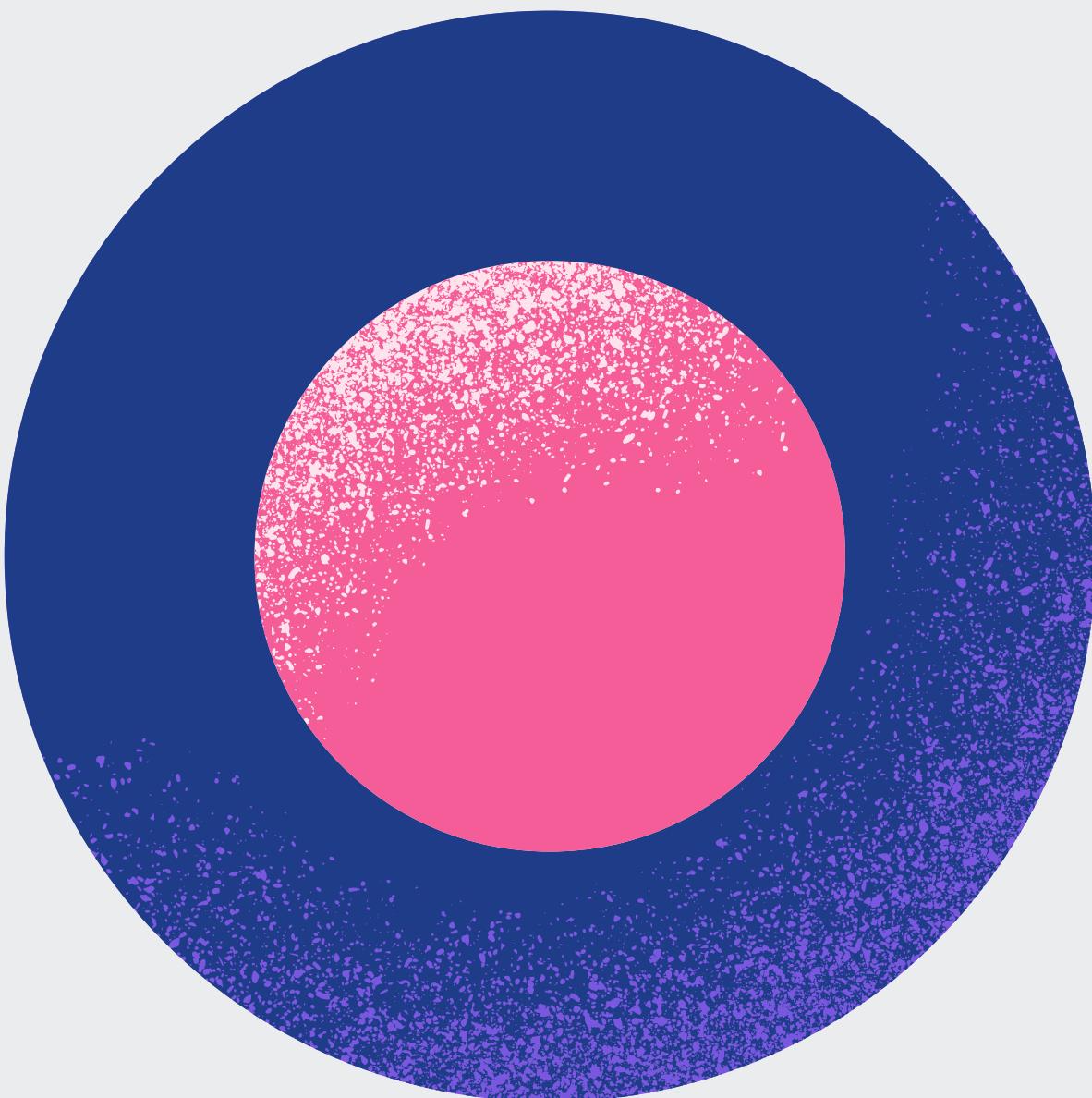

Mapping of existing lifelong learning programmes



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About Materahub

Materahub is a consultancy organisation based in the south of Italy, Matera, aimed at supporting cultural changes in Europe. It manages international pilot projects to support cultural and creative industries and other economic fields including social, cultural heritage and innovative tourism sectors, encouraging innovation and inclusion processes and a new entrepreneurial vision to face contemporary challenges.

To find out more visit www.materahub.com

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Executive Summary

Transforming communities, generating jobs and growth, creating spillover effects into other sectors and ensuring that Europe becomes the powerhouse of innovation in the world. These are the main goals of the EIT Culture & Creativity, the newest Knowledge and Innovation Community (KIC). The EIT, namely the European Institute of Innovation & Technology, is an independent body of the European Union set up in 2008 to deliver innovation across Europe (EIT Culture & Creativity, 2023). The EIT brings together leading business, education and research organizations to form dynamic cross-border partnerships. These are called Innovation Communities and each is dedicated to finding solutions to a specific global challenge. Joining the EIT Community in June 2022, EIT Culture & Creativity advocates a sustainable ecosystem for European Cultural and Creative Sectors and Industries (CCSI), connecting and collaborating world-class partners, accelerating ecosystem-centred innovations and businesses, reaching hearts and minds of global audiences with experiences, products and services to shape resilient futures (EIT Culture and Creativity, 2023).

In order to achieve these goals, the EIT Culture and Creativity, alongside its partners, set up a necessary and fundamental preliminary work based on mappings the European Cultural and Creative Sectors and Industries, laying the foundations for designing effective tools and policies to support the sectors, its intersectoral development and the ability to embrace changes and what the future needs. In this direction, this research will support the evidence-based operation and development of the EIT Culture and Creativity, providing an extensive mapping analysis of the quantity and quality of education and life-learning programmes provided by Culture and Creative Industries across Europe.

In this way, this report aims at supporting EIT Culture and Creativity during the next years, in break boundaries in CCSI education by teaching cutting-edge technology to creatives and creativity as a cross-industry skill, increasing multidisciplinary collaborations of higher education leaders with creative industry economics, nurturing imaginative, creative business people and market-savvy artists and designers.

At the same time, this report has the ambition to be a facility, or an additional tool for CCIs that want to or already provide educational services and programmes, furnishing them an overview of the current European learning offer and its possible development.

Finally, this report can be a base for future researches and mapping activities dedicated to the topic, establishing a longitudinal work of investigation and data collection, accessible to EIT Culture and Creativity's partners, the European Union and the entire sector.

Glossary

Cultural and Creative Industries (CCIs): The cultural and creative industries refer to those parts of the modern economy where culture is produced and distributed through industrial means, applying the creativity of individuals and groups to the generation of original cultural product, which may have commercial value either through direct sale to consumers or as intellectual property. The cultural and creative industries typically bring together the arts, media, and design sectors, with a focus upon convergent digital technologies and the challenges and opportunities of globalization. While discussion of the cultural and creative industries can be traced back to the 1940s, it was in the 1990s and 2000s that they came to prominence as both an academic and a policy issue. Policy strategies to develop the cultural and creative industries are typically associated with expanding markets for cultural goods and services. They seek to develop these industries by promoting innovation and creativity, leading to the development of original forms of intellectual property and supporting industries based around culture and entertainment. In some instances, such as culture-led urban regeneration strategies, cultural and creative industries are positioned as an alternative to traditional manufacturing industries. As an academic field, interest in the cultural and creative industries has ranged across communication, media and cultural studies, economic and cultural geography, the creative and performing arts, and applied cultural economics (Dörfling, et al., 2016).

Life Learning Program: Lifelong learning is the "ongoing, voluntary, and self-motivated" pursuit of knowledge for either personal or professional reasons. It is important for an individual's competitiveness and employability, but also enhances social inclusion, active citizenship, and personal development. Lifelong learning has been described as a process that includes people learning in different contexts. These environments do not only include schools but also homes, workplaces, and even locations where people pursue leisure activities. However, while the learning process can be applied to learners of all ages, there is a focus on adults who are returning to organized learning. There are programs based on its framework that address the different needs of learners, such as United Nations' Sustainable Development Goal 4 and the UNESCO Institute for Lifelong Learning, which caters to the needs of the disadvantaged and marginalized learners (EPRS, s.d.).

Vocational Training (VET): Vocational education is education that prepares people to work as a technician or to take up employment in a skilled craft or trade as a tradesperson or artisan. Vocational Education can also be seen as that type of education given to an individual to prepare that individual to be gainfully employed or self-employed with requisite skill. Vocational education is known by a variety of names, depending on the country concerned, including career and technical education, or acronyms such as TVET (technical and vocational education and training) and TAFE (technical and further education) (UNESCO, 2018).

Reskilling and Upskilling: According to the Cambridge dictionary, Upskilling is the process of learning new skills or of teaching workers new skills, while Reskilling is the process of learning new skills so you can do a different job, or of training people to do a different job. Both are effective strategies for employers to combat what is expected to become a perennial skills shortage. Reskilling means looking for people with ‘adjacent skills’, that are close to the new skills your company requires. It provides a lateral learning experience that can help with the vast amount of reskilling required of employees in the modern workforce. The World Economic Forum estimates that half of all employees will require reskilling by 2025 due to technological advancement. A culture of upskilling, on the other hand, means teaching employees new, advanced skills to close talent gaps. It involves keeping your team members involved in continuous education and helps them advance along their current career path.

Introduction

Despite the high level and quality of creative talent present within CCIs in Europe, many professionals in the sector lack a structured access to research, emerging technologies and skills that are outside of their specific field. These skills include crucial entrepreneurial and cross-cutting competencies, such as digital and financial management. Consequently, current CCIs graduates are not always ready to enter the modern labour market. CCIs professionals also often lack these skills, and this hinders their ability to innovate and limits their contributions to growth, competitiveness and impact on society. This lack of entrepreneurial, financial management, cross-cutting and technical skills results in EU CCIs creatives being less able to keep up with competitors around the globe that innovate and scale better (KEA, 2019).

The research emerges as a response to the prevailing challenges of developing creative professionals with transversal skills, competencies and knowledge in tech, business, entrepreneurial, investment, legal and the contribution of creative and cultural sectors in the triple transformation (green, social, digital). These deficits hinder innovation, growth, competitiveness in the sector as well as resulting in limited employable opportunities or business success. Thus, through the current research, the EIT Culture and Creative will seek to:

- reskill, upskill and develop key behaviours to boost innovation, employability and business success rates in emerging, mid-level and established creative professionals.
- create lifelong learning programmes that develop skills and competencies required to drive bold innovations addressing Europe's global challenges and to support the triple transformation.
- foment the application of creative practice and methodologies (e.g., creative thinking development/design thinking) in non-creative and cultural professionals and graduates.

Indeed, this report illustrates the work conducted during 2023 by Consorzio Materahub, alongside the EIT Culture and Creativity, in terms of mapping the current European Learning offer provided by Culture and Creative Industries. The research aims at generating insight regarding the current learning environment, investigating from perspective of the learning programmes provided by CCIs in Europe, so outside of the Higher Education Institution (HEI) and University milieu. Established so the sample of the research, this mapping activity aims at identifying learning programmes characteristics, good educational practices and innovation, but also gaps and deficiencies, especially in relation to future labour market needs. In this direction a qualitative approach will be used to explore eventual misalignment between current offer and future demand of life-learning education.

This report is structured as follow:

- Research Methodology. It will be reported the methodology used during the research, indicating which approach and pillars have followed.
- The Data Collection Guidelines. Here the reader will be led through the data collection approach and tools, as well as the guidelines used for the data management and storage.
- Desk Research: Culture and Creative Competences and the European Learning Offer. This chapter illustrates the literature review and the baseline research conducted for elaborating the area of research and so the data collection tools.
- The Results. Here, the results of the data analysis are reported and commented.
- Conclusions and future development. In this chapter, the reader can explore possible further development of this research project, limitations and applications.

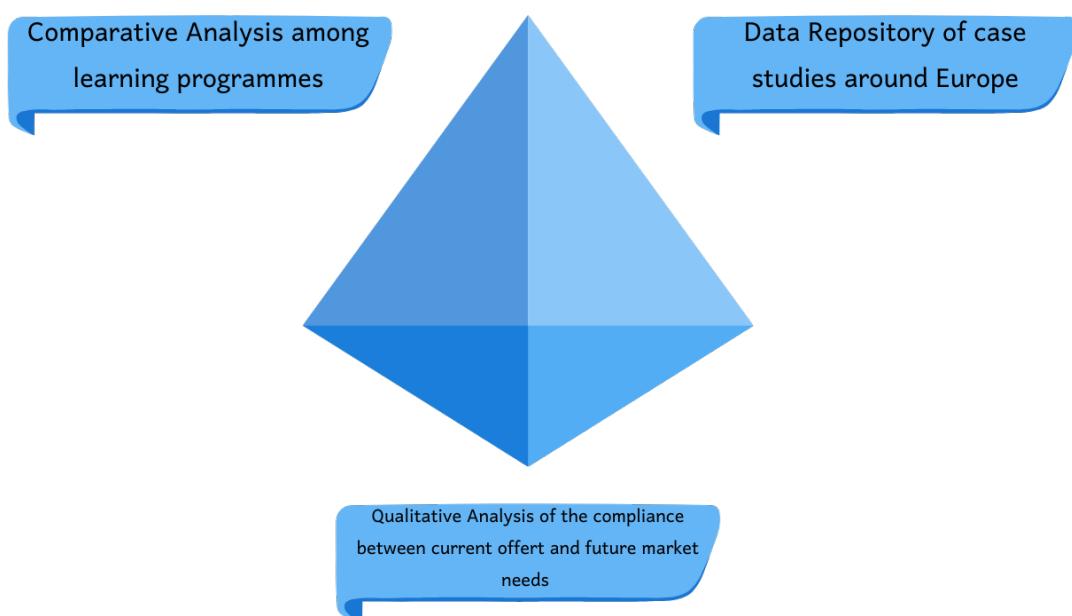
The research has the ambition to provide a foundation for further contributions in the realm of the research or supporting CCIs during their strategic development. At the same, this document is aimed primarily at KIC partners, European CCIs, networks and institutions, for supporting policies, grants and projects design. In addition, it provides consistent information to potential students and learners that could benefit from any of the educational programmes developed by the KIC and the CCIs engaged in the research activities.

Research Methodology

The research methodology has been designed in order to create a flexible and adaptable research structure, able to embrace the multitude of organisations, learning programmes and contexts part of the European ecosystem. The overall effort of the methodology aims at establishing a rolling data collection of the existing European learning offer, creating a data repository of cases around Europe and nurturing a comparative analysis between current state of the art and future compliances among competences required by the market and the ability of the learning programmes to provide them.

The mapping research so aims at creating a reliable portray of the current European learning offer, regarding no-institutional-oriented education, mostly vocational trainings, and so establishing the base for a comparative-qualitative analysis of European lifelong education. This actual, existing perspective plays a decisive role by itself, providing valuable information in terms of gaps, deficiencies, best practices and potentialities of the programmes; at the same time there is an undeniable, steady tension between the current learning programmes structure and what the future needs by cultural and creative professional profiles, which kind of competences are required. In this direction the overall mapping methodology has been designed in order to embrace this tridimensionality, guaranteeing an in-depth data repository of the current European learning programmes, a comparative analysis among current peers, while at the same time exploring the development perspective of the current learning offer and its compliance with the future.

Figure 1 - Research Approach

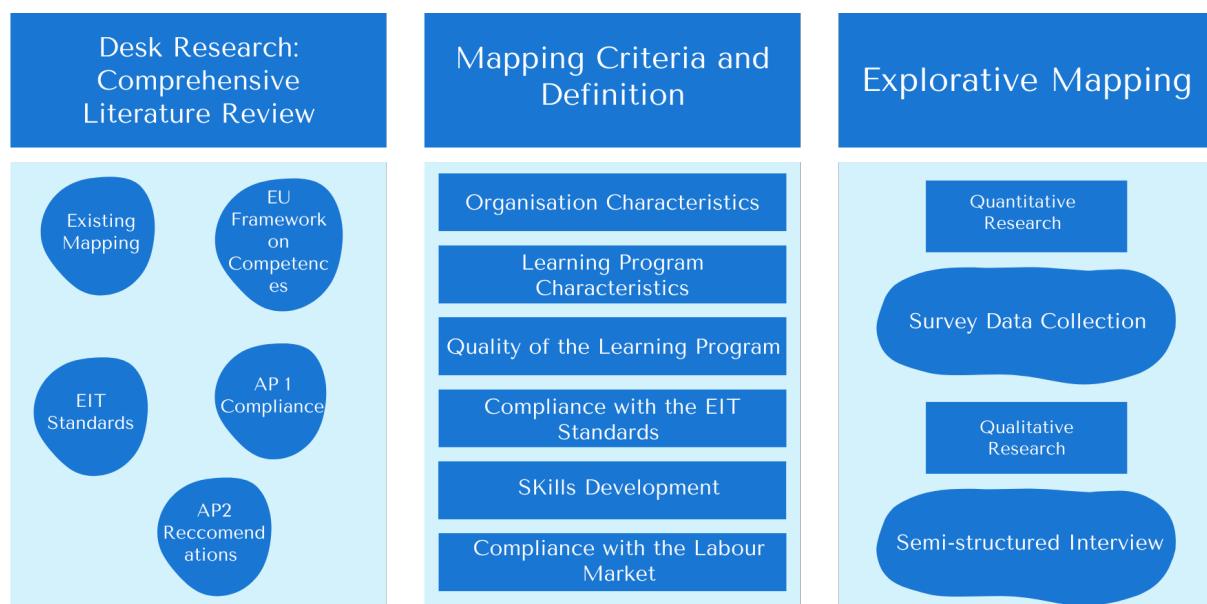


Mapping of existing lifelong learning programmes

This approach induces three main outputs: an open map of learning programmes for cultural and creative professionals and competences; a quali-quantitative understanding of their characteristics, gaps and value; a qualitative statement of possible development of the European learning offer in the CCIs' sector. The first one is ascribable to the necessity of producing an orienting space where consulting the current state of the offer, guaranteeing access to each program and organisation information, while at the same time leaving space for further enhancement of the database. In this direction, the research methodology set data collection tools and checkpoints able to keep gathering data. Indeed, the survey and a digital platform will enable a rolling data collection, even after this report, so providing the condition for a longitudinal research. The second one regards the urgency of having affordable data for understanding the state of health of the current learning offer, its characteristics and its compliance with the EIT standards. Finally, the third output supports a deep understanding of what could be still integrated to move the entire European cultural and creative sector toward the ability of dealing with future challenges and complexities.

In this direction, the research methodology is based on three pillars, as shown by figure 2.

Figure 2 - Methodological Development of the Research



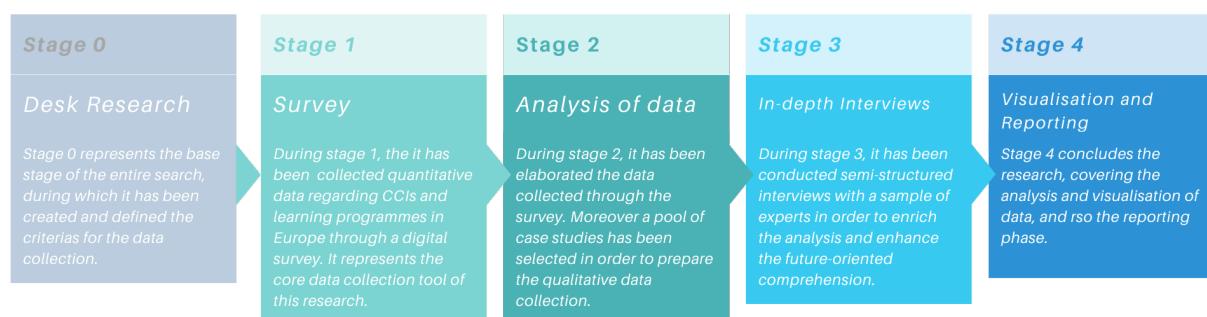
The first one, the desk research, is a comprehensive review of the state of the art of previous mapping researches aimed at framing cultural and creative skills development or learning offers in Europe. It served to position the conversation, understanding what already exist and what needs to be integrated, in relation to the European conversation and according to the EIT Culture and Creativity's objectives. Indeed, the desk research was a preliminary step, necessary to lead the design of the data collection tools, following specific criteria and dimensions elaborated according to the research itself. In this direction, the entire data collection was elaborated basing on the delicate work done in terms of balancing evidences emerged from existing mapping activities, with the EIT learning standards, EIT Culture and

Creativity's objectives, and the harmonisation between the AP1 and AP2 mapping research. This procedure brought to the elaboration of the mapping criterias, as already shown by the figure 2. The latter represents the second pillar of the methodology, namely the areas of research through which data have been collected and analysed. In other words, mapping criterias are those dimensions that allows to portray a learning program and its organisations, its main characteristics, its reason to be, its ability to create value and its conformity with current times and future possible development. As mentioned, the criterias allows to design the data collection tools and so effectively proceeding with the explorative mapping: it refers to the actual activity of data gatherings and mapping of the information, conducted during the research. In this direction, the next chapter will describe the research process and its phases.

Phases Overview

The research methodology follows a stage-based approach. Precisely, the main stages of the research methodology have been set down consequently, as figure 3 shows:

Figure 3 - Research Process



The research process matures through 5 stages, from the desk research, named stage 0 ,since it represents the baseline of the entire research infrastructure's development, especially of the data collection tools, to the final stage, dedicated to visualisation and reporting.

Stage 0 – Desk Research

As mentioned previously in this document, the very base stage is represented by the desk research. It has been partially described before and it will be further developed during this report. However, this stage prepares the data collection and analysis, setting criterias, areas of improvement and so designing the research infrastructure.

Stage 1 – Survey

The first stage results from the role of connection, among sources and evidences, done during the previous phase. It represents the core mapping activity of the research. It has been conducted through a survey, in order to favour the comparability of data, their visualization and accessibility, both in terms of collection and readiness of the data.

The survey aims at gathering fundamental information concerning the production and offering of learning programmes for upskilling and reskilling of Cultural and Creative Industries (CCIs), around Europe. It is divided in two parts. The first part is dedicated to the respondent organization, where it is located, which one is the sector where it operates and its typology. Gathering information about the organization is as fundamental as understanding its learning programmes. Indeed, it guarantees the possibility to trace an effective map of CCIs dedicated to training, and their characteristics. The second part is vertically dedicated to the learning programmes offered by the organization, their characteristics and quality, their target, and the compliance between the programmes and both the labour market and the EIT standards.

The survey was implemented between April and July of 2023, and fulfilled by 141 respondents.

Stage 2 - Analysis of Data

Following the successful collection of 141 responses to the Mapping survey, the research endeavours transitioned towards a comprehensive data analysis phase. The primary objective encompassed the extrapolation of pertinent concepts and categories that align with the overarching mapping objectives. These insights serve a dual purpose: firstly, they provide valuable inputs for the subsequent qualitative data collection phase, which exclusively focuses on exploring correlations between learning programs and anticipated labour market demands; secondly, they lay the groundwork for an in-depth qualitative data collection process. This forthcoming phase aims to uncover nuanced insights through a meticulous qualitative data collection approach.

The analysis of data is structured into six distinct sections, each meticulously designed to illuminate various facets of the research.

Section 1: General Perspective on Participant Demographics

Within this section, a comprehensive exploration of participant demographics is undertaken. This involves a meticulous examination of the diverse organizational typologies that are represented, coupled with an investigation into their respective sectors of operation, complemented by pertinent commentary. An inquiry into the potential interplay between these organizational typologies and their affiliated sectors is also conducted. Additionally, an in-depth analysis is devoted to the geographic dispersion of participants across various countries.

Section 2: Learning Program Characteristics

This section delves into the characteristics of the learning programs under investigation. It involves dissecting the subject areas covered by these programs and categorizing them based on distinct characteristics. The analysis extends to exploring potential correlations between

program categories and subject areas. A comprehensive description of the learning programs is provided, employing a coding approach to extract emerging categories.

Section 3: Target Audience Examination

In this context, the spotlight shifts to the target audience of the learning programs. A meticulous report is provided concerning the attributes of the intended student recipients, coupled with efforts to discern correlations within this cohort. An exploration also ensues into potential relationships connecting the field of study with the identified target audience.

Section 4: Focus on Skills Development and Innovation

This section focuses intently on the domain of skills development, closely aligned with the parameters set forth by EIT guidelines. Specific skills are accentuated and organized through the application of clustering methodologies. Furthermore, distinctions in the levels of emphasis allocated to these skills are expounded, subsequently delineating interconnections among them. Potential correlations between skills and the target audience are also investigated, with particular emphasis on the central theme of innovation.

Section 5: EU CCIs Learning Program Profile

This section traces information collected and portrays learning program profile, namely a concentration of characteristics and qualities correlated among them, emerged with continuity during the analysis of the learning programmes.

Section 6: Qualitative Compliance with Labour Market

In the last section, current evidences are qualitatively compared with future labour market needs, with the ambition of laying the foundation for a longitudinal analysis.

In every section, a methodical and thorough approach is employed to extract valuable insights. This effort contributes to a holistic comprehension of the complex interrelationships among learning programs, target audiences, and the landscape of skill development.

Stage 3 - In depth interviews

This part of the research has been dedicated to enlarge the previously conducted analysis and finding further evidences regarding the compliance between the learning programmes and the current and future labour market. The design of the interviews has been based taking into account the final four questions of the survey, and the following analysis of the obtained results, in order to enhance the research with a top-view perspective of phenomena. Indeed, basing on the answers received from the survey, it has been extrapolated the most important topics to follow up with specific experts.

Stage 4 - Visualisation and Reporting

The final stage of the research has been dedicated to the visualization of the results obtained by the overall analysis and the design of a specific digital platform, making data available and comparable through a geographical map, as well as, leaving the survey accessible.

Table 1 - Research stages

S 0	DESK RESEARCH
0.1	Identification of the main sources
0.2	Analysis of previous researches and reports
0.3	Compliance with AP2 recommendation
0.4	Compliance with AP1 mapping research
0.5	Elaboration of the mapping criterias
S 1	SURVEY
1.1	Design the survey
1.2	Design the consent form
1.3	Design the repository of data
1.4	Design the survey on Monkey survey
1.5	Provide info and 2 picture to EIT
1.6	Design an email
1.7	Define a list of partners and network for sharing the survey
1.8	Define an engagement strategy
1.9	Define the sample
1.10	Sending the survey
S 2	Analysis of data

2.1	Definition of criteria of selection
2.2	Analysis of the mapping
2.3	Selection of 20-30 experts/cases studies
S 3	In depth Interviews
3.1	Design of semi-structured interview
3.2	Design an email
3.3	Conducting and Analysis of the interviews
S 4	Visualisation and Reporting
4.1	Analysis of data: best practices, bias and ranking
4.2	Visualization of data
4.3	Design of the Final Report
4.4	Design of the Platform Map
4.5	Design of the dissemination strategy
4.6	Realization of the dissemination activity

The Data Collection Guidelines

The data collection used in this research operates through a mixed method, combining an overarching quantitative collection of data derived from the survey, with an in-depth qualitative data collection aimed at exploring specific aspects and criteria through qualitative interviews with selected cases studies. The mixed approach guarantees the most affordable and least time-consuming strategy to obtain valid, objective and comparable data to portray a European-level phenomena and obtain qualitative information to understand the current ability of learning programmes to generate updated, accessible competences, in line with the current and future labour market, and in line with the EIT purpose.

