Outline

Highlights

Abstract

Keywords

1. Introduction

2. The framework outlining the challenge

3. Methodology

4. Findings, analysis, and implications

5. Conclusion and directions for future research

Declaration of generative AI and AI-assisted tec...

Declaration of competing interest

Acknowledgements and funding

References

Figures (5)

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Review Article

‘Now open for action!’ – A real-world challenge project developed at the Polytechnic Institute of Viseu

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Highlights

- Real-world challenge projects that tackle intricate societal – and technological – problems are pillars for collaborative and innovative teaching practices.
- The Demola Portugal Initiative worked as a reference paradigm to challenge the teaching staff, today's talents and partner entities to pursue change.
- Higher Education Institutions are being reframed to become more innovative, humanising and transformative spaces.
- The ‘Open for Action’ team completed several tasks that would attract young audiences to the theatre and other art forms after the pandemic.
- The synergies resulting from the cooperation among HEIs, Government, Industry, and Society at large, in interaction with nature, lead to a win-win situation.

Abstract

Higher Education Institutions are committed to developing innovative pedagogical practices that open the doors to collaboration between students, who are seen as talents; teaching staff, who become their facilitators; and partner entities that present them with societal challenges, in different fields, and call for intercultural, multidisciplinary, proactive, multi-stakeholder action. This is the setting of the virtual learning environments that the Demola Portugal Initiative has embraced and cherished in a network of 14 Portuguese Polytechnic Institutions. Our study focuses on a real-world challenge project that was part of the first batch developed at the Polytechnic Institute of Viseu, together with ACERT, a cultural and recreational association from the region that struggled with a fall in activity caused by the pandemic. Using design thinking and co-creation, a team of six students came up with a few solutions that would make young generations reconnect and participate in cultural activities. The aim of this paper is, thus, to present a case study that portrays how Higher Education Institutions are being reframed to become more innovative, humanising and transformative spaces that extend beyond the classroom walls to scaffold learning through meaningful tasks and partnerships. With this study, we may conclude that this project empowered the team and made them feel like true change-makers, whilst developing skills for their future that they can put into practice in the workplace.

Previous article in issue

Next article in issue

Keywords

Academia-industry co-creation; Demola Portugal initiative; Pedagogical innovation; Real-world challenge project; Participatory approaches

1. Introduction

Real-world challenge projects that tackle intricate societal – and often technological – problems are increasingly taking centre stage, as pillars for collaborative and innovative teaching practices in Higher Education (Amante & Fernandes, 2023, 2022; Demola, 2023b). Whatever the subject, design thinking and project-based learning are approaches that are student-centric and that foster autonomy and active work, preparing students in an academic interdisciplinary environment, but also supporting their transition to working life (Fernandes & Amante, 2022). Many initiatives and innovation hubs (e.g., Demola Portugal Initiative, 2023; Design Factory Global Network, 2023; Passport to Success, 2023; SUGAR Network, 2023) have been committed to developing students' creativity, critical thinking, motivation, negotiation, and leadership, as well as communication and entrepreneurial skills and mindset (Amante, Antunes, Dygala, & Gökçe, 2021a; Oliver & Oliver, 2022; Guaman-Quintanilla, Everaert, Chiluiza, & Valcke, 2023). They are also known for supporting research and, in the attempt to co-create new services, products or merely good solutions or scenarios that present opportunities for value creation, end out enhancing student employability competencies and employment opportunities.

More than ever, Higher Education is expected to prepare this next generation of talents to work optimally in environments of constant change, technologisation, and increasing competition. But this does not have to be detached from a social and humanitarian dimension. In fact, academia can act as the birthplace of innovation and civil progress, shaping our future. For that purpose, the shift from the triple helix of innovation (Etzkowitz & Leydesdorff, 2000) into a quadruple helix ecosystem that incorporates the public or civil society (Carayannis & Campbell, 2009) is heavily relied upon as a new mission, one that generates returns not only financially, through economic profit, but also encompasses social value (Vivona et al., 2023). There is still another model that is expanded beyond the academia's societal responsibility to include a quintuple helix. According to Martini (2023), the quintuple helix …

> … stresses the socio-ecological perspective of the natural environments of society. Social ecology focuses on the interaction, co-development, and co-evolution of society, and nature. The goal of the quintuple helix is to include the natural environment as a new subsystem for knowledge and innovation, so that "nature" becomes established as a central and equivalent component of and for knowledge production and innovation.

