and transferability. This design principle aims to preserve traceability from competences to training and simplifies the curriculum design process.

3.2.3. Three Proficiency Levels

The learning outcomes defined for EU3Digital aim to cover all the six levels defined in Bloom's Taxonomy [17]: remember, understand, apply, analyse, evaluate, and create. Therefore, based on these levels, the EU3Digital Curriculum is defined to address three proficiency levels of progression in the acquisition of competence in an approach similar to the one adopted by DigComp 2.2 [18]: foundation (remember), intermediate (understand), and advanced (apply, analyse, evaluate, create).

For example, training and assessment for a learning outcome at the understanding level will likely be designed significantly differently than at the evaluation or development levels. This design principle aims to help find the best alignment of curriculum elements to cover learners' competency gaps relative to a specific proficiency level.

3.2.4. Adult-Oriented Education

The EU3Digital Curriculum is exclusively designed for adult education. From an educational perspective, adults are assumed to have undertaken formal and informal education and be responsible, competent and active [19]. Adult learners are usually motivated by the desire for personal development and the practical benefits of training. They are most effective when experiencing their real problems and exploring solutions.

One of the most frequently used adult learning techniques is problem-based learning, where concrete problems are described, and participants are expected to provide possible solutions and evaluate them. Therefore, for the EU3Digital Curriculum, the planned forms of education are problem-based, which can be adapted for use in workshops, online courses, webinars, and massive open online courses (MOOC). This design principle aims to focus on curriculum elements with the best fit for adult learners.

3.2.5. Learning Styles Eclecticism

It is expected that adults can identify their preferred ways of learning, i.e., their own most effective learning style. Learning styles are characteristic preferences for alternative forms of taking in and processing information. These preferences can be assessed on four dimensions, as suggested by [20]: sensing or intuitive, visual or verbal, active or reflective, and sequential or global.

Kolb's theory of learning styles [21] combines two processes for grasping information (concrete experience and abstract conceptualisation) with two methods for transforming knowledge into learning (active experimentation and reflective observation), leading to four learning styles: convergers, accommodators, divergers, and assimilators.

Therefore, considering the diversity of TSOs and SEs and the background of their collaborators, the curricula must be eclectic in learning styles. This design principle covers diverse learning styles while keeping the curricula simple. When drawing on the EU3Digital curriculum to develop localised training resources, we encourage trainers to adapt the suggested methods to meet the needs of their target audience's learning styles, using our suggestions as a starting point rather than a final one.

3.2.6. Blended Learning Approach

Independently of the delivery methods used, training can use three types of approaches: synchronous, asynchronous, or blended [22]. Synchronous learning is when a live instructor interacts with a group of learners in real time, either in a classroom or online. Asynchronous learning is when there is no real-time communication between the learner and instructor or interaction. It is also called self-paced learning since it allows learners to do courses at their own speed.

Therefore, the approach defined for the EU3Digital Curriculum Design was to support blended learning, which combines synchronous and asynchronous learning. This design principle aims to get the best of both worlds, support in-person and online training, and thus address a wide range of learning styles.

3.2.7. Learning Methods Flexibility

Training is about disseminating and acquiring knowledge, developing skills, and shaping behaviours and attitudes. For many years, workplace training has been conducted primarily in classroom settings, led by an instructor. In recent years, many other learning methods (aka training delivery methods) have become widely popular for their proven flexibility and effectiveness.

Finding the training methods that best fit the needs of organisations and individuals can be challenging and must be done correctly [23]. Well-known training delivery methods range from highly interactive to self-study, in-person or virtual, such as instructor-led training, group discussions, group participation, hands-on activities, role play, on-the-floor training, mentor shadowing, interactive training tools, interactive learning guides, case studies, videos, simulations, podcasts, infographics, and animations.

The EU3Digital Curriculum prescribes a small set of learning methods but easily accommodates the trainers to include their preferred training delivery methods. This design principle aims at keeping the curricula' simplicity and flexibility.

3.2.7. Minimalist Instruction

The theory of minimalist instruction [24] has foundations in the psychology of learning and problem-solving. Minimalist instruction intends to help design instruction material so people can learn faster and for longer. Learning is always complex and can be even more challenging if the instruction is complex. The key idea in minimalist instruction is to ensure the training material is not obtrusive.

One goal of the minimalist approach is to teach people what they need to know to do what they wish. Among other characteristics, minimalist instruction materials motivate people to train on real tasks and get started fast, addressing current topics very briefly in the order that seems best for the reader, supporting error recognition and recovery, and trying to explore readers' prior knowledge. This approach often involves using minimal text and visual aids and focusing on hands-on, interactive, and experiential learning. The idea is to use the least materials and instructions necessary to achieve the desired learning outcome.