For this reason, the data collection methodology achieves the following specific attributes:

- Easily usable, meaning that the scope of the methodology is accessible, readable and applicable regardless of the competences of the user.
- Scalable, referring to the aim of being applicable to different contexts, needs and situations, even after the end of the project, so that it may be used in order to keep studying the phenomena and augmenting the sample.
- Disseminated, meaning the ability of being flexible and inclusive, so taking as much as possible in consideration the wide range of situations and exceptions to the data collection process in relation to different backgrounds and systems.
- Objective, referring to the fundamental need of requiring a process able to keep data objective, reliable and valid.

During this chapter, it will be illustrated the data collection tool used, the source of verification. Moreover in the appendix B, it could be consulted the data management plan.

The Survey

The survey is the core data collection tool of the research. It has been structured on 38 issues, divided into two main areas and 6 criterias (see the description of the research pillars in the previous chapter and further elaboration in the next chapter dedicated to the Desk Research).

The composition of the survey has been coincided in order to guarantee the right balance among the quality of the responses, the effectiveness of the research structure and the accessibility of the research tool for the participants. Indeed, the majority of the issues are closed-answer and easy to achieve or obtain data. This direction was needed to assure data comparability and correlation analysis, as well as answers' dispersions.

The survey was elaborated and distributed through the platform SurveyMonkey. From the dashboard the survey has been sent directly to 637 organisations, while thousands of others

have been reached sharing the link with portal and archives of organisations, as mentioned below in the section dedicated to the source of verification. The result is 141 respondents.

The survey is divided in two main areas. The first one entirely dedicated to endogenous peculiarities of the organisation.

Part 1 - General Information on the Organisation

- Name and surname of the respondent
- Position of the respondent in the organisation
- Name of the organisation
- Typology of the organisation
- Sector of the organisation
- Country of origin of the organisation
- City of origin of the organisation
- Website

These data are flanked by information regarding the learning programmes provided by the organisations themself. In particular, the second area is subdivided into other 4 parts, corresponding to the aforementioned criterias.

Part 2.1 - Learning Program General Information

This part is dedicated to collect general information about the learning programmes, their structure and identikit in the map of items the research is going to build. These data contribute to facilitate the access to the topic and give access to easily comparable information.

- Name of the Learning Program
- Brief Description of the Learning Program
- Area of Study
- Topic
- Category
- Credentials
- Language
- Target Students
- Origin of the Target Students
- Type of Participation
- Educational Approach
- Runtime

Part 2.2 - Quality of the Learning Program

This part explores the compliance of the learning programmes with recognized quality standards and with qualitative properties. These data contribute to generate an overall understanding on the quality of the European educational offer in the cultural and creative realm, and the compliance between the items and the pillars of the European Union in terms of education.

- Is the Learning Program aligned with the European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET)?
- Is the Learning Program accredited or recognized through the EQF (European Qualification Framework)?
- Does the student selection process include criteria for the assessment of students' entrepreneurial potential?
- Is the Learning Program aligned with the European Entrepreneurship Competence Framework (ENTRECOMP)?
- Is there a tracking system of students' careers after the end of the learning program?
- Does the implementation of your program include academic partner?
 - o If yes, Are the academic partners engaged in:
 - curriculum development
 - teaching activities
- Does the implementation of the programme include non-academic partners (ex. industry, business, government partners, etc.)?
 - o Are the non-academic partners engaged in:
 - curriculum development
 - teaching activities
 - placement, internship or field activities
- Are the academic or non-academic partners from at least 2 different countries?
- Does the programme require from students to study across organisations (either physically, virtually, or blended)?
- Does the programme require from students to study Internationally (either physically, virtually, or blended)?
- With regards to the learning programme as a whole, are strategies and policies in place to enhance inclusion, diversity and non-discrimination, including targets and monitoring mechanisms?
 - o In relation to the previous question, if yes, can you report the strategy/policy?
- Does the programme provide an internship/ apprenticeship/ job training experience?
- Is the Learning Program the output of a European Project?

PART 2.3 - Learning Program Compliance with the EIT Standards

This part of the survey stresses the compliance with the EIT standards and investigates the area of skills development and upskilling of the sample. The competences investigated here are the ones promoted by EIT, specifically the ones in accordance with *EIT Quality System for*

non-degree education and training. In this direction, this part has also a specific focus on innovation skills and approaches.

- What is the level of emphasis that your learning program put on the following areas in terms of learning outcomes and skill development?
 - o Entrepreneurship Skills and competencies
 - Financial and business management skills
 - Entrepreneurial skills
 - Developing sustainable business solutions
 - o Innovation skills and competencies
 - Generating new knowledge, ideas, and technological solutions
 - Evaluation of unintended consequences of innovation and technology
 - o Creative skills and competencies
 - Creative thinking and problem-solving skills
 - o Intercultural skills and competencies
 - Interpersonal relations and collaborative skills
 - o Making judgements and sustainable competencies
 - Critical thinking and analysis of arguments and information
 - Ecological Skills
- With regards to the topic of innovation, does the learning programme
 - o Actively promote student's networks, such as building personal contacts with industry partners?
 - o Provide students with information and guidance on intellectual property rights (IPR) aligned with the respective (inter)disciplinary field?
 - o Have a continuous improvement plan in place to support instructors covering e.g. training, shared learning or continuous professional development in the area of innovation and entrepreneurship education?
 - o Adopt inter-/transdisciplinary approaches by including science/technology/knowledge components?
 - o Focus on addressing broad societal and global challenges?
 - o Link up with new business and innovation processes?

PART 2.4 - Learning Program Compliance with the Job Market

The last part is populated by open-ended answers, dedicated to understanding the compliance between the sample and the labour market, with both a current and future perspective.

- How does your learning program contribute to the current and future labour market?
- How does your learning program address current training needs of the labour market?
- What is the level of placement derived from your learning program?
- How does your learning program encourage digital and green competences?

The semi-structured interviews

A semi-structured interview has been designed and used in order to investigate with more flexibility the alignment between future labour market needs and the current learning offer. The data collection tool is more suitable to deepen a qualitative and conversational topic as the one aforementioned, with a limited and selected number of experts. In this direction, this approach has been selected since of the looking-forward nature of this part of the research as well as guaranteeing a modular consequential approach. Indeed, the interviews are consequential to the survey: the latter needs to lead the design of the interview, basing on the data obtained during the data collection, since they provide insights regarding current status and possible future needs (especially in relation to part 2.4 of the survey).

The elaboration of data allows the design of the query in two parts: the first one is considered the core, based on 4 questions:

- What does the future need by cultural organisms?
- Is there a mismatch between current European CCIs educational offer and the future labour market needs?
- How much professionals and organizations are able today to impact next challenges and transitions?
- What are the necessary skills to tackle the future challenges? and Why?

These questions have been accompanied by the 4 final questions of the survey, those ones asked in the part 2.4, only eventually used.

During the period the months of September and October have been conducted 6 long interviews with experts. Two professional profiles were used for the interviewee: long-career practitioner and decision-maker in the sector of cultural and creative skills education.

Each interview lasts around 40 minutes and was conducted virtually through Meet.

Sources of verification

Sources of verification (or collection) show how and where to submit the data collection tools; in other words, they are the list of stakeholders, partners, sources, databases and organisations where to collect the data and achieve research objectives. In this direction, they answer the question: WHERE can the necessary data be found?"

In this research, source of verification where mostly of two types:

- Documents, reports, scientific paper, and so on, consultable online and useful for the desk research;
- Organisations and professionals, necessary to contribute to the mapping quantitative and qualitative data collection.

Specifically, for the survey it has been used several sources and distributed among several peers in order to achieve the current number of 141 respondents. The survey has been shared following two criterias:

- heterogeneity of the population: comparing with Eurostat data, the sample will take into consideration the composition of CCIs in terms of sector, geographical distribution, dimension and juridical status. In this direction, it will be guaranteed the same composition and balance among the factors between the sample and the general current situation.
- quantitatively consistent: comparing with Eurostat data, the sample will provide a valid number of cases both relatively and absolutely speaking.

Following these criterias the process of sharing and distribution of the survey has been oriented to organisations. Specifically, the sources of verifications used are the following:

Creative European Networks. Creative Europe Networks are organisations of different sizes representing thousands of members from individuals to national and regional organisations working in the cultural and creative sectors. The European Commission consults with these networks concerning the design and implementation of the EU's culture policy. They are divided into 6 six areas, namely Architecture, Book and Publishing, Cultural Heritage, Cross-sectoral, Music, Performing Arts (European Commission, s.d.).

European Platforms for the promotion of emerging artists. The European Union has set up the "European platforms for the promotion of emerging artists". They are intended to be an essential instrument for developing the careers of emerging talents and improving their working conditions. These platforms work in partnership with member organisations, each of which receives a grant to set up a common artistic programme as well as a branding strategy. The platforms provide tailor-made responses to the needs and challenges of emerging talent, offering them targeted professional opportunities in terms of mobility, training, incubation and development, as well as remuneration (European Commission, s.d.).

Organisations part of Consortium which manage at least one Creative Europe project, from 2014 onward. Creative Europe invests in actions that reinforce cultural diversity and respond to the needs and challenges of the cultural and creative sectors. The main objectives of the programme are to safeguard, develop and promote European cultural and linguistic diversity and heritage and to increase the competitiveness and economic potential of the cultural and creative sectors, in particular the audiovisual sector.

Organisations part of Consortium which manage at least one Erasmus+ project, from 2014 onward. Erasmus+ is the EU's programme to support education, training, youth and sport in Europe. The 2021-2027 programme places a strong focus on social inclusion, the green and digital transitions, and promoting young people's participation in democratic life. It supports priorities and activities set out in the European Education Area, Digital Education Action Plan

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and the European Skills Agenda. The programme also supports the European Pillar of Social Rights, implements the EU Youth Strategy 2019-2027 and develops the European dimension in sport.

In addition to these sources of verification, the research leverages a Materahub internal database of hundreds of CCIs around Europe and of course the EIT Culture and Creativity Partners, the 50 organizations (excluding universities) that are currently part of the EIT.

Desk Research: Culture and Creative Competences and the European Learning Offer

The literature has limited evidences of mappings on cultural and creative competences, professional profiles, or learning programmes and trainings characteristics. The requisite is clear: labour market is changing drastically, accordingly to digital transformation and the current ecological transition. Professionals in all sectors are experiencing rapid shifts that require new learning environment and approaches where upskilling and reskilling continuously and rapidly. In this context, cultural and creative professionals are threatened by these changes too: from the impact of generative AI, to the role into current functional society. What's role they play in this scenario?

Current policies at European and National level leverages the role that these proficiencies and expertise can play in terms of bridging the world of science and technology with the one of arts and culture, valuing diversity and social cohesion, and advocating the quality of the experience beyond functionality, as reported by the New European Bauhaus (New European Bauhaus, s.d.). From another point of view, the entire sector is moving with different velocities and objectives: the heterogeneity of the profiles and organizations ranges from well positioned markets to sectors that are encountering several difficulties, especially to renovate their skills and processes of production. The risk of skills mismatch is high.

The consequences of skills mismatches are felt by all actors. At the individual level, mismatch leads to serious wage penalties, especially for overqualification, that eventually affect both work and life satisfaction. For organizations, skills mismatches have negative consequences for productivity and workforce turnover, undermining the introduction of new products, services or technologies (ILO & OECD, 2023).

In this direction, learning programmes should be able to welcome current challenges and transformation, providing to professionals the right skills, environment and system to keep upskilling in the direction the labour market needs. This is the reason why mapping learning programmes today in Europe, in the cultural and creative sector, are fundamental to understand the direction and compliance with the current labour market and with future challenges.

Despite of the surprising current scarcity of researches on this topic, some interesting works have been done during the last years in order to bridge this gap. In particular within the Erasmus+ projects' context, national and sectoral focuses have been conducted in order to investigate the state of the art of education, training and learning formats in the sectors, exploring the kind of competences are mostly necessary and those ones still uncovered in

order to fill the current gap. Both organisational and student perspective have been taken into account using mostly qualitative tool of analysis.

A totally different result emerges in terms of terminology mapping, competence frameworks and CCIs classification and state of health. In this direction, the main classification effort and reference for researches concerning competences and professional profiles, is ESCO, (European Skills, Competences, Qualifications and Occupations), which is the European multilingual classification of Skills, Competences and Occupations, which works as a dictionary, describing, identifying and classifying professional occupations and skills relevant for the EU labour market and education and training (European Commission, s.d.). ESCO contributes to frame the terminology and skills classification used in this report. At the same time, it was important embracing in the research the key components and the approaches of the EU skill frameworks, especially Entrecorp and Digicomp.

Another important contribution to the research is provided by the “EIT Label Handbook for Quality system for non-degree education and training and EIT Competence Certification Model”. Indeed, in this direction the research integrates the nomenclature, the terminology and approach reported in the handbook, which depicts the EIT strategy and focus on competences and qualifications. The handbook has been important since it contributes to comply the overall conversation in the cultural and creative sectors, regarding competences and profiles, with EIT approach and direction on the topic.

Another fundamental input was given by the European project Cyanotype, which is part of Alliances for Sectoral Cooperation on skills, funded by the Erasmus+ Program (Cyanotype, s.d.). Since of the assonance between this research’s objectives and the one conducted by the Consortium of the project Cyanotype (which Materahub is part of), several P2P contributions happened, giving the possibility to refines and coordinates the research tools and objectives used by the two settings, sharing sources of verifications, biases and results.

In this way, also the mapping research conducted by the Erasmus University Rotterdam for the EIT Culture and Creativity on HEI learning programmes was included in the current desk research and specific meeting of alignment between the two researches were conducted during stage 0 and stage 1. Indeed, the two research teams, alongside the Cyanotype consortium, aimed at guaranteeing coherency among approaches and the mapping criterias, generating a unique multifaceted perspective, that was adapted and repeated among the research clusters. The final goal is strictly connected with the initial condition here reported, i.e. the absence of an adequate density of reports on the current European learning program offer in the cultural creative sector, on the possible existence of skills mismatches and on current required skills development and habit.

The Results

The gathering of 141 responses through the survey and the consequent semi-structured interviews conducted with 6 experts lay the foundation for the elaboration of the results. The information and data extracted during the data collection were managed in order to both spotlight current characteristics of the European learning offer in the cultural and creative sector, and stress correlation among data in order to generate new meanings about distributions, gaps and highlights. Indeed, the analysis proceeded on a horizontal perspective, placing a descriptive overview of lifelong learning programmes delivered by CCIs. At the same time the analysis was conducted in order to vertically explore and understand the whys and how learning programmes are managed and provided.

The analysis of the results has been organized into six distinct sections, each intricately designed to shed light on various aspects of the research.

Section 1: General Perspective on Participant Demographics

Within this section, a thorough examination of participant demographics unfolds. Indeed, this section explores the characteristic, typology and geographical distribution of the organizations which participate to the survey, in order to illustrate the interplay about these data and laying the foundation for explaining the correlation among organizations and learning programmes.

Section 2: Learning Program Characteristics

This section delves into the attributes, characteristics and distributions of the learning programs. It involves dissecting the subject areas covered by these programs and categorizing them based on distinct characteristics. The analysis extends to exploring potential correlations between program categories and subject areas. Moreover, the section reports information about duration, participation, alignment with EU framework, relation with partner. The aim of the section is generating a comprehensive and deep map of the current learning situation.

Section 3: Target Audience Examination

In this context, the spotlight shifts to the target audience of the learning programs. A detailed report is provided concerning the attributes of the target participant, stressing the correlation among objectives of the learning programmes, audiences and skills. An exploration also ensues into potential relationships connecting the field of study with the identified target audience.

Section 4: Focus on Skills Development and Innovation

This section focuses intently on the domain of skills development, closely aligned with the parameters set forth by EIT guidelines. Specific skills are accentuated and organized through the application of clustering methodologies. Furthermore, distinctions in the levels of emphasis allocated to these skills are expounded, subsequently delineating interconnections among them. Potential correlations between skills and the target audience are also investigated, with particular emphasis on the central theme of innovation.

Section 5: EU CCIs Learning Program Profile

Section 5 reorganizes and funnels previous elaboration toward the creation of a learning program profile in Europe, referring to the synthesis of what emerged in the previous sections into a comprehensive CCIs learning program profile. This section helps to summaries the analysis journey about the current status of the learning programmes in Europe and open to further elaboration and discussions.

Section 6: Qualitative Compliance with Labour Market

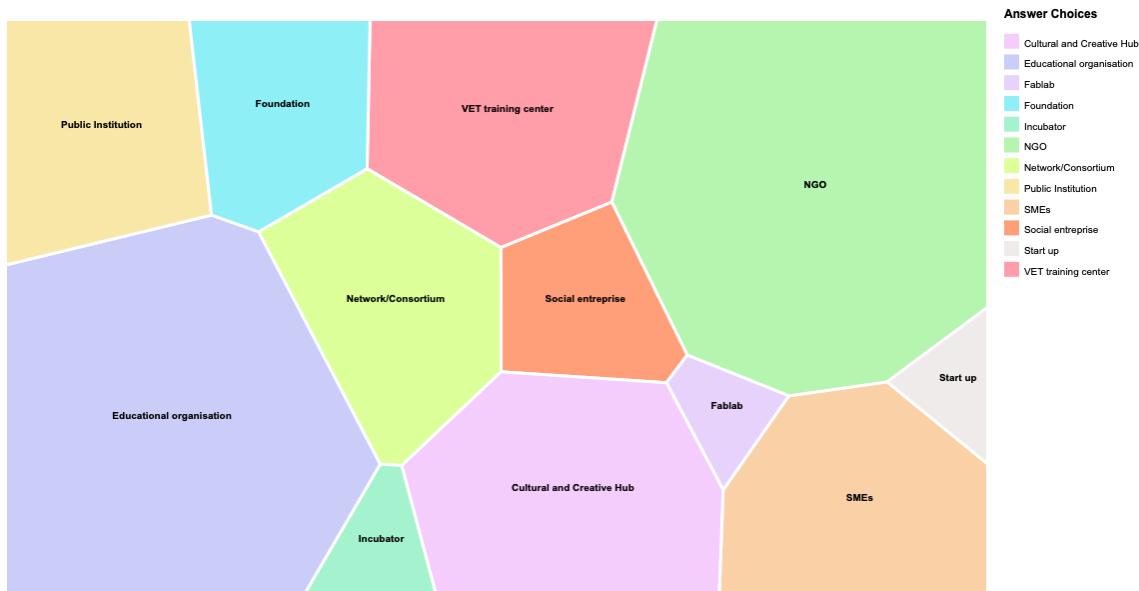
The final section is a qualitative and speculative elaboration, obtained through a coding process of the survey and semi-structured interviews. It will investigate the compliance between current European learning offer and what the future markets needs from culture and creative professional profiles.

In each section, a systematic and thorough approach is employed to extract valuable insights. This endeavor contributes to a holistic comprehension of the intricate interrelationships among learning programs, target audiences, and the landscape of skill development.

Section 1: General Perspective on Participant Demographics

Section 1 coincides with the first mapping criteria, emerged from the desk research and the preparation phase. It is fundamental to understand the “playground” of the research, meaning the characteristics of participants, the organizations which provide educational contexts. This part is fundamental for two main reasons: the first one is the natural necessity of understanding the root, the characteristics of who participate and provide the contents, which in this case are the learning programmes; at the same time, this section is even more important since the entire research focuses on a specific area of the market: as mentioned indeed, the investigation moves outside of the university and HEI area, exploring the vast, but still relatively unknown, domain of educational programs and services provided CCIs in Europe, so outside of the formal educational zone. In this direction, it is crucial taking into account the composition of this panorama and the characteristics of the population.

Figure 4 - type of organizations



Starting from the typology of the organizations, pictured in figure 4, the analysis presents a diverse panorama of organizational typologies among the participants. Non-Governmental Organizations (NGOs) constitute a notable segment, represented by the 21.28% of the total. They are mostly populated by social-oriented organizations and a more diversified profile. This substantial presence reflects a significant engagement from the NGO sector, underscoring its active involvement in the survey.

Educational Organizations follow closely, accounting for 20.57% of the responses, solidifying their substantial presence within the survey participant pool. In this case, they are private-

oriented organization, principally dedicated to provide educational services and learning contents, outside the university and HEI domain.

Cultural and Creative Hubs are also prominently featured, making up 10.64% of the responses, indicative of their notable involvement.

Among other participant categories, Vocational Education and Training (VET) training centers constitutes the 9.22% of the responses, a relatively limited percentage taking into account the specificity of their activity and the orientation of this research.

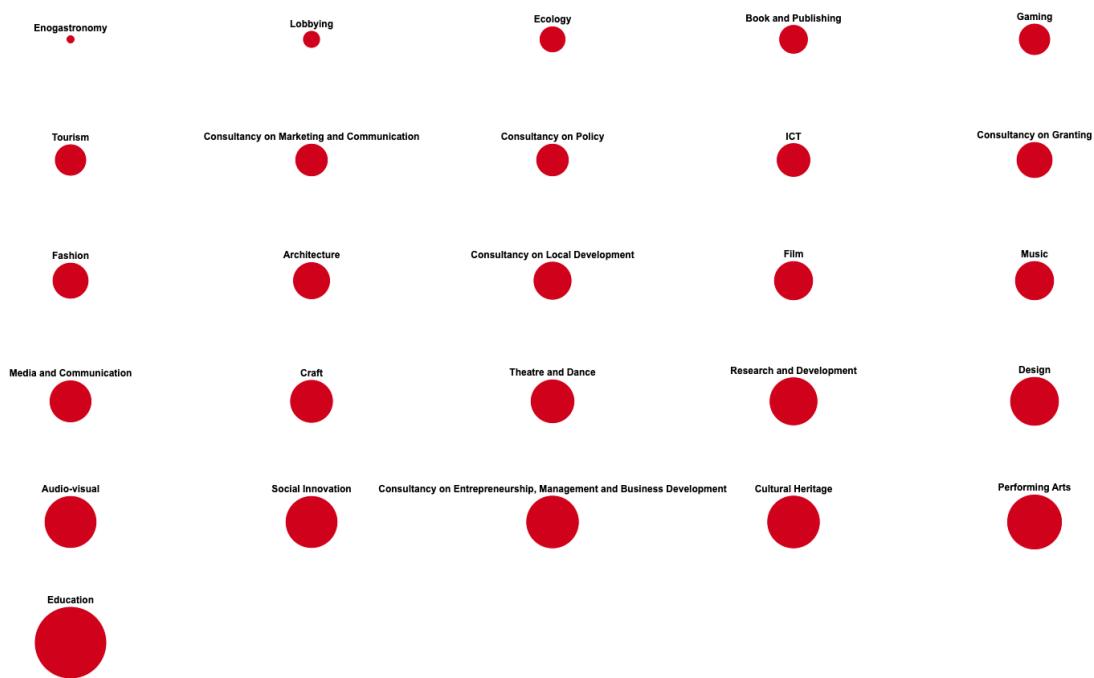
At the same time, Network/Consortium represents 7.80% of the total amount of participants. Foundations are represented by the 5.67% of the responses. In addition, the survey captures a marginal but distinct presence of participants associated with Startups, Social Enterprises, Incubators and Fablabs. Each of these categories is represented by few 6 participants, collectively accounting for 4.26% or 1.42% of the total survey responses.

The distribution of participants across this spectrum of organizational typologies underscores the multi-faceted nature of participation within the survey. It reflects a broad array of organizational contexts, each contributing valuable insights to the survey's overarching objectives. This diverse engagement enriches the depth and breadth of the survey findings, offering a holistic perspective on the mapping objectives being pursued. At the same time, it surfaces some peculiarities: beyond more predictable results, there is a good distribution and representation of the entire population of organizations' typology. It surprises the relative reduced number of VET organizations, while at the same time it results a good indication the inclusion of fablab, incubator and start up, that can potentially rise in the next years. From a research perspective, the fair variation of the sample guarantees a good analysis of the learning program composition.

This first portrays needs to be flanked by data regarding the specific sectors of the participants, in the cultural and creative realm, as reported by figure 5.

Mapping of existing lifelong learning programmes

Figure 5 - Sector of the organizations



The analysis provides a comprehensive overview of the sectors in which participants are actively engaged. The educational sector is a dominant preference, constituting approximately 46.81% of the total responses. This high percentage underscores the resonance within the realm of learning and instruction. The performing arts sector also demonstrates a strong presence, representing around 27.66% of the responses, indicating a prominent role of this organization in providing learning activities alongside cultural production.

Cultural heritage and social innovation sectors share a similar participation rate of approximately 24.82% each, indicating the trend in the cultural heritage sector of engaging audience in Europe mostly through educational formats. At the same time, social innovation, alongside consultancy organization rely their specificity on a circular model of design, implement and teach. Indeed, the consultancy on entrepreneurship, management, and business development sector aligns with cultural heritage and social innovation, reflecting 25.53% of the responses. The emphasis on consultancy further accentuates the multifaceted nature of expertise of participants.

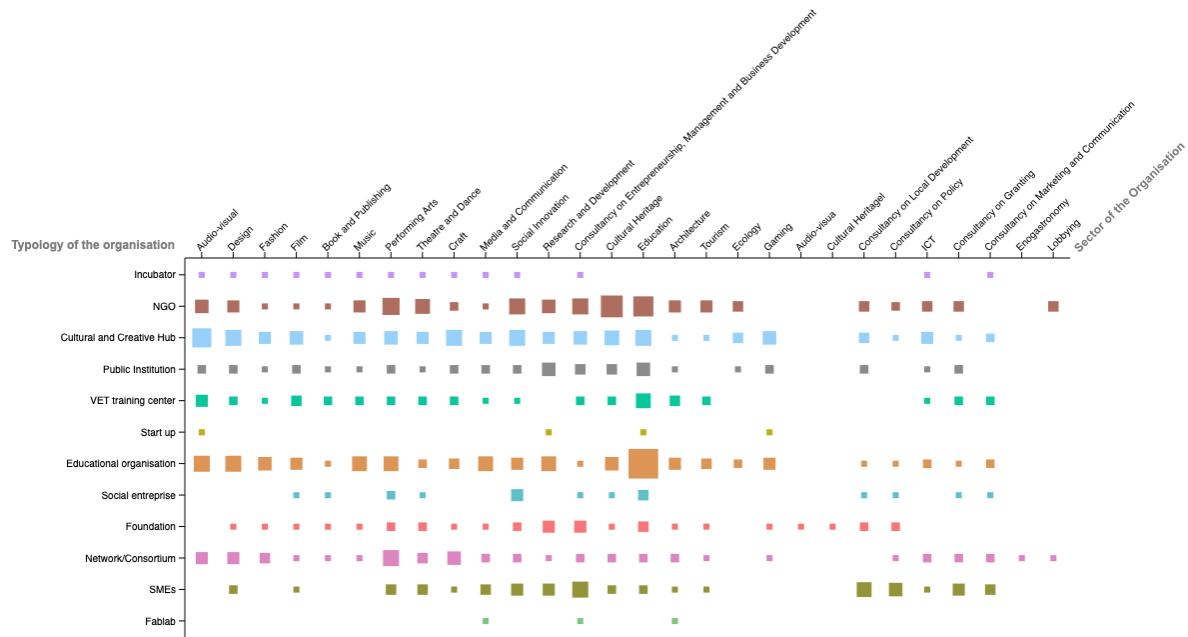
Design and research and development sectors capture approximately 21.99% and 21.28% of the responses. Meanwhile, the audio-visual and media and communication sectors represent 24.82% and 16.31% of the responses. Craft and theater and dance sectors account for around 17.02% of the responses each.