With this model, then, academia, government, industry, civil society, and the natural environment come together, in a web of interrelationships, to ensure economic and societal development and transformation in an inclusive and sustainable way (Mironova et al., 2019).

Based on these considerations and in our uncertain, fast-evolving world, we aim to focus on how the Demola Portugal Initiative (2021–2023) worked as a reference paradigm to challenge the teaching staff, today's talents and partner entities to pursue change. We are particularly interested in answering this question: To what extent did the Demola Portugal Initiative, and particularly its project entitled "Aprendizagem com base em processos de cocriação [Learning based on Co-creation Processes]", introduce new methods and tools, and how did these innovations contribute to active pedagogies, the enhancement of students' motivation and skills, alignment with labour market needs, and the advancement of society's progress, inclusivity, and sustainability, in accordance with the principles of the fourth and fifth helices of innovation? We will attempt to answer it by looking at and discussing one of the eight real-world challenge cases developed within the first edition of the initiative, recognising that this represents a fraction of the broader initiative's impact, as a total of 48 teams participated in the implementation project named "Link Me Up – 1000 Ideias [Ideas]", across the first to the sixth edition of the overarching Demola Portugal Initiative. In other words, we aim to provide an overview of the two projects that make up the Demola Portugal Initiative, and then reflect upon its role in fostering positive change within the educational system, focusing on a team of students, today's talents, who became true change-makers, while creating a better, more hopeful, and inclusive society, during the pandemic, in collaboration with ACERT, a cultural and recreational association that has a very active involvement in the performing arts, including theatre productions, music events, and other cultural activities.

Thus, this study starts with an insight into the Demola Portugal Initiative, which frames the challenge developed together with ACERT, the chosen partner entity known for its commitment to promoting the arts and culture in the region of Viseu, specifically in Tondela. Then, the methodology is explained, followed by the qualitative analysis of the data collected and a discussion of the findings and their implications. Finally, a conclusion will summarise the most important points and present directions for future research, because this initiative herewith described can provide guidance for the development and implementation of similar initiatives, in different contexts, which also shift from the traditional triple helix of innovation to a quadruple helix ecosystem, involving public or civil society participation besides academia, industry and government, or even to a quintuple helix, benefitting education, society, the natural environment, and the economy as a whole.

2. The framework outlining the challenge

The synergies that result from the cooperation among Higher Education Institutions, the Government, Industry, and Society at large, in interaction with nature, lead to a win-win situation that brings about inclusive and sustainable prosperity, as made clear in the section above.

With this in mind, the Demola Portugal Initiative was launched in 2021 at an event held at the Embassy of Finland, in Lisbon, where the former Portuguese Minister for Science, Technology and Higher Education, Manuel Heitor, highlighted the importance of this programme "to prepare students, graduates and early career researchers to profit from the opportunities available and become agents for the twin green and digital transformations" (Demola Global, 2023a). Aiming at "enabl [ing] cross-polytechnic interaction and effective industry-academia knowledge exchange", the initiative intended to make use of Demola expertise and bring together "… 900 polytechnic teachers, 600 companies from Portugal and internationally and around 5000 students from Portuguese polytechnics and international institutions" (ibidem).

The Polytechnic Institute of Viseu (known as IPV) was among the 14 Polytechnic Institutions that participated in the programme, by providing training to its teaching staff and to vocational schoolteachers from the region in order to promote pedagogical innovation and give them the tools to strategically cooperate with local, national and international companies and other civic organisations.