Minimalist instruction is often used in technical skills training, as it allows learners to experiment and explore independently, reducing learners' cognitive load and allowing them to focus on core concepts. It also emphasises creating a learning environment where the learner is responsible for their self-directed learning.

Therefore, the instruction materials developed and gathered to support the designed curricula aim to follow the minimalist instruction theory. This design principle aims at enabling people to learn faster and for longer, with more 'doing' rather than reading, and to help make errors and error recovery less traumatic and more pedagogically productive.

3.2.8. Pattern-based Approach

For an organisation to acquire and develop the competences needed to reach their optimal level of digital maturity and empowerment, strategic thinking is needed, multiple factors are considered and balanced (a.k.a. forces), and many design decisions made. As developed by Christopher Alexander and his colleagues [25], patterns are a way of capturing and conveying knowledge and experience in a structured, reusable format.

A pattern describes a problem, a solution, and the context in which the solution is applicable. The idea behind patterns is that the problems and solutions related are specific enough to be helpful and general enough to be useful in a wide range of situations. Patterns are intended to help designers identify and understand the forces and trade-offs involved, thereby easing solutions' development.

For all this, patterns are considered a powerful tool to document and communicate proven practices, design knowledge, and other forms of expert knowledge in complex fields involving large amounts of information. Therefore, at EU3Digital, we adopted a pattern-based approach to developing minimal instructional materials. Each pattern helps the learner focus on one well-contextualised problem at a time. Learning in small steps reduces risk and helps build confidence. This design principle aims to support a problem-centred curriculum design and enable learners to understand the rationale behind well-known proven solutions to the key problems related to each one of the EU3Digital Competences.

3.2.9. Open Curriculum

Learning implies constantly recalling, checking, rejecting, or modifying our constructs of reality. In a constructivist approach, knowledge is not passively passed through the senses or communication but built by learners through active interaction with new information, personal experiences, social interactions, and mediation [26]. Since digital competences are, as in almost no other area today, subject to constant continuous changes, a constructivist approach may help embrace creativity, add flexibility, and support change in implementing learning and teaching processes.

Therefore, to teach EU3Digital competences, we decided to support constructivism using an open curriculum approach. In this educational approach, learners can design their own learning path instead of following a predetermined set of courses, thus having more control over what they learn, how they learn it, and when they learn it. This design principle accommodates the demands of digital competences acquisition and is therefore seen as optimal for curriculum creation and training.

3.2.10. EU3Digital Training and Assessment

Based on the design principles mentioned above and existing literature, the outline of this EU3Digital Curriculum Design was produced early on in the project and then refined it with the input of experts. The curricula were concluded after incorporating all the experience gained in the three exchange pilot training activities provided for small groups of collaborators from national TSOs and SEs: first in Portugal (June 2022), then in Spain (October 2022), and later in Croatia (January 2023).

One of the essential goals of adult education is to gain insight into distinctive characteristics and opportunities, as well as the individual aspirations and expectations of the learners themselves. It is imperative to design assessment instruments (e.g., questionnaires, essays, assignments) to appraise the competences of each learner. The content and the form of adult education would benefit if adjusted to learners' learning styles, after self-assessment, for example.

The TALOE (Time to Assessment Learning Outcomes in E-learning) project specialises in assessing learning outcomes. It provides a tool that can facilitate the choice of assessment methods according to the type of competences, freely available online at the project website, with tutorials and examples [27].

As an example, in the EU3Digital competence “2.4. Evaluate and monitor efficiency and sustainability of digital infrastructure”, one can take the text of the competence and find that the verbs that better fit are “Evaluate” (Checking) and “Analyse” (Organising) [28].

The advice provided by the tool for this competence has three suggestions:

- a) Practical work – structured enquiry.
- b) Reflective practice – abstract conceptualisation.
- c) Essay – Problem.

Based on these suggestions, the responsibility for providing the assessment may choose one of the three according to their decision criteria and suitability. This procedure may be repeated for all competences, and three assessment techniques are defined per competence.

For the EU3Digital training units, it was decided to use as often as possible three different assessment methods, one per proficiency level:

- a) Questionnaires to answer about presentation contents (e.g., multiple choice questions).
- b) Practical work to analyse and discuss case studies.
- c) Essays to propose and explain solutions to problems.

3.2.11. Training Units

To support the learning, each training unit provides a problem-solution approach for the competences (a.k.a. pattern summaries or patlets). In some cases, also provides small decks of slides outlining the most relevant topics. In addition to these materials, EU3Digital partners aim to start curating a bank of learning resources, both existing and new ones, seeded by the new learning resources developed explicitly for EU3Digital and existing resources selected by the partners and their networks.