Several sectors show moderate engagement with participation rates ranging between 9 and 20 participants, contributing to the well-rounded scope of the survey. While some sectors

Mapping of existing lifelong learning programmes

exhibit smaller participation, their inclusion contributes to the overall tapestry of organizational interests. This intricate distribution emphasizes the diverse and multifaceted nature of organizational involvements, underscoring the broad range of sectors contributing to the survey insights. The variation in participation underscores the dynamic landscape of organizational focus, enriching the depth and breadth of the survey.

Figure 6 - Correlation Analysis between typology and sector of the organizations



The aforementioned analysis of the survey data reveals a diverse range of organizational typologies among the participants, with prominent representation from NGOs, Educational Organizations, Cultural and Creative Hubs, VET Training Centers and SMEs. This diversity is mirrored in the sectors in which these organizations are actively engaged, as shown in figure 6. The latter represents a step forward in the comprehension of the research's population.

As predictable, the NGOs population operates in a wide spectrum of sectors, with a light predominant within sectors such as Cultural Heritage, Education, Performing Arts, and Social Innovation. Similarly, organizations working in Educational Organizations play a pivotal role across several sectors including obviously Education, but also Audio Visual, Design, Music, Performing Arts, Research and Development, and Media and Communication, highlighting their significant contributions to knowledge dissemination and innovation.

Also the responses from professionals associated with Cultural and Creative Hubs showcase a dynamic landscape, with a widespread distribution across sectors like Audio Visual, Design,

Craft, Social Innovation, Cultural Heritage. This exemplifies their role in fostering interdisciplinary collaboration and innovation.

VET Training Centers exhibit a balanced engagement across various sectors, with a particular focus on Education and Audio-Visual domains, underscoring their role in practical training and education. Lastly, although representing a smaller subset, SMEs demonstrate their impact primarily within Cultural Heritage, Consultancy on Local Development, and ICT sectors, showcasing their versatility and contributions across heritage preservation, strategic guidance, and technological advancement.

The analysis underscores the intricate interplay between organizational typology and sectoral engagement. It also reflects the profound impact of these organizations across cultural, educational, creative, and developmental spheres. As stakeholders seek to optimize strategies, these insights provide a foundational understanding of the diverse ecosystem within which these organizations operate. It is noteworthy that the dynamic correlation between typology and sector accentuates the pivotal role of each organization type in shaping various facets of society and industry.

Figure 7 - Country of the Organisation

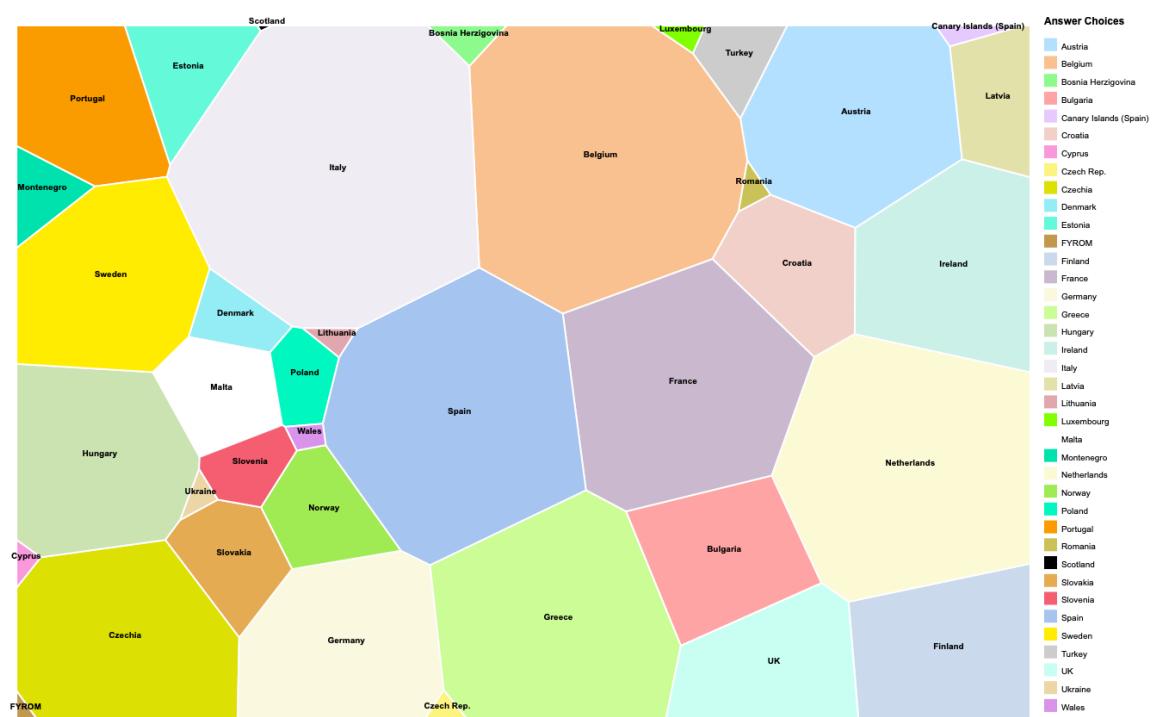


Figure 7 offers a comprehensive perspective on the geographical distribution of organizational affiliations which participants are working for.

Italy, constitutes 10.64% of the responses, underlining the resonance within Italian organizations to the survey, taking into consideration the unavoidable relation with the research promoter, namely Materahub, based in the south of Italy.

While Belgium, The Netherlands and Spain follow closely with the 35.46% of the total responses, reflecting a substantial engagement from organizations situated within these regions. France and Greece, contribute 6.38% of the responses, also showcasing notable representation. Meanwhile, Germany, Austria, and The Czech Republic collectively constituting 14.18% of the total responses. This aligned engagement indicates active participation from these Central European countries.

Ireland, Sweden, and The UK representing only the 4.26% of the responses, while Finland accounts only the 3.55% of the responses, highlighting its distinctive but comparable representation.

Furthermore, several countries exhibit a relatively smaller presence, ranging from 0.71% to 2.85% of the total responses, but collectively accounting up to 21.27% of total 141 responses. It is noteworthy that certain countries do not have participant representation in this survey such as Cyprus and Luxembourg.

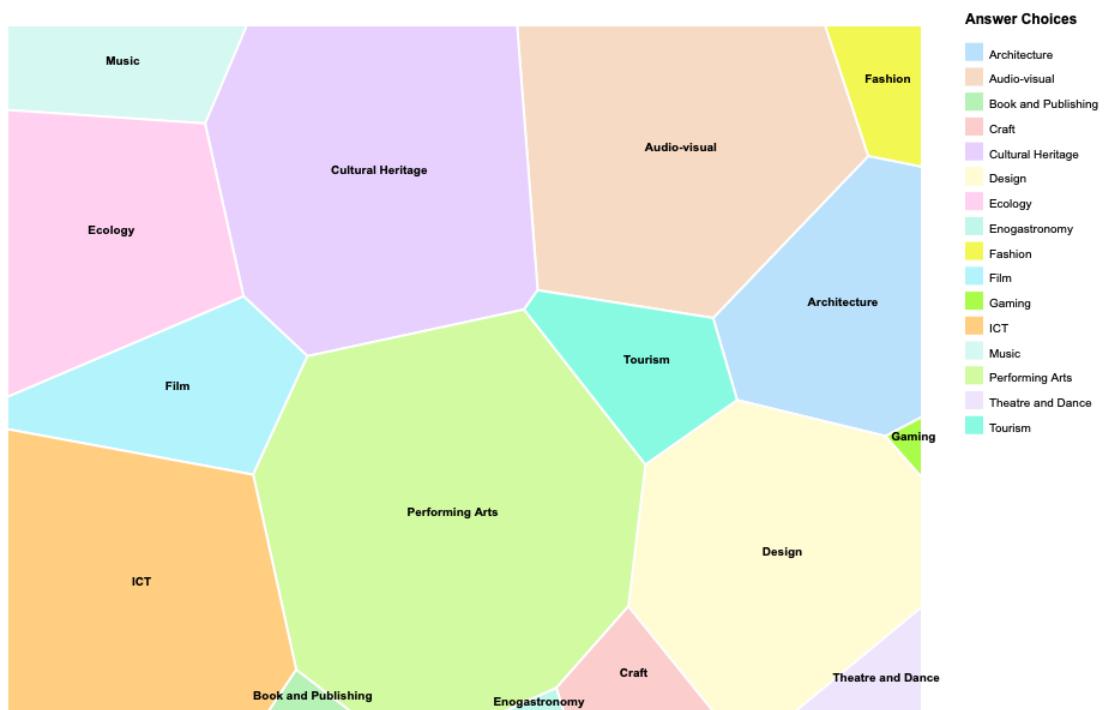
The distribution across these diverse countries underscores the multinational character of participant composition, featuring pronounced engagement from specific regions. These percentages collectively provide a comprehensive lens through which to view the extent of participation from different countries, thereby enriching the overall depth of insights garnered from a diverse array of organizational contexts.

Section 2: Learning Program Characteristics

Section 2 introduces the main part of the research journey. It is dedicated to inductively reconstitute the current European learning offer, understanding its characteristics and peculiarities. This journey will be ended by section 5 where learning programmes will be profiled. This journey reports a photography of a part of the current reality and as such, it creates space for commentary and understanding of area of improvement or development.

Section 2 reports those findings that help understanding the characteristics of the learning programmes provided by CCIs in Europe. Starting from figure 8, learning programmes are organized per Area of Study.

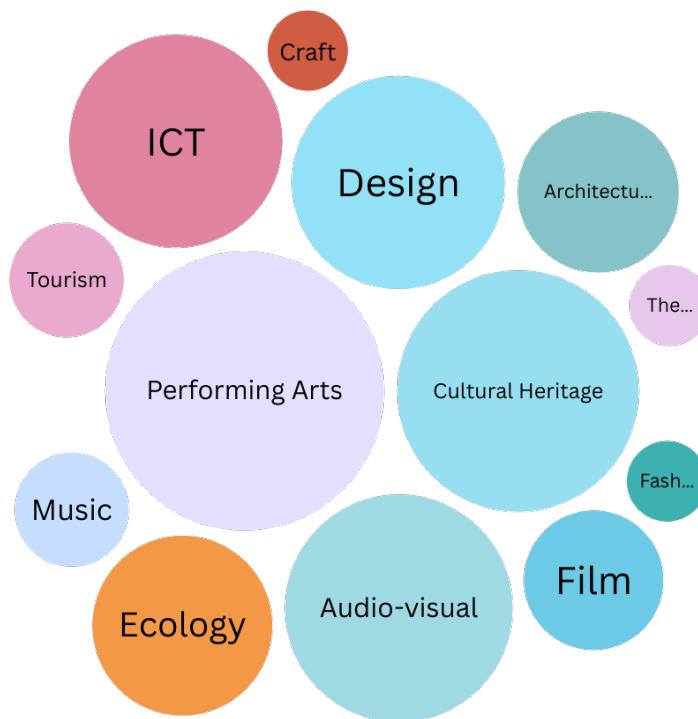
Figure 8 - Area of Study of the Learning Programmes



Area of study means a curriculum area under which course titles can be grouped, offering a structured framework for concentrated and exhaustive learning. Among the 141 participants, two areas stand out, namely Performing Arts, with the 19,35% of the total respondents, and Cultural Heritage, counting on the 14,52%. It is not a surprise that these areas of study emerge, since they are traditionally still the main ones investigated and studied in Europe, still attracting professionalization path and learning set up. Alongside them, recent disciplines surfaces, imposing a renovate approach to cultural learning. Indeed, audiovisual, design and ICT represent respectively the 12,90% and the 11,29% (in both design and ICT case) of the total, spotlighting the pervasiveness of digitality and the attempt to encompass the classical approach to disciplines (as in the case of design).

Mapping of existing lifelong learning programmes

Figure 9 - Area of Study of the Learning Programmes - 2nd visualization

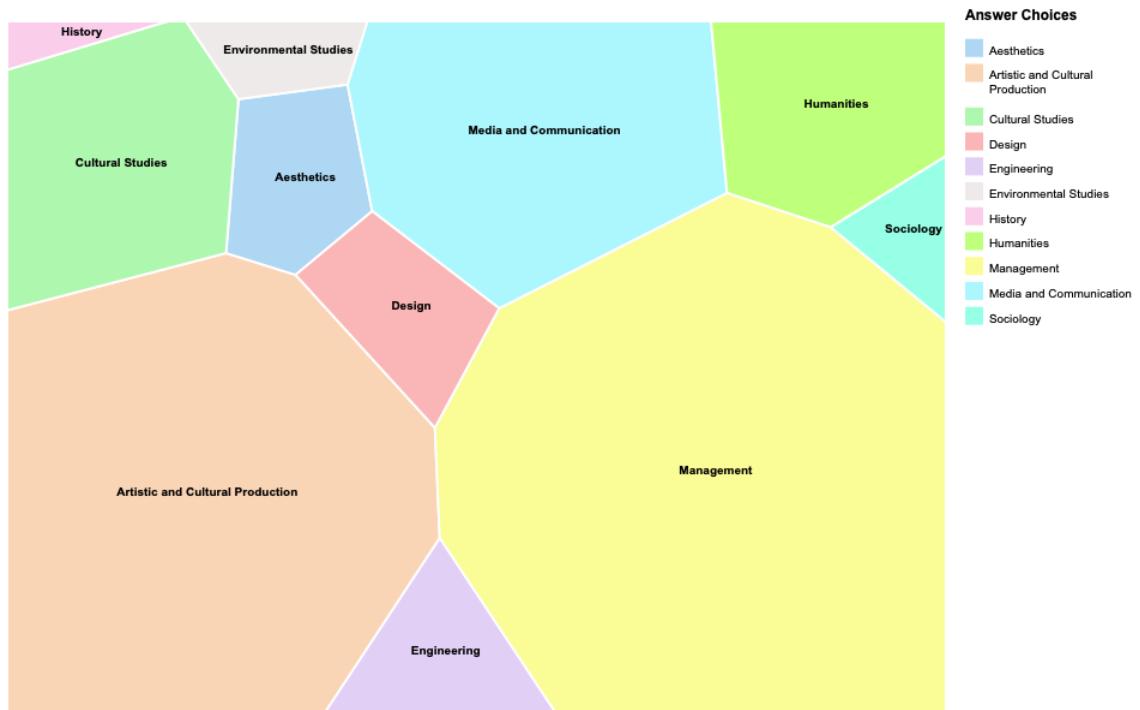


In line, the other areas follow, with interesting evidences that emerge. Despite the aforementioned trend, the research reports an unremarkable percentage of gaming studies, despite of the growing and absorbing economy of this sector. Music, Film, Architecture, Tourism and Fashion keep a relevant percentage in the learning environment, with respectively 3,23%, 4,84%, 6,45%, 3,23% and 1,61%. Moreover, an important data regards ecology as area of study, with the 8,06% of the total, demonstrating an increasing necessity of skills in the sector. Another important consideration that these figures indicate, is the set of skills and profiles required. Indeed, the research focuses on educational programmes provided outside traditional educational institutions, often delivered by CCIs to CCIs professionals or future employees of the sector. This importantly influence the area of study in the sense that these programmes are much more oriented toward integrative skills. Moreover, these first data inform that there are areas of study more inclined to be realized by professional or professionalizing organizations than others, more handled by University and HEI (as in the case of Fashion).

Alongside data concerning areas of study, figure 10 reports the categories of the learning programmes. The latter indicate the research perspective used to study the specific area. In this context, the category of learning program serves as a fundamental lens through which we classify and analyze educational offerings, allowing us to discern the underlying methodologies, pedagogical approaches, and curricular frameworks that shape the learning experiences within a given domain.

Mapping of existing lifelong learning programmes

Figure 10 - Category of the Learning Programmes

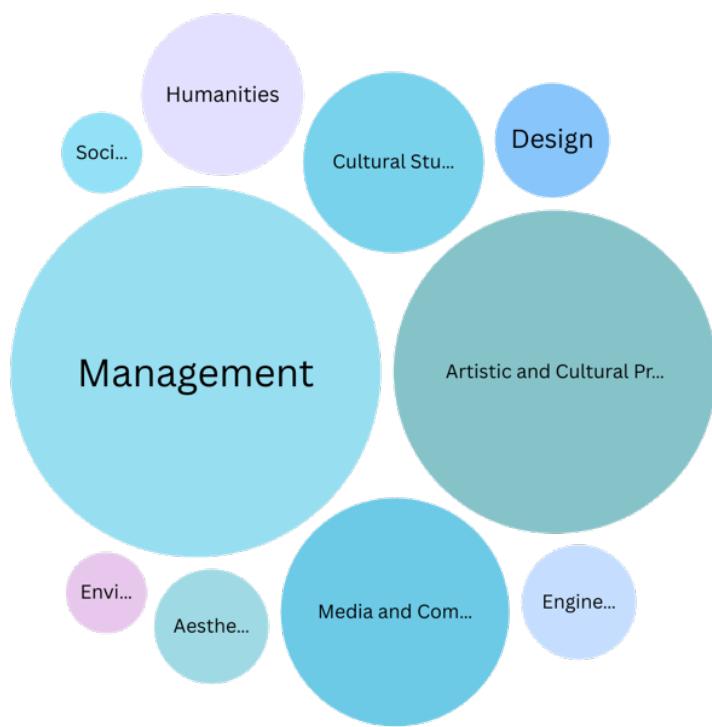


As in the case of the area of study, the categories of the learning programmes seem more oriented toward those ones more inclined to provide vocational competences in the current market scenario. Indeed, management, production and communication report the majority of cases. Management stands out as the most prominently featured category, accounting for approximately 34% of the total responses. This indicates a robust commitment to cultivating leadership abilities and organizational acumen among students, which are recognized as indispensable skills for thriving in the dynamic and competitive professional landscape of the present day. In the same direction, artistic and cultural production capturing the focus of 26% of the responses, underlining the pivotal role of creative applied competences (as it will be reported later in this report). Regarding media and communication, it accounts for approximately 13% of the responses, in accordance with emerged from the area of study in terms digital applications. This emphasis reflects a commitment to equipping students with the necessary skills and knowledge for effectively navigating the information-saturated environment of the modern world.

Humanities and Cultural Studies reports 6,45% and 8,06% of the total amount, highlighting a durable persistency of these approaches to cultural learnings, also outside of the institutional field. At the same time, as reported by many sources, as Klamer (Klamer, 2021), Throsby (Throsby, 2000), Florida (Florida, 2002), it demonstrates a turnaround approach happened during the last two years, where management, production and media approaches take the lead of cultural learning at the cost of humanities and cultural studies, more advances, at least numerically, in the past.

Mapping of existing lifelong learning programmes

Figure 11 - Category of the Learning Programmes - 2nd visualization



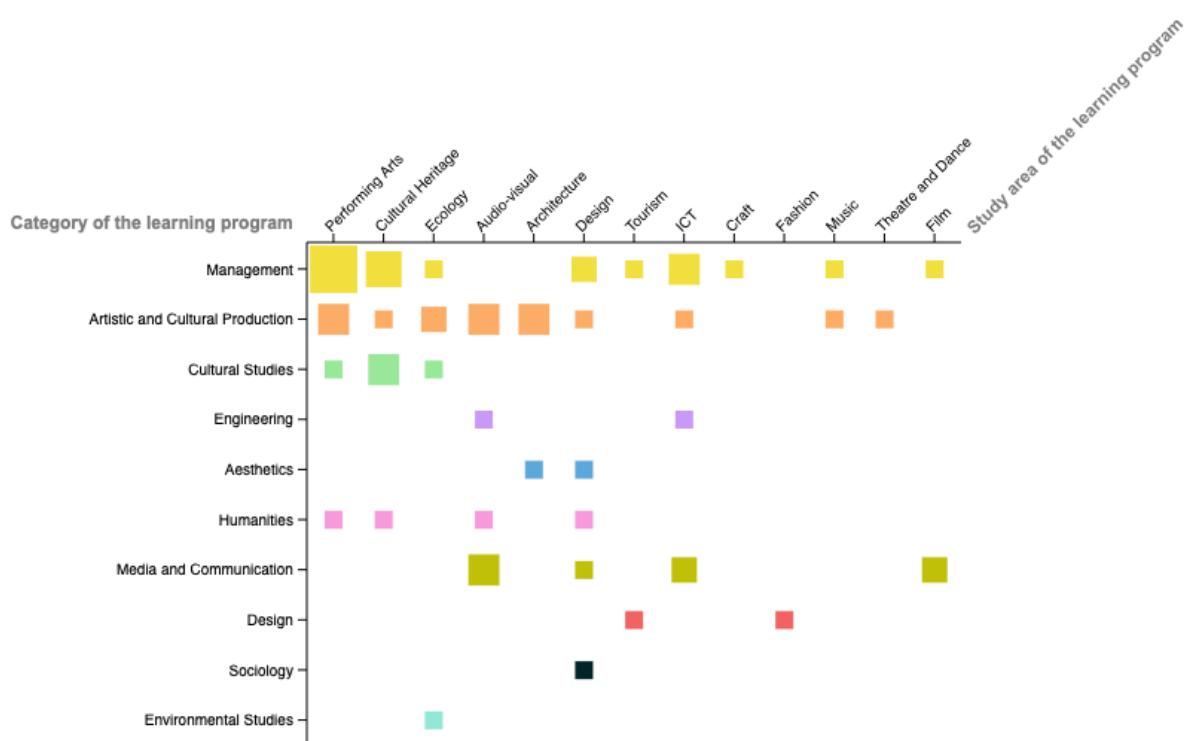
Moreover, Sociology, History and Environmental Studies receive fewer mentions as learning categories, reporting their current being out of the major learning paths.

The inclusion of specialized disciplines also emphasizes the institutions' dedication to providing a well-rounded and diverse educational experience, catering to a wide array of student interests and educational pursuits. The combination of categories and area of studies give further elements to understand and analyse the composition of approaches and learning profiles currently developed in Europe, as reported by figure 12.

The correlation between the area of study within a learning program and its corresponding category offers valuable insights into the educational landscape of the surveyed institutions. Analyzing these associations demonstrates how specific fields of study are classified and organized within the broader framework of educational programs. And according to the figure 12, the correlations between area of study and category of learning programs are quite diverse.

Mapping of existing lifelong learning programmes

Figure 12 - Correlation between categories and areas of studies



For instance, within the realm of total learning programs in Management, there is a strong alignment with the study area of Performing Arts, with the 33% of respondents indicating that the category of their Performing Arts learning program is about Management. It suggests a concerted effort to equip students in this field with not only artistic skills but also managerial competencies essential for the diverse demands of the performing arts industry. Similarly, Cultural Heritage, ICT and Design also emerge as prevalent areas of study with the category of Management. It reports the pervasiveness and necessity of management and leadership competences among the main areas of study. At the same time, “management of the performing arts” and “cultural heritage management” seem to be most widespread programmes around Europe.

Similarly, the Artistic and Cultural Production category reveals a robust and evident connection with three distinct study areas: Performing Arts, Audio-visual, and Architecture. These interconnections emphasize the “production” orientation of these areas more than others (taking into consideration the bias emerged by the scarcity of data from some areas, as in the case of fashion which cross only with the category of design, but that could naturally combine with production too). Production is present also for theatre and dance and music. This combination reveals the necessity of production learning approaches to cultural learnings, but it not highlights when these competences can be interdisciplinary and so

applicable to several areas of studies, and when they refer to a really specific set of skills, that change from cultural production to the other.

Additionally, the domain of Media and Communication demonstrates its dynamic and integrative nature by forming correlations with four distinct learning program categories, comprising Audio-visual, Film and ICT, and lesser with Design. These associations underscore the elevate specificity of these learning programmes, still unable to pervade disciplines and approaches in the digital era.

For the other learning program categories, the correlations with areas of study are quite subtle, with few responses in case there is any connection between area of study and category of learning programs. For instance, the majority of Cultural Studies programmes are focused on Cultural Heritage. At the same time, in the remote corner of these results emerge some interesting combination, as in the case of learning programmes which category is Design and Tourism as area of study, reporting a not ordinary trend in the sector, especially in relation to current challenges generated by tourism. Moreover, ecology is not covered only by environmental studies, but appears to be transversal with cultural studies, management and production, demonstrating the growing need of these specific skills in several of these programs, alongside other competences.

In summary, the correlations between areas of study and learning program categories underscore a general multidisciplinary approach to education within the surveyed organizations, with predictable combinations and the evidence on some consolidated programs and approaches as in the case of management and media.

Proceeding with the analysis, figure 13 reports the duration of the studied learning programmes, indicating a clear trend in the sample. Indeed, around the 60% of the participants (precisely 59,67%) account a duration of less than 6 months of studies. It means that more than half of the learning programmes concludes their education journey in 6 months, with an important percentage (35,48%) of them less than 1 month. This data should be red in relation to the main property of these programmes, since they are often highly specialized courses, VET education or supportive learning that concentrate contents into small period of time. At the same time, this data reflects a possible unsustainability, in terms of economic resources and time allocation, of these educational services for CCIs, which core activities are not focusing on education.

The rest of cases are divided between the 11,29% of programmes developed within 1 year, the really small amount run between 1 and 2 years (3,23%), and the rest of them delivered during a period of more than 2 years (12,90%).

Figure 13 - Duration

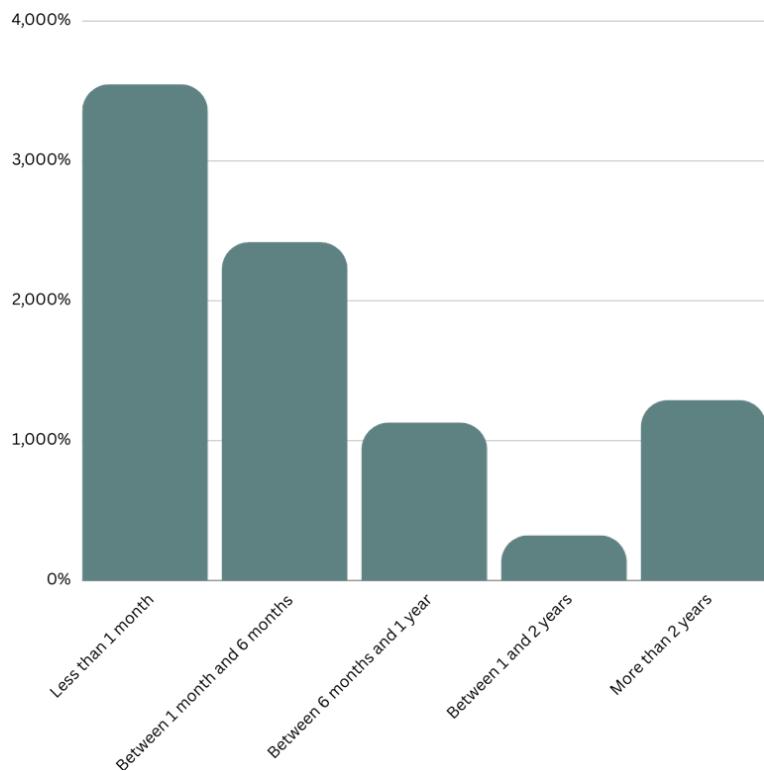


Figure 13 and so data regarding the duration of the learning programmes can be further analyzed and understood if related to credentials.

