



'22

**IV ENCONTRO DE REFLEXÃO
E PARTILHA PEDAGÓGICA**
EM CIÊNCIAS SOCIAIS

EFFECTIVE LEARNING IN HIGHER EDUCATION SHARING EXPERIENCES

23 E 24 DE SETEMBRO 2022

LIVRO DE ATAS

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FICHA TÉCNICA

Evento	IV encontro de reflexão e partilha pedagógica
Título	Livro de atas do IV encontro de reflexão e partilha pedagógica
Local	Escola Superior de Ciências Empresariais do Instituto Politécnico de Setúbal, Portugal
Data de realização	23 e 24 de setembro de 2022
Editor	Instituto Politécnico de Setúbal, Portugal
Editado por	Luísa Cagica Carvalho, ESCE/IPSetúbal Boguslaw Sardinha Catarina Delgado João Nabais Paulo Bogas Pedro Mares Rui Dias Sandra Nunes Susana Galvão Vitor Barbosa
Autores	Luísa Margarida Cagica Carvalho et al.
Capa e paginação	Susana Galvão
Mês/Ano	Outubro de 2022
ISBN	978-989-53890-2-5

Co-creation based on design thinking

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Resumo

Neste artigo propomos discutir sobre as diferentes atividades que podem ser consideradas para apoiar os estudantes na co-criação através do design thinking. Fá-lo-emos através de uma experiência de laboratório vivo na temática do Bem-Estar sobre estilos de vida saudáveis para jovens que frequentam o ensino superior. Neste estudo de caso, as etapas de co-criação na resolução de problemas reais foram preparadas por dois facilitadores e desenvolvidas através de um grupo internacional de quinze estudantes, com diferentes formações de base, no âmbito da aliança europeia E³UDRES². Durante um período de dez semanas foi levada a cabo uma solução pelos estudantes para um estilo de vida saudável para os jovens. Como protótipo, duas aplicações foram planeadas pelos estudantes, envolvendo um stakeholder externo interessado no tema.

Palavras-chave: co-criação; colaboração; design thinking; laboratório vivo; E³UDRES²

Abstract

In this paper we will discuss about the different activities that can be considered to support students in co-creation through design thinking. We will do this through a live lab experience in the theme of Wellbeing on healthy lifestyles for youngsters in higher education. In this case study, the steps of co-creation in solving real problems were prepared by two facilitators and developed through an international group of fifteen students, with different backgrounds, within the European alliance E³UDRES². Over a period of ten weeks a solution for a healthy lifestyle for young people was carried out by the students. As a prototype, two applications were planned by the students, involving an external stakeholder interested in the topic.

Keywords: co-creation; collaboration; design thinking; I Living Lab; E³UDRES²

1. Introduction

E³UDRES² stands for Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions. This ongoing project adopts the innovative concept of I-Living Labs (ILL) for the development of a university of the future as well as for smart and sustainable regions.

Building on the existing model of Living Labs, the foundations of an ILL are co-creation, transdisciplinary, stakeholders, learning outcomes and assessment (Blumenstein et al., 2021).

In the context of the ILL of E³UDRES², students from international partners, working with external stakeholders, will be co-creating solutions on real life problems in one out of three domains: (i) Human contribution to artificial intelligence; (ii) Well-being and aging; (iii) Circular economy. The educational entrepreneurs who facilitate the co-creation process use different methods throughout their ILL, depending on the specific problem in the ILL.

2. Objectives

The ILL on Healthy Lifestyles for Youngsters (HLFY) is the wellbeing experiment at focus in this paper and was a remote ILL run throughout ten teaching weeks in the second semester of 2021/2022. The main challenge is to find practical solutions to healthy lifestyles for youngsters in higher education. To reach this goal the ILL focused on innovative opportunities for students in higher education in the following wellbeing dimensions: Nutrition, Physical activities (sports), and Mental health issues.

Co-creation as a form of collaborative innovation, where ideas are shared and improved together, in this ILL, involved three types of learners (fifteen students, two educational entrepreneurs, one external stakeholder) from different countries (Austria, Belgium, Hungary, Portugal, and Romania), among which three were French Erasmus students, one Spanish and two Russian, as well as with different backgrounds (agricultural engineering, computing, economics, electrical engineering, enologist, marketing, food science (food engineering), and horticulture), but a common interest on the healthy lifestyle topic. To support a user-centred co-creation process, the educational entrepreneurs of this ILL prepared a set of activities involving researching the challenge, empathizing with the end users, defining the problem, ideating as many solutions as possible, and prototyping and testing them (Westerlund, 2018). The main purpose of this research is to reflect and discuss upon these options.

3. Methodology

To achieve the research objective a high-level search on the design thinking methodology was first conducted in order to systematize the main issues to be addressed in the co-creation process through design thinking. The Stanford Design Thinking Model was followed as a basis for the phases, step by step (Doorley et al, 2018).

4. Main results and reflections

The ILL team on HLFY co-created a solution to a problem, making use of the methodology of design thinking. Known as a user-centric approach, the main currency of design thinking is empathy, defined as the ability to put ourselves in the users' shoes; to truly see the world through their eyes in a given context or situation (Huion et al, 2021; Stevens, 2021). From the first phase of design thinking, called "Empathize" up till the "Testing phase", the main purpose of the designers is to gain a deeper understanding of the needs and values of the target audience (Huion et al, 2021).