Particularly at IPV (Instituto Politécnico de Viseu, 2023a, Instituto Politécnico de Viseu, 2023b), this initiative was put into practice through two complementary projects, one entitled "Aprendizagem com base em processos de cocriação [Learning based on Co-creation Processes]" (reference no. POCH-04-5267-FSE-000818) and then another one, "Link Me Up – 1000 Ideias", which was managed by the Polytechnic of Leiria as the leader of the Consortium and funded by Compete.

Through design thinking, the use of platforms for co-creation, online (national and Polytechnic-specific) discussion forums and boot camps, Demola Global in partnership with trainers from the Polytechnic of Bragança, covered different topics on how to facilitate co-creation: from setting the scene and handling ideation and prototyping, to teaching methods and techniques such as brainstorming, storytelling, and interviews, among others, and the discussion of best practices and reflective insights into practices, all these contributed to upskill academic and vocational staff.

Eight IPV Professors and two vocational schoolteachers in each batch thought of a societal challenge that an organisation – preferably from Viseu – was facing. The training entity guided them towards sketching a case, which would then be solved by a multidisciplinary and intercultural team of students and facilitated by the trainee, i.e., the IPV Professor/vocational schoolteacher that designed the challenge aided by the partner entity. The same methodology was mirrored in 13 other Polytechnics, in six editions that started in January 2021 – even before its official launch – and ended in June 2023.

The real-world challenge project that is the focus of this study was one among the eight cases designed as part of the first edition, held from January to June 2021. The training programme consisted of 192 synchronous hours, via Microsoft Teams, and 152 asynchronous hours, making up a total of 344 h per trainee reported to the POCH funding agency, but the work developed with each group of students lasted 8 weeks, from the 22nd of March to the 21st of May 2021. Because of the second wave of the Covid-19 pandemic in response to rising cases in Portugal, national restrictions did not allow for face-to-face sessions in this first edition. However, with the easing of lockdown restrictions, company visits started to be planned, and, on the 31st of May 2021, the team working with ACERT managed to visit the Theatre Company and present the whole creative process to the stakeholders *in loco*, as shown in Fig. 1, below.

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Fig. 1. Visit to the backstage of ACERT and meeting with stakeholders to present the findings of the project.

A few other teams, for instance, the one working with Visabeira Turismo and another working with Ervital, were also able to visit the companies and discuss the results of their co-creation projects. The remaining ones met experts remotely and held virtual visits.

ACERT is a cultural and recreational association that aims at promoting the participation of local communities, through "innovative artistic and cultural praxis that contributed to the region's attractiveness and dynamism" (Amante & Fonseca, 2021). Due to the pandemic, everything was put on hold and ACERT also felt the need to cancel, postpone, reschedule, and adapt its activities.

The challenge, then, was for the team of students to reflect on the major changes that culture – and ACERT in particular – was going through, attempting to reach a huge diversity of audiences in the face of distress, but also after the pandemic. Knowing that the arts contribute to the well-being of our societies and to their cultural wealth, the idea was to prepare for a re-enactment envisioning multiple solutions, which moved away from the flourishing paid online broadcasting and streaming performance services that the theatre company was tired of at the time, and that did not follow the desiderate of community participation. The multidimensional form that characterises the performing arts could not comply with digital solutions only, and the social connection was much longed for. That was the reason why, after analysing weak signals, megatrends, and the interviews conducted, among other tasks, the team explicitly looked for a few solutions to be implemented upon the end of the Covid-19 lockdown.

Before delving into the creative process, its various stages, and its impact, it is now time to present a closer look at the methodology that was carried out.