Credentials refer to the documentation which verifies the successful completion of the training or learning program. There are several types of credentials. These are generally important to recognize the value of the program and the level of competences provided, in relation to market. Outside of the university context, some credentials are more developed than other, as figure 14 reports. Before analyzing it, it is important to firstly declare the meaning and characteristics of each one of them.

According to the EU, the term credential is an umbrella term that includes apprenticeships, badges, micro-credentials, certificates, certifications, degrees, diplomas and licenses. Credentials may be awarded by secondary or postsecondary institutions, professional education and training providers, industry associations and employers. In detail, they can be described as follow:

- Apprenticeships: it is a program for training a practitioner with on-the-job training and often some accompanying study (classroom work and reading). Apprenticeships can also enable practitioners to gain a license to practice in a regulated occupation (Davy, 2019).
- Badge: Badges represent a way of acknowledging achievements or skill acquisition at a more granular level than a HEI degrees. Badges continues to gain traction as a way

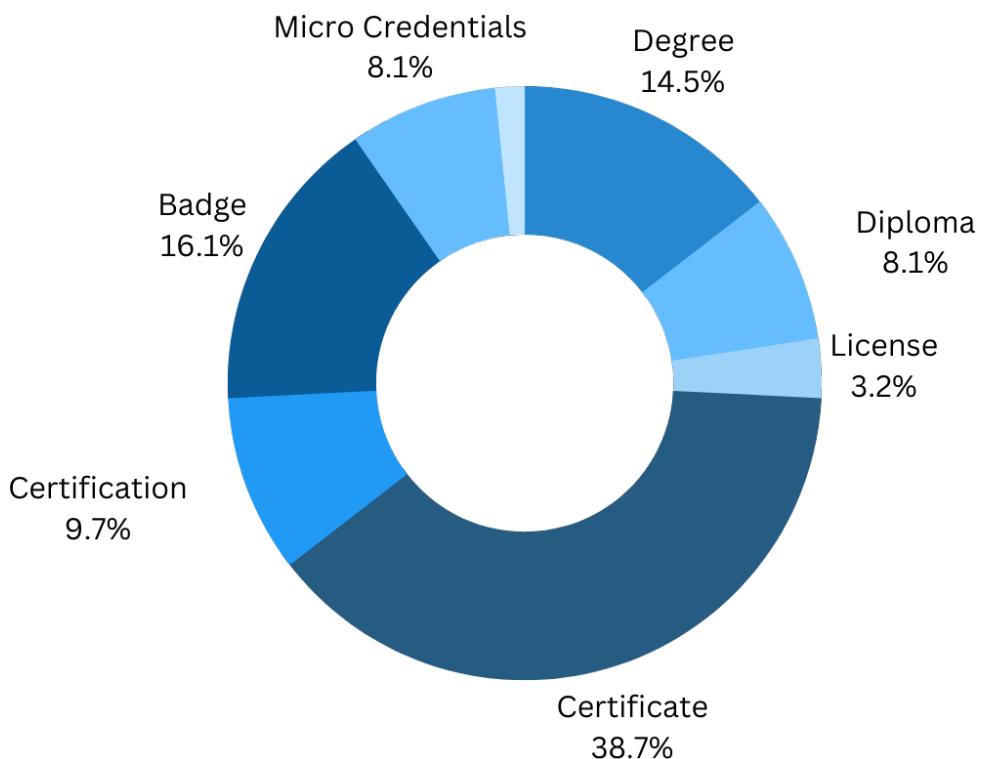
to acknowledge achievement and establish qualifications in various professional fields.

- Micro-credential: A micro-credential is the record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes have been assessed against transparent and clearly defined standards (European Commission, 2021).
- Certificate: A certificate is a credential that confirms that it has been completed a specific course or program of study (a sequence of courses). Certificates are used to demonstrate knowledge and skills in a particular subject area.
- Certification: certification is a process to verify a required skills, knowledge and ability to perform a specific job. It involves meeting specific requirements, such as completing a certain amount of education or training, passing an exam, and meeting ongoing continuing education requirements. It is usually granted by a professional association or organization, not a higher education institution.
- Diploma: It is an accredited credential that signifies a certain level of education and practical experience. Unlike a degree, diplomas are typically more specific regarding a certain career, take less time to achieve and provide more vocational experience.
- License: A license is a document issued by a governmental agency recognizing that a person has met the requirements and is allowed to perform a job in a particular area. Licenses can be issued by the federal government, state governments, and local city and town governments. The city or state in which the license is issued usually determines where an individual is allowed to perform the duties of that job.

This distinction helps to navigate better the next three representations. As mentioned, figure 14 depicts the distribution of credentials among participant organizations.

Mapping of existing lifelong learning programmes

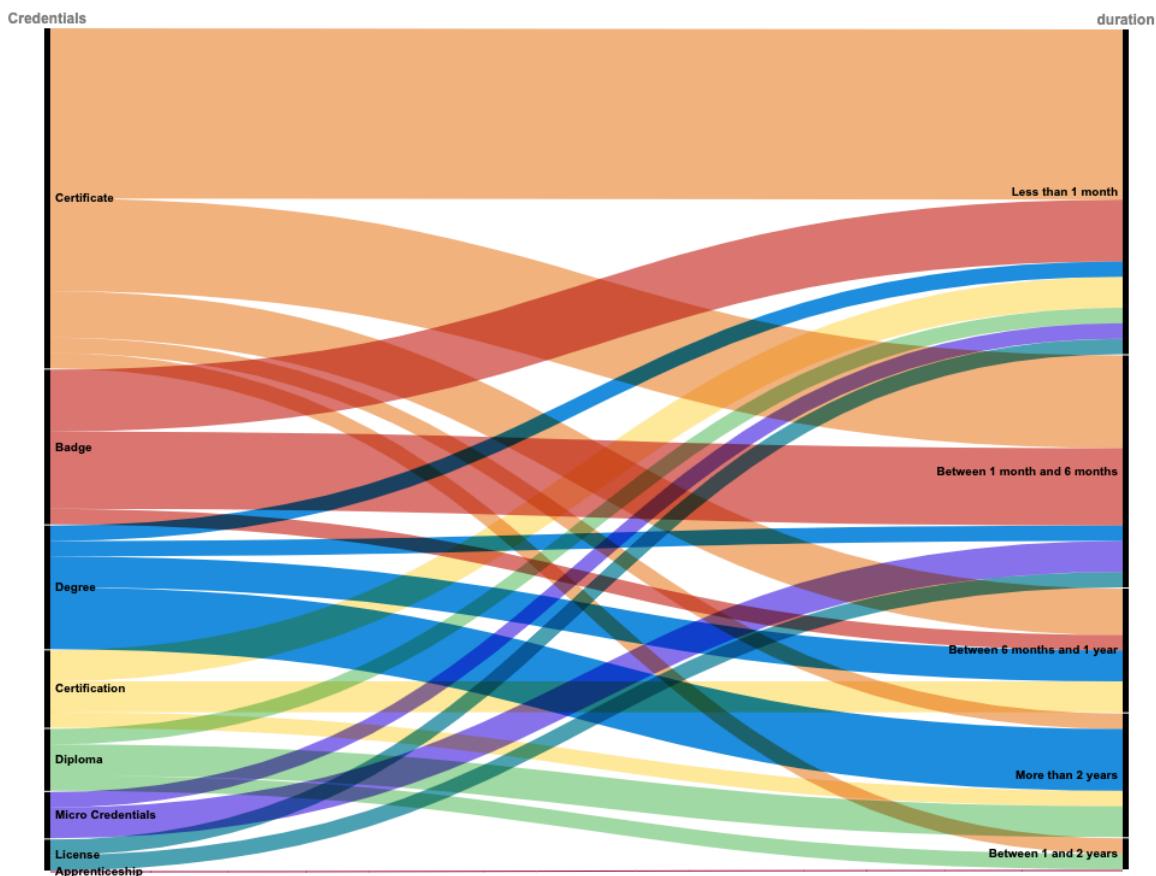
Figure 14 - Credentials



Indeed, as shown by the figure, participants report a consistent adoption of the certificate as program credential, accounting the 38,7% of the total respondents. It is in line with the duration data collected, taking into account the second most used credential, namely the badge, with 16,1% of the total. In both cases, they award professional development and targeted learning courses. At the same time, the 14,5% of the respondents declare to use degrees, in continuity especially with HEI or University setting and acknowledgement. On the other side, few participants reported licenses as an employed system of credit, while not a single one flags apprenticeship.

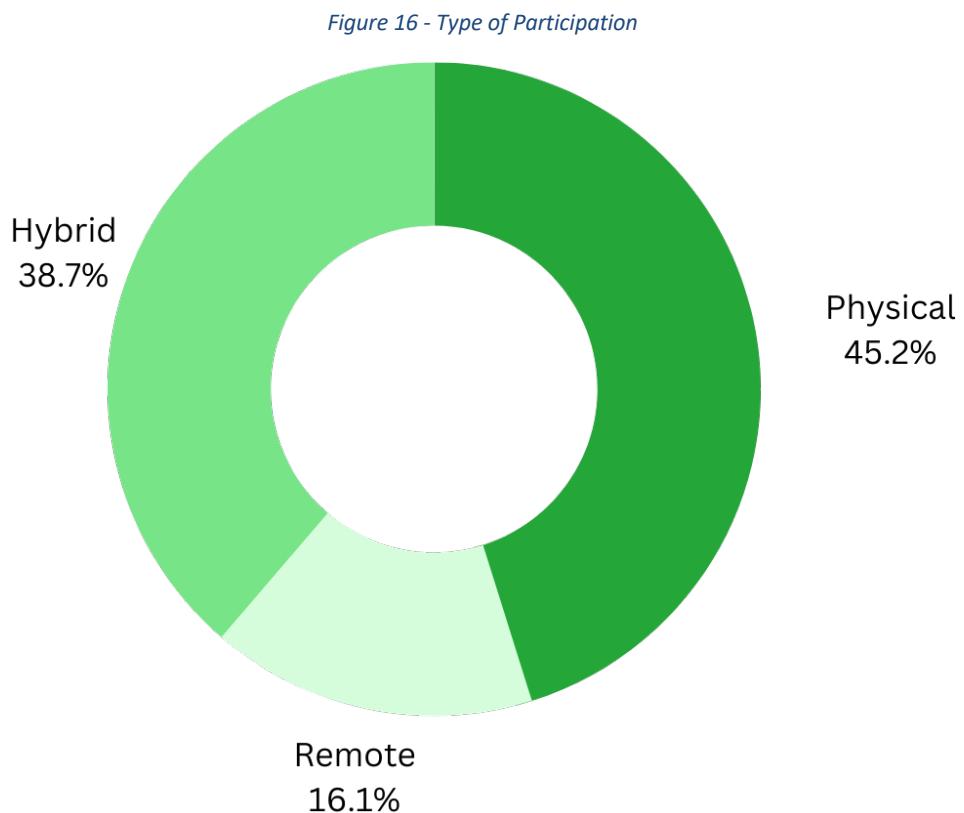
These last data score an additional perspective if correlated with duration data.

Figure 15 - Correlation between credentials and duration



As figure 15 shows, each credential usually corresponds to specific form learning program, creating space for meaning and significances between credits and time. As previously mentioned, credential like badge is mostly used for programs shorter than 6 months, as in the case of certificate, even if the latter present few cases of long-term educational journey, over one year. In the opposite direction, degree confirms its academic standard propensity, concentrating the majority of its cases for program long more than 2 years, with a consistent percentage also for peers between 6 months and 1 year. In the case of micro-credentials, cases distribute fully within 6 months, since this form of accreditation helps certify the outcome of small but tailored learning experiences (THE COUNCIL OF THE EUROPEAN UNION, 2022).

Moving to figure 16, it represents the type of participation delivered by the sample. It refers to the structure of participation provided by the programs, swinging from physical to remote participation, taking into consideration hybrid form of programs' design.

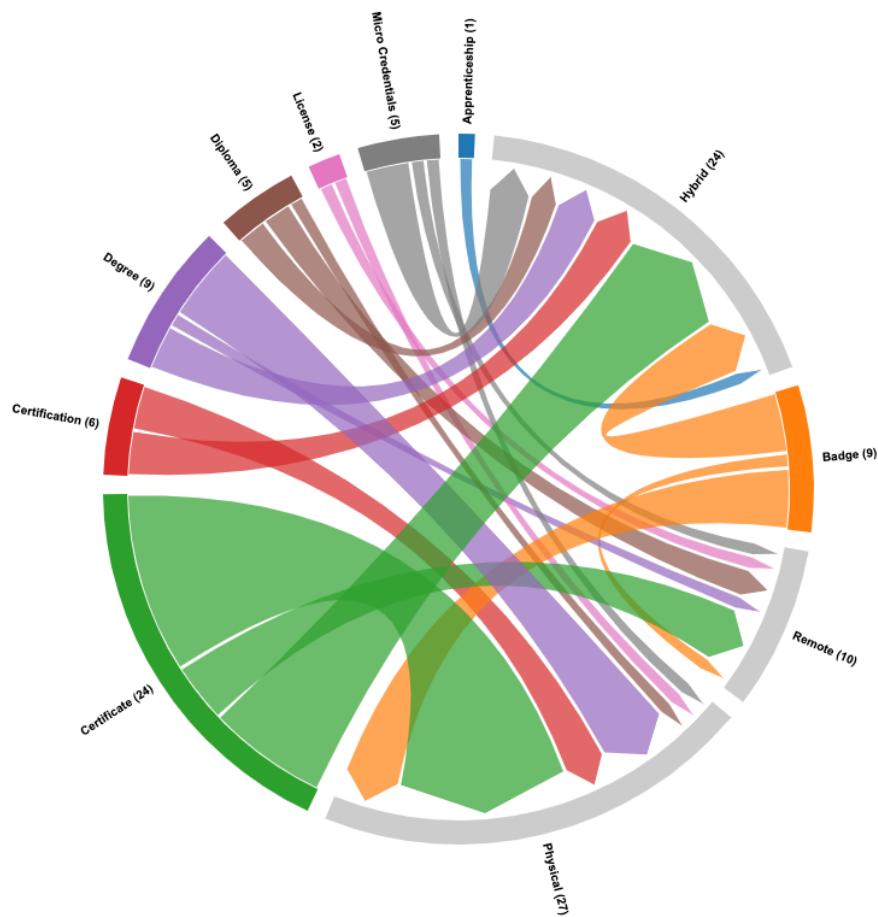


The sample appears to be principally oriented to preserve physical learning experiences. Beyond the 45,2% of respondents which account a full “in presence” structure, another 38,7% promotes a hybrid participation to the programmes, meaning that the 83,9% of the total is designed in order to, at least partially, guarantee a physical participation to students. In this direction, only 16,1% is a full remote learning experience.

This representation validates an overall necessity of physicality, eventually accounted by both students and organizations. Indeed, there are some area of study and disciplines whose learning experience results difficult to replicate fully digitally, as in the case of craft or fashion. At the same time, since the latter are not among the majority of cases reported in this research, it needs to take into account other drivers. Physicality still guarantees a better overall experience in terms of learning and networking, and it could be still preferred, especially for short concentrated and tailored educational journey. At the same time, digital support to traditional educational type of participation starts to be an important solution, seeing data, while the 16,1% of full remoteness appears to be a limited impact, but it suggests to be compared with longitudinal data. Indeed, remote learning rapidly increased during and after pandemic of Covid-19, as reported by the World Bank (Muñoz-Najar, et al., 2021). Its persistence or even enhancement should be track during the time in order to possibly understand a phenomenon of customs’ shifts. At the same time, increasing digitality means guaranteeing more access to both tools and courses. Specifically, a digital participation is also a matter of ensuring access to education to people, professionals and families who can't afford physical experiences' expenses.

Mapping of existing lifelong learning programmes

Figure 17 - Correlation between credentials and type of participation

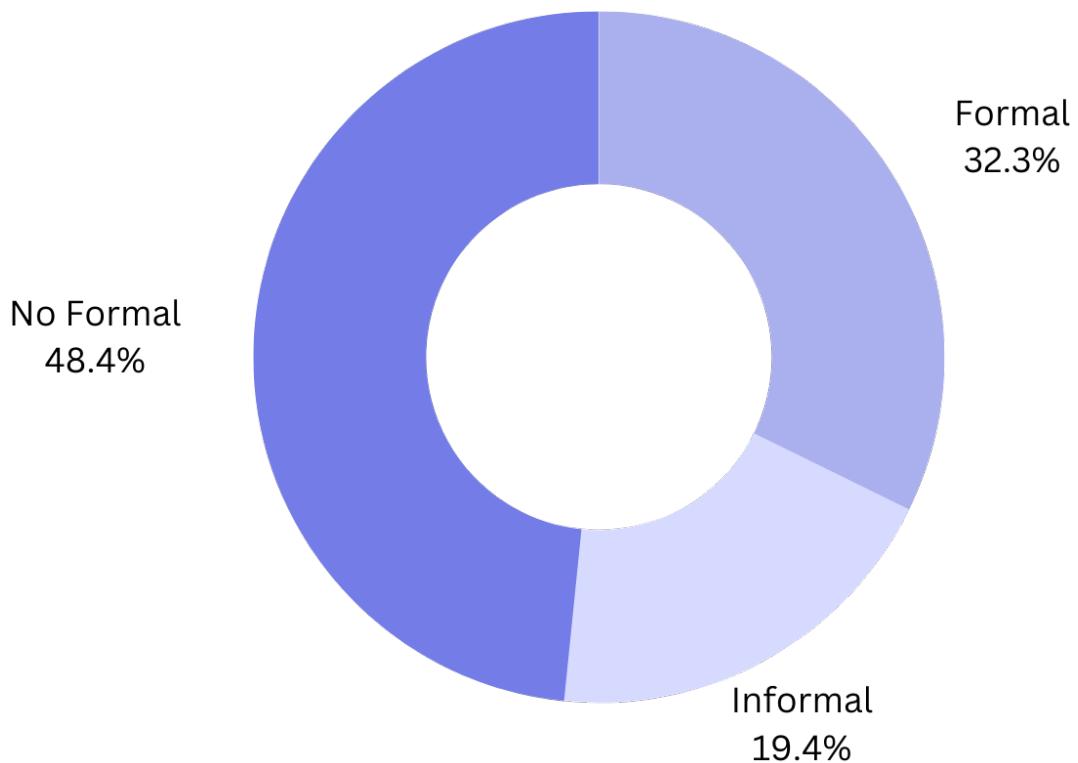


Stepping forward the analysis, figure 17 stresses the correlation between type of participation and credentials, in order to understand which kind of credits are used by the categories of learning participation aforementioned. In continuity with what discussed in terms of relation between duration, type of participation and inclination to a certain type of participation, degree is mostly divided between physical and hybrid participation with a minuscule percentage allocated on full remote experience. The same setting is proposed by certification, badge and certificate, with the last one prominent in all three cases, due to its major overall percentage. Moreover, micro-credentials programs privilege hybrid experiences, while diplomas have the most consistent percentage divided between hybrid and remote participation. These last data show an ability to change, especially for those programs which are more flexible, tailored and oriented to specific upskilling processes.

Another important information that needs to be taken into account concerns the type of educational approach. The latter refers to the way the learning program is provided. It is classified into three categories: formal, informal and non-formal education. According to AEGEE Europe (AEGEE Europe, 2014), these categories are explained as follow:

- Formal education: the hierarchically structured, chronologically graded 'education system', running from primary school through the university and including, in addition to general academic studies, a variety of specialized programmes and institutions for full-time technical and professional training.
- Informal education: the truly lifelong process whereby every individual acquires attitudes, values, skills and knowledge from educative influences and resources in informal education environment – from family and neighbors, from work and play, from the market place, the library and the mass media.
- Non-formal education: any organized educational activity outside the established formal system – whether operating separately or as an important feature of some broader activity – that is intended to serve identifiable learning clienteles and learning objectives.

Figure 18 - Type of educational approach

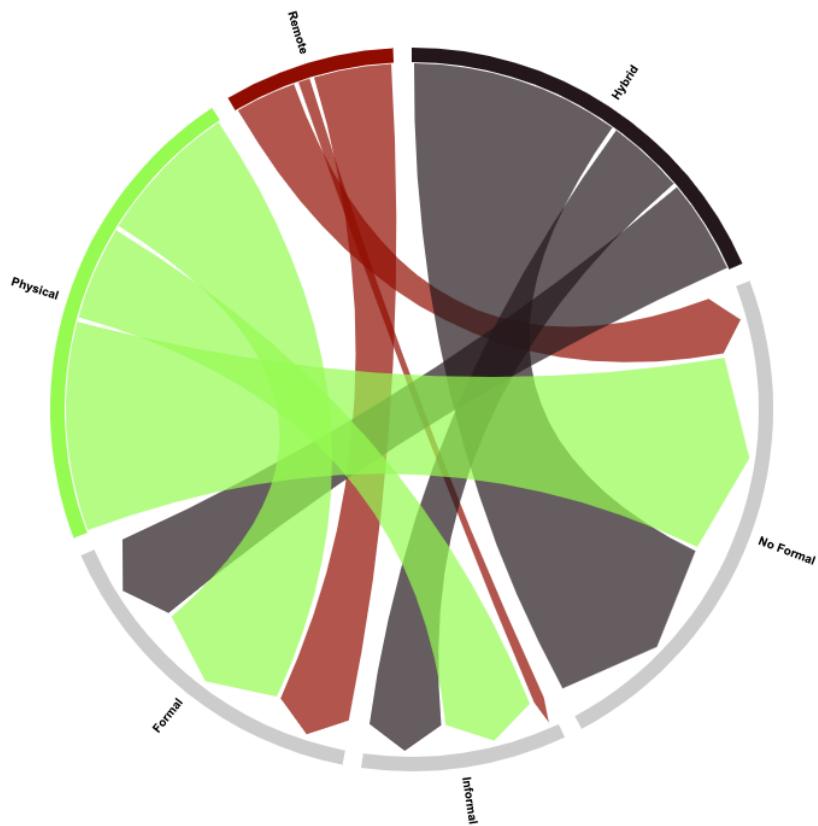


The prevalence of No Formal education is coherent with the nature of the survey itself. Despite of it, a 32,3% of the participants recognize their contents more aligned with formal approach to learning. This could happen since formality in education is going to emerge also in context considered no-formal before, moving the bar of formality beyond the academic realm. Finally, the 19,4% of participants declare to use an informal approach, experimenting educational environment highly adaptable and fluid.

Figure 19 relates the last data with the type of participation. The results are in line with the information and weights observed in the previous visualizations. No Formal education is mostly conducted through physical and hybrids experiences, while around the 20% of it

presents a remote participation. At the same time, digital support to education seems well presented in formal education, as well as hybrid versions.

Figure 19 - Correlation between type of participation and type of educational approach



Leaving participation, duration, credentials and approach behind, the next cluster of characteristics analyzed in this report concern the quality of the learning programmes. First of all, it has been investigated the compliance of the learning programmes with European qualitative framework concerning education. In particular, three frameworks have been adopted for the research, namely EQAVET, EQF and Entrecomp, since they are the most relevant in terms of sector (CCIS) and research context (EIT and the EIT label). Here reported their meaning:

- EQAVET is based on a quality assurance and improvement cycle (planning, implementation, evaluation/ assessment, and review/revision) and a selection of descriptors and indicators applicable to quality management at both VET system and VET provider levels. The EQAVET Framework can be used by VET providers and in VET systems to support the quality assurance of learning environments (e.g., school-based provision, work-based learning, apprenticeships, formal, informal and non-formal provision) all types of learning contexts (e.g., digital, face-to-face and blended) public

and private sector VET providers VET awards and qualifications at all levels of the European Qualifications Framework (European Commission, s.d.).

- The EQF is an 8-level, learning outcomes-based framework for all types of qualifications that serves as a translation tool between different national qualifications frameworks. This framework helps improve transparency, comparability and portability of people's qualifications and makes it possible to compare qualifications from different countries and institutions (European Union, s.d.).
- EntreComp is a free, flexible reference framework that can be adapted to support the development and understanding of entrepreneurial competence in any setting (European Commission, s.d.)

Figure 20 - Compliance with European standards

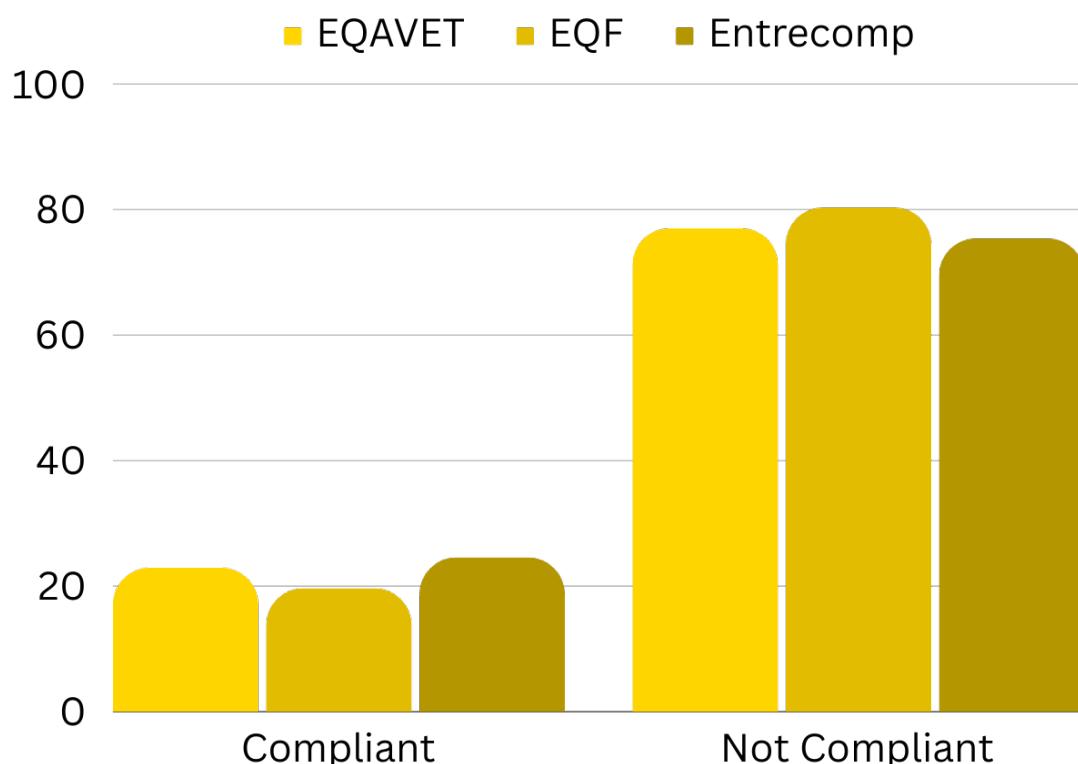


Figure 20 depicts a clear situation: learning programmes part of this research scarcely propose contents and services in line with these frameworks. The latter appears to be mostly unapplied and so the educational contents are rarely designed on these qualitative schemes, making also more difficult the evaluation of the competences generated and their comparison. Indeed these frameworks guarantee the comparability of a standard which could be useful for helping improving the visibility and awareness of the single courses. At the same time, frameworks not always result immediate and easily applicable since they are fixed structure that cannot include the multitude of aspects on which these learning programmes are based on. Moreover, frameworks are often highly specialized, requiring specific competences and processes in order to be applied internally within the organization and in relation to the programmes.

