CREATIVE COMMUNITIES FIRST

IO3: HEI Pedagogic Framework and Online Hackathon Guide for CCF's e-Service Learning

www.creativecommunities.eu

2021-2023
CREATIVE COMMUNITIES FIRST PROJECT

IO3 is co-led by
ACEEU and Vilnius Tech

Co-funded by the Erasmus+ Programme of the European Union

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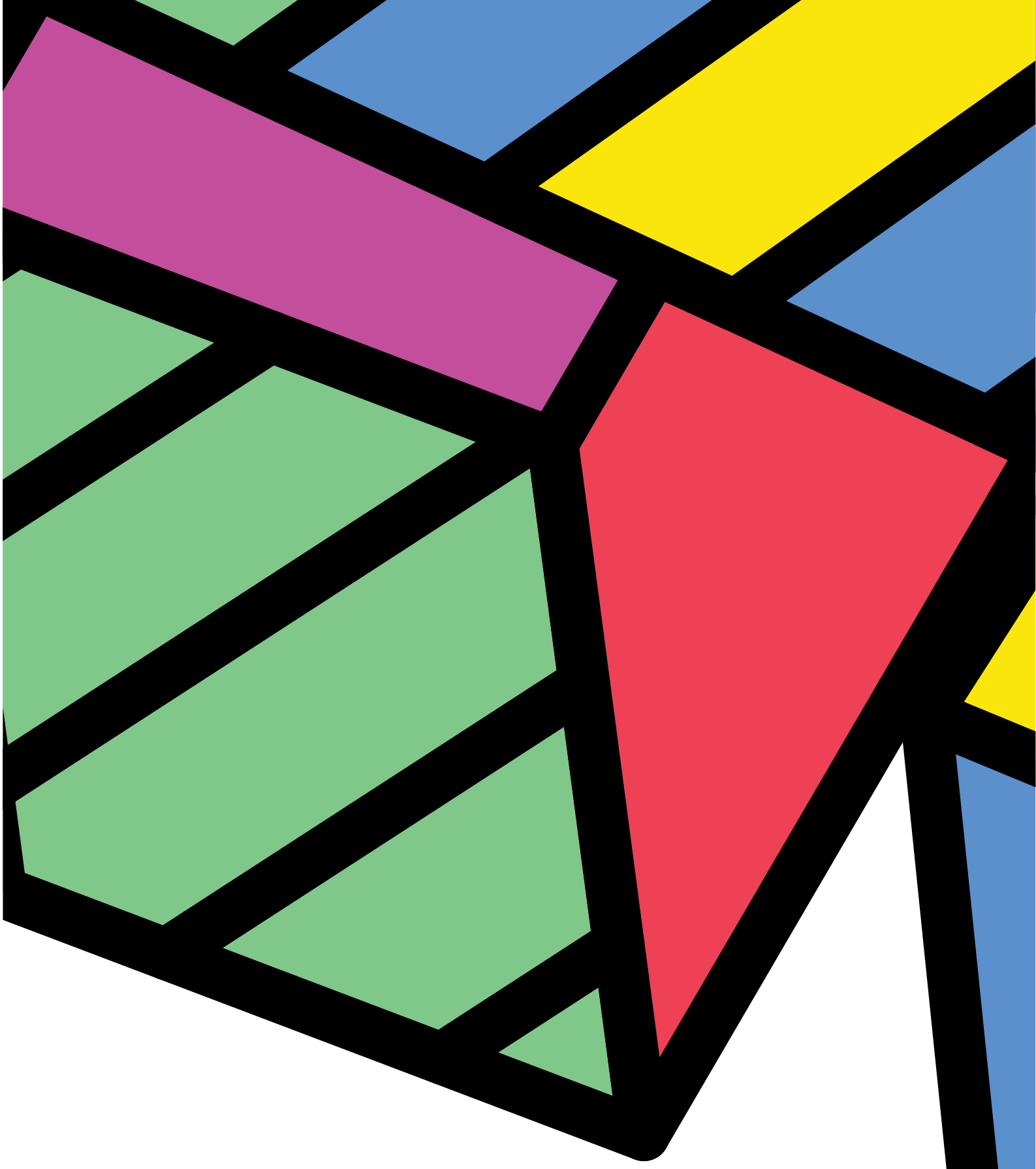

01

INTRODUCTION

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Creative Communities First Project

Creative Communities First (CCF) is a project under Erasmus+ programme, that unites 6 European partners to support HEI educators to digitally transform their teaching methods via e-service learning and online hackathons leading to increased levels of 21st century skills of staff and students and also - the rejuvenation of small, local, creative communities in the process.

CCF project seeks to forge an effective and replicable HEI led digital model for creative industries training and support in communities. It recognizes the key role the creative economy has to play in regenerating Europe post COVID as it straddles economic, social, cultural and technological issues and is at the crossroads of the arts, business and technology. CCF is also mindful of the transformational power of higher education institutions and new partnership formats as engines of social mobility, innovation and equality of opportunity.

CCF will employ e-service learning as a key mechanism to enable HEI educators (TARGET GROUP 1) and students (TARGET GROUP 2) to create meaningful COVID19 supports for regional creative industries sector. E-service learning is an innovative approach that uses technology to deliver service learning programmes and approaches. Service learning is an educational approach that combines learning objectives with community service in order to provide a pragmatic, progressive learning experience while meeting societal needs.

CCF will involve HEI students in creative community e- service learning with creative community collectives and stakeholders (TARGET GROUP 3). Facilitated via the CCF Digital Open Innovation Platform, this service learning opportunity will provide students with an opportunity to apply the learning from their HEI educations and effect positive change at community level. In this way, as a pedagogic approach, e-service learning not only benefits creative practitioners and their communities, it also puts students 21st Century (problem solving, creativity, analytic thinking, collaboration, virtual communication, ethics, action, and accountability) skills into practice.

During the project implementation period, partners developed the Digital Open Innovation and Education Platform accessible via www.creativecommunities.eu. Additionally, a Guide to the Sustainable and Regenerative Development of EU Creative Economies and Communities Post COVID19 has been created. The third project result - HEI Pedagogic Framework and Online Hackathon Guide for CCF e-Service Learning - provides a transferable and replicable model of HEI led immersive e-service learning (facilitated via the CCF DOIP and online hackathons) which has the power and potential to rejuvenate small, local, creative communities adversely impacted by the COVID19 crisis.

The HEI Pedagogic Framework and Online Hackathon Guide

CCF's HEI Pedagogic Framework and Online Hackathon Guide embraces the third mission of universities and fosters the concept of "future universities" as precincts of innovation collaborating with industry to solve real-world problems.

This resource combines an innovative pedagogic framework built on the concept of e-service learning and a practical online hackathon based on collaborative problem solving, in a unique and high impact manner.

Through the HEI Pedagogic Framework and Online Hackathon Guide the *Creative Communities First (CCF)* project will contribute to promote the civic engagement and responsibility in the HEI sector to reach out and use the resources at its disposal (skills and knowledge of educators and students) to contribute to positive civic, economic and societal change.

Covid-19 Challenges

COVID-19 and the quarantine have had a dramatic impact on employment for many. However, according to a new UNESCO report, it has hit the cultural and creative industries sector extremely, with 10 million jobs lost in these sectors worldwide in 2020. This has affected not only individuals but also the wider economy, wiping $750 billion off the global value of the cultural and creative industries. Job losses have catalysed a rush into the digital space that was already underway by 2020.

Also, national reports clearly demonstrate that the COVID-19 pandemic has had a profound effect on cultural and creative industries worldwide. However, the current crisis has revealed a serious lack of consistent and equal response capacity across the sectors in both developing and developed countries.

To survive in this difficult environment, stakeholders needed to react rapidly and develop new, more resilient ways of functioning. Creative industries sector had to restructure their business models and find new ways how culture is produced and enjoyed as well as how education and research are undertaken.

The rapid implementation of digital tools in their functioning during the COVID-19 pandemic (on-line tours, exhibitions for museums, etc.) enabled some institutions to partially overcome the closed doors. The switch to the online context was easier for some organizations due to the nature of their activity and the presence of investments to accomplish the digital shift or by the fact that the digital shift was already part of their program of development, therefore the pandemic just accelerated its implementation.

Following the global changes with this project we seek to support HEI educators to digitally transform their teaching methods via e-service learning. Future universities will be places where university and industry are co-located and collaborate on projects that solve real-world problems. They will become precincts of innovation that actively apply research for community impact and broker relationships between young entrepreneurs and mentors, supports and funders.

This shift to the future role of universities has already begun and pre-COVID the HEI sector was moving from sole education towards a more active role in regional economic and community development. However, COVID has stalled and hampered this. The sudden transition to online and distance learning has prioritised the delivery of core curriculum and in the absence of digital means to progress their third mission, it has been more or less abandoned.

02

GOALS

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Why producing a pedagogic framework and online hackathon guide?

The CCF project believes that e-Service Learning has the power and potential to rejuvenate small, local, creative communities adversely impacted by the COVID19 crisis. As a result, this resource aims to create **a transferable and replicable model of HEI led immersive e-service learning** (facilitated via the CCF Digital Open Innovation Education Platform (DOIP) and CCF online hackathons) which will inform HEIs on the conceptual structure of how HEIs can provide e-Service Learning to respond to the real problems faced by the community. The Framework will focus on how to support HEIs in designing a virtual collaboration with the creative communities to co-create solutions to solve real-world problems. The framework will be highly replicable to be used across Europe by a wide range of universities and a range of faculties (Arts, Business, ICT, etc.)

The second deliverable produced in this resource is a guide to organizing an online hackathon. The guide will consist of **practical knowledge on how to deliver e-Service Learning through an online design sprint-like event** based on the learnings of the CCF project. The guide will be created following the CCF's HEI Pedagogic Framework for e-Service Learning.