It is expected that more resources will be selected, curated, and shared in the bank of EU3Digital Learning Resources by trainers and trainees. The EU3Digital Curricula was designed to be implemented as one module per competence, grouped by competence area, using small instruction units, hereafter called training units. The training units are structurally similar but flexible in duration and target proficiency levels.

In practice, each training unit can be used for three levels:

- a) Foundation: a presentation of 20-40 minutes followed by a 10-minute questionnaire for self-assessment.
- b) Intermediate: same as above, plus a group activity of 20-60 minutes (e.g., reflective practice) to analyse and discuss case studies proposed by the trainees, preferentially, or trainer, followed by a qualitative assessment done by the trainer, a self-assessment, or a peer-assessment.

c) Advanced: same as above, plus a report (essay) written in a group or individually to analyse, evaluate and propose solutions addressing the key challenges of one case study, with an estimated effort of 3-6 hours, followed by a qualitative assessment done by the trainer, or a self-assessment, or a peer-assessment.

The openness and flexibility of the training units are considered critical for the resilience of EU3Digital Curricula over time, enabling the curriculum to keep its value, to be easily changed, updated, or extended by trainers to embrace the expected frequent future changes in digital technology, education and needs of target learners.

3.3. IO3 and IO4 Policy and Tools

IO3 consists of Policy Paper addressing Digital Support for Social Impact and how digital competences can improve the action and impact of TSOs and SEs. The aforementioned deliverables of EU3 Digital concur with in-depth empirical and literature research conducted for the EU3 Digital project. Findings offer detailed insights into how digital competences can improve the action and impact of social enterprises. This policy deliverable converts the research findings into a policy advice paper aimed at informing the European Commission and other relevant stakeholders in their initiatives for developing digital skills and competences in Europe's social economy ecosystem.

The deliverable IO4 is a Toolkit on Digital Skills to support SEs and TSOs with going digital, this Toolkit provides users with a hands-on guide to open access tools, resources, and services that can enable them to adapt dynamically and swiftly to societal changes. Whether one wants to learn more about the processes one needs to have in place to meaningfully implement digital tools within the organisation, or if one would like to learn which free or low-cost tools can support in executing the organisation's mission and activities, this toolkit intends to answer these requests. It addresses Data Collection, Cybersecurity, Teamwork, Finances, Design, Outreach, Community management, Conferences/events and Next Steps.

4. CONCLUSIONS

As mentioned, the EU3Digital project aims to support TSOs and SEs in their digital transformation by identifying digital competences and providing training resources to help each organisation succeed in their journey towards a whole Trustworthy Digital Organisation.

This paper tried to explain the methodology followed to build the curricula, training units, and materials, including the design principles, key concepts, and methods involved. The document refers to a set of twenty-three training units to serve as a base to build your own training, using the same format and structure, and reusing as much as possible, the training units provided.

Although the more and stronger competences, the better, the fact is that each organisation is unique, and many different ways can work for your organisation. Therefore, it is recommended using organisational knowledge, insight and intuition to determine the sequence of competences that best fit the needs. We provide an archetypical sequence for the central training units that starts with the foundational competences and then progresses into others.

Reflecting on the process of creating intellectual outputs at the close of EU3Digital, we recognise the value of the choice of the project authors to adopt a competence approach, and, as outlined in this paper, the practical uses of the intellectual outputs. However, we also acknowledge that there are limitations to a competence-based approach to learning – not least because there are different understandings of the concept of 'competence'. In EU3Digital, we adopted a broad understanding of competences that enabled us to address the attitudinal and ethical issues that our interviewees raised, and to reflect their emphasis on the importance of 'soft' skills. Second, competence frameworks have largely focused on the development of individuals rather than organisations. The uniqueness of the EU3Digital competence framework lies in its organizational framing. However, this sets up a complex challenge to represent all of the knowledge, skills, and attitudes needed in a TSO or social enterprise. In practice, it is impossible to meet all of the needs of the many different organization structures under this heading – from associations, to corporates, to founder led social enterprises, whilst also considering how the competences are distributed and coordinated across such diverse organisations. Again, these factors reinforce that the competence framework can only provide a starting point and that training must be contextualized.

Concluding, start the journey towards a Digital Transformation of the organization by creating awareness in your TSO or SE organisation of the advantages of digitalisation using the outputs of EU3Digital. Then form a good team and define a vision and an initial list of digital needs, involving as many stakeholders as possible. Build your infrastructure to be efficient and inclusive. Along the

journey, one will be building the digital organisation, processes, and culture, all in parallel, addressing your topmost digital needs first, one by one, a little of each at a time, in a piecemeal growth process, adding value, doing great things, possibly slowly but steadily.

Soon, it is expected to share more resources on the EU3Digital Learning Resources page of the project's website. It is also expected to help develop a community around the results of EU3Digital and to support communities of practice at local, national, and European levels.

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