Mapping of existing lifelong learning programmes

Figure 21 - European Project Output

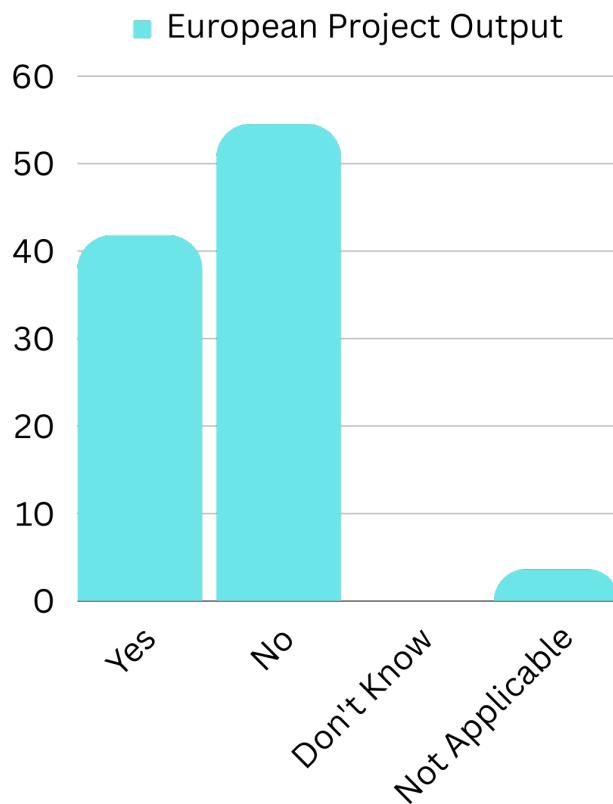


Figure 21 provides another important information for the research which is the percentage of learning programmes which are the result of European Project. The visualization presents an almost balance between programs which are and which are not a European Project output, with a moderate majority of the negative answer. In any case, the percentage of learning programs that have been designed or also implemented during a European project (41,82%) is consistent and highlight the role that European grants and initiatives for education and VET, as in the case of the Erasmus+ are nearly pervasive and represent an important environment for prototyping no-formal and CCIs education, embracing innovation and tailored needs.

The next figures investigate the partner composition of the learning programmes. Indeed, it has been asked to participants to indicate if the learning programmes includes partners, with which functions and their nature. In this direction, firstly it has been explored the presence and distribution of possible partnerships.

Mapping of existing lifelong learning programmes

Figure 22 - Typology of partners

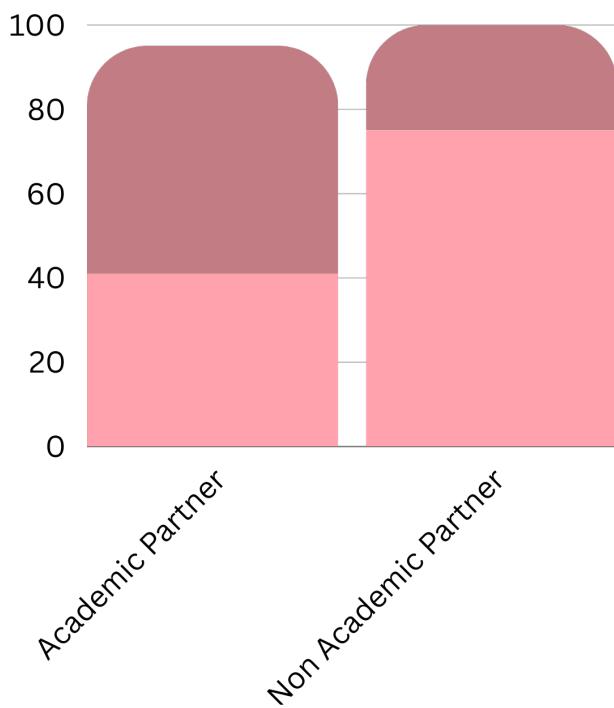
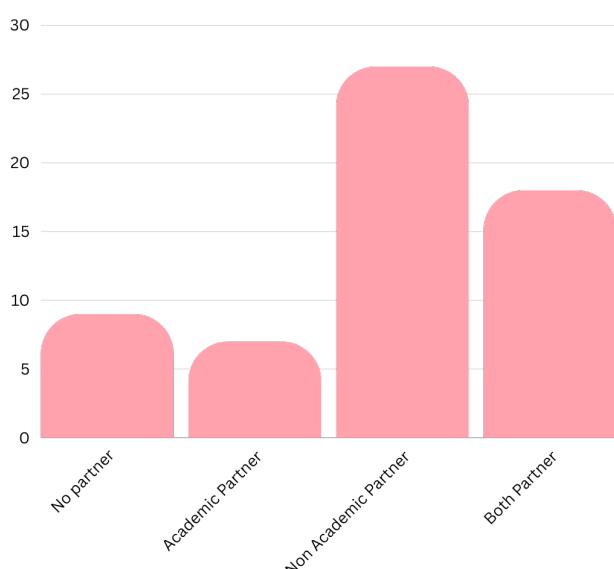


Figure 22 reports that learning programs present a good consistency of non-academic partners, namely public and private organizations outside the academic realm, as NGOs, profit-oriented organizations, VET organizations and so on. Indeed, the visualization indicates percentage of partners, using light pink and, as shown, the absence of that specific partner in dark pink. It means that over half of the sample hasn't academic partner among their possible consortiums. This data is even more explained by figure 23, which represents the distribution.

Figure 23 - Distribution of partners



Mapping of existing lifelong learning programmes

Precisely, 14,75% of the learning programs do not have partner at all, while those participants which declare to have an academic partner are even lower, namely the 11,78% of the population. On the contrary, non-academic partner are largely privileged in this sample since 73,77% of the learning programs present a non-academic partner, of which the 40% displays also an academic partner.

Figure 24 - Partnership characteristics



Figure 24 adds another level of detail in terms of partnership and their role in relation to the learning programs. In fact, it shows how partners contribute to the development of the educational service. In the case of academic partner, almost all of the partners support the development of the education curricula (In 87,5% of the cases), while 79,17% of universities and HEI also supports and lead the implementation of teaching activites.

Regarding non-academic partners, actually 93,02% of the organizations engaged are responsible for the implementation of the educational activities, while a small number of them take also care of the strategic approach, so the development of the educational curricula. Moreover, due to the typicity of the partner, it has been explored also its contribution in terms of placement and internship, with the 65,12% of them dedicated to it.

These data concluded the characterization part of the results. This section maps and portrays an overall picture of how CCS's learning programs in Europe are structured and distributed. These characteristics will be further analyzed in section 5, in order to extracts learning program profiles.

Section 3: Target Audience Examination

Section 3 is vertically dedicated to target audience, namely the participants to the courses. The reason why this information has been isolated from the rest of the characterization part (section 2) is connected with the importance of understanding these data, since they are at the intersection between section 2 and section 4. Indeed, most of the analyses that will be conducted in the next part of the report stress the correlation between skills development and target, until arriving to a complex correlation among area of study, categories, skills and target.

Before proceeding, however, it is important to keep in mind that these data are extrapolated from the survey, and so filled up by cultural managers and professionals who were in charge of answering to the survey. This means that this conversation presents a “top-down” approach, instead of focusing on the direct perspective of the learning programs’ participants. The reason is dual: first of all, it was fundamental understanding the intention, i.e., the engagement’s objective of the organization in relation to target; secondo of all, a participant-oriented data collection and analysis is particularly time-consuming and challenging, so not aligned with the time and resources at the disposal of this research.

So, the research asked to participants to indicate which targets audience their learning programs intend to or have engaged. Each participant could report more than one category. The latter has been elected following the Erasmus+ usual classification of project’s target. These are

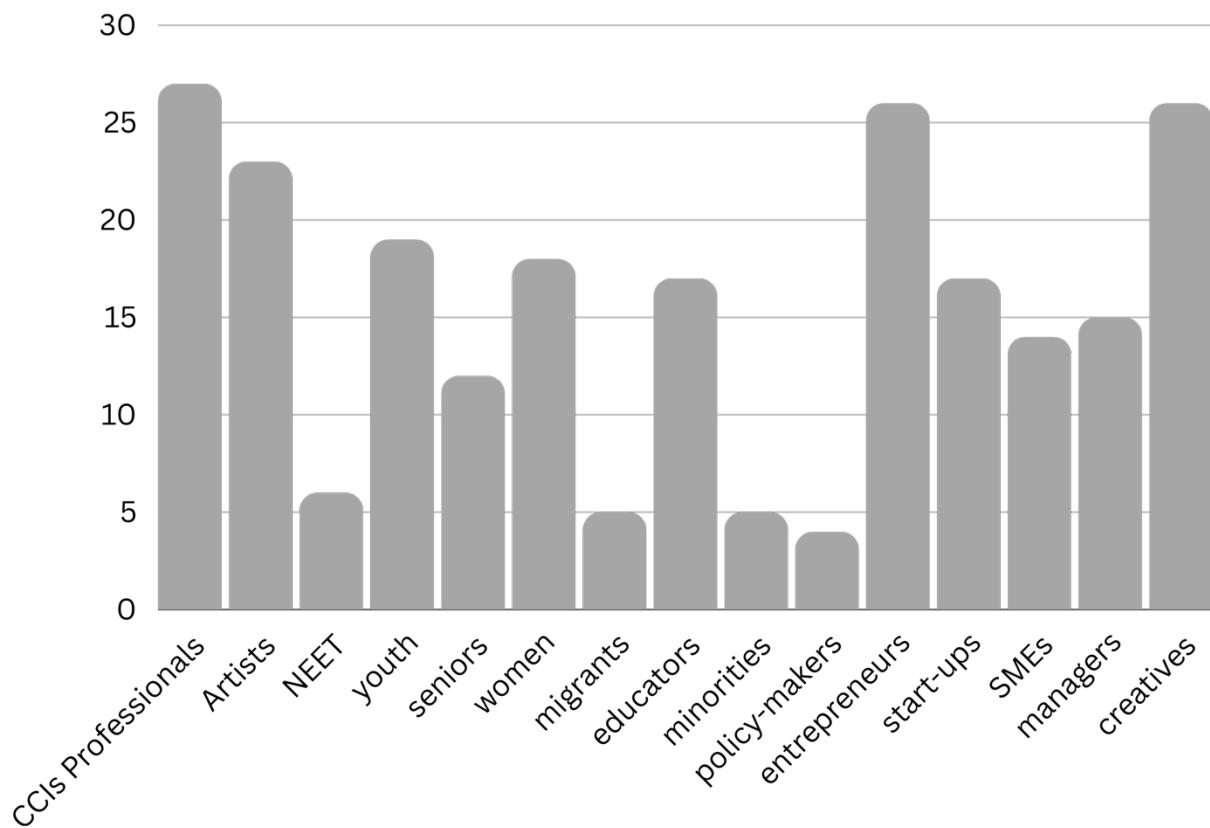
- CCIs Professional
- Artists
- Women
- Migrants
- Educators
- Minorities
- Policy makers
- Entrepreneurs
- Startups
- SMEs
- Managers
- Creatives.

Since each participant had the chance to nominate more than one category, final percentage results higher than the entire (100%). Therefore, figure 25 depicts the overall situation and restitutes four main targets engaged by the CCIs learning programs, namely CCIs professionals (43,55%), creatives (41,94%), artists (37,10%) and youth (30,65%). The first three categories are mostly part of processes of reskilling or upskilling, while young can be both a

characterization of the first three (CCIs professionals and artists are principally composed by a young population), or an autonomous category which is usually more oriented to a first layer of professional educational (young refers to over 16 years old). Another important remark concerns the difference between CCIs professionals and creatives: the first refers to all those professionals that work for a cultural and creative organization, so including technician, researchers, managers, communicators; the second refers to professionals who apply creativity to their daily life work, alluding to art directors, designers, talents.

The aforementioned categories are broad and easily targetable from learning programs' managers. On the contrary, a really specific cluster of targets is represented by startups, SMEs, managers and entrepreneurs with respectively 27,42%, 22,58%, 24,19% and 41,94% of engagement rate. Despite the first two categories are the only two which do not refer to individuals but rather to organizational typologies, they are often targeted, by different systems, grants and policies, as a whole which represents a specific kind of professional.

Figure 25 - target audience



Entrepreneurs, managers, SMEs and Start-ups tend to refer to the same cluster of needs in terms of competences, at least this is what emerge from the research, as it will be further developed later in this report. Their density in the sample is aligned with the nature of learning programmes examined here, as well as the sphere of categories and competences emerged (as reported at the beginning of section 2, management, production and communication appear as the most prominent items with learning categories). Moreover, this data is perfectly in line with the characterization of the entire cultural and creative sector

which has turned its entrepreneurial/market-orientation during the last 20 years, especially within some geographical areas.

Another cluster of targets is represented by minorities, migrants, NEET and seniors, respectively the 8,06%, 8,06%, 9,68% and 19,35% of total sample. These populations are principally engaged with a double aim: creating new competences as a vehicle to tackle social marginalization and exclusion. The learning programs so act both as an opportunity to learn something new and so access or re-enter in the market (the latter principally indicated in case of migrants and seniors), as well as having the possibility to relate with other peers, throughout a dedicated and safe environment. Percentages says that these targets are less engaged than other by the sample, even if, they are fairly represented, or even more as in the case of seniors.

Women can be contained in each of the other category, but they are mentioned separately since many programs and grants allocate resources specifically for this target's needs, especially in relation to upskilling and job placement. This target has been elected 29,03% of times.

Educators, instead, represents the 27,42% of the total population, definitely an important percentage compared with others and that requires really specific programs, since the latter need to train other trainees in order to enable them to improve their educational competences and so enlarging the overall quality of education in the sector.

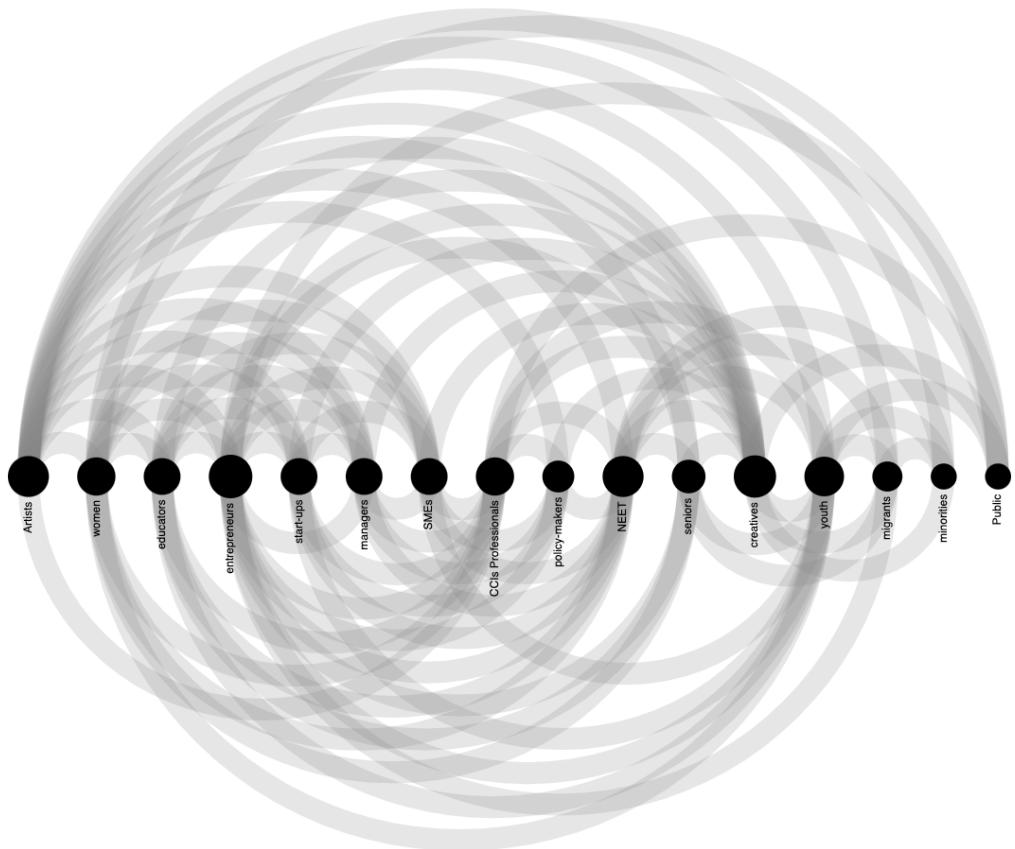
Finally, policy-makers are mentioned only 6,45% of times, showing an overall resistance to upskilling of the category, at least throughout CCIs learning programs.

Each of these targets is never isolated, never engaged as unique beneficiary of a learning program or strategy. Understanding the correlation among populations, contributes to better understanding the topic and the way education is designed and delivered in Europe. For example, figure 26 represents a mesh of connections between peers, indicating the overall strong interrelation that exists between different targets, so different needs, competences and levels of knowledge.

Indeed, figure 26 depicts the correlation among beneficiaries, meaning how many times a specific target has been selected alongside another one, by the participants of the survey. Moreover, the visualization has been designed in order to manifest the relation between first and second targets: taking into consideration those programs which do not focus on only one beneficiary, it indicates how many times a population has been selected as a primary target and what is the most common secondary target related to the precedent one.

Mapping of existing lifelong learning programmes

Figure 26 - Correlation between target



So, for example, in relation to those programmes where artists are prioritized, they are often paired with creatives, young and educators. In the case of women as primary target, they are matched with entrepreneurs, suggesting specific inclination and learning setting of the learning programmes. On the contrary, when entrepreneurs are the primary beneficiary of the trainings, in that case they are almost always associated with SMEs, startups, managers and creatives. In case of other target, the scenario is different, as for example for young people. When engaged as primary beneficiary, it doesn't emerge a specific correlation, but seems well distributed among the different other categories, with a slight density in the case of women and creatives. Other cases instead, have just few correlations, as in the case of SMEs, and with a limited distribution, which, in this situation is expressed in relation to managers.

Section 4: Focus on Skills Development and Innovation

Section 4 is at the core of the analysis since it investigates the development of skills, which refers to the productive capabilities acquired through all levels of learning and training, occurring in formal, non-formal, informal and on-the-job settings. Section 4 put the emphasis on the contribution that learning programmes cause to the development of specific skills and to the achievement of defined learning outcomes.

The research targeted a set of skills coherent with EIT education standards and EIT labelled quality system in education and training (European Institute of Innovation and Technology, 2022). The EIT specific professional and educational training framework aims at creativity, innovation, entrepreneurship, sustainability and internationalization, leveraging the knowledge Triangle into a practical educational model and set of skills.

In this direction, the research investigates the conformity of the current European Culture and Creative learning offer with this approach and pool of competences, and so stressing the intention and the ability of the sector of addressing the aforementioned approach.

At the same time this section investigates each programs' capacity of creating an innovation-friendly environment, promoting students' network with sector partners, fostering transdisciplinarity, addressing new societal challenges, and so on.

In this direction, in the the section, it will be analyzed the obtained results per each skill and the correlation between the programs' contribution to the development of a specific skill and the target audience designed, generating further significances in terms of strategic approach by organizations to the development of skills specific target.

Before starting it is important to remember that 9 skills were detected, clustered as follow:

- Entrepreneurship Skills and competencies
 - o Financial and business management skills
 - o Entrepreneurial skills
 - o Developing sustainable business solutions
- Innovation skills and competencies
 - o Generating new knowledge, ideas, and technological solutions
 - o Evaluation of unintended consequences of innovation and technology
- Creative skills and competencies
 - o Creative thinking and problem-solving skills
- Intercultural skills and competencies
 - o Interpersonal relations and collaborative skills
- Making judgements and sustainable competencies
 - o Critical thinking and analysis of arguments and information
 - o Ecological Skills

Entrepreneurship Skills and competencies

This cluster of skills is composed by “financial and business management skills”, “entrepreneurial skills”, and “the ability to develop sustainable business solutions”.

Figure 27 - entrepreneurial skill

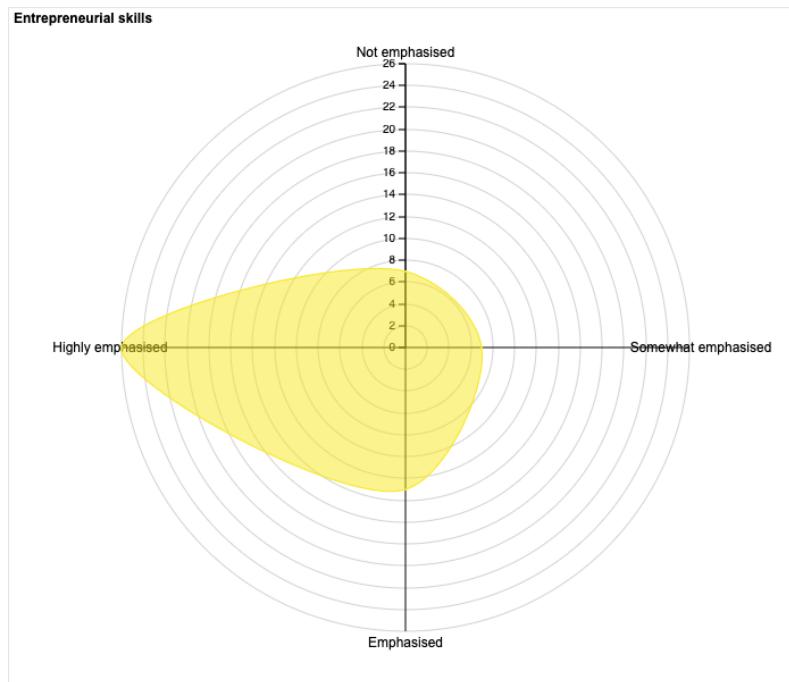
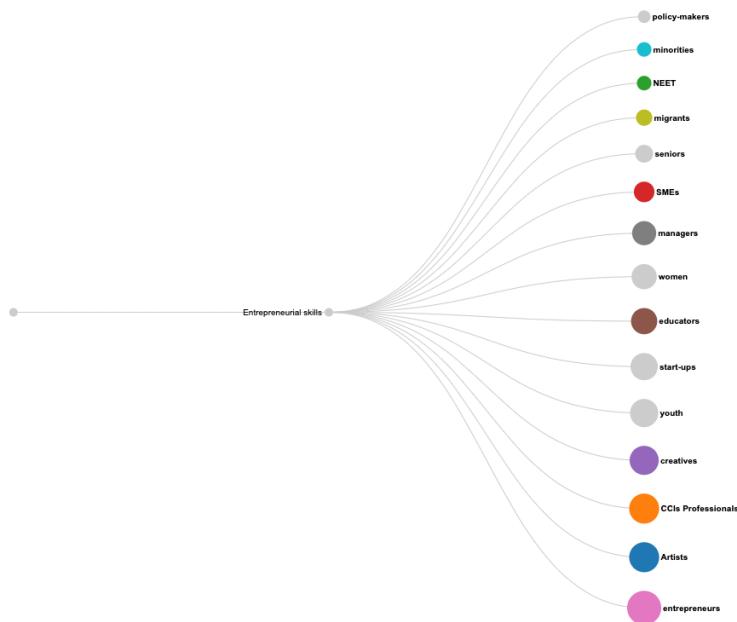


Figure 27 represents the scorer of the entrepreneurial skills. It is sharply inclined toward a really positive dimension. Indeed, the figure reports that almost the 70% (70,91%) of the participants emphasize and contribute to the students' development of the entrepreneurial skills, throughout their learning programmes. Specifically, the scorer shows that among this data, the 47% highly emphasized this kind of skills during their programmes, reporting one of the best results among the entire set of competences in this research, and precisely the highest within the cluster “Entrepreneurship Skills and competencies”.

As mentioned, these data are put in relation with target distribution, as reported by figure 28. Represented from the lowest value to the highest, figure 28 explores the number of learning programs with high emphasis and contribution to the development of the entrepreneurial skills which target those beneficiaries. In substance, these programmes, which present a good distribution in terms of target, appear to principally upskill entrepreneurs, since the latter represent the major target group with almost 14% of the total population.

Mapping of existing lifelong learning programmes

Figure 28 - Target correlation: Entrepreneurial skills



Also, artists, CCIs professionals and creatives are very well included, indicating the tendency of providing an entrepreneurial mindset to these kind of professionals in order to enter successfully or keep them trained in the current complex market. On the contrary, policy-makers and minorities seem shortly listed by these specific programs.

The second skill of the cluster is reported by the scorer in the figure 29, namely the financial and business management skills. In this case, answers are more distributed, resulting in a more spacious representation. Observing the data, compared with the previous skill, financial and business management skills doubled cases where the competence is not developed and emphasized (in the 23,64% of the cases), while reducing high positive score at 29,09%. Overall, this competence appears to be generally part of the set of skills provided by CCI's learning courses, but not extensively as specific institutions, courses and programmes can guarantee verticalizing and dedicating almost totally the curricula on Finance and Business Management. At the same time, CCIs' learning programs seem more oriented to provide other proficiencies, completing them with a financial and management overview.

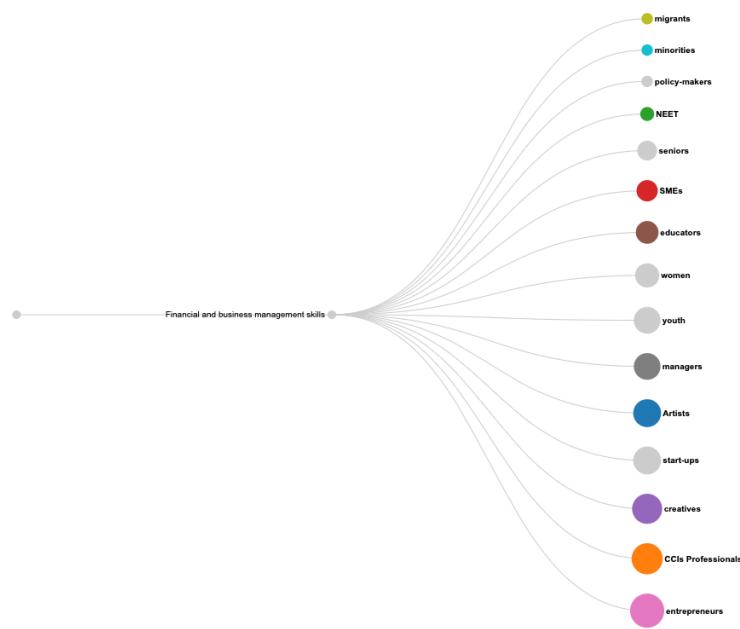
Mapping of existing lifelong learning programmes

Figure 29 - financial and business management skills



Regarding the target, figure 30 keeps showing entrepreneurs and CCIs professionals as the most referred audience, while artists lose some ranks compared with entrepreneurial skill.