3. Methodology

In light of the above, this study focuses on the challenge developed by one of the eight teams that made up the first edition of the two projects that were part of the Demola Portugal Initiative. It was a multidisciplinary team, as there were students enrolled in different undergraduate degrees, such as Plastic Arts and Multimedia (1st year), Advertising and Public Relations (2 nd year), Cultural Performance Arts (2 nd year), Sports and Physical Activity (3rd year), but there was also a team member who was in her last year of a Master's degree in Applied Communication, all from IPV, and an international participant who was a Chinese postgraduate student at the University of Warwick, in England, with a major in Art, Enterprise and Development. All of them had applied for the challenge through the Demola Portal (https://portal.demola.net/↗) and they were chosen because, in their profile and C.V., they claimed to be passionate about culture, and theatre in particular, or they had experience in the field as actresses, dancers, creative amateur artists/writers, or in community engagement or empowerment activities. One of them lived in Tondela and had been at several events by ACERT as a spectator and/or as a community participant. The team led an in-depth exploration of the case from multiple perspectives, shedding light on ways to support artists while empowering and engaging young people in participatory practices (European Theatre Convention, 2021; White, 2013). They used Microsoft Teams to meet whenever they felt the need to discuss the tasks assigned by their two facilitators, who, in turn, had received and tested them during their training with Demola Global and peer trainees from IPV. Once a week, the team joined both the facilitators and the ACERT's artistic director to present their work and the conclusions reached, and to get feedback. Data were obtained from the materials the team uploaded to the Demola Portal, also from the instant messages on Demola Chat, their final report, and from direct observation of their performance throughout the process.

The co-creative process took eight weeks, and it made use of the "Double Diamond" approach (Stelzle et al., 2017), in which the team members went from divergent (opening up and encouraging as many ideas as possible) to convergent (closing in by filtering and selecting ideas) stages. For that purpose, they successfully completed different tasks that involved creating mind maps, conducting a PESTLE analysis, identifying stakeholder and user groups, carrying out interviews, engaging in design research, formulating thought-provoking 'How might we … ' questions, generating affinity diagrams, analysing megatrends, fostering ideation, developing low-fidelity prototypes, and delving into value-proposition analysis, among others.

Upon completion of the process, this team and the seven other groups that participated in the first batch made a video pitch to show all the partner entities, IPV, other Polytechnic communities, and all interested parties what they had accomplished and how to contribute to positive change. It is important to note that this co-creative process was replicated in the following five batches till June 2023 and that Demola's business model had already been used with various other stakeholders, namely in Spain (Catalá-Perez et al., 2020) and in Japan (Demola Global, 2023a,b). The proven success of the methodology in these projects and initiatives enhances the methodology's marketability and reputation and the main purpose is for the Pedagogical Innovation Training Programme, developed within the consortium, to leave a lasting impact by sowing the seeds of innovation and significantly enriching educational methodologies and tools (Dieguez et al., 2023). The findings of this study and their implications are discussed in the following section.

4. Findings, analysis, and implications

Due to the pandemic, the journey began in an online-only collaboration environment and, in order to get the whole team on the same page with each other, the members were invited to share their views on the topic by drawing their mind maps on Miro. Some interesting ideas emerged, as shown in Fig. 2, such as, regarding accessibility, "[m]ak [ing] the show available in other platforms besides online. Maybe as a TV available purchase or even radio stations using only creative reading" ('Open for Action' team, 2021). Besides that, they thought about giving theatregoers the opportunity to access different parts of a play that did not make the final cut and, among many other insights, building partnerships (e.g., with schools) to encourage community participation and nurture talents.

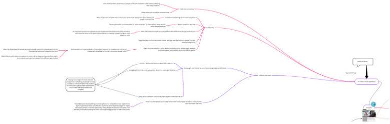

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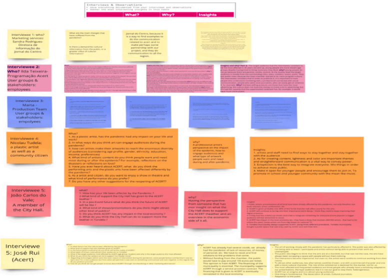
Fig. 2. Part of a mind map created collaboratively on Miro (Source: Demola Atlas and the team's final report).

