



# CiC NEXTBOOK

Co-created Interactive Courseware

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## Intellectual Output 3: Training & Onboarding Material for Teachers

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# Table of Contents

- 1. Introduction.....3**
- 2. History.....3**
- 3. Training and Onboarding Activities .....4**
  - Training materials .....4
  - Train the Teacher Event .....4
  - Multiplier Events.....6
    - University of Maribor .....7
    - University of Wolverhampton .....7
    - KU Leuven .....7
    - Instituto Politecnico do Porto.....8
- 5. Outcomes.....8**
- 6. Impact.....9**
- 7. Dissemination.....10**
  - Specific conferences we presented at.....11
- 8. References .....12**

## 1. Introduction

Based on the previously developed pedagogical framework (O1) and the online learning environment (O2), and in conjunction with Nextbook staff, the University of Wolverhampton developed hands-on training and onboarding material for teachers and their students. This material was split up in several categories:

a) Presentations were given at a number of national and international conferences, as detailed in Final Report Section 6.2, and live to teachers and professors at each of the partner institutions and nearby institutions at both the international Train the Teacher event held in Leuven and at the Multiplier Events held at each Institution. This material served to i) inform academics and higher education professionals about our project and its emergent praxes and findings, and ii) facilitate on-the-job learning for educators who are eager to include co-creation and interactivity in their (existing or new) curricula. This latter material was given in the form of participant workshops where we also took feedback that we incorporated into our ongoing research-led platform design.

b) Guides have been made available online, for free, as self-study manuals on co-creation and how to get started with the platform and its co-creation features.

c) A step-by-step click-through onboarding tutorial integrated into the platform and shown upon creating a new account has been created.

d) Video tutorials have been made available through the Online Expertise Centre via the website hosted by the University of Maribor.

This documentation should be used in conjunction with both the Pedagogical Framework (IO1) and the analysis of Learning Analytics (IO2) which include methods on how to encourage student interaction from within their courseware, and mention how the generated data can be interpreted and used for grading. The guides have been made available in the languages of each participant organisation.

The guides and methods address alignment with current pedagogies prevalent in the HE sector, the impact or relevance of different subjects and disciplines and synergy with other trends and technologies such as flipped learning, project based learning, mobile learning, etc.

## 2. History

IO3 began circa April 2021, following the pandemic crisis and our granted request for an extension. As described elsewhere, we demonstrated the potential of the project and platform at internal (institutional), local, national and international conferences and looked to 'onboard' participants to meet our metrics but, due to the huge impact of the pandemic on the Nextbook team, we were never able to have the fully functional platform we needed to draw the interest of educational professionals already exhausted from the abrupt shift online caused by COVID-19.

This impacted on the efficient sequencing and timetabling of activities to achieve the Indicators particularly. Other areas affected were the face to face meetings and, particularly, end user testing: due to oversaturation of online platforms and on-screen teaching and learning in what we called elsewhere the “frantic and mostly unplanned shift to online modalities of teaching and learning” (Traxler et al., 2020), we were unable to recruit many participants who were “bruised by their experience of emergency online transition and distrustful of a more prolonged and substantial embrace of digital pedagogies by their institutions; confirming the findings from previous studies that signpost academics’ hesitancy towards and suspicion of higher education’s digitalisation (Marshall 2018; Selwyn 2017; Williamson 2020). (These) accounts are a story of trauma in the face of pandemic and of profound professional and personal disruption” (Watermeyer et al., 2020, online).

The greatest impact, however, was felt by Nextbook, who own and run the platform. Forced early on to pare down to a sole member (the owner/entrepreneur), it was unable to meet the planned timetable milestones and we fell behind from mid-2020. By September 2021 he contacted the project lead to concede that could not dedicate his time to the project alone. We mapped this against our Risk Assessment and contacted the National Agency in October 2021 with our plan to work towards some lower Indicator numbers as a result. Working within the constraints of a never fully fit-for-purpose platform did mean, as explained elsewhere, that we were unable to meet our Indicators for numbers of staff and number of modules/courses using Nextbook. However, we did meet all the Intellectual Outputs.