As a pre-phase, students were asked in groups of 3-4 to conduct desk research on what, how, and why with the following guidelines: 1) search for information on the ILL topic from various sources (websites, books, magazines, blogs, articles, etc.); 2) divide a page into three sections and break down what they've understood as follows: What: ... A healthy lifestyle for youngsters is... (concepts, dimensions, related topics,...); Why: ... A healthy lifestyle for youngsters because... (facts, data, trends,...); How: ... A healthy lifestyle for youngsters through... (concrete actions, good practices,...); 3) present their work briefly to the rest of the group in the next synchronous session; 4) reflect and discuss what they've learned about "the topic".

For the empathize phase of design thinking with the purpose of getting to know the user and understand their needs and motivations, students had a first empathize exercise consisting of three steps: 1) Prepare an interview participation, by choosing one of the following wellbeing dimensions: Nutrition, Physical activities (sports), Mental health issues; then thinking about the last time they had a healthy or unhealthy behaviour on the chosen wellbeing dimension; finally, describing the experience, their feelings and emotions, by answering to questions like: "How would you describe that experience?", "How did the experience make you feel?"; 2) Conduct a brief interview, by pairing up with his/her reflection partner and proceeding as follows: Person A interviews Person B and then switch roles; 3) Create an empathy map, by filling it on its four quadrants (says, thinks, does, and feels), based on the interview they have conducted, and using a virtual whiteboard app like Mural for accomplishing the task. Students have presented their empathy maps on the next synchronous session, also both reflecting and discussing on what they've learned about "the user".

The additional empathize exercise involved an external stakeholder, Hungary's biggest plant in egg processing. Students were asked to collect their questions to the external stakeholder in Mural related to the three major topics in healthy lifestyle (healthy nutrition, sports and exercise (physical activity), mental health). They then conducted the interview with Capriovus Ltd. and finally collected their interview notes on the Mural board.

Taking both empathize exercises, students proceeded to the define phase in order to unpack the empathy findings into needs and insights, and scope a meaningful challenge, with the final aim of

narrowing down the broader design challenge to something more specific (Huion et al, 2021; Stevens, 2021). In that phase, students worked in groups of 3-4 on a two-step define exercise by using the breakout rooms in Microsoft Teams. The first one called "Good point of view" (POV) consisted of: 1) going back to the unpack activity and formulate a POV by combining the following three elements: User - defines the type of specific user whom they are writing their POV about; Need - identifies the users' essential needs/goals; Insight - synthesizes the gathered information into a key takeaway and this statement can be used to design a solution; 2) inserting their information about the end user, the needs and their insights, by filling the sentence: "the user (describe vividly) needs... because of... (compelling insight)". The second step of the define exercise called "How might we?" (HMW), consisted of: 1) reframing the POV statement as a "how might we" question; 2) presenting both the POV and the HMW that they have defined; 3) reflecting and discussing on the POV/HMW to proceed in the next design thinking stage. Again, students used the Mural board to accomplish these tasks and, following the define stage of design thinking, where the team decided to focus on two different challenges, the big group was split in two.

In the next stage, ideate, in order to come up with ideas and solutions to solve the user's problem, the two group of students (seven and eight students each) had a three-step ideate exercise, accomplished in a breakout room and using the Mural board: 1) take their POV statement / HMW question and collect as many solutions as possible; 2) present their solutions; reflect and discuss to come up with new/improved solutions; 3) reflect and discuss on the solution to proceed in the next design thinking stage. Two applications were planned by the students: an app that can help people to talk with professionals to get more information to talk about mental health and taboo subjects; an app called MealTime offering various restaurant options, various meals, cooking recipes and suggestions for students to choose healthy meals instead of junk food.

Prototyping i.e., the design and development of solution(s) proceeded also as a co-creation process, followed by a testing phase in order to gather feedback, refine solutions, and continue to learn about the potential end users. To that end students were first asked to test with youngsters in higher education (the end users of this ILL) and then test with the external stakeholder. In both cases students let the user/stakeholder experience the prototype, have them talk through their experience, actively observed the user/stakeholder, and followed up with questions (Doorley et al, 2018).

Finally, students reflected and discussed what they've learned with both testing exercises and, by making use of the design thinking process as an iterative, non-linear process, they subsequently refined their POV statement / HMW question and improved their prototype.

Conclusion

Both educational entrepreneurs learned the way of design thinking and were able to lead the group in its step by step. Nevertheless, not every student was involved in every single activity from the very beginning. The big group size didn't help them to engage as it was supposed, even though the splitting of the group in two, helped somehow to increase students' participation and motivation in the ILL. However, some students revealed difficulties in interacting with others during the entire ILL. Moreover, Capriovus Ltd aims the development of new, innovative food products, to which the students were able to identify and to involve the company's interest in their work during defining, prototyping, and testing periods. The involvement of the stakeholder gave the impression to the students that they are working on a real useful solution during the ILL. At the end, all learners developed specific competences by working collaboratively on solving societal challenges. The students were also delighted to have won first prize in the show down event of the spring edition with 16 ILL competitors.

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