BeyondScale

Workshop User Story

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- Type of Activity - **Inbound Workshop**

How to read the document

This document represents the series of workshop user stories within the BeyondScale project. These stories are based on the combination of the HEInnovate dimensions and the Value Proposition Canvas, and they depict the experiences of the partner higher education institutions. To understand the concept of the workshop, we provide a **glossary** below:

- **The Aim:** BeyondScale is one of the Forward-looking projects to create a pan-European community of practice, that will share, and document emerging good practices based on the outcomes of the individual and collaborative activities of the participants. Within the BeyondScale project, the HEInnovate tool is deployed beyond its self-assessment capacity.

- **Inbound & Outbound activities:** The HEInnovate dimensions are used to drive entrepreneurial and innovative change across a range of inbound and outbound education and engagement activities in higher education institutions (HEIs) with relevant stakeholders. From the BeyondScale perspective, the inbound activity serves to support HEI's institutional development process and organizational capacity; therefore, it targets internal stakeholders (administrative staff, academics, researchers, students). As for the outbound activity, it aims at strengthening HEI's wider regional and societal engagement, thus it targets external stakeholders (students, employers, social enterprises, business, NGOs).

- **The Value Proposition Workshop:** In order to have a structured workshop format, the Value Proposition Design approach was adopted and the BeyondScale team came up with the new format which incorporates the specific HEInnovate dimensions and the Value Proposition canvas. The Value proposition canvas is a tool that helps to understand the inbound and outbound stakeholders, and to target their needs better, which leads to optimized value creation.

- **Buddy System:** One of the main assets of the BeyondScale project is the Buddy System, in which partners engage in a peer-learning, exchanging experiences, and discussing plans. Our partner higher education institutions have been organized as a buddy team throughout the project based on similar challenges, interests, and the HEInnovate dimensions.

Inbound Workshop @NOVA IMS, our story

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Abstract

NOVA Information Management School (NOVA IMS) is a faculty of NOVA University, Lisbon Portugal with a particular focus on the areas of data science, data analytics, and information management. NOVA IMS is an international school with around 30% international students from more than 80 different nationalities. The need for continuous improvement of the quality of teaching and learning and the need to equip our graduates with digital skills led us to partner in the Beyond Scale project. The activity described in this user story builds on the HEInnovate dimension "Digital Transformation and Capability" and focuses on improving the quality of teaching and digital enhanced learning. Providing digital skills to our graduates is identified as a major requirement from the labour market. To discuss the actions need for this, we organised a workshop with NOVA IMS program coordinators. The workshop helped us refine our digital teaching and learning strategy.

The Activity

Digital technologies to support teaching and learning

This user story describes a workshop held at NOVA IMS to deliver on an inbound activity that is part of the BeyondScale project: the digital technologies supporting teaching and learning. This activity builds on the HEInnovate dimension "Digital Transformation and Capability" and focuses on improving the quality of teaching and digital enhanced learning.

As part of its strategic plan for 2019-2022, NOVA IMS, the Data Science school from NOVA University, has decided to invest in pedagogical innovations focusig on Digitally-Enhanced Learning (DEL) initiatives in the Data Science area. To achieve this goal, we conducted at NOVA IMS a session with professors, which pointed to the need to support the teaching and learning processes by means of digital tools and digital content in our course curricula.

At NOVA IMS, we argue that the use of digital technology would not only complement teaching and learning but also allow students to upskill their digital competencies, which are vey much in demand in today's labour market.

More specifically, we aim at the specific goals of 1) promoting the use of digital technologies by lecturers and students, 2) discussing and developing new pedagogies of teaching and learning, and 3) monitor and assess the the effects of the DEL on students and lecturers and professors' satisfaction.

Preparing the workshop

Our first goal was reviewing the current use of digital technologies and digital competencies among staff and students in NOVA IMS. To get a sense of this we decided to use the HEInnovate self-assessment tool and organise a workshop around this topic.

More specifically, the workshop goals were:

- To evaluate the state of the art around digital transformation and capability in the NOVA IMS programs;
- To define a plan (based on a value proposition canvas) for strengthening our digitalisation strategy for teaching and learning in NOVA IMS.