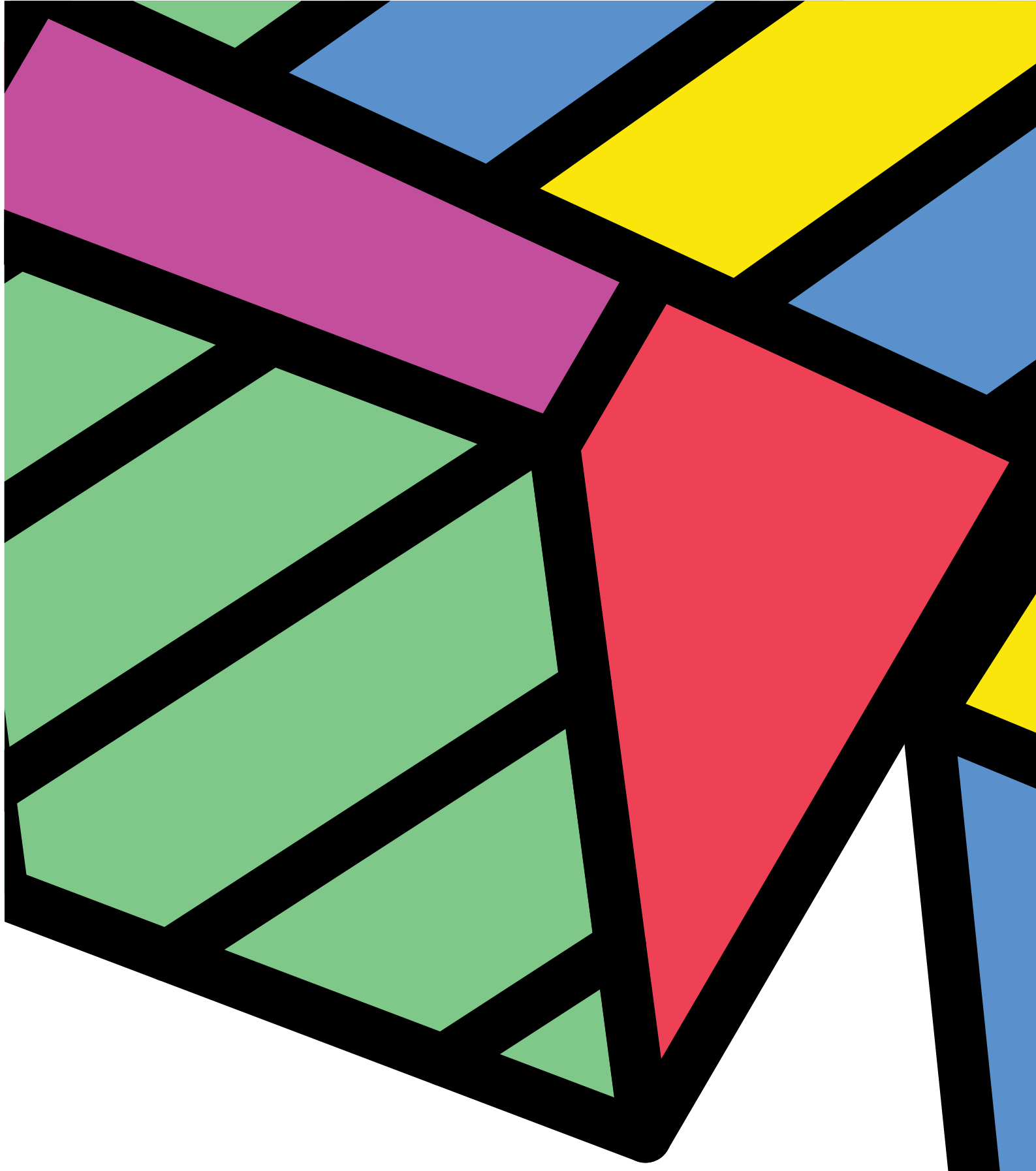
About the Goals of the HEI Pedagogic Framework and Online Hackathon Guide

Our goal with this resource is to produce an innovative and transferable knowledge and practice that:

- Combines pedagogic approach and digitalization (e-service learning and online hackathon) to support HEIs in advancing their so-called "third mission" and provide an immersive and applied learning experience for their students
- Supports HEIs students to acquire 21st-century skills and attitudes such as collaborative problem-solving, interpersonal communication, critical thinking, self-efficacy as they co-create creative industries solutions
- Allows creative communities to benefit from the knowledge and innovation transfer from HEIs to support them in rejuvenating and regenerating post COVID 19 and better prepare their outlooks and business models in the future

Who can use this HEI Pedagogic Framework and Online Hackathon Guide?

This resource was produced specifically for HEIs educators (academic staff) and students, corresponding to TARGET 1 and TARGET 2 of the CCF project. The HEI Pedagogic Framework and Online Hackathon Guide will be tested by the university partners of the project, with the aim to not only improve the overall resource but also to contribute to adapt the framework and guide to different HEI contexts in order to make a useful resource able to be reproduced and used by the target groups on a global scale.



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HEI PEDAGOGIC FRAMEWORK

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What is a Pedagogic Framework?

A pedagogical framework is a teaching system consisting that usually encloses different elements which aim at guiding educators at implementing their teaching in a systemic way. Pedagogic frameworks usually include a set of believes that encourage educators to implement the framework, a series of steps that can facilitate its implementation and scientific fundamentals, namely they are built on research and tests.

What are the benefits of Implementing an HEI Pedagogic Framework?

Based on the results of the desk research and interviews conducted by the Creative Communities First consortium, the HEI Pedagogic Framework was created to benefit and support higher education institutions and universities to implement a pedagogic approach and model that could facilitate the implementation of e-service learning in their institutions.

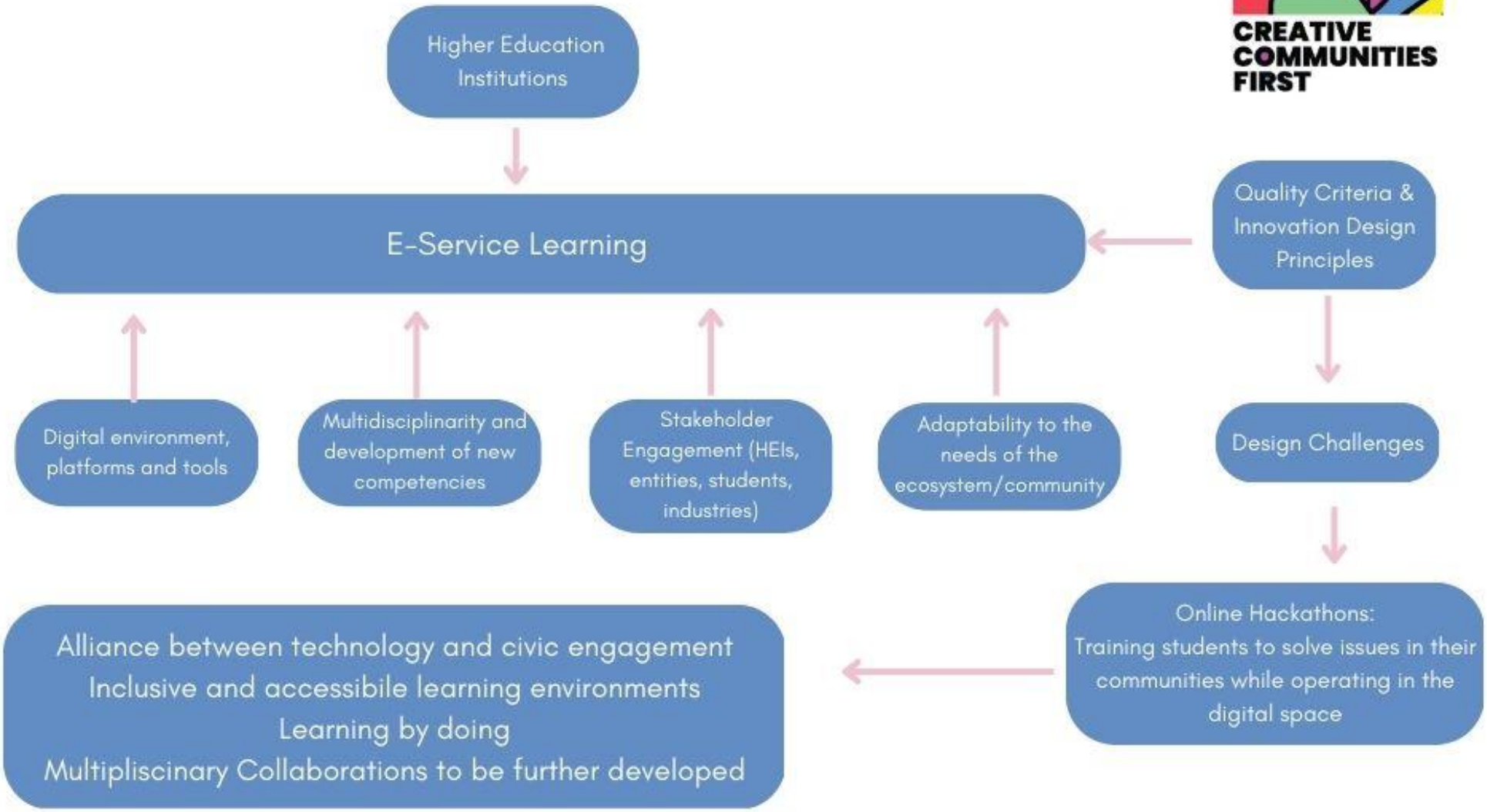
The construction of the framework is based on connecting the key-elements identified from each of the partners and on highlighting the main links between them in order to guide educators to make the best use of the services offered by their institutions and of the potential of e-service learning to involve students in support creative industries in their communities. See the table below.

How does the HEI Pedagogic Framework is connected to the Online Hackathon Guide?

Hackathons are creative and problem-based learning events, during which students can be trained at addressing societal issues or problem in their communities by developing and using innovative solutions. Online hackathons bring students to work in the digital space and or with digital tools (see chapter 6). Exploring the potential of digitalization in education and combining e-service learning's elements such as student engagement, problem-solving and innovation-thinking to develop impactful solutions are tools that HEI should and can use in their institutions.