Figure 30 - Target correlation: Financial and business management skills

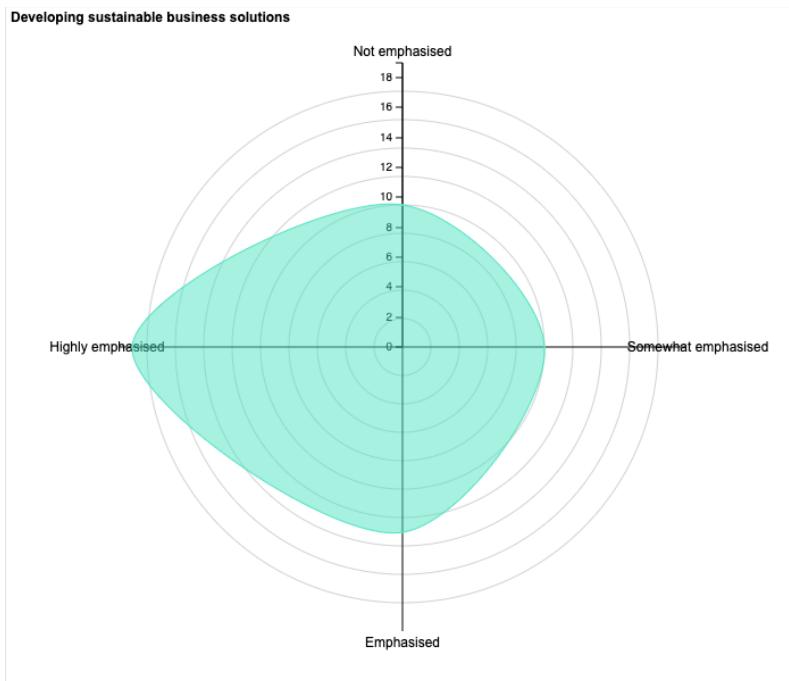


The first cluster is completed by “the ability to develop sustainable business solutions”. Also in this case, the scorer has not distinct outlines, due to the absence of a bright prevalence of one value on the others. The number of cases that reports a high emphasis and development of the skill revolve on the 34,55% of the population, while more than 36% of the cases do not

Mapping of existing lifelong learning programmes

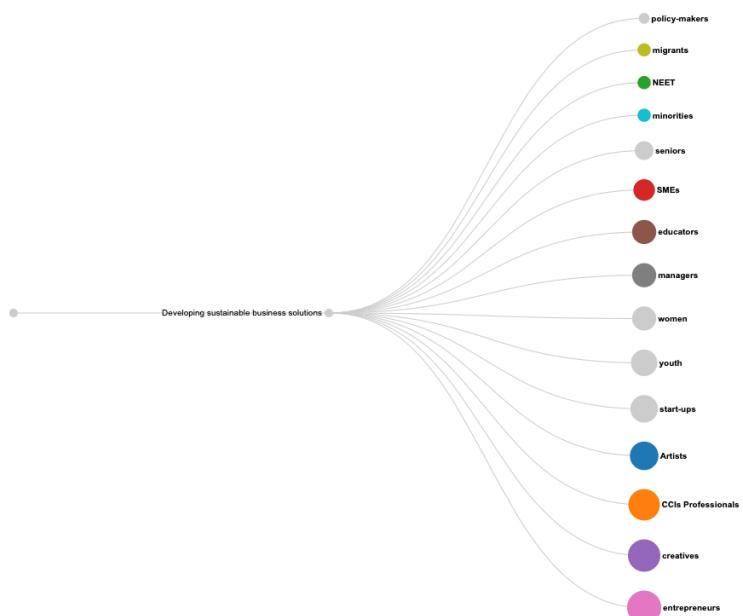
focus their training contents on this ability, or just lightly. It is predictable, since the ability to develop sustainable business solutions is strictly related to the previous competence.

Figure 31 - Developing sustainable business solutions



Taking into consideration the target, figure 32 depicts a classic scenario where entrepreneurs are the most engaged category, right after creatives and CCIs professionals. Also, in this case artists seem less involved, as shown in the previous skill. Policymakers still occupy the lowest rank.

Figure 32 - Target correlation: Developing sustainable business solutions

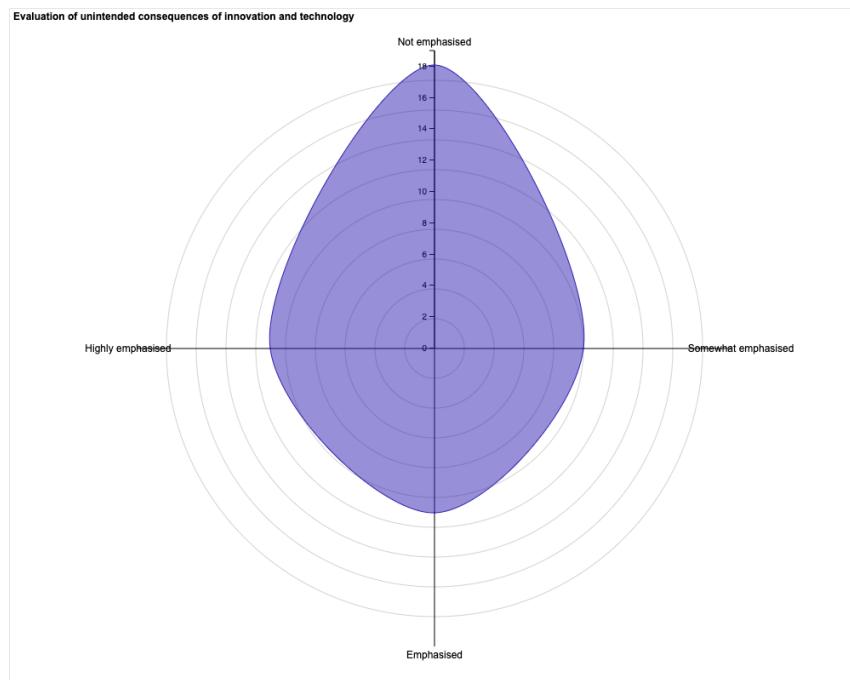


Innovation Skills and competencies

This cluster of competences is populated by the following two skills: “generating new knowledge, ideas, and technological solutions” and the “evaluation of unintended consequences of innovation and technology”.

Starting from the latter, the evaluation of unintended consequences of innovation and technology results the less emphasized and developed ability among all the table. Figure 33 reports this information clearly: the scorer proves to be sharply oriented toward negative value. Indeed, data communicates that in the 34,55% of cases, the skill is not emphasized and developed, while only the 20% of the programmes take of highly developing this competence. The result is not surprising since of its specificity and the overall difficulty to still provide a set of competences able to enable professionals in the CCIS to evaluate innovation and the impact in this specific branch. At the same time this approach is fundamental to empower the sector to lead the change, ethically and coherently with a sustainable growth for the entire society. Indeed, it is probably this kind of competences that the sector needs, instead of vertical abilities on technology and digitality that appears to be more responsibility of other learning directions than the ones examined in this research, as demonstrated by the same data.

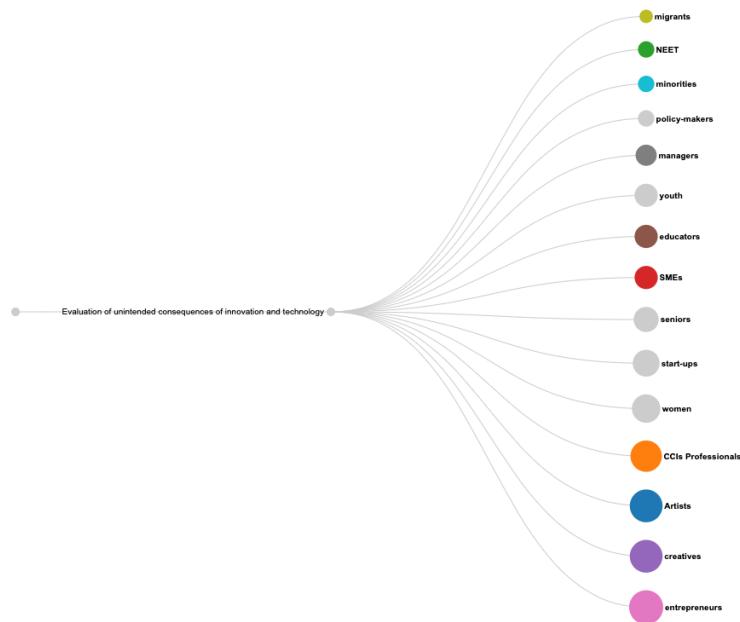
Figure 33 - evaluation of unintended consequences of innovation and technology



From the target perspective, beyond the top scorer, which remains entrepreneurs, women are particularly engaged by programmes which highly valorized this skill, positioning them among the top target audience. On the contrary, young and managers descend the list, moving closer to those targets poorly researched.

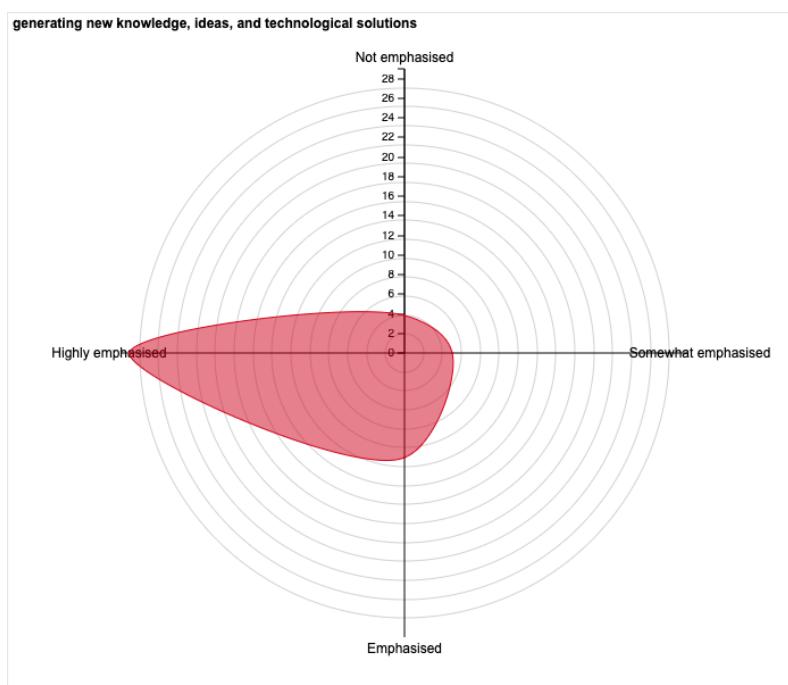
Mapping of existing lifelong learning programmes

Figure 34 - Target correlation: evaluation of unintended consequences of innovation and technology



On the other side, the scenario changes drastically, as shown by figure 35.

Figure 35 - generating new knowledge, ideas, and technological solutions

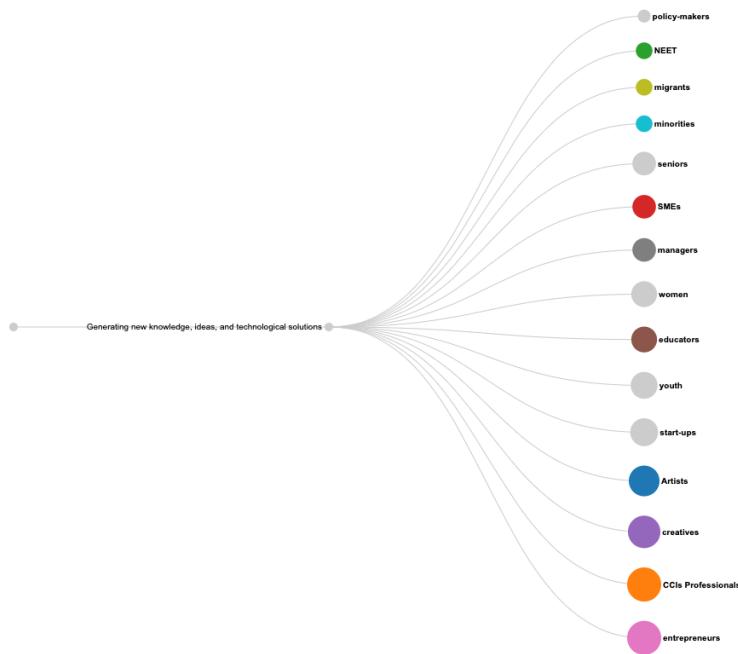


Generating new knowledge, ideas, and technological solutions appears to be one of the most developed competences by the sample, precisely the second one. It changes the perspective, since in this case dealing with innovation regards the application of creativity and design of new solution and processes. It seems more appropriated to the current characteristics and design of the CCIs learning programmes in Europe. Regarding data, the 58,18% of the

Mapping of existing lifelong learning programmes

participants report to highly develop this skill within the curricula of their programmes, as the scorer in the figure 35 clearly visualize. In this direction, only in the 7,27% of the cases the skill is not emphasized at all.

Figure 36 - Target correlation: generating new knowledge, ideas, and technological solutions



Regarding the audience, figure 36 shows how important is the target youth for the learning programmes which emphasized this skill. This information seems reinforcing an overall tendency toward horizontal education, accessible to future professionals too instead that just to cultural workers.

This trend would be compared with other emerging from skills development's analysis and from the characterization in order to start tracing some learning programs profiles in the sector.

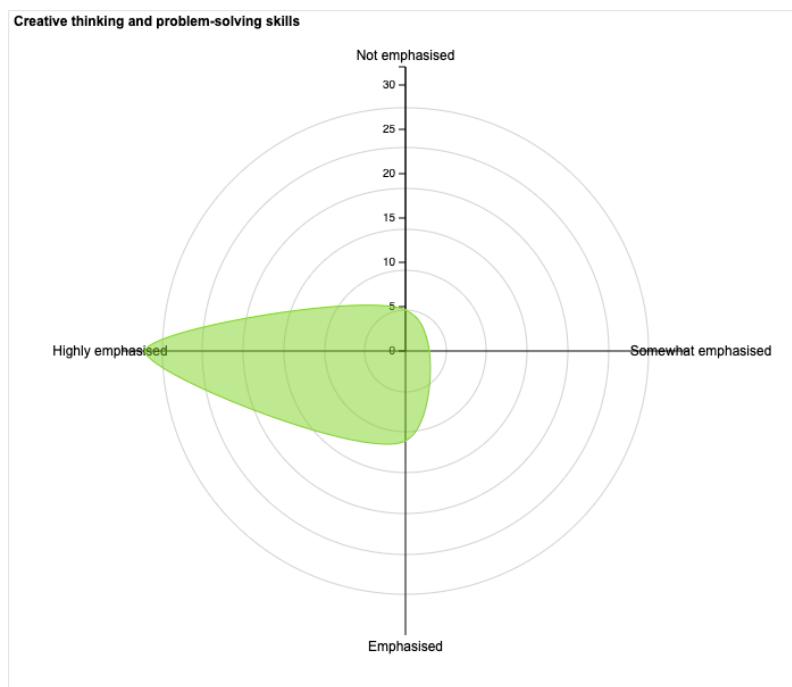
Creative skills and competencies

This area of competences is populated by just the creative thinking and problem-solving skills. The latter represent the most evolved competence within the learning programs examined in this research. Creative thinking and problem solving seems going alongside the previous skill, in terms of learning outcomes, approach and targets, showing how much creativity and the imagination and design of new patterns are the favoured training angle of current CCIs education.

Scorer in figure 37 shows a sharp inclination toward the highest emphasis and development of the creative competence, as demonstrated by the dataset. The best result in the skills' analysis has been elected from the 58,18% of the population, exceeding the 75% in case of positive value.

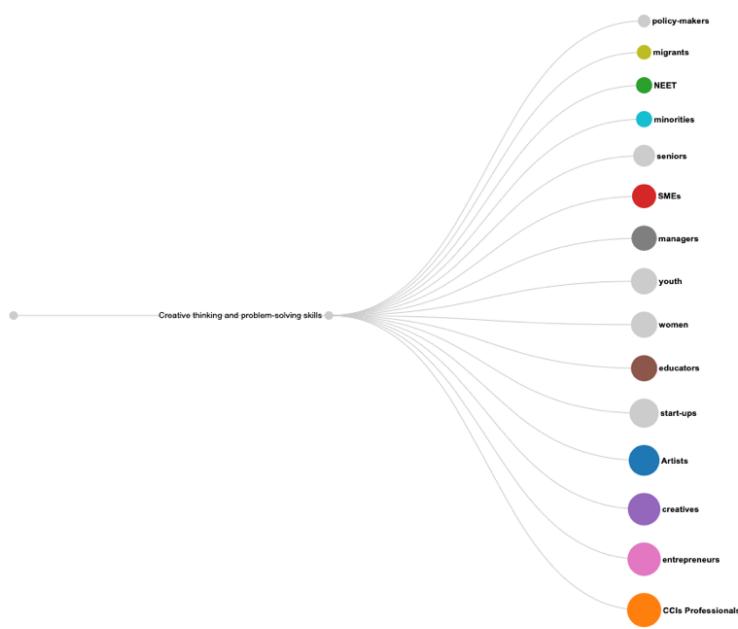
Mapping of existing lifelong learning programmes

Figure 37 - creative thinking and problem-solving skills



This really positive results confirm the overall trend in relation to target engagement and development of specific competences.

Figure 38 - Target correlation: creative thinking and problem-solving skills

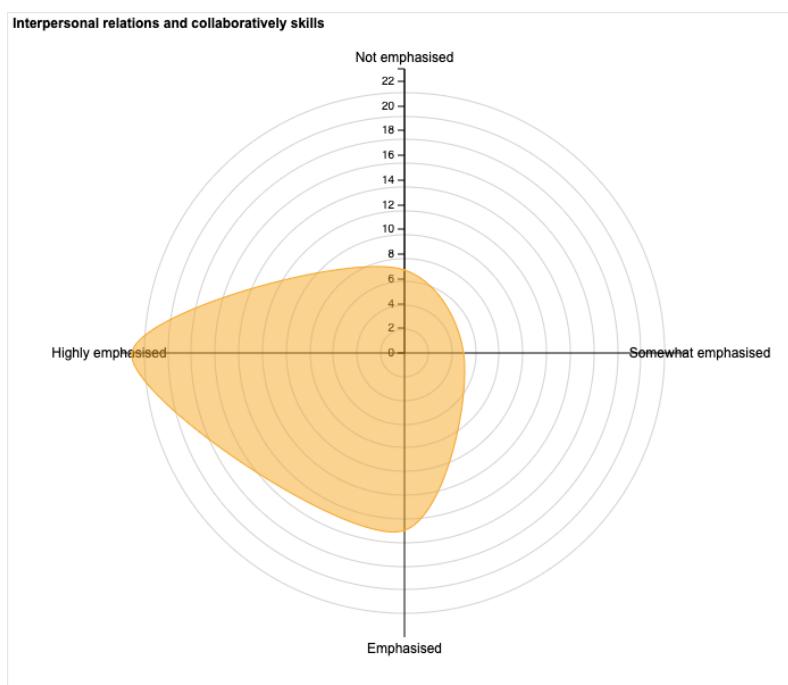


In Figure 38, top targets are the same founded in the previous figures, but in this case the absolute most engaged audience is the CCIs professionals. Also, educators grow in the chart, demonstrating the necessity of enabling trainers with creative-oriented skills and giving them the possibility to disseminate.

Intercultural skills and competencies

Intercultural skills and competences embrace those particular skills that professionals and generally people use in order to curate and make project with others, in order to generate new socio-cultural value. These are here synthetized precisely with the value “interpersonal relations and collaboratively skills”. In this case, medium values are really important in order to understand the final results. Indeed, figure 39 represents the scorer of this competence. Overall, the representation shows the record oriented toward a positive emphasis, marking high development for the 41,82% of the population and an additional 27,27% which submit to emphasize the interpersonal relations and collaboratively skills in their learning programmes counting a distinct significant positive result and demonstrating a good integration of trainings dedicated to the development of the collaborative skills.

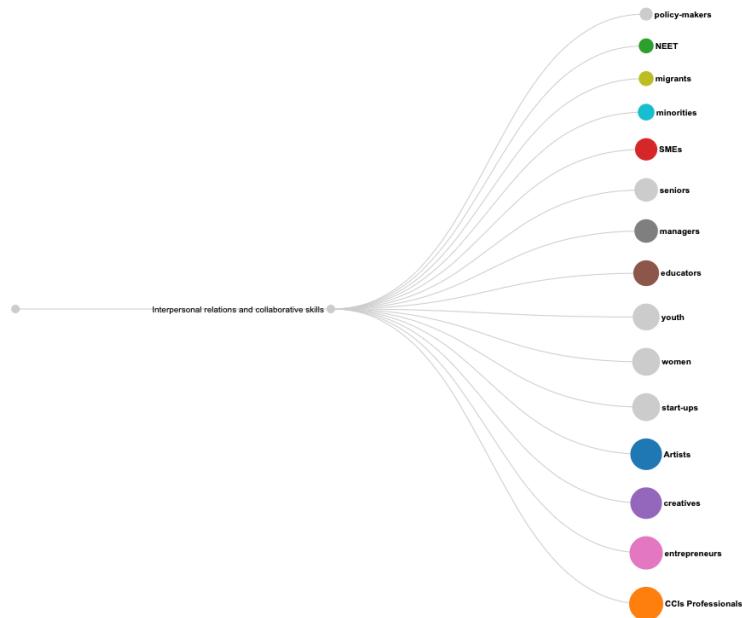
Figure 39 - interpersonal relations and collaboratively skills



Regarding the audience, figure 40 shows the same profiles at the top and the bottom, while in the middle women and startups swing to the peak, implying probably different motivations. In the case of startups, these profiles are trained in order to enhance their collaborative muscle and improve the professional journey in front of them. In the case of women, they could also be professional skills to reinvest in the market, or an upskilling process.

Mapping of existing lifelong learning programmes

Figure 40 - Target correlation: interpersonal relations and collaboratively skills



Making judgements and sustainable competencies

Last cluster is dedicated to the ability of supporting the ability of professional and generally human being to critical decisions and ethical approach, especially in relation to environmental sustainability, circularity and new models of living. This delicate context of learning and training has been encapsulated into two dimensions of skill, namely the critical thinking skills and the ecological skills.

The first case is visualized by the figure 41, where it reports a distribution scheme already previously seen, with the majority of participants who declare a high development of the competence withing their learning programs (40%), even if a more balanced distribution occurs among the other records, demonstrating in general a good approach to subject, with less emphasis in relation to other previously mentioned skills.

Mapping of existing lifelong learning programmes

Figure 41 - Critical Thinking Skills

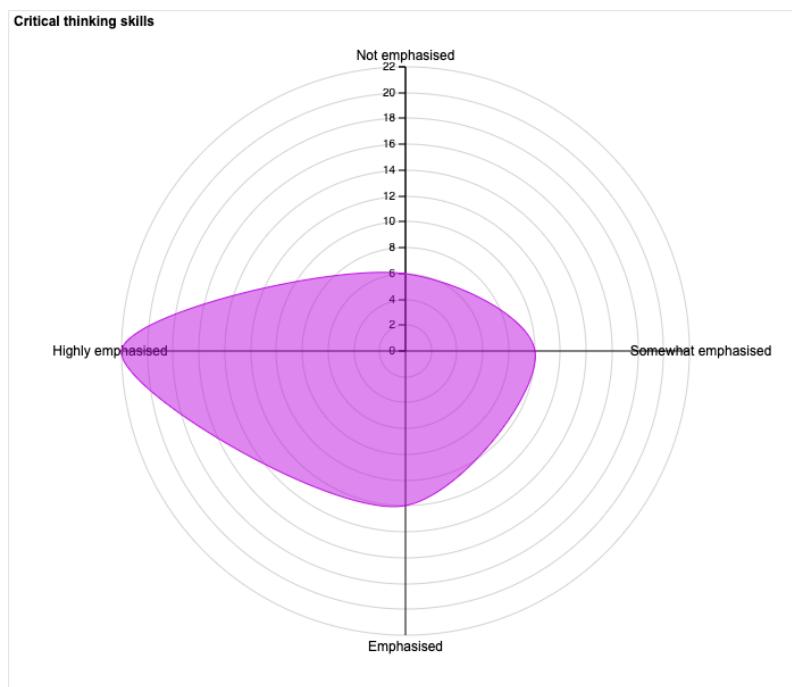
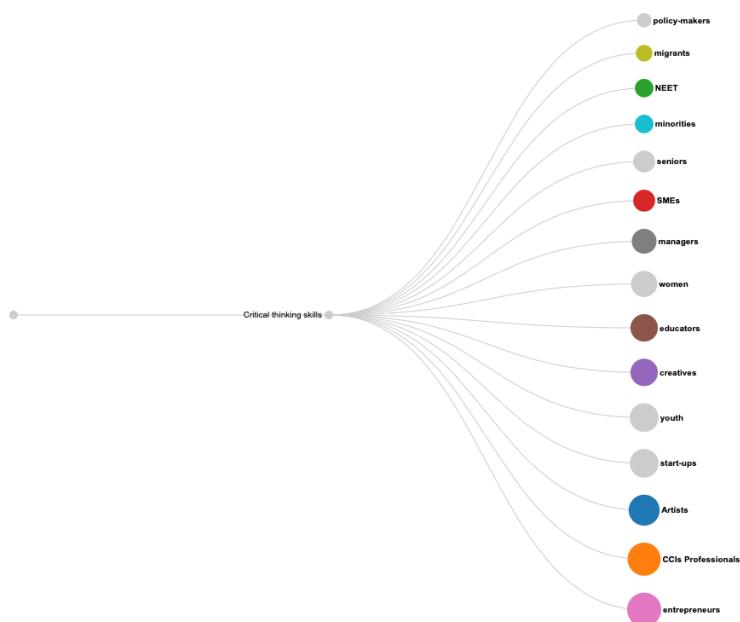


Figure 42 depicts the target distribution in case of highly emphasized critical thinking skills learning programmes. Young and Startups are well-positioned and results among the most engaged target alongside CCIs professionals, artists and entrepreneurs.

