

Teaching Business Models via Blended-Learning

Alina Margolina¹ and René Bohnsack

Abstract

Practice-oriented business model courses can be resource intensive and potentially entail a redesign of the curriculum. Blended-learning has been heralded as a solution for this problem. In this paper, the authors describe the design and content of a blended-learning business model course using an online Business Modelling Tool.

Keywords: Blended-learning, business model course, online platform

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¹ Project Manager at Smart City Innovation Lab

² Assistant Professor for Strategy and Innovation at Católica Lisbon School of Business and Economics, Director Smart City Innovation Lab

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Introduction

Developing innovative business models for new ventures is a vital capability that has to be mastered to maintain long-term competitiveness of firms. In fact, the failure to create a sound business model is a “top 20 reason” for start-ups to fail (CB Insights, 2018), and the lack of experience with developing new business models accounts for 16% of disrupted industries (KPMG, 2015). This leaves business schools with the challenge to help the new generation of students to not only acquire the necessary theoretical knowledge, but also to develop the capacity of ‘doing’. Having said this, many courses are already moving away from ‘traditional’ courses in business schools (e.g. teaching *about* business models) towards more practice-oriented approaches (e.g. *enable* and *practice* business modelling) (Piperopoulos & Dimos, 2015).

Taking a more practice-oriented approach for business models can mainly take two routes: teaching business model innovation in the context of existing organizations or business model development for new ventures. We focus on the latter, since it provides students with skills that are useful in a corporate and startup environment.

In the context of new ventures – i.e. as a startup or a project within a corporation – business model development is intrinsically linked to the entrepreneurial process. It requires a student to seize an opportunity and create a compelling value proposition (idea stage), find a paying customer (customer stage), consider a go-to-market strategy (strategy stage), and think about financial and practical implications (implementation stage). Put differently, a course on business models for new ventures needs to cover the value creation element (i.e. idea, customer) and the value capture element (i.e. strategy and implementation).

Yet, a practice-oriented course has pedagogical implications. In order to provide action, practice, experimentation, problem-solving and reflection, students need a new pedagogy based on active learning, learning by doing, mentoring, team work, and experiencing simulations of the real life. While this is sensible and viable in theory, in practice, this type of course can push the limits of classroom learning at a regular business school. Adequately implemented, it requires more resources, is more time intensive and potentially entails a redesign of

the overall curriculum. Since this is often not an option, this type of courses may become somewhat ‘half-baked’ and not encourage entrepreneurial intent in the end.

So is this setup a pipe dream? Maybe not. Blended-learning has been heralded as a solution for this problem. Blended-learning combines traditional classroom learning with e-learning. With blended-learning, teachers (or instructors) can cultivate a community, give feedback and motivate students in the classroom, and allow learner-centered, self-paced, and cost-effective knowledge transfer online. In addition, using gamified online modules can support instructors in teaching creative skills and a business model mindset (Byrge, forthcoming). As a matter of fact, blended learning has been proven to be more effective than either face-to-face sessions or online learning on its own (Graham et al., 2013). Hurray you may say, but not so fast. Effectiveness is only achieved if both online and offline components of the course are accurately aligned (McGee & Reis, 2012). This is a task, more difficult to achieve than it sounds in terms of content, structure and pedagogy. Particularly the synchronization between online knowledge transfer and classroom activities requires careful planning as well as engaging technology. Modern learning-management systems (LMS) provide the opportunity to upload blended-learning material such as templates, videos and quizzes. Yet, since LMSs cater for generic setups they miss to account for the idiosyncrasies of a practice-focused business model course, i.e. allowing a team-based and project focused process (at least in a user-friendly fashion), inclusion of the business model canvas and ability to track and compare the progress of each venture team.

Given the above mentioned challenges and opportunities, the authors of this paper set out to create a business model course for new ventures in a blended learning format with a specific focus on tailoring the online content to the classroom experience. The audience for the course were bachelor, master and executive students. First, because the subject lends itself to be suitable for these audiences, but also because we had the opportunity to test the effectiveness for all three audiences in practice.¹

¹ This setup has also been applied in company workshops and multi-stakeholder R&D projects, yet in this paper we focus on the context of higher-education courses.

Our learning objectives for participants were:

- build the capacity of developing viable and sound business models for new ventures and internalize the business modelling and venture creation process,
- build the capacity to work on a new venture in a team, give and receive feedback,
- build the capacity to use online tools in the business modelling process,
- build an entrepreneurial mindset.