In the workshop, we started by identifying the digital tools already used in the learning process to see if they are well-aligned with the existing digitalisation strategy. To prepare the ground for discussion and present an overview the internal digital transformation process, we surveyed the program coordinators using the statements from the HEInnovate self-assessment dimension: Digital Transformation and Capability. HEInnovate provided several statements to reflect on digital capability, defined as the ability to integrate, optimize and transform digital technologies to support innovation and entrepreneurship in HEI.

Following this step, in the workshop (see below) we facilitated a discussion to identify the opportunities and benefits of increasing digital tools and their connection with some problems/challenges identified in the learning process.

The Workshop

A meeting with 12 participants (program directors in NOVA IMS and faculty office staff) was held on December 13th, 2020, initiating a self-reflection and assessment of the NOVA's use of digital technologies to support teaching. The workshop was also attended by the Dean of NOVA IMS and three external observers from the Beyond Scale partnership. Due to the pandemic situation on that date, the meeting was online and had 2 hours duration. Two moderators (from the Beyond Scale team and NOVA's Innovation and Analytics Lab) were leading the workshop (Table 1)

Table 1 – Participants in the workshop

Moderators	Beyond Scale team and NOVA's Innovation and Analytics Lab
BeyondScale partners observers	3 members
NOVA IMS Program coordinators	9 coordinators
Teacher Support Office	2 members

The reason for including program coordinators was the fact that these are more experienced professors that know about the activities at their school, including the state of the art of the digital tools used in the learning process. In addition, their management role would allow them to steer the implementation of the digitalisation strategy in the learning process.

The first step was the creation of a survey to self-assess the Digital Capabilities at NOVA IMS, for which the Heinnovate dimension on Digital Transformation and Capability was used.

Several questions were added to the original HEInnovate statements to get a more informative assessment of the digital capabilities. For instance, we asked the participants to exemplify and justify their answers using open questions. From the answers obtained, a detailed analysis of the answers was performed, allowing us to prepare some discussion topics for the workshop. For the Likert scale questions, an average and a standard deviation was calculated, and for the open questions, an analysis of the answers was made and the most relevant topics were listed. The fact that the workshop was based on the value proposition canvas required a detailed explanation of how to conduct this type of session and the involvement of some colleagues who already had previous experience with the canvas method.

Conducting the workshop

The agenda for the workshop was the following:

- Present the results from the self-assessment survey and review current digital capabilities applied by NOVA IMS in teaching and learning;
- Start a discussion on the state of the art of the digital transformation of NOVA IMS programs as well as the use of digital tools in the learning process
- Define a plan, using a value proposition canvas, to refine the digitalisation strategy to improve teaching and learning.

We used the Zoom platform for the videoconference, asking permission from all participants for recording the session, allowing for a more detailed posterior analysis. The self-assessment survey results were shared, and some comments and suggestions were asked from the participants.

Figure 1 presents the results from the self-assessment survey, with the mean and standard deviation for all answers. Due to a relatively small number of participants in the workshop answering the survey, we cannot take significant conclusions from this figure.
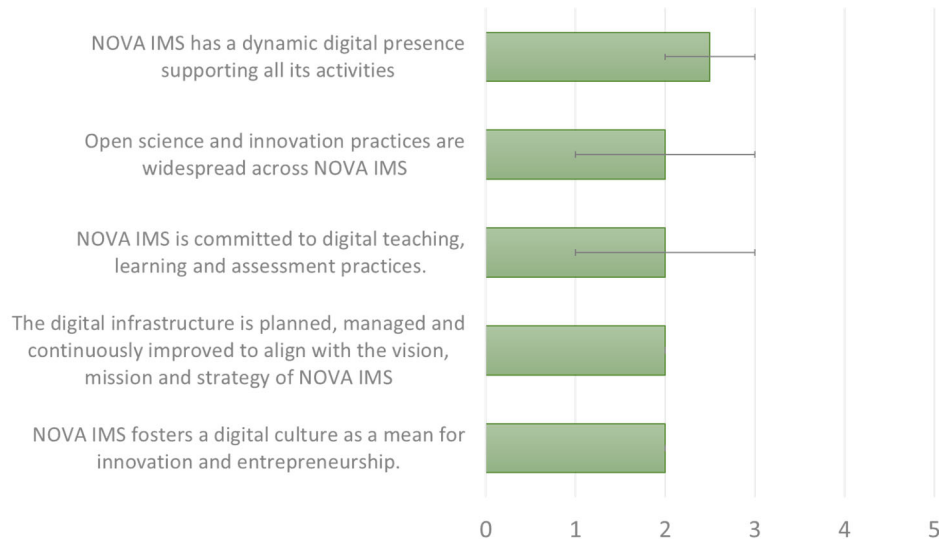