### 3. Training and Onboarding Activities

#### Training materials

Following iterative input from the project partners as the platform evolved, and as use case studies were completed (particularly at KUL), and from participants at the events described below, the following materials were created:

- A single-page platform guide was created and sent via email to educators (and, depending on the course, their student) ahead of each pilot class. This screenshot-illustrated guide explained the student-oriented features such as note-taking and commenting.
- A series of video tutorials are available at <https://cic.um.si/nextbook-platform/>.
- As a helpful guide for authors looking to upload their own content to Nextbook, a template file in .docx format was created and made available via <http://nextbook.io/publish>. This template makes it easier to create interactive books with more advanced types of content, such as multiple-choice questions, questions with textual answers, and videos.

#### Train the Teacher Event

The aim of this activity was to provide participating educators with sufficient knowledge about and experience with co-creation, and to familiarise them so that they can be successful in adapting the techniques and software to their own use cases.

Following an introductory session, we had specific input on the pedagogical framework and some of our use case studies were shared. The platform was explained and explored, and all participants had hands-on time with it, and were able to both explore and discuss its potential, then we had a very useful feedback session, which led to further tweaks to the platform after the session.

A SHEILA workshop format was applied with 13 teachers from UK, Slovenia, and Belgium. They identified 19 high-priority SHEILA items for building a Learning Analytics policy for co-creative courseware: 7 items for the initialising phase, three items for the prototyping phase, four items for the piloting phase, and five items for the scaling phase. The strongest emphasis on the initialization phase was not unexpected considering the current state of LA, where it was still trying to find its way to actual educational practice. The results furthermore suggest that the participants found, when considering the themes represented by the items, engaging all stakeholders (seven items) and clearly defining the purpose of learning analytics (six items) to be most important. Also when looking at the dimensions “Map the political context” (five items), “Develop engagement strategy” (five items), “Identify desired behaviour change” (four items), and “Identify key stakeholders” (three items) were most prevalent. This again can be aligned with the fact that LA is considered an approach with potential value, but that still requires a stronger foundation of learning analytics with all stakeholders, a clear delineation of the purposes it will be used for and for which not, and alignment with existing policies. This session led to further discussion around the most effective and desirable LA characteristics, and therefore those that the Nextbook platform should prioritise developing and displaying to educators.

All participants were recruited from partner institutions through an open process of volunteering for the opportunity. All volunteers were asked to complete an application, and senior staff vetted these and selected the most appropriate. An example from UoW is below:

"We are offering four people from each participating Institution the opportunity to attend a fully-funded training event on the Nextbook platform and co-created interactive courseware. If you feel this would benefit you and your students, please apply to your Institutional representative. Places will be awarded by the 6th of May."

All final participants were Lecturers/Senior Lecturers/Professors at their Institutions, with responsibility for one or more modules. All were briefed on co-creation before travel, and were able to participate effectively in discussions and feedback through experience, expertise and participation in the event. 13 participants x 3 days = 39 days' of funding.

As part of the training, participants were able to:

- be exposed to the pedagogical underpinning of co-creation and collaborative online work
- see and discuss pedagogic use cases already gathered by the project team
- be introduced to the Nextbook Platform
- explore the platform
- feed back on strengths/limitations and engage in dialogue about effective co-creation (see notes below)
- see and discuss our emergent findings on Learning Analytics
- take part in a curated SHEILA workshop to decide the key areas for future work on LA.

Following this, all participants were expected to try to embed the principles and practices of online co-constructive teaching and learning into at least one of their modules in their home institutions where practical and allowed by institutional hierarchy and policy. Although we have anecdotal evidence of this taking place, we have no results nor impact studies from these to discuss as yet, as these modules are still ongoing.

What is co-creation discussion, 7/6/22:

- Shared sustained thinking (DM - UoW)
- Recursive marking (CL - UoW) – adding marks if the student responds to feedback
- Collaborative groupwork – problem-based work
  - Group dynamics?
  - Choose groups for them or self-select?
  - Free-riders?
- Groupwork in breakout rooms!
- Students adding value to each other in, e.g., WhatsApp groups – asking for feedback and support
- Students working in problem-based groups with industry mentors (LP - UM)
- Also students creating their own exam Qs (!) and LP using 15 of these as 50% of the exam
- Flipped approach – problems and videos/materials shared beforehand, then letting the students comment, then adapting the f2f session to meet comments/Qs generated
- Literal use of Eurovision scoring – score 12,10,9,8 etc. of each other's projects and use this to help understand the value of what is produced. Could be used for posters...?
- Students in groups creating page overviews of different techniques, share, then play a game where you give scenarios – which one would you use if...?
- EMF (IPP): everything has to be mandated before the course starts. Does this make it harder? TdL (KUL): not if we establish it effectively – what % of the course grade will be generated from student engagement with co-created texts that do not exist yet.