The artistic director was very interested in some of the ideas but showed some reluctance towards the digitalisation of the shows. This meant that the team was challenged to think about hybrid scenarios or, even better, to build solutions that would take young audiences back to ACERT and hook them in a way that they would want to be part of it. The frequent conversations with the artistic director, the facilitators and other guest experts were key to the collaboration process and the fact that, together, the team progressed in their research about **P**olitical, **E**conomic, **S**ocial, **T**echnological, **L**egal and **E**nvironmental (PESTLE) factors associated with the case, made them much more knowledgeable and able to provide valuable insights. Their understanding of the "big picture" allowed them to feel at ease when interviewing members from the Tondela municipality, others who worked on regional communication networks, the stage crew and other artistic staff, and local inhabitants (cf. Fig. 3).



Interviews & Observations
What?
Why?
Insights
Interviewee 1: who? Marketing services: Sandra Rodrigues- Diretora de Informação do Jornal do Centro
Interviewee 2: Who? Ilda Teixeira- Programação Acert User groups & stakeholders: employees
Interviewee 3: Marta - Production Team User groups & stakeholders: empolyees
Interviewee 4: Nicolau Tudela; a plastic artist as well as a community citizen
Interviewee 5: João Carlos do Vale; A member of the City Hall.
Interviewe 5: José Rui (Acert)

Jornal do Centro, because it is a way to find examples to do the communication related to acert and to make perhaps some partnership with our project, and they do communication to all the region.

What?
1. As a plastic artist, has the pandemic had any impact on your life and work?
2. In what ways do you think art can engage audiences during the pandemic?
3. how can artists make their artworks to reach the enormous diversity of audiences (considering age profile, gender, ethnicity, education, income, preferences)
4. What kind of artistic content do you think people want and need most during or after the epidemic? For example, reflections on the disasters or reflections on love?
5. Have you ever heard about ACERT, what do you think the performing arts and the plastic arts have been affected differently by the pandemic?
6. As a artist and citizen, do you want to enjoy a show in theatre and what kind of performance do you prefer?
7. Do you have any other suggestions for the reopening of ACERT?

why?
A professional artist's perspective on the impact of the epidemic, how to engage audiences and what type of artwork people want and need during and after pandemic.

Insights:
1. artists and staff need to find ways to stay together and stay together with the audience
2. As for creating content, lightness and color are important themes and straightforward communication is a vital way to convey power.
3. Eclepticism is the best way to integrate everyone. Mix things in order to achieve most public.
4. Make it open for younger people and encourage them to join in. To promote in school and younger community with the mean like music.

what?
1- How has your life been affecter by the Pandemic ?
2-What kind of support the City Hall has given to the ACERT teather ?
3- In a pos-Covid future what do you think the future of ACERT will be like ?
4- What kind of shows/presentations do you think might attract other kind of publics?
5- Do you think ACERT has any impact in the local economy ?
6- What do you think the City Hall can do to support more the teather in Tondela ?

why?
Having the perspective from someone that has mor insight on what the City Hall does to support the ACERT theather and an overview in the economic side of it all.

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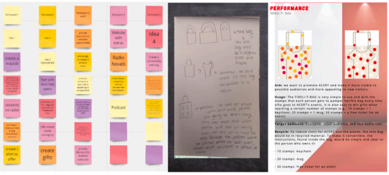
Fig. 3. Summary of the interviews shared among the team members on Miro, then discussed with the facilitators and the partner entity and uploaded to Demola Portal (Source: Demola Atlas and the team's final report).

This gave the team a breath of ideas to build from and, collectively, they went from simple, rapid ideation to the sketch of low-fidelity prototypes that would reward loyal theatregoers and deeply engage youth in a participatory relationship with ACERT, as depicted in Fig. 4.



Participant 1
Participant 2
Participant 3 youth
Participant 4
Participant 5
Idea 1
Idea 2
provide internships or volunteer opportunities
Website with extras
Idea 4
create a mascot
Idea 2 improvement
encourage co-create of script or music
Radio Novels
Create a convertible tote bag
flyer with door that opens
produce contents or topic that a appealing to young people
create deeper connections with art courses near the theather
concerts on radio
Podcast
offer extras create packaging
create t shirt to offer
create gifts
provide discount for students tickets fee
PERFORMANCE
FIDELI-T-BAG

Aim: we want to promote ACERT and make it more visible to possible audiences and more appealing to new visitors.