Figure 42 - Target correlation: critical thinking skills

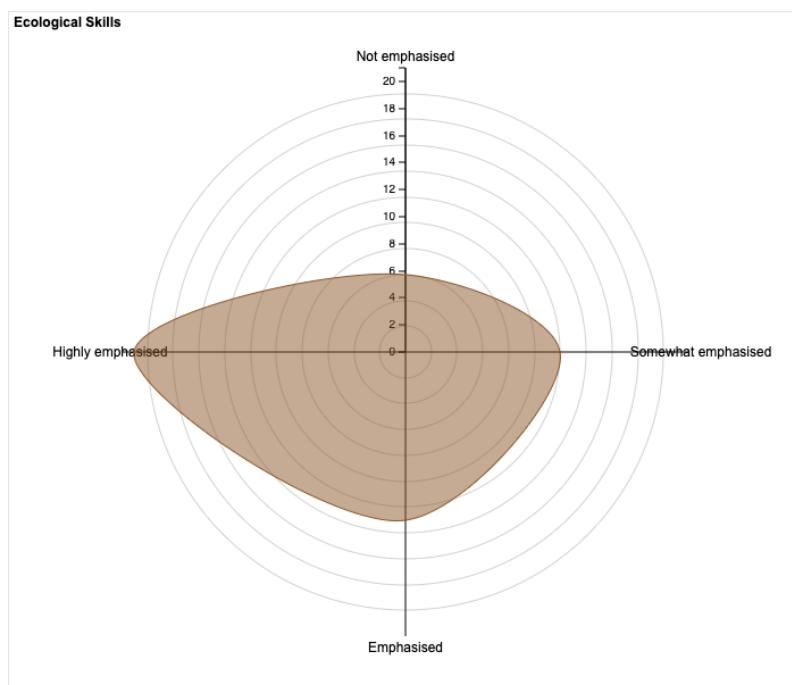


Moving to the other competence, part of this cluster, ecological skill and the ability to identify the environmental impact of actions and decisions seems to be well represented in figure 43, reporting an encouraging scenario. As the previous skill, also in this case, ecological skill is

Mapping of existing lifelong learning programmes

more spread along the values, keeping an overall favorable development of these competences. These data shows that CCIs learning programs are performing in the right direction in order to provide and profile professionals able to spend this knowledge transversally, among the sectors.

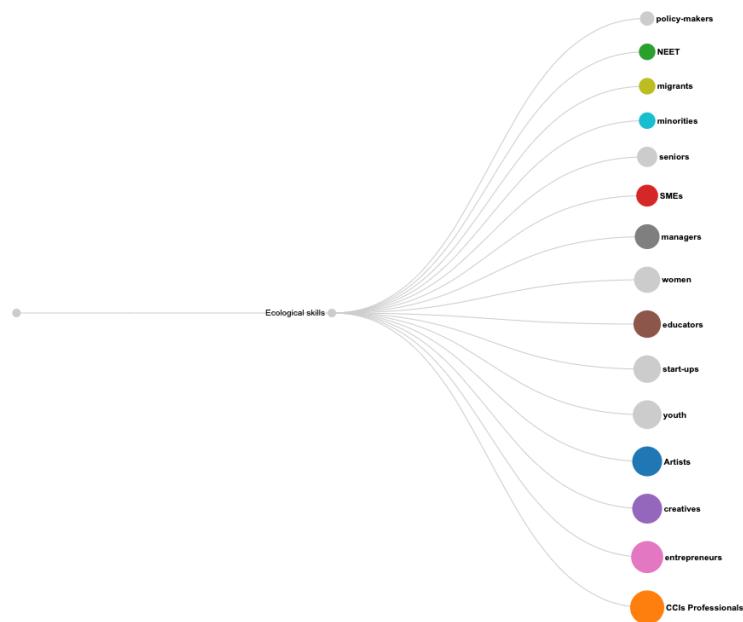
Figure 43 - Ecological Skills



In relation to targets, ecological skills appear to be well-distributed among audience, with a good balance in terms of participation. In this direction there are no peaks in the records, with almost the same structure reported in the previous ones.

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Figure 44 - Target correlation: ecological skills



Skills Overview

In order summarizes the results reported in this section, figure 45 and 46 can particularly help to achieve an overview perspective, visualising together previously mentioned crucial data.

Figure 45 – high developed skills overview



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Starting from the scorer visualized in figure 45, it gathers all the competences together, showing the tension among them and ranking them. Indeed, the scorer is a representation of the skill development strategy of the European learning programmes that participate to the survey. Recalling what was said, creative-oriented skills are the most developed, alongside the entrepreneurial one, demonstrating a general attitude and behaviour around what skills are the most important to be trained and developed in the CCSI, but also the ones that are the most suitable to be provided and coached. More technical or vertical competences, as the ones pertaining the financial, management and evaluation area, are significantly less developed inside the current curricula. Looking ahead, instead, ecological and collaboratively skills report an optimistically and interesting development, also in terms of diversification of competences and dialogue with other sectors, as mentioned in desk research.

Figure 46 - total correlation between skills and targets

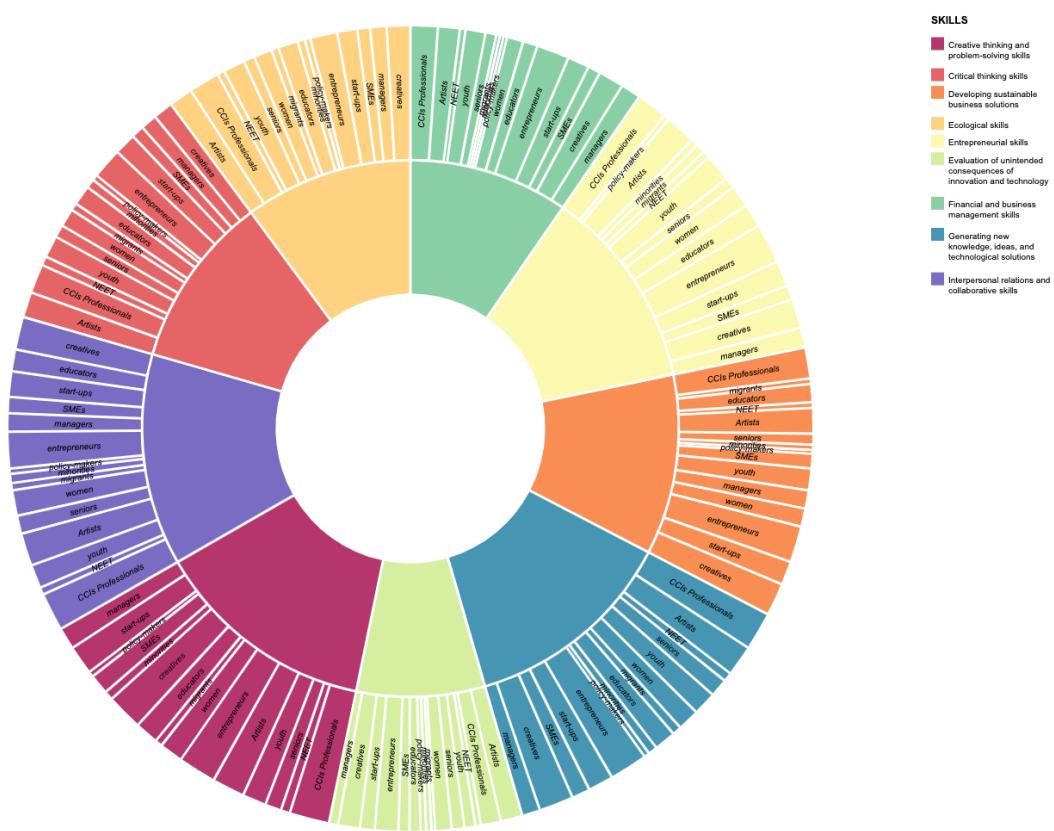
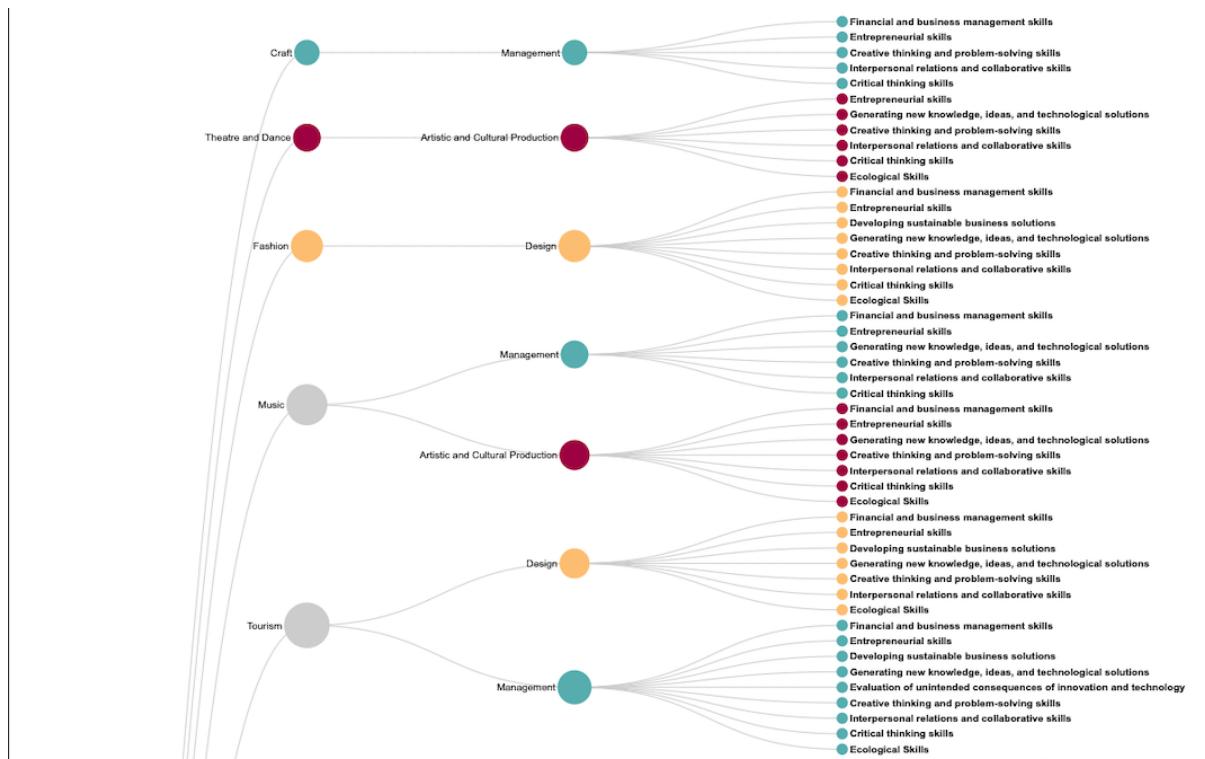


Figure 46, instead, represents a massive information composition, gathering the competence-target correlation results into one articulated view and so allowing an overall perspective.

Moving forward, the next visualisations return a final correlation investigated, among learning programmes' areas and categories of study, and skills developed. This analysis adds another step in the comprehension of the current European formative offer, showing the articulation among these characteristics. Figure 47, 48, 49 and 50 represent the same analysis, divided into 4 sections, due to the extent of it and so improving the reporting of the results and the consultation of the data.

Mapping of existing lifelong learning programmes

Figure 47 - overall correlation between areas and categories of study, and skills - section 1



For example, starting from figure 47, craft educational programmes are mostly based on a management curricula, tending to develop, with almost the same intensity, financial and business management skills, entrepreneurial skills, creative and critical thinking, as well as collaboratively skills. Scrolling through the figure, the scale of the dots starts changing, notifying an increasing number of cases of tourism-based programmes for example, which tend to be more articulated in term of categories and with more heterogeneous curricula.

Continuing moving to the bottom, following a descendent organisation of data, figure 48 starts reporting a differentiation in the density of the skills developed, represented by the different size of the bubbles. In the cases of management curricula for the area of design, for example, developing sustainable business solutions, as well as the creative-oriented skills, are more emphasized than the other mentioned.

Mapping of existing lifelong learning programmes

Figure 48 - overall correlation between areas and categories of study, and skills - section 2

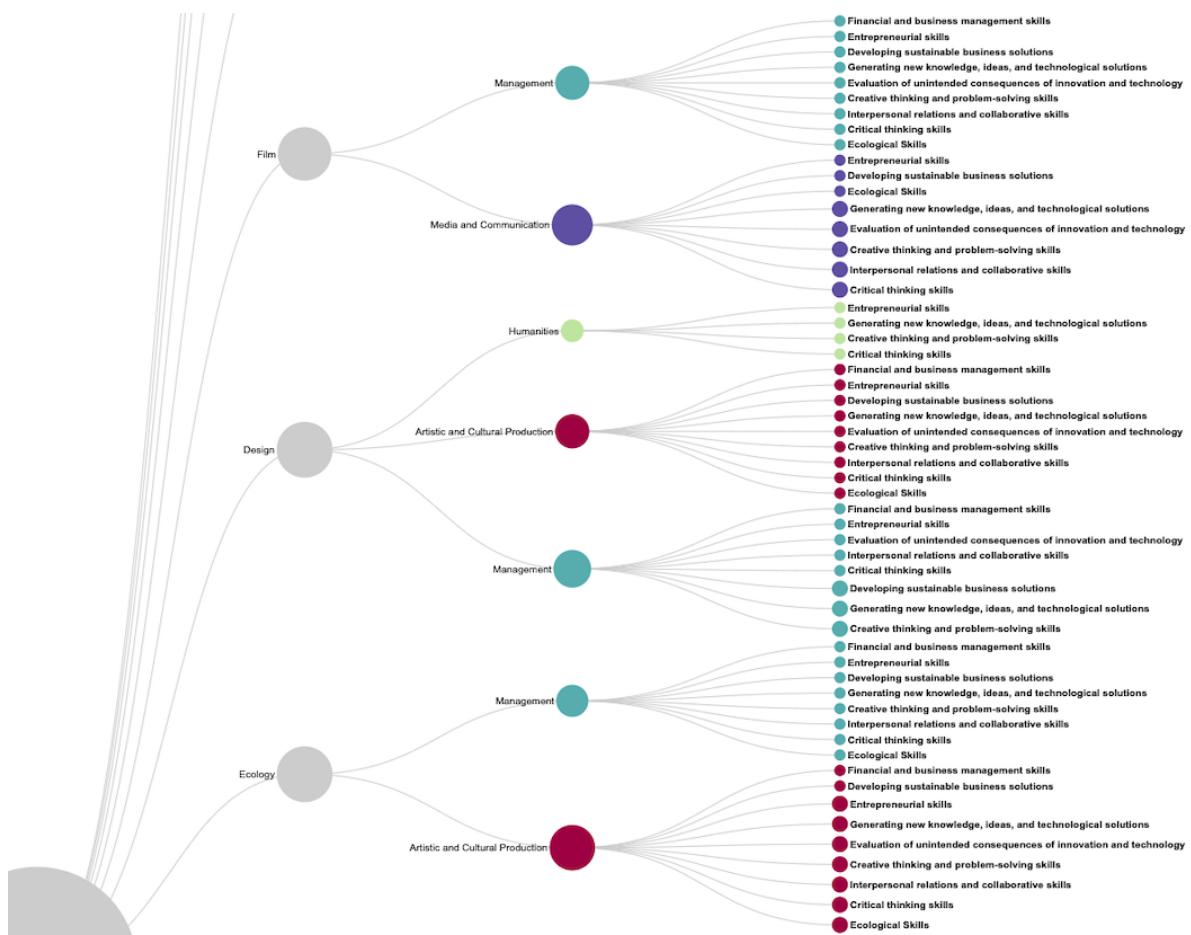
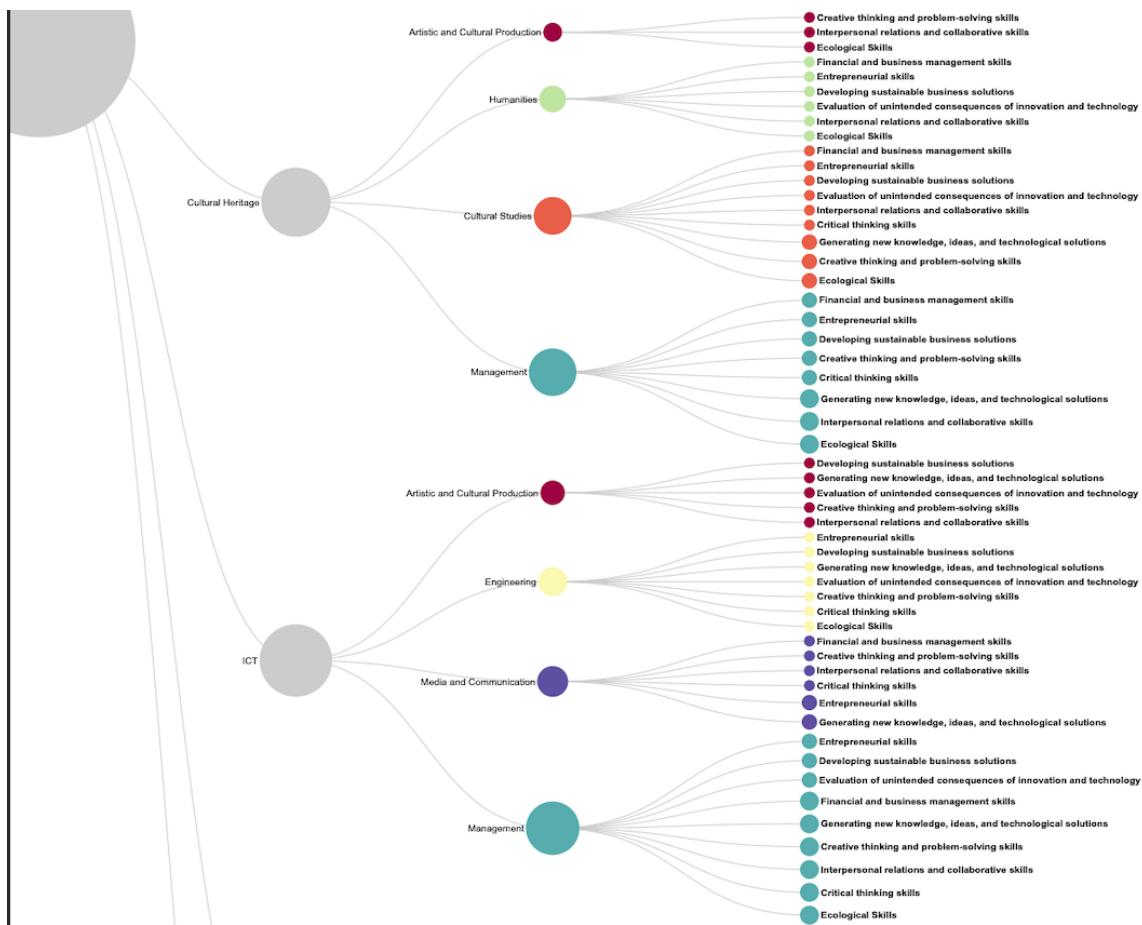


Figure 49 is totally focused on the cultural heritage and ICT learning programmes, demonstrating the density and diversification of curricula of these learning programmes, and the articulation of the competences.

Mapping of existing lifelong learning programmes

Figure 49 - overall correlation between areas and categories of study, and skills - section 3

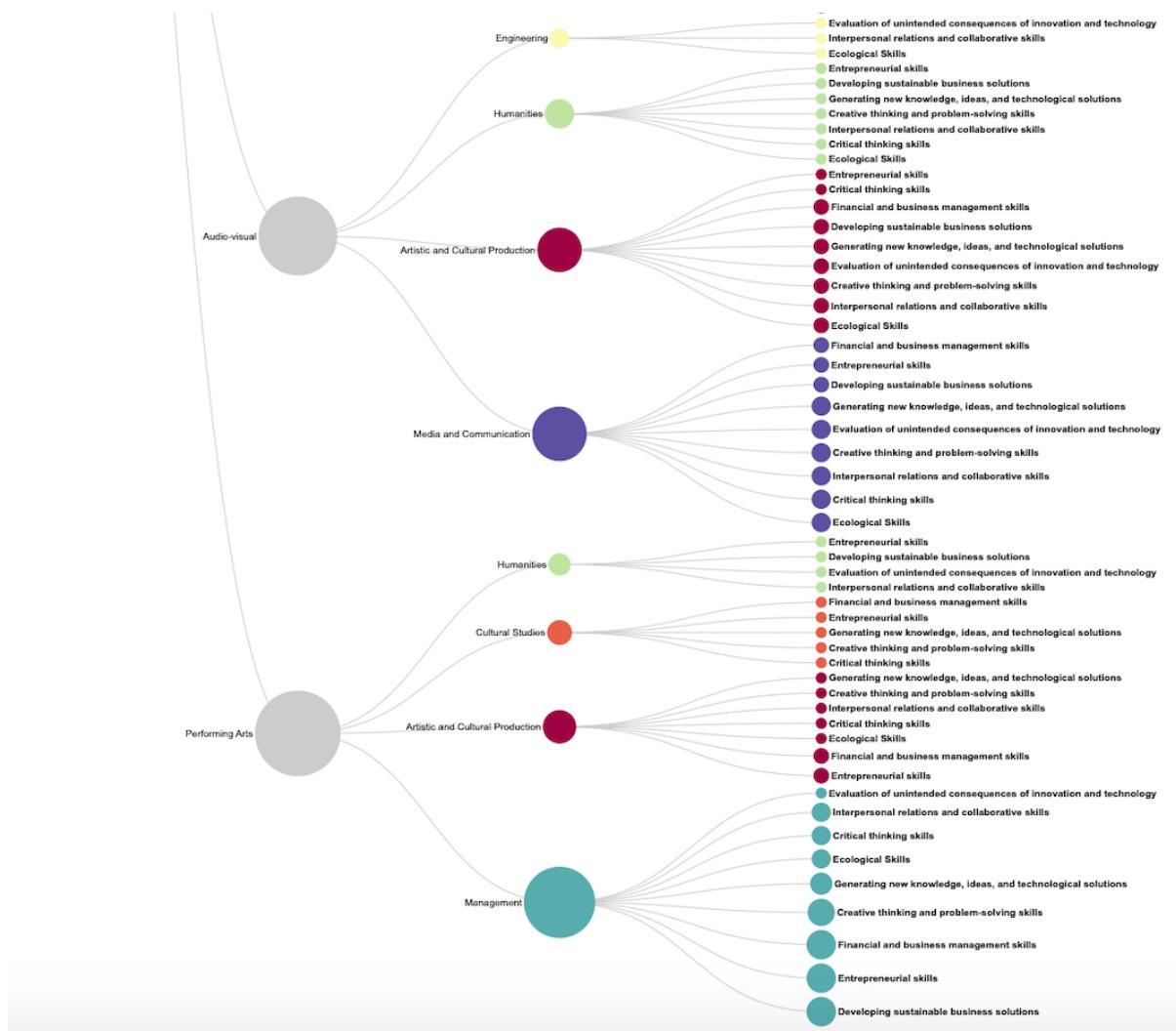


Finally, figure 50 completes the frame reporting the most participated programmes, namely the audio-visuals and performing arts ones. Performing Arts is largely oriented toward management curricula, emphasizing management and financial oriented competences, as well as creatives ones. Audiovisual courses instead are inevitably based on communication and production approaches, without, in this case, a sharp competence orientation.

These visualizations help defining further the overall complexity as well as looking closer how programmes are diversified, on which kind of curricula and categories specific areas of study approach the creation of knowledge, and with which specific skills development. Moreover, they help exploring how long EIT-labelled skills are emphasized in specific curricula and areas of study. In general, these information and correlation can be investigated even more, contributing to the design of specific policies and strategic interventions.

Mapping of existing lifelong learning programmes

Figure 50 - overall correlation between areas and categories of study, and skills - section 4



In conclusion, stressing these correlations provide a clearer definition of the phenomena. EIT-labelled competences have large space for integration and further development. Creativity appears to be focal point of many of the areas of study detected. In general, horizontal/transversal skills seem more developed than vertical competences.

Enabling Innovation-oriented environments

In the last part of the data collection, it has been explored the ability of the learning programmes of promoting innovation and enabling those conditions necessary to foster an innovation-oriented environment.

Figure 51 depicts the overall inclination of the sample to contribute to the creation of significant factors for innovation, the latter resumed here into the next 6 elements:

- Actively promoting student's networks, such as building personal contacts with industry partners;

Mapping of existing lifelong learning programmes

- providing students with information and guidance on intellectual property rights (IPR) aligned with the respective (inter)disciplinary field;
- having a continuous improvement plan in place to support instructors covering e.g. training, shared learning or continuous professional development in the area of innovation and entrepreneurship education;
- adopting inter-/transdisciplinary approaches by including science/technology/knowledge components;
- focusing on addressing broad societal and global challenges;
- having a continuous improvement plan in place to support instructors covering e.g. training, shared learning or continuous professional development in the area of innovation and entrepreneurship education.

Figure 51 - promoting innovation

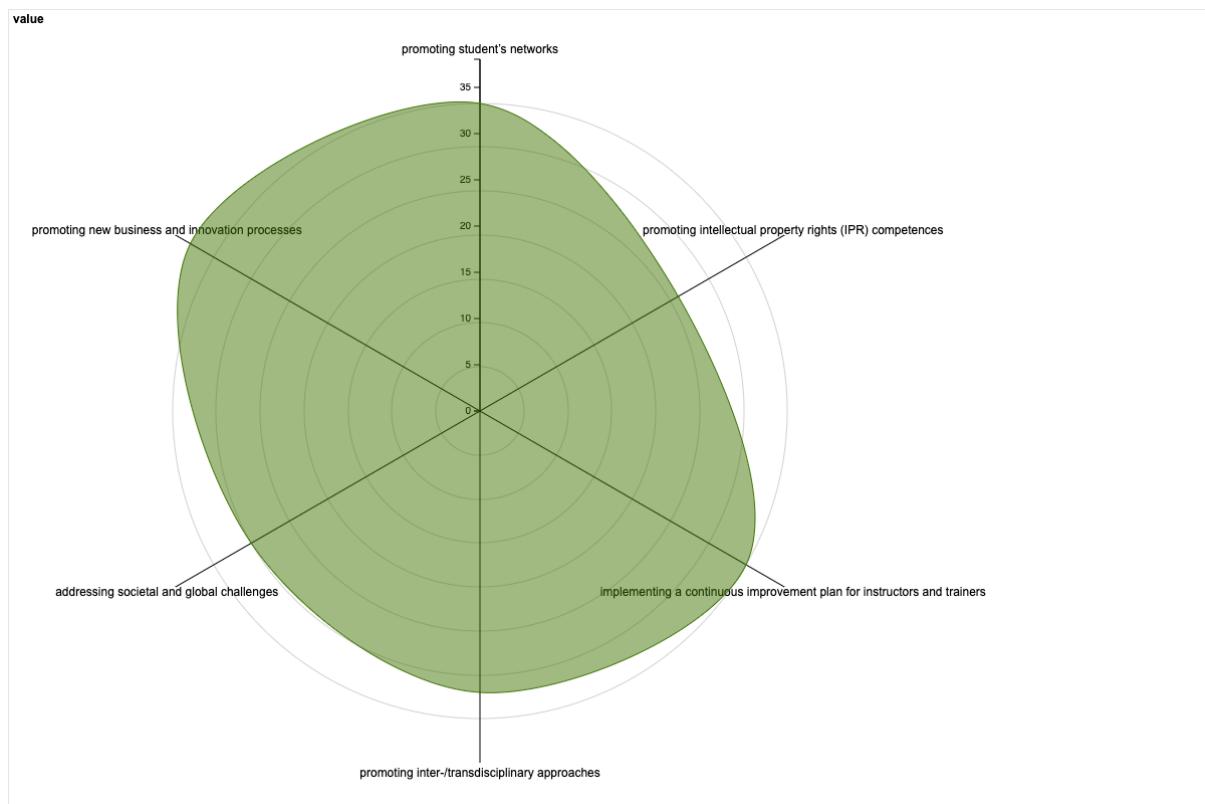


Figure 51 depicts a marked ability of the sample of promoting networking and collaboration among students and organizations, as well as B2B networking, as reported by the 63,64% of positive answers given in relation to the promotion of students' network and the 69,09% of the sample which recognizes the ability to link with new business and innovation processes.