## Multiplier Events

The aim of this activity was to provide participating educators with sufficient knowledge about the project and share the created work from earlier Intellectual Outputs. The original plan was for each multiplier event to have an introductory keynote followed by several workshops given by different educators with past experience with the co-creation software. In these workshops, the attendants were to be trained on how to use co-creation, prior learnings shared, and input gathered from those present. The pedagogical/didactic framework (O1) and the current state of our understanding of Learning Analytics as they support co-creation and collaborative work (IO2) were presented and hands-on sessions allowed the attendants to gain practical experience with co-creation. The conferences were organised by each project partner with the assistance of Nextbook, and was open to educators, students, and members of the professional field. The events were announced via social media, the project website, and other existing communication channels, and invitations to the conference were sent out to educators throughout the country. Below each event is presented in chronological order.

## University of Maribor

This Multiplier Event was tied to Transnational Project Meeting 6, held in Maribor.

### DAY 1

14:00-14:15 - Introduction to project and interactive courseware (Matt Smith, University of Wolverhampton)

14:15-14:30 - Presenting Nextbook platform (Bart Lens, Nextbook)

14:30-15:00 - Presenting a use case with Nextbook (Tinne De Laet, KU Leuven)

15:00-15:30 - Pedagogical framework for co-creation and interactive courseware (Ana Barata, IPP Porto)

15:30-15:45 - Break

15:45-16:45 - Hands-on workshop on using Nextbook (Bart, with support of others)

16:45-17:00 - Closing plenary + transfer to hands-on workshop (Matt Smith, University of Wolverhampton)

### DAY 2

9:00-9:15 - Introduction to project and co-creation interactive courseware (Matt Smith, University of Wolverhampton)

9:15-10:00 - Speculative design workshop (Howard Scott, University of Wolverhampton)

10:00-10:30 - Presenting Nextbook platform (Bart Lens, Nextbook)

10:30-10:45 - Break

10:45-12:00 - Presenting a use case with Nextbook and Learning Analytics workshop (Tinne De Laet, KU Leuven)

12:00-13:00 - Lunch

## University of Wolverhampton

This Multiplier Event was across two separate events at the University, introducing the platform and the principles of collaborative and co-creative software. All attendees were educational professionals doing their Masters or Doctorates in Education. In these workshops, the attendants were shown how to use co-creation, our emergent findings were shared, and input was gathered from those present as to how they may be able to use it in their own contexts, which ranged through Primary, Secondary, Tertiary and Higher Education and in a wide variety of fields.

The pedagogical/didactic framework was presented and a hands-on session was planned to allow attendants to gain practical experience with co-creation. The conference was organised by the University of Wolverhampton, and was open to educators, students, and members of the professional field.

The conference was attended by 22 education professionals.

## KU Leuven

Due to the project timetable and external circumstances, this event was small and only mostly catered to internal institutional participants, hence no monies are requested for this event. The project results were presented at the [Leuven Engineering and Science Education Center](#)'s annual event on 31 May 2022, attended by 50 attendees. More information on the event, and the



reference to the project can be found here:

<https://set.kuleuven.be/LESEC/events/annual/2022/LESEC-annual-event-2022>

Furthermore the project was presented at the TU Berlin on 6 December 2022 during a presentation and workshop titled “Research-based educational technology innovations: learning analytics, interactive courseware, and reflection tools”, the event was attended : attended by 16 teachers of TU Berlin. Information on the event can be found here:

<https://www.tu.berlin/zewk/angebote-nach-themen/wissenschaftliche-weiterbildung/lehren-und-lernen-in-praesenz-und-digital/lunch-fuer-gute-lehre> (Wintersemester 2022/2023)

### Instituto Politecnico do Porto

The challenges of pedagogical innovation and digital skills in education were discussed at the colloquium “Reinventing Active Participation in Education: Innovation Challenges”, on November 30th, at the Instituto Superior de Engenharia do Porto.

Organized within the scope of the “Co-created Interactive Courseware – CIC” project, Erasmus+ project, coordinated by Wolverhampton University and with local coordination of the Research Unit GILT–Games Interaction and Learning Technologies, this event was aimed at teachers from different areas and levels of teaching and to all those interested in these matters.