On these bases, the HEI Pedagogic Framework and the Online Hackathon Guide are two useful tools able to complement each other that HEI educators can use to design, develop and implements e-service learning both as a pedagogical approach and as an action-based praxis.

Higher Education Institutions (HEIs) Pedagogic Framework for E-Service Learning



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HOW TO USE THE FRAMEWORK

04 | HOW TO USE THE FRAMEWORK

The HEI Pedagogic Framework can be used to provide HEI educators a useful tool to implement e-service learning in their programs with the aim to benefit students in being more involved in societal and community-related issues two through the use of digital tools.

In the HEI Pedagogic Framework, e-Service Learning is at the center of the framework meaning it is the approach the pedagogic approach to use for educators (in their classes/courses) and Higher Education Institutions (in their courses).

The main elements that characterize e-Service Learning are connected in the framework to the main topic through four arrows. These elements can be seen as a check-list for HEI educators and institutions as they are pillars on which e-Service Learning can be implemented and shaped.
The main elements are:

- Digital environment, platforms and tools: HEI educators need to ensure the availability of digital tools and platforms in order to facilitate the creation of a digital environment in which the service learning can be placed and used.

- Multidisciplinary and development of new competencies: a successful e-Service learning aims at supporting students to develop new skills and competences (i.e. digital skills) and to address societal issues through projects and initiatives that can be enriched with the combination of learnings from different academic disciplines.

- Stakeholder Engagement: this element is essential to bring together students with the communities and to approach the project/issue they are working on from a bottom-up perspective. At the same time, stakeholder engagement includes the engagement of not only actors who are external to the HEI but also students themselves, whose participation and engagement should be fostered thought the e-Service Learning approach.

- Adaptability to the needs of the ecosystem/community: e-Service Learning has a flexible nature, hence HEI should consider that the approach used while teaching students on how to address societal/communities' issues and while working on specific projects should be contextual and adaptable to the needs of the stakeholders involved. Similarly, HEI educators should consider to use flexibility also in the choice of working tools for students.

While working with e-Service Learning, making sure to apply quality criteria and innovation design principles is a fundamental step for HEI educators. Such criteria and principles will allow educators to:

1) To ensure the quality of the e-Service Learning course/project
2) To have clear guidelines to conduct the course/project assessment
3) To facilitate students to explore several aspects of their work i.e. innovation, analysis, project management, impact and much more

HEI educators can use an additional tool to apply quality and innovation design principles to their e-Service Learning-based courses and/or projects. These are the so-called "Design Challenges" which consists in exercises for students which aim at boosting creativity, creating innovative solutions, and encouraging students to learn and familiarize with new brainstorming methods.

In an academic environment such as HEI, online hackathons are an optimal opportunity to implement concretely and pragmatically design challenges in the context of e-Service Learning. Online hackathons benefit students as they train them at addressing with creativity and innovation a specific challenge faced by a community or target group in a specific ecosystem. In addition, online hackathon in which the challenge to be solved address a social issue can have the doable result to:

- Producing solutions that can be actually implemented
- Fostering the development of several skills and knowledge for the students involved

Finally, in order to ensure the most fruitful, constructive and valuable online hackathons built on the e-Service Learning pedagogic approach, educators can refer to the following elements:

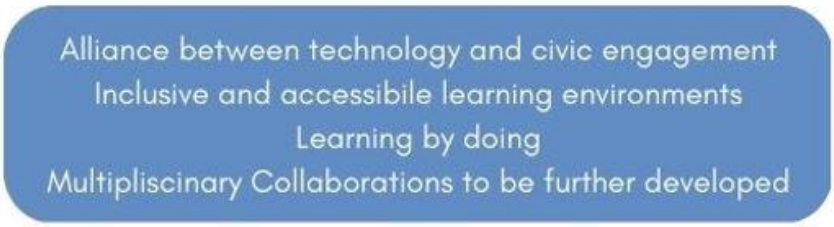
- Alliance between technology and civic engagement: it refers to the combination of tech-based tools (platforms, websites, forums, applications etc.) which can facilitate the creation of dynamics and solution aiming at civic engagement in which students, educators and HEIs can foster their relations with different actors and stakeholders in the community.

- Inclusive and accessible learning environments: an essential element of online hackathons based on e-Service Learning is to ensure the creation of inclusive and accessible learning environments in which digital tools can be used to facilitate such dynamics and to support the learning process for

students.

- Learning by doing: online hackathons are occasions to implement e-Service Learning pedagogic approach while boosting students' participations in addressing social issues. In doing so, students can use and develop skills such as creativity, innovations, critical thinking, problem-solving and teamwork. Furthermore, they will develop further knowledge about the community/ecosystem in which they are operating, about the topic of the project/challenge/event, about the digital tools that can be used during the hackathon.

- Multidisciplinary Collaborations to be further developed: in online hackathons as well as in e-Service Learning, students can reply on knowledge gained from multiple disciplines. This combination of resources, concepts and subjects can be further developed in courses implemented by the HEIs and based on an e-Service Learning pedagogic approach, but they can also be further explored by HEI educators and students in future projects.



05

THINKING PROCESS

05 | THINKING PROCESS

The HEI Pedagogic Framework was created thanks to the combination and analysis of the contributions from the CCF's project partners. Each of the partners focused on conducting a desk research and an interview with an expert concerning different aspects of the e-service learning in HEI.

Conceptualization and Pedagogic Characteristics: Defining Service Learning and its transformation to e-Service Learning

Service learning (SL) is a pedagogical approach in which active participation in community activities outside the classroom combined with curriculum is central. Service learning can be simply described as learning by doing in multidisciplinary collaboration, which deepens learning outcomes. Key elements include for example civic responsibility, real-world problems, a community-oriented approach, and reflection of learning (Albanesi, Culcasi and Zunszain; Waldner, McGorry and Widener 2012).

Manjarrés Riesco et al. describe that, E-service learning (eSL) means that the service or the learning component takes place online or hybrid model. In addition, there's definition "extreme SL" (Xe-SL), when both learning and service take place entirely online. (Albanesi, Culcasi and Zunszain) However, it has been described that eSL is not just about digitization or technologies. It is new mindset and new approach.

Service learning, e-service learning and multidisciplinary collaboration can be considered as one solution to today's challenges.

The pace of change in the world has exploded and will increase even more. Change also effects to learning and educational structures. Learning no longer takes place only in educational institutions. The importance of lifelong learning is emphasized. Educational institutions must be able to renew and meet the needs of "real world problems". This could be achieved through increased collaboration with actors such as associations, the public sector and companies. However, the constant renewal of educational institutions is a challenge. Are teachers and educational institutions able to monitor continuous change, considering existing resources? At the same time public finances are tightening, so the need for resource efficiency will grow. It should be possible to make better use of the resources available in collaboration with educational institutions. We simply can't afford not to network.

Operating models are changing as our societies become more networked. This should also be considered from the perspective of developing education. Network expertise is and will be an important and future-oriented working life skill. Service learning offers the opportunity to practice multidisciplinary collaboration in networks. On the other hand, the concept of learning in also changing. Ultimately, one of the most important working life skills is learning how to learn.

COVID-19 has been one of the key drivers of change during the past two and half years. Digital transformation sped up, which had a huge impact on societies and networks. The pandemic has also strengthened the importance of e-service learning alongside service learning.

E-service learning can be considered as a key development of service learning. This has been influenced by COVID-19, but also by the overall development of digitalization.

Creative competencies and entrepreneurship are more based on the skills than knowledge. It should be

noted that the boundaries between non-formal learning and formal (“traditional”) education are blurred. There's a growing need, for example, for demonstration of competence and workplace education and training. In many fields of education (e.g., creative industries), learning by doing is the best and even the only way to learn. However, educational institutions are needed to evaluate the competence. Education systems should adapt this need.

Insights about the Main Elements of e-Service Learning

According to García-Gutierrez et al. (2017), there is no general agreement about the definition of “service learning”. However, Preradović (2020) covers the scope of its implementation and states that it consists of the "engagement within the community (service) and reflection on that engagement (learning)" (Preradović, 2020, p.1). Students can apply learning in real-life situations and reflect on that application (Melaville, 2006), and the community benefits from their engagement (Preradović, 2020). Service-learning distinguishes itself from a classic internship as students are not contractually engaged by a company (Reinders, 2016). Service-learning projects can supplement students' future career opportunities and thus be incorporated into curricula (Preradović, 2020). They represent a mutually beneficial dialogue between all involved stakeholders. It has been proven that service-learning can also be done digitally, with either service, instructions, or both taking place online, also called e-service-learning (Waldner, McGorry, and Widener, 2012). In this section, our research focuses mainly on service learning since e-service learning as an approach is a new concept.

Pawlowski (2018) recommends evaluating the project's compatibility to the program's overall curriculum and service-learning outcomes to the overall goals of the degree. The service-learning experience should enhance the students' learning (Pawlowski, 2018); otherwise, it may not provide the desired learning experience.

The teaching style has a high impact on the project's success. Adequately prepared and interactive course content (Deshpande & Chukhlomin, 2017) leads to project success and high course quality, including appropriate outputs and easily understandable content (Albebisi & Yusop, 2019). For content taught online, Polasek and Javorcik (2019) suggest processing teaching material in small separate units of five to seven minutes due to the retentiveness of the students.

Including the e-service learning external partner in the co-design can ensure that the deliverables match the partner's needs (Mattson & Wood, 2014). Petkus (2000) recommends carefully screening suitable partners to avoid low involvement because the partner may initially show a high interest. However, commitment decreases steadily due to poor time management, which may hamper the students' learning experience.
According to Glade et al. (2015), taking a partner from an existing community is advisable because it ensures projects' continuation and helps establish solid
partnerships. Waldner et al. (2012) suggest introducing the partner and the students to each other to improve understanding.