Usage: The FIDELI-T-BAG is very simple to use and with the stamps that each person gets to pamper her/his bag every time s/he goes to ACERT's events, it is also easy to win gifts when reaching a certain number of stamps (e.g., 10 stamps = 1 keychain; 20 stamps = 1 mug; 50 stamps = a free ticket for an event).

Target audience: Everyone. Loyal audience and new audiences.

Recycle: To reduce costs for ACERT and the planet, the tote bag would be in recycled material. To make it convertible, the instructions, found inside the bag, would be simple and clear to the person who owns it!

- 10 stamps: keychain
- 20 stamps: mug
- 50 stamps: free ticket for an event

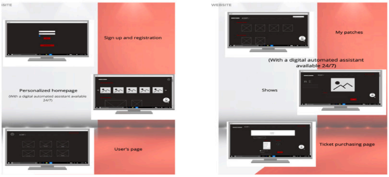


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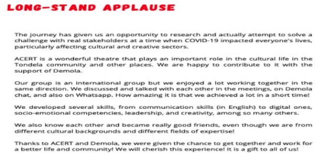
Fig. 4. Rapid ideation and some low-fidelity prototypes co-created by the team (Sources: Miro and the team's Final Report).

They prepared a communication plan to guide them in addressing the needs of ACERT, according to their programme, and that could also work as an action plan for them to reach the target: young generations. As a result, among other ideas, they made creative flyers to promote the music festival “Tom de Festa” and they designed a mug “for beer” that could be purchased at the ACERT store to be used in that festival or similar events or to be offered as a gift. According to them, it could be an “opportunity to work with the traditional potters of Tondela (SOENGA – Barro de Molelos), blending the traditional and the modern facets of life, preserving the community's historical built heritage, while looking ahead into the future. It opens doors to intergenerational engagement” (‘Open for Action’ team, 2021). They also designed some more merchandising, such as a key and coat rack that they named “Hanging for 45”, alluding to the 45 years of ACERT; a Fideli-T-Bag, which would be a unique, recyclable tote bag that could be converted into a T-shirt, and it would be stamped every time a ticket for an ACERT's event was bought. Loyal audiences would then be pampered with this customised Fideli-T-Bag and, at the same time, a number of stamps would mean they would get a keychain, a mug or a free ticket for an event. Furthermore, in order to give the users “a more complete experience by allowing them to make personalized actions like register and enter their Fideli-T-Bag (…), having a section to explore and even revisit their past purchased shows, (…) and special ‘extras’ and freebies to complement every show” (ibidem), the students created an ACERT website prototype.

This process of co-creation required teamwork, communication and digital skills, creativity, relationship building, leadership and negotiation. The team members recognised it all and, in their own words, as a conclusion to their final report, they wrote (see Fig. 5):



LONG–STAND APPLAUSE

The journey has given us an opportunity to research and actually attempt to solve a challenge with real stakeholders at a time when COVID-19 impacted everyone's lives, particularly affecting cultural and creative sectors.

ACERT is a wonderful theatre that plays an important role in the cultural life in the Tondela community and other places. We are happy to contribute to it with the support of Demola.

Our group is an international group but we enjoyed a lot working together in the same direction. We discussed and talked with each other in the meetings, on Demola chat, and also on Whatsapp. How amazing it is that we achieved a lot in a short time!

We developed several skills, from communication skills (in English) to digital ones, socio-emotional competencies, leadership, and creativity, among so many others.

We also know each other and became really good friends, even though we are from different cultural backgrounds and different fields of expertise!

Thanks to ACERT and Demola, we were given the chance to get together and work for a better life and community! We will cherish this experience! It is a gift to all of us!

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Fig. 5. Final Report conclusion. (Source: Final Report).

The real-world case also developed their intercultural and language skills, and it allowed them to meet experts who stepped beyond consultation to become part of the team. This goes hand in hand with Agrawal, Kaushik and Rahman's remark (2015, p. 446) that …

> … co-creation leads to the development of innovative solutions which reflects that customers and various stakeholders are well aware of their needs and that it is their involvement which could bring out customized and personalized products and services tailored according to their requirements.