In addition to sharing experiences and knowledge applicable in different educational contexts, participants who brought a laptop were able to use the Nextbook digital platform and explore its potential.

#### Program

2:15 pm – Registration

2:30 pm – 4:00 pm

#### Opening

Pedagogical Innovation and Digital Skills | Paula Peres (ISCAP & GILT)

Education 4.0 | Marina Sousa (ISEP-DOG)

Co-creation and participation: the CIC project | Ana Barata (ISEP-DOG & GILT)

#### Debate

16:00 – Coffee Break

4:15 pm – Workshop: Exploring Nextbook

5:30 pm – Close

## 5. Outcomes

Feedback from participants at conference and in-person events demonstrated interest in the concept and the underpinning theories and frameworks, but not enough to translate into solid numbers of volunteer participant educators. We were told that they had had to cope with working across a broader spectrum of platforms and tools during the pandemic than ever before, and another one - especially one that was not yet aligned with their existing Learning Management Systems - was too much for many to contemplate participating in.

Nevertheless, we managed to meet and outdo our Indicators for student participants: we had planned for 1000 but offered it to over 3000 students, 1462 of whom created unique student user accounts and used the platform, generating more than 3000 interactions.

In terms of our other indicators:

1. Number of educators as direct participants of this project: 4 (higher education institutions) x 6 (LTT participants per institution) = 24. We had more than 40 participants than this from our institutions attend Multiplier Events or the Train-the-Teacher event, so this indicator was met.

2. Number of learners that will be involved in the pilot projects: 200 per partner = 1000. As indicated above, we exceeded this by nearly 50%.

3. Number of courses embedded with co-creation: 100 (including existing courses that have been adapted to the co-creation software). With the ongoing issues with the platform, only about half of participating staff engaged their students directly on the platform. Many use co-creative techniques and pedagogies, but not this specific platform. Not met.

4. The number of educators to be reached through 4 multiplier events (one per country):  $50 + 3 * 30 = 140$ . Not met.

5. Number of educators and education organisers reached through networks = 1250. Through dissemination and published work we met this target.

6. The number of people reached through social media and via the project website = 10000. Met. We were liked and retweeted by some followers with significant networks.

7. Number of educators that will incorporate the co-creation approach in their teaching practice = 200. As with 3), this is not met.

8. Number of national/regional authorities informed on the project via at least one presentation = 4. Met.

## 6. Impact

Good impact was shown at the Multiplier Events. All partners reported positive feedback and concrete interest from participants.

Responses from partners and workshop/event/conference participants have indicated throughout that the project has had a significant impact in increasing knowledge amongst partners of i) effective pedagogical strategies for online

co-creative and collaborative work, ii) effective use of learning analytics, especially around co-creation, iii) use of the Nextbook platform, and iv) the difficulties of onboarding participants and effective strategies to overcome these challenges, all of which will enrich their further work and teaching, and feed forward into future project work.

The workshops at the Train the Teacher event and the Multiplier Events were inspiring for partners as they heard from internal institutional staff, external contributors and participants what value they saw in the project and that there is a genuine appetite for access to such a platform in order to reap the identified benefits of co-creation amongst students.

In the final partner discussions in the final Transnational Meeting in Porto (December 2022), partners reflected on what they had learnt about project management, task scheduling, good communication. Partners noted the genuine improvements throughout the project and the leadership and coordination of all partners on their areas, and the collaboration throughout, especially in the difficult contexts and situations we encountered. It was agreed that this level of communication and supportive cooperation would be a touchstone for future projects. Partners also learnt a huge amount about how to manage virtual access to events, the best methods and platforms for accessibility and the value of creating reference material for ongoing dissemination and widening access.

Internal dissemination within partner organisations and through the Train the Teacher event particularly has also created impact with staff, such as the potential of the CIC resources and their underpinning pedagogical theoretical base, and the Nextbook platform itself, to increase transferable skills and open up more effective online collaborative and co-creative teaching and learning across multiple contexts and fields.

Feedback from participants following end user testing indicated that this could be a very useful tool to generate greater engagement in learning through co-creative and/or problem-solving online tasks. This appeared to be the case in Belgium, in particular, where KUL ran the largest modules and took thorough feedback from participants - see pedagogic use case studies.

Participating in this project helped participants meet several significant benefits, including:

**Personal development:** Engaging in end user testing as both teachers and students helped individuals expand their knowledge and skills, thereby boosting their personal and professional growth.