Figure 1 – Results from the closed questions of the self-assessment survey

The second part of the self-assessment survey included open questions asking examples and evidence for each statement. Table 2 summarizes the answers provided for each question made.

Table 2 - Results from the open questions of the self-assessment survey

Evidence that NOVA IMS fosters a digital culture as a mean for innovation and entrepreneurship
• Student Engagement and Enhanced Learning Simulations already used in some classes • Some courses use serious games evaluation and content internalization from student feedback • Use of moodle seamlessly integrated with the Big Blue Button for online teaching
Evidence that the digital infrastructure is planned, managed and continuously improved to align with the vision, mission and strategy of NOVA IMS
• Faster deployment of digital solutions • Prototyping Mentality Articulation between professors and developers • Some systems are not fully integrated, which should be improved
Evidence that NOVA IMS is committed to digital teaching, learning and assessment practices
• There is allocation of budget for pedagogical innovation • There is will and efforts to develop an operational plan
Evidence of Open science and innovation practices are widespread across NOVA IMS
• Infrastructure to accelerate student's projects
Evidence that NOVA IMS has a dynamic digital presence supporting all its activities
• NOVA IMS Website • Internal Communication • (lack)Dashboards and KPI's • Some tools are in place, such as moodle but no monitoring plan

The meeting then moved to the discussion of the digitalisation strategy.To make it a more structured discussion, we used the value proposition canvas. Since this framework was not familiar to most of the participants, a short explanation was presented, explaining the two sides of the canvas, the customer profile and the value proposition.

The customer profile is divided into three parts: Jobs, Pains and Gains, and some examples were presented for each:

- Customer Jobs
    - describe the things students are trying to get
    - tasks they are trying to perform and complete, problems they try to solve or needs they are willing to satisfy.
- Customer Pains
    - Pains describe anything that annoys students, during the learning process.
    - Some trigger questions:
        - What makes your students feel bad?
        - How are current solutions not working for your students?
- Customer Gains
    - Gains are the outcomes or benefits your students want.
    - trigger questions :
        - Which savings would make your students happy?
        - Which savings in terms of time, learning performance, and effort would they have?

Regarding the Value proposition component, it is composed of products & services, pain relievers and gain creators, as described below:

- Product and Services
    - What are you offering? Enumerate all products and services your value proposition stands for.
- Pain relievers
    - how exactly your products and services alleviate specific students pains.
    - trigger questions - make your students feel better?

- Gain creators
    - Gain creators should describe how your products and services create customer gains by bringing outcomes and benefits.
    - trigger questions - Could your products and services… create some kind of saving? Produce outcomes your students expect or even exceed their expectations?