The broad range of ideas evoked above proves that co-creation is a successful approach to address complex challenges, because it actively promotes the inclusion of various perspectives from within the academia, the partner entities, and the civic society at large. Everyone benefits from this participatory practice, not just the students. By accessing ACERT (2023), we notice that the website does not follow the team's suggestions as it does not have a user management function, but the layout is currently more user-friendly than it was at the time, and there is a tab named “Estúdio [Studio]”, according to which an artist uses a studio at ACERT to promote his/her musical creations, which can be viewed online through the YouTube channel ‘O estúdio é teu’ [The study is yours]. Even if most of the ideas are discarded by the organisations, the fact that these projects enable students to work outside the classroom walls to collaborate with intercultural, multidisciplinary peers, learning from different stakeholders and experts, while trying to solve complex societal challenges, contributes to reframing Higher Education Institutions to make them more innovative, humanising and transformative spaces.

5. Conclusion and directions for future research

For some years now, there has been a growing emphasis on co-creation based on strategic partnerships involving teams of talents and the industry in programmes that are often funded by the Government (Albers et al., 2018; Catalá-Perez et al., 2020; Mattila et al., 2019). In Portugal, one such programme is, as described in this study, the Demola Portugal Initiative, which has been regarded very positively by all the participants: the Polytechnic Professors and Vocational schoolteachers, who are trained by Demola and act as facilitators of an intercultural and multidisciplinary team of 4–6 students, the students themselves who are eager to try to solve societal challenges found in existing companies from the region, and the different stakeholders who benefit from co-creative practices. This study aimed at portraying an innovative pedagogical approach that connects academic higher education institutions and local partner entities, particularly by reflecting upon a real-world challenge project developed at the Polytechnic Institute of Viseu, together with Demola and ACERT.

Using Miro templates, Canva, and other tools on Demola Portal, as well as Demola Chat, videoconferences via Microsoft Teams, among other co-creative platforms, the 'Open for Action' team completed several tasks, facilitated by an IPV Professor and a Vocational schoolteacher from the region of Viseu, who had previously learnt the advantages of these tools, and how to use them, in their training sessions. This allowed the team to collaboratively design some lo-fi prototypes that would attract young audiences to the theatre and other art forms after the pandemic. The joint online sessions held with the facilitators, the artistic director and other experts, as well as the interviews conducted, gave them the opportunity to exchange their points of view, receive feedback and be challenged to think out of the box, co-create and develop a lot of competencies in a free-flowing environment.

As the following five editions progressed and COVID-mitigation measures were gradually lifted, face-to-face company visits and other dynamics were in place. Even though the two projects have just come to an end, the seeds of co-creation have been sown (Amante, Antunes, Dygała, & Gökçe, 2021b; Faria et al., 2022) and these active methodologies and tools are now being used at IPV in different course units, according to some of the participants of the six editions.

Shaping the future through co-creation is a trend now as, more and more, there is the transformation of Higher Education into an open, innovative, collaborative, and synergistic system aligned with the expectations and requirements of today's knowledge-based society, where the teacher works as a facilitator, rather than an instructor, and the learning environments extend to beyond the classroom to incorporate partner organisations and networks (Rodrigues & Mourato, 2023) with clear advantages for them, as Thomson et al. (2022, p. 65) note:

The benefits of using co-creation vary from harnessing the active involvement of participants in co-creating thus securing "buy-in", sharing resources and knowledge to enhancing innovation processes, providing network solutions, and contributing to the well-being of the service system.

It would be interesting to accompany the impact that this initiative had on pedagogical practices at IPV, so future research is to be developed to understand the changes the teaching staff have introduced in their classes, as well as if they are using challenge-based approaches and the tools and platforms for that. On the other hand, further research is to be conducted on ACERT to assess if the outcomes of the project have been implemented and resulted in engaging young audiences, as expected.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work the author, Susana Amante, did not use any AI-assisted technologies.

Declaration of competing interest

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