Additionally, the choice of a partner can also affect the students' motivation. Saud (2021) found out that the distance to the partner has a noticeable impact on the students' motivation.

To summarize: finding a local partner with a relatable challenge and intrinsic motivation to work with students keeping up communication throughout the project can be a strong driver for a successful project.

According to Lewis (2014), students participating in service-learning projects should be selected based on their experience and existing technical skills or time management (Saud, 2021). They should have sufficient technical knowledge and relevant soft skills because insufficient technical knowledge represents the leading cause of project failure (Lewis, 2014).

Apart from skills and experience, students' motivation is a crucial success factor. LaPorte et al. (2017) state that the students need to be motivated during the service project, and Bingol et al. (2020) advise that initial motivation plays a decisive role in course completion. Students should have the commitment and right attitude, especially if they participate in e-service-learning, as Naveed et al. (2020) found out. Issuing a certificate for successful participation can increase students' motivation (Bingol et al., 2020).

To achieve the desired learning outcomes, the students need to reflect on their experiences. The reflection tasks should address the learning outcomes and thus be chosen during the course design (Pawlowski, 2018). Possible reflection tasks can be written work like blogs, creative projects like photo books, or an oral discussion (Pawlowski, 2018). Eyler et al. (1996) recommend that the reflection possess the following attributes: It should be continuous, taking place in advance, during, and at the end of the service-learning project (Eyler et al., 1996).

Learning outcomes of E-Service learning and the impact envisioned in HEI & Creative Industries and Communities

Service learning is a high impact experiential pedagogical practice which enhances student engagement and develops critical thinking by matching student learning outcomes with identified community needs (Association of American Colleges & Universities, 2008). E Service learning is defined as an integrative pedagogy that engages learners through technology in civic inquiry, service, reflection, and action (Preradovic et al, 2021). There is a myriad of ways in which digital technologies can assist the success of service-learning projects. Enabling technologies allow easy access for the collation, communication, and dissemination of information (Gutierrez et al, 2021). Rigor, reciprocity, and reflection are core to service learning (Veyvoda and Cleave, 2020).

The focus of this research is on the perceived learning outcomes of e- service learning. Some of the learning outcomes mooted are greater learning autonomy for students; learn by doing; International mobility through digital technologies, the transmission and experience of human values through technological media (Gutierrez et al, 2021).

A comparative analysis of traditional face to face service learning and online e service learning suggests that e service learning outperforms service learning in enhancing student developmental outcomes.(Wong and Lau, 2021). The qualitative study attributes stakeholder commitment together with student reflection as a positive enabler for high impact learning opportunities (ibid).

Waldner et al (2021) classify e service learning into:

1. Hybrid-either teaching or service is online; and
2. Extreme E service learning in which service and teaching are entirely online.

Higher developmental outcomes such as knowledge application, research skills, problem solving skills, social competence, teamwork, and civic orientation (Wong & Lau, 2021). Knowledge application through synchronous feature of online communication allowing for reflection immediately after to connect theory

to practice serving the community (ibid). Planning, reflective journals, project reports, and feedback help in creating a strong awareness of implementation challenges posed by e service learning. Hence more effort is required on teambuilding, monitoring, and evaluation (ibid).

Veyvoda and Cleave, 2020 argue that community engaged learning through whatever means is essential to a liberal education developing awareness of social inequities and cultural humility.

E Service learning requires the same academic rigor, and the eservice acts are designed to deepen and reinforce acquisition of knowledge through engagement and proficiency in meeting the module or programme learning outcomes. The acts should correspond to the curriculum and a clear rationale should justify their inclusion in the curriculum (Veyvoda and Cleave, 2020).

E service-learning is reciprocal and addresses the gap between theory and application, linking academic learning back to community service. Community partners are viewed as subject matter experts in their fields and the communities they serve. Equitable distribution of effort and time, knowledge and experience between partners and students is a key component of a successful partnership (ibid). E Service learning is reflective. This iterative process allows students to link theory with practice and experience from the community setting. It challenges biases and gives exposure to real world experience. It provides space to gain greater awareness of the complexity of real-life challenges and social issues and develops their critical thinking skills (ibid).

Approaches to service learning

Britt 2012 identifies three types of service learning-learner, citizen or activist. The learner approach focuses on skill development and reflexive learning. This is grounded in Dewey's work on experiential learning and Kolb's Reflective cycle of work performance to strengthen learning. The process has a number of steps

- Community need identified
- Students provided with challenge
- Skills development to meet challenge
- Application of new skills to rise to challenge
- Reflect on process to learn develop new skills/knowledge

The Citizen approach provides that community service strengthens civic values and active citizenship probing students to consider what it is to exist in a community and in relation to others (ibid). The activist approach sees spaces where social inequities can be safely explored, challenged, and encourages students to be change agents (ibid).

E Service-learning projects

Strait et al, 2015 posit four types of service projects

- Direct service involved working with community partners to address a need of the community they serve
- Indirect service entails working on projects without direct involvement with community members
- Community engaged research looks at problem solving an issue using appropriate research design and data collection, problem is presented by a community partner
- Advocacy and public awareness- educating the public on campaigns which reinforces learning outcomes.

Extreme e service learning sees no physical contact between student, faculty or community partners, the emphasis is on the client needs and the production of deliverables (Veyvoda & Van Cleave, 2020).

Preradovic et al, 2021 note that school children in Croatia developed their interest in programming and robotics, logical thinking, problem solving and foreign language skills. Minecraft education developed their cultural interest in the Glagolithic script improving their cultural and literary skills whilst also deepening their digital skills. This highlights that the alliance between technology and civic engagement can be very valuable for students in understanding their place in the world where social justice and well-being are embedded in any academic learning.

At the University Politechnica of Bucharest, e service-learning projects developed students' awareness of the sustainable development goals with regard to local challenges that experts with technical background should address and solve (Preradovic et al, 2021).

Quality Assurance and Sustainability in E-Service Learning

When exploring the concept of Service Learning in the literature, most definitions refers to "an organized educational experience that both meets needs of the community and fulfils learning objectives" (Steinke, Fitch; p. 24). The concept was built on the Theory of Experimental Learning, which was developed in 1938 by John Dewey and focused on the idea that "students' learning can be enhanced through valuable fieldwork in order to inspire academic interest" (Yusof; Harun; Atan; p. 2893).
Besides being a beneficial pedagogy for students, Service Learning has also a valuable impact on the community as well as on higher education institutions that implement it in their curricula (HEI) (Guthrie; 2010). In addition, Service Learning pedagogies have demonstrated to enhance a great variety of students' skills such as communication, team working skills, leadership, adaptability and enterprising skills among others (Yusof et al; 2018).
Common methods to measure the effectiveness of Service Learning modules and courses rely on tools such as research scales, written essays, interviews and other qualitative tools which contribute to measure learning outcomes such as "knowledge application, critical thinking and problem solving, and intellectual development" (Steinke; Fitch; p.25).

Nonetheless, despite the great value that Service Learning provides to students and educational institutions, this specific pedagogy risks to be left behind due to the growing transition to online learning platforms (Waldner; McGorry; Widener; 2012). In the last two years, such transition has been further incentivised due to the outbreak of COVID-19, which has forced HEIs to shift rapidly towards Information and Communication Technology-based and methods in order to perform online teaching (Dapena et al. 2022)(EASLHE;2020). As a result, in the aim of including also Service Learning pedagogies to the online space, e-Service Learning has emerged as a concrete solution that enables the instructional component, the service component, or both to be conducted online (Waldner et al; 2012).

Due to its hybrid nature, experts such as Waldner et al (2012) have identified four types of e-service Learning:

- Type I with service fully on site and teaching fully online
- Type II with service fully online and teaching fully on site,
- Type III characterised by a blended format with instruction and service partially online and partially on site, and

- Extreme e-service-learning which consists in instruction and service completely online (Waldner et al; 2012).

Each e-Service Learning type provides a wide variety of benefits including transferable skills refinement such as critical thinking, professional and networking opportunities, academic and personal growth (Faulconer; 2020). On top of this, due to the use of ICT-tools (e.g. collaborative online platforms and discussion forums) learners have the opportunity to develop skills such as knowledge co-construction and reflection which contribute to develop their cognitive intelligence (Yusof; Harun; Atan; 2018) and to increase their digital literacy and 21st-century skills (EASLHE; 2020). Moreover e-Service Learning has the potential to eliminate geo-spatial constrains by making use of "synchronous tools (e.g., audio and video teleconferencing, text-based chat rooms, virtual classrooms) and asynchronous tools (e.g., e-mail, drop boxes, micro-blogging online, discussion boards, video streaming, digital video production" (EASLHE; p. 30).

Considering the transversal nature of e-Service Learning, consisting in integrating Service Learning composed by academic content and service in the community and Online teaching (Yusof; Harun; Atan; 2018), educational experts agree on using qualitative criteria that are built on a combination of best practices from traditional Service Learning, ICT and communication (EASLHE; 2020). Based on this, a publication from the European Association for Service Learning in Higher Education (2020), has collected the main criteria to assure qualitative performances of e-Service Learning programs.
These include e-Service Learning content to be meaningful and relevant to persons/institutions, to offer opportunities to learn and deepen understanding for all participants and to have defined goals that can be reachable and measurable for each specific Service-Learning project (EASLHE; 2020). In addition, e-Service Learning projects should be designed and planned by the learners, while actively collaborating with community partners, and they should be linked to the curriculum/study program in an explicit way, so that learning outcomes can easily be linked to the academic theory and methodology while encouraging systematic reflection on the learning processes and outcomes for all participants (EASLHE; 2020).
Moreover, a key-element to assure qualitative performance of e-Service Learning is to maintain "active and constructive communication" (EASLHE; p. 30) through the use of synchronous and asynchronous digital tools among all participants involved (namely students, teachers/educators and community partners).
Finally, in accordance with additional literature, qualitative criteria include the use of "recorded videos to guide project progression, providing optional synchronous collaboration opportunities, communicating and managing clear expectations, preparing a service-learning contract, using project management tools (e.g. Gantt chart), applying flexible deadlines, and clearly communicating skills that will be developed and resources that are available" (Faulconer; 2020).