We used the Mural[1] platform to allow participants to fill the canvas. Some initial statements were already on the canvas, allowing for a better understanding of what is meant by each component (Figure 2).
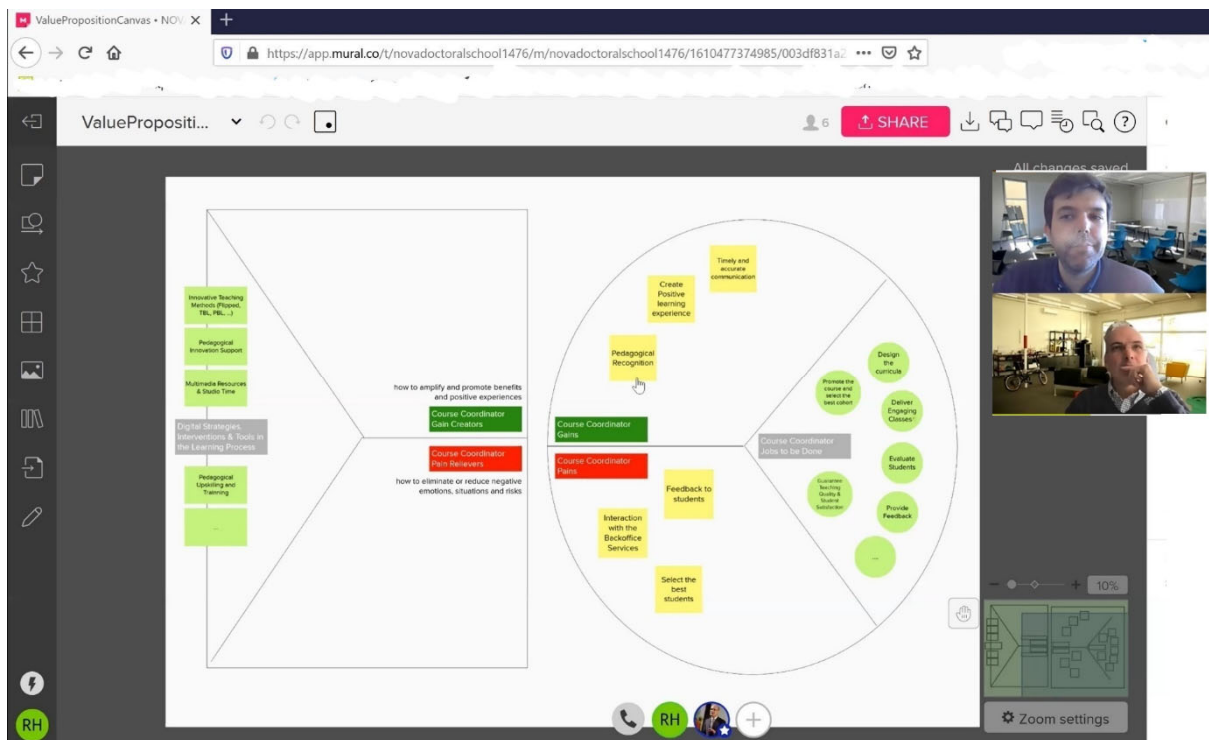

Figure 2 – Initial value proposition canvas on Mural platform

All participants were very active in completing the canvas.The canvas was filled with ideas and proposals on refining the digitalisation strategy for teaching & learning. Participants mentioned the type of interventions and suggested the tools to be used. Figure 3 presents the final canvas with all the ideas for each component. The main pains and gains were identified with some possible directions on how to implement a digitalisation strategy.
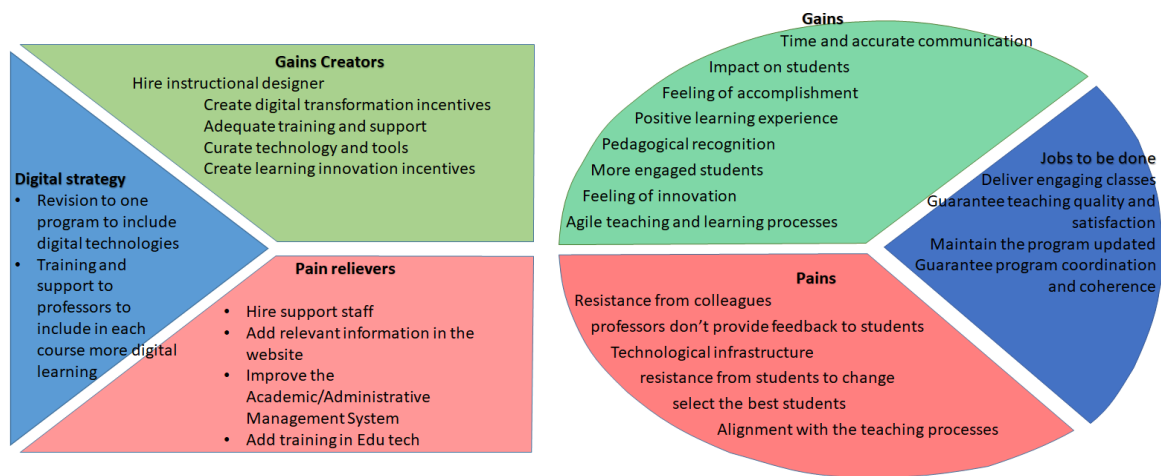
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[1] https://www.mural.co/