**Career advancement:** The experience and expertise gained through understanding online pedagogy and engaging in co-creative online teaching and learning has potentially enhanced individuals' career prospects, making them more competitive in the job market, both internally in their institutions and on a wider basis.

**Networking opportunities:** This project brought together individuals from diverse backgrounds and academic fields, and from across Europe, allowing us to form valuable professional connections and build a strong network for future cooperation and bidding.

**Research and innovation:** Participating in this project has clearly contributed to research and innovation, leading to advancements in online learning and teaching, and its theoretical base.

**Exposure to new ideas and perspectives:** Working on the CIC project has exposed individuals to new ideas and perspectives, broadening their pedagogical thinking and expectations, and allowing students to reap the benefits of the platform, pedagogy and improved teaching.

## 7. Dissemination

As well as the above series specific events, the project was disseminated through a series of national and European Conference presentations. Feedback received at all events and through all channels was fed directly back into the project discussions and platform design. This feedback influenced the theoretical framework, discussions on and understanding of learning analytics for co-creation, and the platform itself as we responded to what participants found

useful, irrelevant, foundational, frustrating, supportive etc. This was particularly useful as we advanced through iterations of dissemination and feedback, adding and removing features and options in the light of assessments of, responses to, and critique of use of the platform by students and staff, as well as from workshop attendees, the Delphi group of experts and participants at the Multiplier Events.

### Specific conferences we presented at

LEARNING ANALYTICS FOR CO-CREATION AND INTERACTIVE COURSEWARE

CUC2022 — CARNET User Conference 2022

DESIGN THINKING AROUND TEACHING AND TECHNOLOGY

Workshop Co-creation Conference: interactive learning materials, Oct 2022

PEDAGOGICAL FRAMEWORK PROPOSAL FOR CO-CREATION

Co-interactive Courseware: Multiplier event, Dec 2022

CO-CREATION & PARTICIPATION: THE CIC PROJECT

National multiplier event, Dec 2022

REINVENTAR A PARTICIPAÇÃO ATIVA EM EDUCAÇÃO: DESAFIOS DA INOVAÇÃO

National multiplier event, Dec 2022

RESEARCH-BASED EDUCATIONAL TECHNOLOGY INNOVATIONS: LEARNING ANALYTICS, INTERACTIVE COURSEWARE, AND REFLECTION TOOLS

Presentation at TU Berlin, Lunch fur gute Lehre, 6 Dec 2022

INTERACTIVE COURSEWARE TO SUPPORT BLENDED LEARNING

SEFI 2022 conference 19-22 September 2022, Barcelona, Spain

USING INTERACTIVE COURSEWARE TO SUPPORT FLIPPED TEACHING

LESEC 2022 Event, 31 May 2022, Belgium

CO-CREATED COURSEWARE PROJECT – NEXTBOOK

Co-interactive Courseware: Multiplier events, Nov 2022

SOUSTVARJANJE PRI UČENJU IN POUČEVANJU

DSI 2021 – 28. konferenca Dnevi slovenske informatike 2021

THE QUEST FOR MEANINGFUL LEARNING ANALYTICS FOR CO-CREATION PLATFORMS

EC-TEL 2021 – Sixteenth European Conference on Technology Enhanced Learning

A PLEA FOR CONNECTING DISCUSSION AND QUESTIONS TO THE COURSE MATERIAL

SEFI 2021 – Annual Conference, online, Berlin

TECHNOLOGIES IN PANDEMIC SITUATION: SUPPORT OR A BARRIER

EAAEIE 2021 – 30th Annual Conference of the European Association for Education in Electrical and Information Engineering, Czech Republic

INTERACTIVE COURSEWARE TO CONNECT DISCUSSION TO COURSE MATERIAL: SO WHAT?

Wlv Annual Research Conference (ARC) 2021 and at

Association for Learning Technology Conference 2021, UK

## 8. References

Traxler, J., Smith, M., Scott, H. & Hayes, S. (2020). Learning through the crisis Helping decision-makers around the world use digital technology to combat the educational challenges produced by the current COVID-19 pandemic (No. 1). EdTech Hub. <https://docs.edtechhub.org/lib/CD9IAPFX>

Watermeyer, R., Crick, T., Knight, C. & Goodall, J. (2020). COVID-19 and digital disruption in UK universities: afflictions and affordances of emergency online migration. *Higher Education*. <https://doi.org/10.1007/s10734-020-00561-y>