Another criterion to assure quality in e-Service Learning is to ensure the sustainability of the programs. In this regard, acknowledging the type of service project and identifying its target is a needed step. The example brought by Dapena et al. (2022) of an e-Service Learning project conducted by Bachelor and Master's students working with people with special needs, showed that one of the difficulties encountered was to work digitally with people with autism who reported to have issues in utilising computers and digital tools (Dapena et al; 2022). On the other hand, when approaching the sustainability of e-Service Learning from the student's perspective, the European Association for Service Learning in Higher Education (2020) recommend to "offer adequate time frames for students to make experiences and learn in community settings/with community partners in an effective and sustainable way" (EASLHE; p. 31).

Finally, as explained by Faulconer (2020) sustainability stills remains one of the greatest challenges of e-Service Learning. Despite the development of several models to assess the status of Service Learning institutionalization, the author of "eService-Learning: A Decade of Research in Undergraduate Online

Service-Learning, American Journal of Distance Education "states that currently there is no literature concerning the application of these models to e-Service Learning. Models such as the Comprehensive Action Plan for Service Learning and the Context, Input, Product, Process Evaluation model only offer analysis of strengths and weaknesses of courses content or delivery for its continuous improvements as well as the analysis of its planning, designing and implementation (Faulconer; 2020), however there is no evidence of their application in Service Learning courses online. Furthermore, it results difficult also to assets the long-term impact of digital tools in Service Learning, their efficacy, maintenance and performance. As concluded by Faulconer (2020) the "careful implementation of communication platforms, training, and transparent troubleshooting may mitigate impacts" (Faulcore;2020).

Design Based Challenge in e-Service Learning

Design Challenge Learning is a dynamic way for learners to become creative problem-solvers. It's the center of engineering and tech genomes.

Design challenges use real-world problems so that learners are invested in the outcome. It's iterative, which means learners are trained that failure is okay, and working to overcome it is where growth happens. It's also collaborative, which is key to future success.

Challenges fall into two categories:

- Build-based, in which the solution is a physical device or structure. We emphasize everyday, recycled materials to increase accessibility for all learners.
- Systems-based, where students grapple with a real-world problem that is part of a complex system. They examine the intricate parts of that problem as they design potential solutions.

These challenges are ideal for making content relevant through a student-centered approach. Design challenges can be made more simple or complex to meet the needs of all learners.

06

HACKATHON

06 | HACKATHON

What Is A Hackathon?

The word hackathon is a portmanteau of the words hacker, which means clever programmer, and marathon, an event marked by endurance.

The concept of the hackathon, also called a hack day or hack fest, was born out of the open source community. The first event labeled a hackathon was the OpenBSD Hackathon in Calgary, Canada, on June 4, 1999.
Hackathons vary in objectives and themes. Hackathons organized as a platform for creating applications such as Mobile apps, operating system variations, web and video game upgrading are branded as niche hackathons. Altruistic hackathons are those where participants work to find solutions for problems such as public transport systems, education and disaster response.
Altruistic hackathons are those where participants work to find solutions for problems such as public transport systems, education and disaster response. A Makeathon has it's focus on the process of making things together. It is more about the process then it is about the end results.

Problem-Based Learning

Creative teaching methods help students to learn without the pressure of learning. Including creative activities along with curriculum gains their interest for learning. The world has changed rapidly in the last decades and major changes such as globalisation, technological advances, inter-connectedness, and accessibility to information influence the way current and future generations of students learn. Hence a transformation in teaching and learning approaches is essential to prepare students to solve complex problems in a global world. In order for students to practice as engineers, they need to have had exposure to a number of projects that offer real-world problems, along with the complexity and uncertainty of factors that influence such problems.

Learning to apply theoretical principles is much better done when given real problems and hands-on activities in projects. For example, in project-based learning, teachers facilitate and guide students through the engineering design process, while students actively engage in research and problem-solving activities within a team setting.

A hackathon is one of the problem-based learning examples and it has the key elements for future education:

- Includes concrete experiences that relate content to the "real world." During the hackathon students solve real world questions or problems that are situated in a real-world environment or setting that becomes part of the learning experience. These real-world problems or questions require considerable investigation by students to arrive at probable solutions.
- Activities are learner-centered: students are responsible for many of the decisions regarding their learning; they address the core issues with their own planning and the resources they discover.
- Involves the integration of knowledge through critical thinking and creativity. Critical reflection is the process where students think critically and creatively and apply learning to their own lives in other contexts. Students are integrating knowledge from their prior life experiences and educational background, they are using a cross-disciplinary approach as they tap resources from outside the discipline to address the key problem or question.
- It requires students to develop communication and collaboration skills including oral, written, and media

strategies. Group work invites challenges for instructors in assigning students to teams, developing a process of working together, and finding ways to continually communicate.

- Requires students to develop information literacy skills. Students will need to access information and apply knowledge. Locating their own resources provides an opportunity for students to gain information literacy skills.
- Requires students to participate in formative and summative assessments of their work – to prepare a presentation, gain the feedback and evaluation.

Skills Developed

Through the problem-based learning students develop their 3 main skills required for their successful future:

- Critical thinking
- Problem-solving skills and
- Collaboration skills.

There are different definitions of critical thinking:
Critical thinking is a capacity to work with complex ideas whereby a person can make effective provision of evidence to justify a reasonable judgment. The evidence and therefore the judgement, will pay appropriate attention to context.
Or
Critical thinking is a reflective and reasonable thought process embodying depth, accuracy, and astute judgment to determine the merit of a decision, an object, or a theory.

But the idea is the same:
Being able to think for yourself is a key skill at a time where the concept of career and the workplace is changing. Critical thinking is clearly self-directed and self-disciplined, so you will need to be able to think for yourself in a realistic and meaningful way.

Problem-solving skills help you determine the source of a problem and find an effective solution. Although problem-solving is often identified as its own separate skill, there are other related skills that contribute to this ability.
Some key problem-solving skills include:

- Active listening
- Analysis
- Research
- Creativity
- Communication
- Dependability
- Decision making
- Team-building

Problem-solving skills are important in every career at every level.

Collaboration entails working with someone else in order to create or produce something.
Successful collaboration includes:

- A willingness to find solutions to problems
- Recognizing collaborators' strengths and weaknesses
- Taking responsibility for mistakes
- Giving credit to others for contributions
- Actively listening to other team members' concerns

Using collaboration skills within a team may include:

- Keeping communication open and never withholding information necessary to carry out tasks
- Reaching a consensus about goals and methods for completing projects or tasks
- Offering recognition of the contributions of others on your team, giving credit where credit is due
- Identifying obstacles and addressing problems cooperatively as they occur
- Placing group goals above personal satisfaction and/or recognition, especially if you're the leader

Apologizing for missteps and forgiving others for mistakes; holding a grudge or sabotaging the efforts of other team members destroys collaboration

Benefits for Participants

A participation in a hackathon could be an addition to any CV:

- People participating in a hackathon develop their skills in a specific topic: they get lectures on the topic, learn to prepare a presentation and to pitch, they also learn from each other technical/field specific skills and learns by doing.
- Hackathon is important also for personal development: communication and teamworking skills, presentation skills, creativity skills, participants also learn how to build a project from the ground up, deal with challenges and defend the concept in front of a panel of experts.
- Hackathons allow you to meet and work with a broad range of talents with similar interests. Many participants in hackathons have made excellent connections that proved extremely useful in both their professional and personal lives.
- Participating and winning in a hackathon can boost chances of landing an excellent job. Recruiters love to hire hands-on candidates who can prove that they can own and take responsibility for their projects.
- Also, a hackathon idea could be a good opportunity to starting a new business.

Benefits for Organisers And Partners

You may organise a hackathon open to anyone, or you may have an internal hackathon to solve particularly your company's challenges. In any case, a hackathon helps to find different solutions for a problem.
It might be a traditional hackathon where participants look to IT-based solutions, create mobile apps or similar things. You can also organise a "making" hackathon, so called makeathon, where in a short period of time physical prototypes are being created. The hackathon can end with a bunch of solutions and presentations on other relevant topics, e.g.:

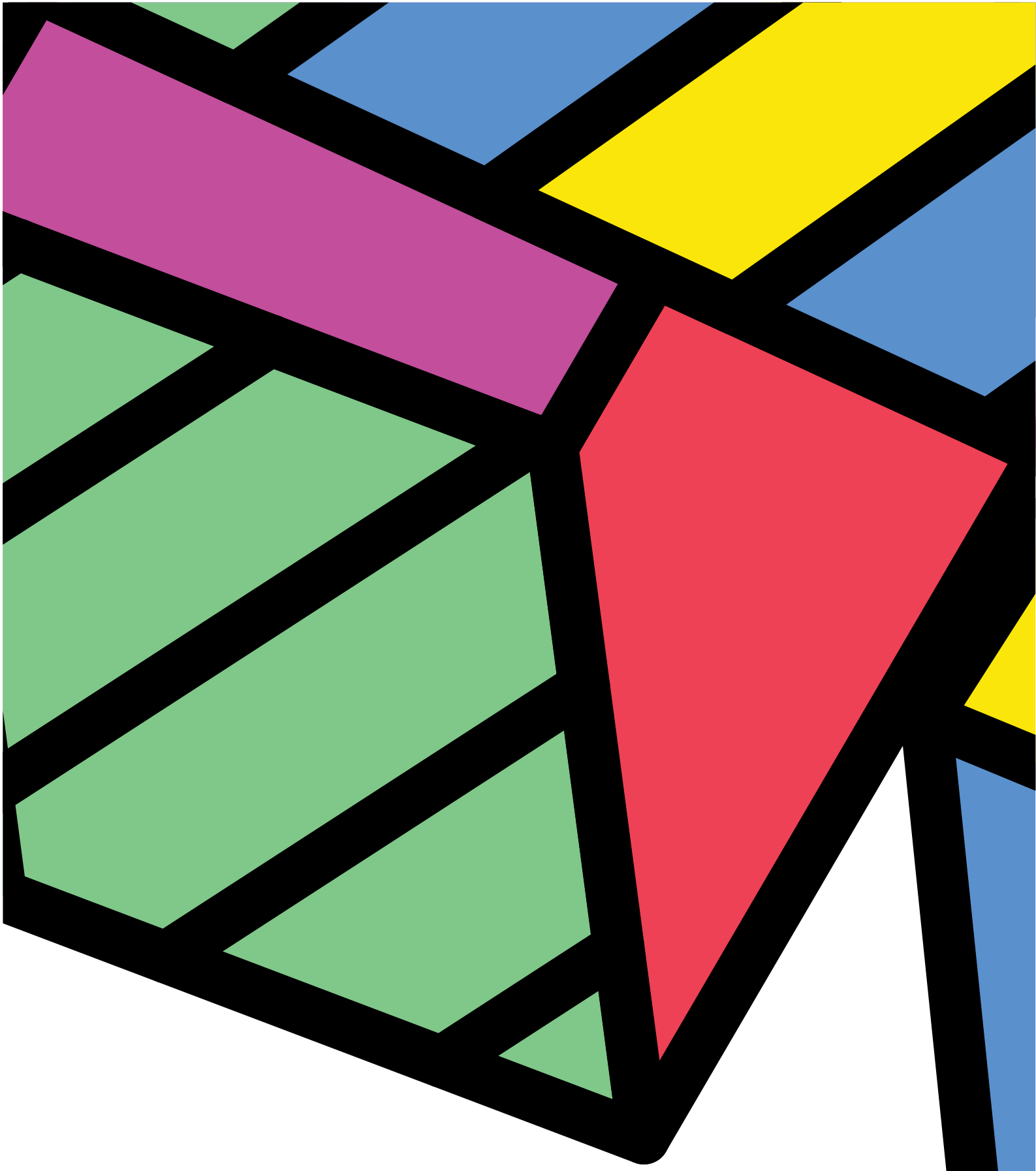
- conceive a company's customer satisfaction process
- design a social media campaign
- devise an advertising strategy
- structure a community initiative
- build a better employee training program

Another benefit of organising a hackathon is to look for inspiration and new ideas for your company; it works also as a mean to inspire and motivate employees when participating in the hackathon and creating solutions that will be applied in the future.

As an organiser you can test also your skills in communicating with the mentors, teams and other partners, to see how your team works and where you could improve.

As an instructor or mentor, you get to build on your authority as an expert in your field. It also opens to greater opportunities to develop vital non-technical skills like leadership, communication, and collaboration.

The hackathon is a good place to expand the network of professionals and to find new talents or future employees, start-ups or products.



07

ORGANISING A HACKATHON

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Traditional Vs. Virtual Hackathon

You may benefit when organising a virtual hackathon: traditional hackathons are way more expensive due to meal costs, venue rental space, utilities, and staffing. Virtual hackathons require much less overhead. The most of the investment will likely be software, digital infrastructure, and equipment, but you may already possess many of these necessary tools. Online hackathons need less manpower to run, fewer hours to plan, and less logistics.

Working from home means that every attendee gets to customize the conditions and create an optimal work environment. A work-from-home setup means fewer distractions for participants, which means more productivity and improved rest.

You can invite more people to participate, and these people can be very different, even participation of people with special needs is simpler.

During digital hackathons, teams collaborate remotely. Employees need to delegate, communicate, demonstrate, and compromise all from behind a computer screen. Developing and mastering these team building skills will serve employees long beyond the event's end.

However, traditional hackathon may be more attractive to the participants, they more interact to each other, it is easier to create new contacts and keep these new connections.

Required Resources

Traditional and online hackathons require a lot of same resources, such as organizing team, mentors, jury, prizes, time to organise everything, etc. Additionally for the online hackathon you will need to choose the software.

For the online event you will need a virtual conference software, such as Zoom or MS Teams. our teams will need to chat face to face on occasion. You should provide access to an appropriate video meeting platform so that attendees can interact with teammates and other guests. You can form the breakout rooms for teams to work or for the mentorship sessions.

Besides the video communication, a text communication is essential. When participants are offline, or before/after the event text messages with useful information, guidance, links and daily communication is important. As an example here could be a Slack or WhatsApp applications. More communication possibilities allow to participants to overcome the physical distance and find new ways to swap ideas.

For the mentoring sessions, brainstorming workshops and other virtual activities we recommend also an online whiteboard tools, e.g. MIRRO, MURAL and similar. Project management software like Asana and Trello are also helpful, as the tools help teams understand duties and stay on task.

Each hackathon end with a presentation, so participants will need a presentation tool and a place where to store the project (pictures, video recordings, drawings, presentations and other files) – repository for all hackathon participants.

Topics And Challenges

The hackathon starts with a problem which participants should solve. The problem depends on the organisers, it could be a company-related, city-related, environment related or related to any other relevant topic.

For example, each year Vilnius Gediminas technical university, Sunrise valley science and technology park, Vilnius University and Cognizant, in a collaboration with Vilnius city municipality organizes a three-day challenge, intended to promote innovations in Vilnius city – Hack4Vilnius. It is a three-day challenge, intended to promote innovations in Vilnius city. The aim of the Hackathon is to generate ideas, how to solve problems of Vilnius city and businesses here and to provide alternative and innovative solutions.

The hackathon originated from the term “hacking” and developed much more widely.
Some other hackathon ideas:

- create a music video clip
- create a short movie
- design a social media campaign
- devise an advertising strategy
- structure a community initiative
- build a better employee training program,
- ideas for better living, etc.

Each hackathon can have few challenges that teams choose, this usually makes the result closer to the one organizers expect. However, participants may suggest their own challenges related to the particular topic – this gives more flexibility to the teams.

Define your target audience – the participants, mentors, companies involved, this will also help to define the theme.

Partners And Volunteers

It is easier to organize a hackathon in a team – to share ideas and responsibilities, to communicate about the event and to celebrate the success. Select the partners you can trust!

Use communication tools to assign areas of responsibility across your team. Ensure that each team member has specific action items they’ll manage before, during, and after the event. Look for volunteers, they will be a huge support during the event.

Format, Timing, Venue, Participants

Once the topic and team are ready, time to decide on the date, duration and the format of the hackathon. Hackathons typically take place over a weekend, but you can potentially hold the event during a weekday as well. The latter may be a better option for internal events, while the former accommodates outside companies. You will want to select a date that is convenient for your organisation. Keep in mind that you will need to block time away from regular work responsibilities so that participants can focus fully on the competition. Also, make sure your dates do not fall to public holydays

It may take from one to few months to prepare for the hackathon, to promote it and to select participants. It is important to keep enough time for the organisation of the event, especially if it’s a hackathon open to public.

Choose whether you will host an internal hackathon, meaning only members of your own organization will participate, or an external hackathon, meaning teams from other organisations can join. If you do host internally, then you must decide which teams to involve or offer the challenge. Also, for an online hackathon, you may consider opening the challenge to foreign participants.

Start the registration 3-4 weeks before the event so that you have time to promote it. You may register teams or separate persons – this will allow you to know if you have to form additional teams at the beginning of the event.

We recommend that the duration of the hackathon would be 2-3 days, an example for an online hackathon agenda:
Friday
17:45 - participants gather on the Slack and Zoom platforms
18:00 - opening
18:05 - greeting words
18:30 - presentation of technical details of the hackathon
19:00 - start of mentoring sessions
21:00 - end of mentoring sessions, work in teams

Saturday
10:00 - presentation: "How to evaluate your business idea?". Introducing the Business Model Canvas approach.
11:00 - prototyping process continues, mentoring sessions begin
19:00 - the end of the mentoring sessions, the prototyping process continues independently

Sunday
09:00 - prototyping process continues, mentoring sessions begin
10:00 - presentation: "How to present a business idea to investors?"
11.00 - mentoring sessions are held
15:00 - video pitches are sent
16:00 - start of the final
19:00 - announcement of winners
19:15 - the end of the hackathon

Branding And Promotion

Before advertising the event, you should confirm your judges and decide on prizes. This information will be part of the promotion. The prizes depending on the size of the event may vary from tech gadgets to courses, memberships and money.

We recommend to create a branding for the hackathon to make it more attractive: choose colours, create logo, templates, Facebook event or even the website where you can post all relevant information, including dates, prizes, jury, agenda, etc.

You may offer food stipend to the participants so they can order takeout with minimal workflow disruption.

Prepare a goodie bag: just because your attendees cannot pick up goodies in person, does not mean you should forget about the gifts. You can send out promotional presents before the event to round out the experience for your participants.

Promotion is an important part of online event planning. You should definitely capitalize on social media to generate buzz for the event. You can post in relevant online communities to spread the word. Also consider whether you would like to use ads and industry influencers to spread awareness of your event. Of course, you should shout out the event in your own website content and utilize email marketing campaigns as well.

Mentors, Sponsors, Jury, Prizes

Mentors are part of the event, and they are additional support for the teams during the hackathon. They provide lectures, consultations and recommendations for the teams and guide them during the whole creation process.

Sponsors are necessary to be able to organise a bigger event. Prepare a value proposition for them, involve them in the event, ask to be part of the jury and you will create new strong connections. Do not forget to add their logos to the hackathon website, presentations and other places.

Besides the sponsors in the jury, additional experts in their field can be invited. As the hackathon is something where participants develop their creative ideas, business accelerators and investors could be someone interested in the event and could create added value for the participants.

Prizes depend on the budget you have, the topic of the hackathon and your creativity. However, when paying prizes, do not forget to check what taxes are obligatory in your country.