Figure 3 – Final value proposition canvas

From Figure 3, we identified the most significant pains to implement a DEL strategy. The following pains were mentioned: resistance from other professors; professors do not provide enough feedback to students, the technological infrastructure, resistance from students to change, having students with different profiles and alignment with the more tradicional and rooted teaching processes. As significant gains, we identified: timely and accurate communication between lecturers and students, the impact in digital skills of students, the feeling of accomplishment from lecturers and students as results of a positive learning experience, the pedagogical recognition from the University, more engaged students, feeling of innovation and agile teaching and learning processes.

From this canvas, we selected for each component some of the ideas for improvement that were proposed, allowing for a further discussion on these topics.

Final reflection

In the final part of the workshop, a summary and final reflection on the primary outcomes from this framework was made. This resulted in a two-fold approach to Digitalisation and digitally-enhanced learning (DEL):

- top-down approach
  - selecting one or two programs where a complete revision will be made to include digital technologies. Two programs are candidates to be selected and be transformed to include more digital enhanced learning approaches. For this approach, the school need to include in the team an technologist enhanced learning manager and an instructional designer.

- bottom-up approach
    - Some tools will be made available to lecturers, as well as training and guidance. Each course might start to include videos, more interactive quizzes, the use of collaborative work in classes, among others.

Based on all this, the two above approaches were further specified into plans and activities that meet the following criteria:

- Selecting one or two programs where a complete revision will be made to include digital technologies. The prototypes will be selected based on the following criteria:
    - Area of content (one should be in a core area, such as data analytics and the other in an applied field such as Health, marketing or business)
    - The program should not be a degree course but instead a post-graduation module, providing more degrees of freedom at this phase in the prototype
    - It should cover different profiles of students
    - The majority of faculty involved in the program should be full time at our school, allowing more flexibility in the transformation

The programs should be implemented in February 2022, with the conversion being started in September of 2021.

- For the second approach, we will make available the tools, support and train the professors, allowing them to create digital content for their courses, following the best practices and exploring with students the benefits of more digital learning. To achieve this goal, we identified the need to hire an instructional designer and technologist enhanced learning professional.

From this initial workshop involving program coordinators, a specific workgroup was created, including the vice dean for education, the scientific board president and four professors with proven experience in the learning process and digital and eLearning tools.

Lessons learned and recommendations

From this experience, we can identify some take-home messages that might be relevant for future meetings and experiments – in Nova and elsewhere.

In the first place, the use of the value proposition canvas was very helpful, even for those with less familiarity ofthe framework. The use of this canvas helped participants to think differently about the value to provide to students. The identification of factors that impact the learning process and students' decisions helped find gain creators and pain relievers in the value creation process. Another advantage of this canvas framework is that it provides a visual representation that is easy to explain and understand. In our case, and since we were having a virtual meeting, the use of the Mural platform was very positive. It allowed creative brainstorming, following a fill and stick post-it notes approach, making it quick to re-evaluate and change the canvas and it stimulated a very active and collaborative environment.

The second take-home message is related to the use of the HEInnovate tool in the workshop. We believe this was a very positive experience, and having a self-assessment before the workshop prepared the participants for a more productive meeting. Presenting the results from the self-assessment in the first part of the workshop was also important, allowing for a more structured discussion around the topic. We would, in a future exercise, again adapt the self-assessment questions to make them more specific and focused on the topic in question, the digital learning process. This comes from the fact that the HEInnovate dimension focuses on the digital capabilities of the institution and its transformation potential. In our particular case, we were paying more attention to the pedagogical perspective; and this required some more specific and practical questions around the available digital tools, processes and practices.