At the same time, almost half (45,45%) of the sample or even more than the half (52,73%) reports to be unable or not currently engaged in focusing the learning programmes on addressing broad societal and global challenges, and provide information and guidelines to IPR (intellectual property rights). Finally, almost the 60% of the total population feel

comfortable in being able to adopt inter-/transdisciplinary approaches by including science/technology/knowledge components.

This scenario visualizes a good inclination of the participants learning programmes in the creation of enabling conditions for exploring and creating new projects and formats, staying in the market and moving forward after the educational period. At the same it appears a good predisposition to crossing disciplines and promoting innovation through transdisciplinarity: in this direction numbers seem encouraging since of the non-discounted ability to think, act and set organizations and education programmes toward a transdisciplinary perspective.

On the other side, the scarcity of formal support to students for covering their creativity and innovation through appropriate knowledge and tools remains probably still the real unique deficiency in a framework which has demonstrated a good overall ability to create enabling conditions for innovation.

Section 5: EU CCIs Learning Program Profiles

This section concludes the precedent analysis by tracing correlated data and so recreating the main two profiles of learning program delivered by CCIs in Europe. These profiles are based on criteria previously analyzed and stress the existing macro correlation among each dimension in order to have these profiles as final result. This retroactive analysis has been done starting from the area of study, so focusing on the main two selected ones, namely “performing arts” and “cultural heritage”. Starting from here, data were mapped through correlation so creating the next learning profiles, shown in table 2 and table 3.

Table 2 - Learning Program Profile 1

PROFILE 1	
Area of Study	Performing Arts
Category of Study (curricula)	Management
Credentials	Certificate
Participation	Hybrid
Approach	No Formal
Duration	Between 1 month and 6 months
Target	Entrepreneurs Creatives CCIs Professional
Main EIT-labelled Skills developed	Entrepreneurial Skills Creative thinking and problem-solving skills Ecological Skills

Table 2 presents the profile 1, which is a learning program in Management of the Performing Arts, conducted hybirdally, with a part in presence and another virtual. This program is mostly dedicated to creatives, CCIs professional and cultural entrepreneurs, and its duration is shorter than 6 months. The education approach is mostly no-formal, and its main goal is the enhancement of entrepreneurial and ecological skills in the participants, as well as their creative thinking approach and problem solving. Finally, the credential of the program is a certificate.

This profile is quite common in Europe. The duration varies from the one here expressed to longer and more formal cases. What is surprising is especially the ecological skill among the ones most developed. This result can be coherent with the transition of these learning program profiles to sustainable-oriented competences, in order to enable participants, and so possible future performing arts manager or current ones, to lead necessary new transitions.

Table 3 - Learning Program Profile 2

PROFILE 2	
Area of Study	Cultural Heritage
Category of Study (curricula)	Cultural Studies
Credentials	Certificate
Participation	Physical
Approach	No Formal
Duration	Less than 1 month
Target	Entrepreneurs CCIs Professionals Artists
Main EIT-labelled Skills developed	Critical Thinking skill

The other profile, reported by table 3, is a cultural heritage learning program with a cultural studies perspective. In this case, the profile is full intense program, shorter then 1 month, based on physical participation. The program is dedicated mostly to artists, CCIs professionals and entrepreneurs, and also in this case is based on non-formal approach. The main skill that the program aims to develop is critical thinking. Finally, also here, the credential of the program is a certificate.

This profile represents a concentrated version of learning, mostly dedicated to upskilling already existing professionals. It is mostly based on horizontal and soft skills and present an interesting approach to cultural heritage, based on cultural studies curricula and on informality.

Both cases represent the most common peculiarities and domains within the population. Following this setting, the profile creation can be enhanced, scaled, so generating possible sample for both policy design and learning format design.

Section 6: Qualitative Compliance with Labour Market

This section has been elaborated thanks to the qualitative contributions of organizations and experts which, during both semi-structured interviews and throughout the survey, provide meaningful experiences and thoughts concerning the compliance between current European learning offer in the cultural and creative sector with future labour market needs, answering then to give related questions, namely is the current offer able to accomplish these aforementioned needs? What are the skills required by the future market?

It is difficult to predict future trends, being ready and well-prepared to anticipate what could be necessary and required. Beyond specific imaginaries and scenarios, conditional information seems declaring the necessity to “enable lifelong learning and make it accessible for all”, as suggested by some of the organizations engaged, which are able to provide these opportunities for free. Continuity and tailor-made care can create the right condition to proceed with confidence toward the future, contributing to support and “consult creatives and CCIs professionals in all lifecycle stages, with face-to-face consulting”. In this direction, it emerges the importance of life learning formats, quickly adaptable to market changes and able to embrace specificity of each participant, as the integration of face-to-face consulting formats into wider educational programmes. New educational formats are required, transversally. Less clear it results the set of competences that are needed by CCIs professionals and creatives. According to different sources, as the World Economic Forum’s report on the future of work 2023 (World Economic Forum, 2023), creativity is at the core of several professional profiles and markets. How to create fluent systems for creatives and CCIs professionals for providing their knowledge and approach? The answer is partially covered by data emerged from the quantitative analysis, which highlight the tendency to valorize and upskill participants to learning programmes in the sector, especially on creativity and entrepreneurship. At the same time, some organizations and participants to the interviews highlight the importance of a continuous dialogue and facilitation with the industries, establishing bridges between peers, and spotlighting the responsibility that CCIs and educational providers have it, in line with data emerged from propensity to enabling conditions for innovation, seen in the previous chapter. Moreover, other participants stress the role of intermediation with relevant industries and sectors, “following advices and demands needs in terms of competences and profiles”. Furthermore, transversality, transdisciplinarity and crossing innovation approaches are strongly suggested and required: in some way the research of transdisciplinary methodology represents the foundation for allowing accomplishing both scenarios previously mentioned, namely the condition for creatives to emerge and lead the change in several sectors, as well as creating strong dialogues with other industries and organizations. Creating a new professional vocabulary and let CCIs professionals and creatives acquire the right competences to dialogue with other peers from other sectors, as well as nurturing creative applications.

The portray just described enhances certain competences instead of others, as for example the digital and green competences, which seem far from a radical adoption in the curricula of the current learning offer examined by this research. This can be the mirror of a general misalignment on the relevance of these competences for the waited profiles of creatives and CCIs professionals. Which kind of digital and green competences is there important to handle by these workers? How deep these competences should be? These questions seem not find proper answers and this fact is in itself an important information, since it means that there are still large spaces for reasonings and still work to do in other to frame the situation.

At the same time, as largely reported by this report, encouraging entrepreneurial skills, “empowering creatives and artists to be more entrepreneurial” seem to be the right direction also for the future of these professional profiles. The general risk of being misaligned with the market, the condition of not having the right tools to be adaptive and economically sustainable in line with the requirement of the market, find a common answer and a line of continuity between present and future evolution of the market, through the “entrepreneurialization” of culture and creativity.

The “entrepreneurialization” of CCIs professionals and creatives is largely adopted as a major answer to possible misalignment. This statement and behavior need to be detailed. The reported number of programmes based on management and the development of entrepreneurial skill suggests an overall awareness of the necessity of providing, and so acquiring this set of competences in the sector, in order to proliferate cultural and creative entities, make them independent and able to sustain themselves. After all, the “entrepreneurialization” is already an answer to how the market has changed during the last decades in Europe, namely stressing privatization, reducing the impact of national welfare policies, increasing “attention” competitiveness and globalizing itself. In this direction, “entrepreneurialization” has been used as a necessary journey to strengthen CCIs and make them more and more adapt to current market requests. This approach pushes CCIs and their professionals to being more oriented to collaboration and exploring/expanding the boundaries of what a cultural organization and professional does and is. This passage is fundamental: “entrepreneurialization” can be considered not only as a set of tools and skills, but more as a necessary approach or what it has been called by an interviewee “a set of soft skills”. Indeed, when referring to “entrepreneurialization” as an approach, it means suggesting that it concerns more the ability to break the boundaries and manage, lead and work as CCI professional without being forced to intend cultural and creative production in a canalized way, but opening possibilities, overcoming silos, so acting entrepreneurially.

Is “entrepreneurialization” what the future labour market needs by CCIs professionals and creatives? This answer could not be univocal. Model of learning and professionalization seem to “still follow an industrial model, where competences are vertical and not transversal, where teaching is organized in silos”. If this is still the dominant model, it is understandable that the majority of the organizations states they are focused on providing skills for “finding

job, positioning in the job market". On the other side, market and its future development seem to be more and more connected with the increasing complexity of the world, and its rapid shifting. It requires the existence of new models. In this way, the point moves from how to be an entrepreneur, to how to navigate this complexity, adapt quickly and being able to keep learning. Gathering participants answers, these points can be met following the next dimensions:

- Creative Application. Extensively recognized as the major set of competences and approach developed through current learning programmes, the ability to deal and flow creativity is hardly fundamental to navigate future complexity. "Future societies will need arts and creatives application", meaning that professionals and human practices will need a more aware usage of creativity, outside silos and boxes, flowing into several praxis. This implies the ability and awareness of reinventing professionals' profiles and rethinking the entire CCSI in relation to their ability to dialogue with other human domains, stimulate adaptability and creativity application.
- Social Potential. Developing social potential means overcoming the separation among what should generate social value and what not, and thinking organically, ecologically and circularly about human existences and practices, so that operating and generating goods and services, knowledge or objects should always be social sustainable and be able to include "values and human rights, since it is the basis for superior performances". The cost of not thinking and operating in this way generates "externalities costs", as mentioned by participants.
- Life-learning. It is overall recognized the necessity of establishing more adaptable and continuous learning systems, able to overcome verticalization of sectors and disciplines, rethink the way we learn and the way we certificate those skills, moving from courses/programmes to learning environment/context, where "the competences you have are those that you handle and use". This point is based on the previously mentioned assumption, i.e., the rapidity of current and future changes that requires equal ability to provide adaptive learning model. This probably means thinking more in terms of changing learning environment instead of programmes, since the latter imply finitizes and uniqueness.
- Certification. How to make skill evident is a problem especially of those disciplines and domain where skills are mostly intellectual, immaterial, not output-oriented, namely the majority of skills of the CCIS. Participants spotlight the necessity to hardly rethinking current framework and certifications, taking into consideration what previously mentioned about life-learning.

Conclusions

This report concludes a research journey of almost one year, where a first stone has been put in the EIT and European effort of creating a huge competitive, innovative and social sustainable learning environment. During the “year of competences” this work has tried to enlighten what the current situation appears and what need to be still done to arrive to the aforementioned ambition. The current scenario is important to have more tools and information on how to design next policies, how to implement effective actions in the sector.

Enough space remains to improve this research, encouraging a rolling research process, as well as an observatory on the European cultural and creative learning offer. Materahub will be in charge of keeping the survey open and accessible to all, through a dedicated virtual space. At the same time, alongside the EIT several actions can be implemented in order to refine the research proxies and domains. In this direction, it is necessary to still enhance the number of participants in order to expand the sample and so the final accuracy of the collected data.

Moreover, the research focuses on learning programmes and so program officers, managers and professionals in charge of the education. It contributes to provide an accurate overview of the essential data for an efficient mapping analysis. At the same, due to the research topic, thinking about a students’ perspective integration of the current research will be fundamental to further investigate the impact generated by educational formats, the compliance between expectations and offer, and understanding professionals needs.

Another important effort that needs to be taken into consideration for future development of the research is the possibility of setting a longitudinal data collection, repeating the latter periodically and further investigating the impact dimension. In this way, it could be explored the way learning programmes change during the time, studying competences’ trends.

In this direction, EIT labelled competences need to be enhanced by a wider variety of possible skills, obtained and traced by an inductive process of data collection, systematization and labelling of these skills.

Moreover, the future perspective is really important in order to lead operators and professionals work in terms of policy design, programmes design, skill development. This part of the research can be eventually enhanced implementing another data collection section with HR manager, recruiter, job expert, philosopher, policymaker that can make the future needs’ analysis robust and possibly quantitative, through the creation of adequate proxies, in order to make the conversation even more challenging and comparable. In addition, a case study analysis of competitive, innovative cases of learning environment, life-learning programmes and skills development can be enhanced in order to encourage practitioners, students, professionals and policymakers to lead the change.

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The wish and hope contained in this research is to keep researching on this topic, giving a significant contribution for the development of the entire sector.

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List of Abbreviations

Abbreviation	Description
EIT	European Institute of Innovation and Technology
KIC	Knowledge and Innovation Community
CCSI	Cultural & Creative Sectors and Industries
SDGs	Sustainable Development Goals
UN	United Nations
EC	European Commission
EU	European Union
CCIs	Cultural and Creative Industries
NGOs	Non-Governmental Organisation
NQF	National Qualification Framework
ESG	European Standard and Guidelines
EQF	European Qualification Framework
HEI	Higher education institution
ESCO	European Skills, Competences and Occupations
IPR	Intellectual Property Rights

Appendix A: The survey

This survey aims at gathering fundamental information concerning the production and offering of learning programmes for upskilling and re-skilling of Cultural and Creative Industries (CCIs), around Europe. Learning more about the state of cultural and creative industry education programmes across Europe will provide conditions for understanding current gaps and future opportunities to improve the relation among CCIs, students, institutions and the market. Indeed, the objective of this mapping practice is stimulating a general improvement of the learning offer.

This survey is being conducted by researchers at the EIT Culture & Creativity consortium, a group of academic, sector, and industry partners working with the European Institute of Innovation & Technology to strengthen the creative and culture sectors in the EU.

To achieve this, the survey is divided in two parts.

The first part is dedicated to the respondent organisation, where it is located, which one is the sector where it operates and its typology. Gathering information about the organisation is as fundamental as understanding its learning programmes. Indeed, it guarantees the possibility to trace an effective map of CCIs dedicated to training, and their characteristics.

The second part is vertically dedicated to the learning programmes offered by the organisation, their characteristics and quality, their target, and the compliance between the programmes and both the labour market and the EIT standards.

Finally, attached to this survey, there is a partner list, namely a document where the respondents can indicate possible organisation to include in the mapping, and so contributing to the research.

Please be assured that your responses will be kept completely confidential.

Your participation in this research is voluntary. You have the right to withdraw at any point during the study, for any reason, and without any prejudice. If you would like to contact the researchers involved in this study, please e-mail us at carloferretti@materahub.com

**Mapping of existing lifelong learning programmes and VET programmes
for upskilling and re-skilling of CCIs**

Part 1 - General Information on the Organisation

This part of the survey is dedicated to your organisation, positioning it on the map of the cultural and creative training offer around Europe. These data will give the possibility to create an important accessible archive of information, and a relevant correlation among the organisations and their learning programmes.

NAME AND SURNAME OF THE RESPONDENT	Free text HERE
POSITION OF THE RESPONDENT IN THE ORGANISATION	Free text HERE
NAME OF THE ORGANISATION	Free text HERE
TYPOLOGY OF THE ORGANISATION	Choose an Option
SECTOR OF THE ORGANISATION	Choose an Option
COUNTRY OF ORIGIN OF THE ORGANISATION	Choose an Option
CITY OF ORIGIN OF THE ORGANISATION	Free text HERE
WEBSITE	Free text HERE

Mapping of existing lifelong learning programmes and VET programmes for upskilling and re-skilling of CCIs

Part 2 - Learning Program

This part of the survey is dedicated to the learning program. In order to fill it up, please focus on a specific program among your portfolio of educational offer. If you have more than one learning program, please feel free to copy this board many times as required, in order to have one sheet per learning program. Please take into consideration that a learning program is not a single course, but a purposed articulated educational structure, with a specific learning goal and target.

The survey is divided in order to firstly gather general information about the program, and secondly exploring some qualitative information regarding the quality of the educational offer, and its compliance with the labour market and with the EIT (European Institute of Innovation and Technology). The latter required a vertical analysis of the innovation and entrepreneurship mindset developed by the program.

Part 2.1 - Learning Program General Information

Name of the Learning Program	Free text HERE
Brief Description of the Learning Program	Free text HERE
Area of Study	Choose an Option
Topic	Free text HERE
Category	Choose an Option
Credentials	Choose an Option
Language	Choose an Option
Target Students	Free text HERE

Origin of the Target Students	Choose an Option
Type of Participation	Choose an Option
Educational Approach	Choose an Option
Runtime	Free text HERE

Part 2.2 - Quality of the Learning Program	
Is the Learning Program aligned with the European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET)?	Choose an Option
Is the Learning Program accredited or recognized through the EQF (European Qualification Framework)?	Choose an Option
Does the student selection process include criteria for the assessment of students' entrepreneurial potential?	Choose an Option

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Is the Learning Program aligned with the European Entrepreneurship Competence Framework (ENTRECOMP)?						
Is there a tracking system of students' careers after the end of the learning program?	Choose an Option					
Does the implementation of your program include academic partner?	Choose an Option					
If yes, Are the academic partners engaged in:						
curriculum development	Choose an Option					
teaching activities	Choose an Option					
Does the implementation of the programme include non-academic partners (ex. industry, business, government partners, etc.)?	Choose an Option					
Are the non-academic partners engaged in:						
curriculum development	Choose an Option					
teaching activities	Choose an Option					
placement, internship or field activities	Choose an Option					

Are the academic or non-academic partners from at least 2 different countries?	Choose an Option
Does the programme require from students to study across organisations (either physically, virtually, or blended)?	Choose an Option
Does the programme require from students to study Internationally (either physically, virtually, or blended)?	Choose an Option
With regards to the learning programme as a whole, are strategies and policies in place to enhance inclusion, diversity and non-discrimination, including targets and monitoring mechanisms?	Choose an Option
In relation to the previous question, if yes, can you report the strategy/policy?	Free text HERE
Does the programme provide an internship/ apprenticeship/ job training experience?	Choose an Option
Is the Learning Program the output of a European Project?	Choose an Option

PART 2.3 - Learning Program Compliance with the EIT Standards

What is the level of emphasis that your learning program put on the following areas in terms of learning outcomes and skill

Mapping of existing lifelong learning programmes

development?				
Entrepreneurship Skills and competencies				
Financial and business management skills	Learning Outcomes	Highly emphasised	Skills Development	Choose an Option
Entrepreneurial skills	Learning Outcomes	Choose an Option	Skills Development	Choose an Option
Developing sustainable business solutions	Learning Outcomes	Choose an Option	Skills Development	Choose an Option
Innovation skills and competencies				
Ability to generate new knowledge, ideas, and technological solutions	Learning Outcomes	Choose an Option	Skills Development	Choose an Option
Evaluation of unintended consequences of innovation and technology	Learning Outcomes	Choose an Option	Skills Development	Choose an Option
Creative skills and competencies				
Creative thinking and problem-solving skills	Learning Outcomes	Choose an Option	Skills Development	Choose an Option
Intercultural skills and competencies				
Interpersonal relations and working collaboratively with people across cultural or national barriers	Learning Outcomes	Choose an Option	Skills Development	Choose an Option
Making judgements and sustainable competencies				
Critical thinking and analysis of arguments and information	Learning Outcomes	Choose an Option	Skills Development	Choose an Option
Ability to identify short- and long-term consequences of decisions in terms of sustainability and the environment	Learning Outcomes	Choose an Option	Skills Development	Choose an Option

Leadership skills and competencies	Learning Outcomes	Choose an Option	Skills Development	Choose an Option
Leadership skills				
With regards to the topic of innovation, does the learning programme				
Actively promote student's networks, such as building personal contacts with industry partners?	Choose an Option			
Provide students with information and guidance on intellectual property rights (IPR) aligned with the respective (inter)disciplinary field?	Choose an Option			
Have a continuous improvement plan in place to support instructors covering e.g. training, shared learning or continuous professional development in the area of innovation and entrepreneurship education?	Choose an Option			
Adopt inter-/transdisciplinary approaches by including science/technology/knowledge components?	Choose an Option			
Focus on addressing broad societal and global challenges?	Choose an Option			
Link up with new business and innovation processes?	Choose an Option			

PART 2.4 - Learning Program Compliance with the Job Market

How does your learning program contribute to the current and future labour market?	Free text HERE
How does your learning program address current training needs of the labour market?	Free text HERE
What is the level of placement derived from your learning program?	Free text HERE
How does your learning program encourage digital and green competences?	Free text HERE
How does your learning program encourage digital and green competences?	Free text HERE
Are you interested in being contacted in the future as a follow up to this survey research? (yes/no)	Choose an Option

Appendix B: Data Management Plan

This part of the methodology is important in order to provide guidelines for dealing with data, and provide all the necessary information to conduct an effective, reliable and valid data collection. This is necessary as, whilst supported by a clear line of responsibility, the data collection will be in the hands of several stakeholders.

Reliability and Validity of Data

Although the terms “reliability” and “validity” seem to be almost synonymous, they have significant and distinct definitions in relation to data.

Reliability is fundamentally concerned with issues of consistency of measures. There are at least three different meanings of the term, which are stability, internal reliability and inter-observer consistency.

- Stability. This consideration entails asking whether a measure is stable over time, so that we can be confident that the results relating to that measure for a sample of

respondents do not fluctuate. The most obvious way of testing for the stability is retesting the data with a different kind of sample, or in the calculation itself. However, there is no easy way of disentangling the effects of a lack of stability. There are no clear solutions to these problems, other than by introducing a complex research design and so turning the investigation of reliability into a major project in its own right. However, in order to bypass a stability problem, and generally lack of reliability, this guide recommends that data set and sources already validated as part of national and international statistic institutions are used.

- Internal reliability. This meaning of reliability applies to the relation to multiple-data measures. It means that when dealing with a multiple-item measure in which each respondent's answer to each question is aggregated to form an overall score, the possibility is raised that the indicators do not relate to the same thing; in other words, they lack coherence. It is fundamental to assure that all indicators are related to each other. If they are not, some of the items may actually be unrelated and therefore indicative of something else.
- Inter-observer consistency. When a great deal of subjective judgement is involved in activities of data collection, from surveys to observations where more than one 'observer' is involved in such activities, lack of consistency in decisions can arise. For this reason, it is important to rely on the guidelines of responsibility previously described, and avoid having several different agents responsible for the collection of the same data.

The issue of measurement validity has to do with whether a measure of a concept really measures that concept. This problem is partly dammed by the work of this guide, meaning that, the analysis and proposals of specific paths for obtaining necessary data is based on the effort of already providing valid data and source for verification.

Cost and Sustainability of Collecting Data

As stated in the previous paragraph, it is not only important to collect data but also how it is collected. Validity and Reliability are both fundamental qualities, and therefore necessary indicators. The literature often refers to Objectively Verifiable Indicators (OVI) so that anyone may check the indicator and its measurement should not change according to who runs the check or according to who interprets its constitutive elements. Finding valid, reliable and verifiable data has a cost, which is precisely the cost of data collection.

Indeed, the cost of collecting data refers to the amount of time, effort and sometimes economic resources to achieve data we consider necessary for a particular indicator. When data is collected, one must always keep in mind the cost of collecting that data and the unavoidability of those information for obtaining a valid, reliable and verifiable indicator. It could happen that sometimes the cost is so high that finding another source of verification or

proxy is the best solution, even at the risk of partly affecting the final one of the qualities aforementioned. It means that the overall operation should be sustainable.

The sustainability of a data collection could so be described as follows: given a set of possible sources of verification, variables and proxies, in relation to the data needed to obtain a specific indicator, it should be chosen the one that:

- describes best the objective achievement;
- is the least costly and easiest to measure;
- is most relevant in respect to the activities that are undertaken for that result.

Technical features of data management and storage

When dealing with high quantities of data, is really important having a clear strategy for storing and managing data. As such, the data responsibility strategy proposed in this section will be followed by Materahub. Coherently, it is fundamental in guaranteeing a secure way to manage the data.

To achieve this goal, data management is organized starting from a first and second procedure of characterization and description of the dataset expected to be acquired/processed/generated by the project. In addition to them, data needs to be classified further in order to create a direct, and easily accessible correlation between data collected during 2023 and possible future data collection, creating an easy way to align organizational data in a longitudinal perspective. In this direction two repository have been created: one reporting data per respondent, one with aggregated data per each question. These sheets will be used and systematically to provide a standard repository for all the future enhancement.

Data Privacy Management

Data protection aims at guaranteeing the individual's right to privacy. It refers to the technical and legal framework designed to ensure that personal data are safe from unforeseen, unintended or malevolent use. Data protection therefore includes e.g. measures concerning collection, access to data, communication and conservation of data. In addition, a data protection strategy can also include measures to assure the accuracy of the data. In the context of research, privacy issues arise whenever data relating to persons are collected and stored, in digital form or otherwise. The main challenge for research is to use and share the data, and at the same time protect personal privacy. In order to ensure respect for data protection and privacy, the EUI has adopted a Data Protection Policy that must be respected by all EUI members and which is inspired by the EU data protection rules. As a source of further reference, the EU General Data Protection Regulation (GDPR) contains a number of key principles for the processing of personal data. This Regulation provides the legislative framework for data protection and privacy issues in the Member States of the European Union. In the same way, EU Regulation 1725/2018, provides the rules for the processing of

personal data by the EU institutions, bodies, offices and agencies. When the planned research includes processing of data carried out in a EU- Member State, applicants need to identify the applicable local or national legal requirements and the competent authorities, which can provide any necessary authorizations.

In this regard, it is important to clarify the meaning of personal data and sensitive data. Both will be processed during the data collection process, especially in relation to local extraction of data and tailor-made tools. In this regard, it is fundamental to design these tools in order to manage properly eventual personal and sensitive data and take care of rights.

- Personal Data means any information relating to identified or identifiable natural persons referred to as “data subjects”. Identifiable persons can be both:
 - Direct;
 - Indirect, in particular by reference to any identification number or to one or more factors specific to their physical, psychological, genetic, intellectual, cultural or social identity.

When dealing with personal data we need to keep in mind that the processing must be necessary and proportioned, and the data should be processed:

- for specified, explicit and legitimate purposes and not further processed in a way incompatible with these purposes;
- only when adequate, relevant and not excessive in relation to the purpose/s (e.g., by minimizing collected information/database fields);
- fairly and lawfully;
- accurately and kept up to date;
- in line with data subjects' rights, including the right to be forgotten;
- in a secure manner;
- in a form, which permits identification of data subjects for no longer than is necessary for the purposes for which the data were collected or for which they are further processed;
- for no longer than necessary for the purposes for which they were collected ('retention period');
- under the responsibility and liability of the Data Controller, who ensures and demonstrates for each processing operation compliance with the Data Protection Policy.

Sensitive data, on the other hand, is data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, trade-union membership, genetic data, biometric data, data concerning health and data relating to sexual orientation or activity. As a rule, the processing of sensitive data is prohibited. However, Article 8 of the EUI's Data Protection Policy, provides for specific circumstances, which allow for the processing of sensitive data. The most common approach, following research, is use of such data following the subject's explicit consent.