Event Day

If you have properly prepared – these days will be about fun! Remind the participants about the link, check with the mentors and jury if everything is ok. Follow the agenda: start with greetings and teambuilding; keep the proofs of the event and participants; register their contact details and team names, this will make the grand final easier.

The hackathon event starts with the participants registration. Then, it is important to register teams and to guide all participants that do not have their team. After the teams are formed, they should start working on their ideas and communicate with the mentors.

Usually, the 2nd day starts with a presentation, that could be useful for the teams to work on their ideas. After this presentation they continue working and developing their ideas.

On day 3 teams should start thinking about the presentation of the ideas. The organizer provides the instructions on pitching, some guidance and the template for the final presentation. Each team has up to 3 minutes (elevator pitch) to present and then additional 2 minutes for the jury questions. The same rules should be applied to all the teams.

After the jury votes (create a separate breakout room for them) award ceremony continues and the prizes are being distributed. Keep the proofs of jury votes and the records of the final places. Some fun activities, common pictures continue.

Post-Event Activities

After the event, the activities for the organizer continue:

- thank the participants and all people and organisations involved
- publish the pictures and the results of the hackathon
- publish the success stories of the winners
- pay all the invoices
- pay the prizes
- prepare reports for sponsors
- organise a follow-up meeting within your team to discuss what could be improved

08

TIPS AND TRICKS

08 | TIPS AND TRICKS

What Do You Need To Have When Organising A Hackathon

- There are many ways how to organise a hackathon, and all of them can be successful. However, some tips and tricks that should make the process easier:
- read the guide
- start planning in advance, keep enough time for dissemination of the event and registrations
- build the team and assign the roles
- involve team members that already have experience in the hackathons
- create a challenge/topics for the hackathon so that it would be easier for participants to understand what do you expect
- look for sponsorship so that you could cover organisational expenses, merchandise and prizes
- involve at least 1 keynote speaker
- promote your hackathon on social networks and directly (during lectures, emails) to the target audience
- have a workplan to be able to follow if all preparation activities were made on time
- have a clear voting system – this will help to jury and make no questions to the participants
- keep in mind that the hackathon does not end with the event – prepare feedback forms, reports and other documents
- be active in social networks, this is your main communication channel and a way to remind about the event.
- check the taxes for the prizes in your country

03

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Good practice: https://www.thetech.org/explore-dcl

Additional Hackathon resources:
https://teambuilding.com/blog/virtual-hackathon
https://hack4vilnius.lt
https://bridgio.eu/hardwarehack2022

10

ANNEXES

10 | ANNEXES

Annex 1. Interview Report 1

Multidisciplinary cooperation. Findings rising from the field based on practical work. Practical challenges and opportunities. Digitalization as part of multidisciplinary cooperation. Possible future trends.

Partner	**South-Eastern Finland University of Applied Science – Xamk**
Interviewer	Riina Hämäläinen
Interviewee	Kirsi Purhonen
Background of Interviewee	Project manager at Xamk and PhD student at Tampere University

Main Topic of Interview

Multidisciplinary cooperation. Findings rising from the field based on practical work. Practical challenges and opportunities. Digitalization as part of multidisciplinary cooperation. Possible future trends.

Question asked

- What are the main challenges for multidisciplinary collaboration?
- How has digitalization changed multidisciplinary collaboration?
- What things are rising from the field (how are things changing? etc.)? What are the foreseeable future trends?

Summary of Discussions

MULTIDISCIPLINARY. Multidisciplinary collaboration is taking place, but there is still a learning journey going on. Taking collaborative and multidisciplinary approach is not always easy. Current main challenges are old structures, existing work culture and (work) language used. In addition, budgeting must always be considered in development work. More effort is still needed in organizations at both the management and grassroots level.

The best way to learn multidisciplinary collaboration is practical work. It is important to remember that contradictions are a great place to learn. Exploring and resolving contradictions makes it possible to find new ways of working and opportunities for action.

An understanding of the basic task and what it could involve is always needed. However, it would be important to also bring together different industries and students. In other words: opportunity to combine different operating cultures and practices. The opportunity to search new ways of working when a person is taken to a completely new environment (or industry). It would help to raise the following important questions: What does the student observe? How should things be developed from the new perspective? This approach is still partly challenging - due to established professional boundaries. However, this would also be beneficial for the student. Education offers a certain perspective, but multidisciplinary can expand thinking.

DIGITALIZATION. Pedagogy can sometimes be a challenge when using digital platforms and applications. Platforms and "digital walls" are not synonymous with pedagogy. It is essential to consider, for example, the purposes for which

the application / platform was built and how the platform works pedagogically. Digitalization gives room for action if there is also motivation to solve challenges. Along the way, there can be surprising challenges. For example, data protection issues or is it possible to use a platform if it is not the organization's own platform?

All in all, digitalization is an opportunity if there is a willingness to solve challenges. It's worth going there where people spend their time.

FUTURE. There is a period of transition is going on around multidisciplinary collaboration. Structural reforms are needed. For example, degree programs (HEI) should be developed further. Similarly, the theories of science concerning education require further development. More opportunities are needed for a more individualized degree and more individualized career planning. For example, degree programs should utilize multidisciplinary more effectively. The links between working life and education should be seen more clearly and thoroughly.

Communities and organizations must be open to reform and allow questions to be made by students. Good questions could be (for example): Why are you doing this? Could this be developed in this way? Could this work this way? Opportunity to ask and act might form new syntheses – perhaps even new professions in the future.

Reflections

Although service learning and e-service learning are important educational approaches and useful for learning, there are things to be considered in development work.

All field of sciences and industries don't equally utilize multidisciplinary collaboration. Well-established structures and professional boundaries ("gatekeepers") can be an obstacle to genuine multidisciplinary collaboration. For example, disseminating models of service learning and e-service learning may still require supporting "a new mindset" and benchmarking of other science fields. On the other hand, there are also good experiences when new experiments have been done boldly and effectively in multidisciplinary collaboration. Disseminating the one unified model of service learning and e-service learning is also challenging because the existing regional structures are different. In addition, organizations must also have sufficient resources for implementation.

Digital pedagogy and pedagogical characteristics require further development. To assure the high quality of teaching, we need to re-think pedagogy for digital age. It is important to understand how platforms and digital environments influences working and studying. For example, conceptualizing new models to guidance is required. Trainers' skills and competence in digital pedagogy should also be supported.

Although challenges might exist in development work, multidisciplinary collaboration offers new opportunities for the future. Possible contradictions are always opportunities to learn. What issues might come up? How can they be resolved so that collaboration develops?

Learning in the circumstances of the work. Alongside with theoretical learning, learning in practice is important. How learning relates to "real world" problems? Multidisciplinary collaboration offers the opportunity to deepen learning as well as the opportunity to learn professional vocabulary and also different operating models. In the future multidisciplinary approach needs to be integrated better into learning processes. Service learning in multidisciplinary teams provides an opportunity to learn new things and new operating models also in the organizations. A multidisciplinary approach and expertise (individuals and organizations) must be seen as an added value. Above all, the key to success is open mind and willingness to cross boundaries.

Additional Note (optional)

The interview approached the concept of service learning through the concepts of multidisciplinary and volunteering.

Annex 2. Interview Report 2

Introduction

Partner	**Accreditation Council for Entrepreneurial and Engaged Universities (ACEEU)**
Interviewer	Federica Casaccio
Interviewee	Dr. Irene Culcasi
Background of Interviewee	Dr. Irene Culcasi is a research fellow at LUMSA university in Rome, Italy. She holds a PhD in Education with a specialization in e-service learning and the impact of soft-skills development of university students in Italy and Chile. Dr. Culcasi is also a founder member of the European Association of Service Learning in Higher Education, where she works on both service and e-service learning.

Main Topic of Interview

Quality assurance and Sustainability in e-Service Learning.

Question asked

- Can you please introduce yourself and share about your work in e-service learning?
- How can we define e-service learning and by which key-elements it is characterised?
- What are the main challenges faced when implementing e-service learning programs/courses?
- Which tools are used to ensure the quality of e-service learning programs/courses? How is quality measured in service learning?
- What is the relation between sustainability and e-service learning? How is sustainability ensured in e-service learning in terms of duration (are courses and programs usually sustainable in long/short-term), reproducibility (can e-service learning courses and programs be reproduced in different contexts) and adaptability to challenges?
- Finally, which advices would you give to higher education institutions who would like to implement e-service learning programs/courses in their curricula?

Summary of Discussions

As Dr. Culcasi states: “e-service learning is a service-learning course mediated by Information and Communication Technologies, where the instructional component, the service component or both are conducted online or in a hybrid model”.

When we look at the use of e-service learning, we can agree that during the pandemic, e-service learning was the only way to continue implementing service learning, especially among higher education institutions and universities, which were facing several challenges in trying to making a social impact in their communities together with their students. Due to this need, we could see how e-service learning become a useful tool to transform traditional classes in more interactive lessons, while keeping active their mission to making an impact. E-service learning has the potential to also have a global impact as it brings together through digital activities students from European and non-European countries who may be facing the same problems.

Nonetheless, implementing e-service learning courses/programs can be challenging. In this regard the first thing to

do is to distinguish between the implementation of e-service learning through a bottom-up and top-down approach. In the first case, the students are completely autonomous in the decision-making process of choosing and implementing a service project in their community, which then involves the participation of the institution. On the other hand, with a top-down approach the educational institution chooses the project to work on, connects with the entities in the community and opens a call to its student to take part into the project. Hence, the challenges can be very different based on the type of approach utilized. At the same time, additional challenges can be harmful to the successful implementation of e-service learning.

The use of technology is among the most important ones. As mentioned by Dr. Culcasi, during the COVID-19 pandemic we could clearly see that several students, who were forced to take online classes, would not open their cameras, with the result that students´ participation as well as collaboration, which are main elements of e-service learning, were heavily affected. Students´ participation is indeed the first step to implement a service-learning project, in which then NGOs and other entities are involved. Being digitally educated is also an additional element connected to the issue of technology within e-service learning. To solve this, universities and higher education institutions could think about offering courses to improve the digital literacy of students and stakeholders involved in the project. Other challenges may be the motivation of students and the inability or lack of opportunities to create moment of reflections for students involved in the project which can extremely be useful to retrieve feedback for the success of the project.

To this, Dr. Culcasi suggests using different types of digital platforms to facilitate the communication among students. This is necessary considering that when students have the opportunity to work on a project in the physical space, they have more participation as well as a better understanding of the impact the project itself has on the community. This is a real issue, especially considering that Dr. Culcasi noticed how the same students, if provided with the right digital skills, will tend to choose online projects (i.e. about cyber-bullying) which involve creating on online community and using platforms such as Instagram. The digital space however, it is not enough.

When it comes to evaluating the rate of success and the quality of a project, Dr. Culcasi highlights that we need to take into consideration several quality elements as well as design principles. The latter include the creation guidelines for teachers/educators to shape the design or the project; these guidelines are articulated in a set of statement that focus on a specific mindset and design activities. As a result, the guidelines will facilitate the decision-making for the successful management of the project. Instructional design, design learning, pedagogy, stakeholder's engagement (in which stakeholders are seen as learning activators), horizontal integrations with students from the same level and vertical integrations with students from multi-disciplinary teams, which enter in touch with different entities in the community.

In addition to this, Dr. Culcasi reflects on the quality criteria that are usually implemented in e-service learning. These criteria are usually divided into different clusters and include relevant learning, relevant service, reciprocity, student engagement and reflection. Quality criteria are also applied to specific element of e-service learning. For instance, in reference to the technology element, one of the criteria is the humanistic, supportive and inclusive use of technology, another one is that the technology has to be suitable to the nature and needs of the e-service learning project.

Finally, Dr. Culcasi highlighted the adaptable and flexible nature of e-service learning programs, which is strictly connected with its sustainability in the long-term. Dr. Culcasi states that "e-service learning cannot be put in a box", it has a flexible nature which makes is adaptable to the different contexts in which it is implemented. Even its terminology can vary: in some countries it is called methodology while in other is called pedagogical approach, which differentiate how it is performed. As a matter of fact, a pedagogical approach encourages institution to work on each discipline in order to make it impactful in the society, without being restricted to the rules of one specific methodology. Based on this, e-service learning is sustainable in its own nature, due to its adaptability to each and every context and to the needs of the society.

Reflections

Theoretical approach to E-Service Learning proves its great importance in academic institutions as it connects students to actively participate to solving societal issues that may raise in their communities through the use of digital tools. Nonetheless, greater awareness should be raised in order to support educators in implementing effectively such approach. In addition, providing a high level of quality is beneficial for the correct implementation of this academic approach, for the participation and engagement of students and for the successful outcome of the project.

Additional Note (optional)

Annex 3. Interview Report 3

Introduction

Partner	**W8/Future Cast**
Interviewer	Mary Whitney
Interviewee	Stuart Lawn, Founder Fab Labs
Background of Interviewee	Stuart is Creative Director of Fab Lab, Manorhamilton and provides training and education in the use of 3D printing to counties Leitrim, Cavan, Longford and Roscommon. The Maker Hub is a mobile Fab Lab that travels to each county providing training and services to SMEs, Micro Enterprises, Schools and Community Groups. The overall aim of the Maker Hub is to foster innovation, education and new business development whilst providing unprecedented access to digital fabrication technology. The Fab Lab, short for Fabrication Laboratory, sought to bring digital fabrication technology out of academia and into the community. As of May 2020 there are now over 2000 Fab Labs in over 100 countries aiming to: ● Serve as a technical prototyping platform for innovation and invention, providing stimulus for local entrepreneurship. ● Be a platform for learning and innovation: a place to play, to create, to learn, to mentor, to invent. ● A conduit of connection to a global community of learners, educators, technologists, researchers, makers and innovators. ● Create a knowledge sharing network that spans 100 countries and 24 time zones. ● Build a global network of common tools and processes, a distributed laboratory for research and invention. Fab Lab Manorhamilton as part of that global and Ireland-wide Fab Lab network are continually seeking to develop the aims of the original MIT Fab Lab charter and these all correspond entirely with the Maker Hub project. Read **Stuart's Bio**

Main Topic of Interview

The qualitative interview seeks to ascertain the issues facing the creative community during the Covid 19 pandemic and gain insights into the perceived learning outcomes of e service learning for the creative community, for students & staff of HEIs and for HEIs.

Question asked

1) Can you tell me about your experience during the Pandemic?
2) How did it affect your working life?
3) Do you see a collaborative space for HEIs in the creative sector?
4) What would that look like?
5) What would you say are the benefits of E service-learning to the creative community?
6) Do you envisage any challenges?
7) What do you think would be the learning outcomes for: -
    a) Creative Community
    b) The HEI
    c) Students and HEI staff involved in E Service learning

Summary of Discussions

The pandemic impacted heavily on Stuart's business. In his case pivoting to online was necessary to fulfil funding obligations, investing heavily in video content. In place of meeting children in workshops and library spaces, he now was sending kits with instructional materials provided on videos.

Stuart referenced some of his sculptor friends who were faced with producing high quality photography of their work to publish on a website in lieu of the traditional gallery exhibition.

Stuart provided some valuable insight into just how creative some of his peers were in combatting the issues of social isolation and leaving a societal footprint in the form of art. One of his friends used zoom to link in with his elderly neighbors, have a chat and also paint their portrait for good measure. The sense of creativity in capturing a specific moment in time through the medium of zoom while adding social value and solidarity with elderly neighbors is priceless. The ability to turn a difficult situation into a force for good.

Online was good in terms of reach, flexibility, relaxed in own environment but face to face allows for deeper conversations and connection.

Stuart and a few friends created a podcast to support each other through this uncertain period in the Northwest. He liked this platform as its non-prescriptive and it was like having a chat with a friend. One of the common threads to emerge from the Podcast series was the opportunity, general positivity, down time to reset, it made everyone reassess what's important and the need for balance and downtime.

Stuart is a proponent of working with HEIs however he believes that the third mission ethos needs to be hardwired into their mission statement. He sees a disconnect between HEIs and community and believes there should be a budget for it in all HEIs and note left on the shoulders of the few who are interested in pursuing this agenda.

Stuart believes the pandemic may have accelerated the move to project-based learning as it has demonstrated a more effective way of doing things.

Reflections

There was a strong response to working with students on solving real world problems. However, it did throw up some real issues such as the time required to ensure students have a good experience and are also learning something on an already resource stretched industry. Stuart saw more synergies with peers such as academics for knowledge sharing and communities of knowledge, cross pollination of ideas.

Another interesting point surfaced on the HEI agenda and the third mission. Is it coming from a business or creative angle. Stuart's own view is that if creative processes improve then business will improve from there. Much of the research comes from improving strategy, business planning and not looking from a creative lens on what the issues are.

Stuart also mentioned zoom fatigue and the need for live interaction for training. His view was more from a connection point into academia and support the HEI might offer, not solely student focused. Stuart also spoke to not trying to fit a square peg into a round hole. The creative journey is not linear and more iterative. A huge piece of learning for any HEI student might be just this. A prescriptive formula might not work, and flow states can differ week on week.

Accessibility is still a piece to work through. Rural Ireland- broadband can be weak and hot spotting can be expensive.

Additional Note (optional)

The interview approach was open ended and allowed the participant free reign to explore these concepts.

Annex 4. Interview Report 4

Introduction

Partner	**Vilnius Gediminas Technical university**
Interviewer	Vilma Puriene
Interviewee	Sara Velsing Groth
Background of Interviewee	Design School Kolding, internationally acclaimed design university where students work with tools, techniques, concepts and methods in an international academic setting and enjoy easy access to excellent workshops.

Main Topic of Interview

Early Warning Program based on design thinking approach.
The ongoing pandemic has highlighted the lack of innovative tools to help small and medium-sized enterprises (SMEs) confront crises. In Europe, experts are signalling that a new wave of bankruptcies is approaching.
Yet, innovative Early Warning systems can play a central role in helping SMEs overcome crises before they even begin.

Question asked

What it is about?
What are the design thinking tools?
Is this EU or national level?

Summary of Discussions

The aim of the programme is to help the owner of a business in difficulty to re-start or restructure its business and to

avoid bankruptcy, job losses and, in the long term, to enter a new path of growth and job creation.
The programme addresses not only the importance of helping companies during the crisis. It also highlights the need to develop tools to motivate owners of the companies, which are facing a business crisis or going bankrupt to identify operational difficulties, seek help and start other activities. Using the "Design Thinking" methodology, programme (mentors) is developing action and tool maps to promote non-technological innovation for companies in stagnation or on the verge of bankruptcy to recover. National maps of support and mentoring actions and tools are being developed to focus on guidance and capacity building, and support for business owners in difficulty.

The programme focuses on the EU and national policy dimension by involving innovation actors, enterprises, stakeholders and public authorities at all government levels in transnational policy dialogue and policy development.
Tools:
Active listening
Financial self-check
Value session
Cycle of renewal.

Reflections

Early Warning programme aims to help companies, which are facing difficulties, not only to inform about the impending crisis but also to provide them with targeted information on possible help/advice from experienced professionals. The experience of other EU countries shows that professional advice given at the right time helps businesses to avoid major crises. It also encourages companies to look for opportunities to direct their business to other markets and thus maintain further business growth.

Additional Note (optional)

Design thinking has become quite popular, also outside the field of design. At its core, design thinking is about understanding and addressing the needs of people, particularly potential users and customers. It is generally considered to be important to involve people, including stakeholders such as colleagues, employees, and representatives of the target group(s), in the design process. By engaging in ongoing dialogue, it is possible to reduce the risk of “tunnel vision”, challenging your own biases and bringing in fresh perspectives.