In order to achieve this, we designed a curriculum from scratch with the learning objectives in mind. We were in the fortunate position to have the resources, time and freedom to create the best possible blended-learning course (from our perspective). Next to creating the structure and content, this included recording videos, inviting entrepreneurs and building on an online platform (at the time of writing this article called www.smartbusinessmodeler.com).

Clearly, the initial investment was high (6 months of preparation excluding software development). However, the result was a new blended learning format for business model courses that reduced classroom time by 50%, increased student satisfaction for millennials and executives alike, and nurtured entrepreneurial intent (most wonderful quote after the course “I had no idea that I could be this entrepreneurial!”). Also, after this initial investment, it can almost effortlessly be replicated given its digital character. It is freely available for instructors to use.²

The six-week course entailed in-class workshops and access to the content of the online platform. Optional are tailor-made videos and invited guests to the workshops. In the following, we describe the setup in more detail with a specific focus on the use, content and functionality of the online platform.

Blended-Learning Course: Business Modelling for New Ventures

The syllabus

The course was given to undergraduate, postgraduate and executive students in separate classes. 36 students

participated in the undergraduate course (3 ECTS), 75 students participated in the graduate course (3,5 ECTS), and 20 students participated in an executive course³. All courses were two-month long and structured in the following way: six in-class sessions were complemented with ten online units. Students needed to prepare the online units prior to the in-class sessions.

The course included the following six weekly sessions:

- Session 1 (Week 1): Idea design
- Session 2 (Week 2): Customer discovery
- Session 3 (Week 3): Value proposition development
- Session 4 (Week 4): Business model development
- Session 5 (Week 5): Strategy alignment
- Session 6 (Week 6): Business plan development and pitch deck design

Each session was three hours long, with 1.5 hours devoted to the explanation of the theoretical material provided via dedicated units in the online course, and 1.5 hours being a practical in-class session with the instructor. Online and in-class parts of the session were held on different days of the week, with a break of at least two days in between to give students time to work on the assignments explained at the end of each online unit. Students did not have to be in class to go through and complete the online part of each session, while the attendance of the in-class part was mandatory. In-class sessions were focused on answering questions about the online material, discussing cases and doing exercises for the week's topic, having students present their progress and give feedback.

At the beginning of the course, students were asked to form teams and think about a business idea they would like to work on during the course. The only criterion for the idea was that it had to address a societal problem (i.e. mobility, waste, social engagement). Inspiration was given in the form of a short talk on smart city trends. This step could be replaced with an inspirational talk on any other topic (e.g. circular economy, digital transformation, or digital technologies) or even by assigned business ideas.

During the course, students worked team-based on the assignments given per session (as described in the next

² Please contact the authors.

³ Due to its nature, the executive course had minor adaptations, yet not relevant to be reported in this paper.

section). Working on a specific idea and elaborating on it as progressing through the sessions helped students to not only learn about business modelling and venture creation but also understand how to apply the frameworks in practice by the end of the course. In the last session, each team had an opportunity to give a presentation and pitch their idea to an invited jury of entrepreneurs and experts in business model development. This session was framed as a ‘Shark tank’ session and included the requirement for the audience to invest a fictional budget in startups. This condition created a very interesting competitive vibe and was fun for everyone involved.

In terms of grading: this is of course rather flexible. In both undergraduate and postgraduate courses, we decided for a combination of a final test and grades for the assignments. The final grade of each student consisted of the following components: test grade (40% of the final grade), grade for assignments completed in teams (altogether, 30% of the final grade), grade for a business plan completed in teams (20% of the final grade) and grade for individual active in-class participation (10% of the final grade).

Use, content and functionality of the online platform

In the following, we describe the online steps along the venture process that were developed (see overview of the process below).

Students access the process online via a collaborative dashboard on the online business modelling platform

(see Fig. 2). The design is meant to be intuitive, motivating and efficient.

For each step, there is an online learning unit, essentially replacing the stand and deliver knowledge transfer of instructors in the classroom with short texts, videos and examples (see Fig. 3).

At the end of each unit, students receive an assignment. Each assignment relates to a step in the process. For each task, students receive a template, an example and additional explanations. All examples on the platform are based on Uber given that it is universally known and intuitive.

In the following, we describe for each step the most important tasks and their respective goal.

1. *Idea*

The first step, “Idea”, is intended to help students to structure their thoughts about the chosen business idea. Some of the tasks that are currently available on the platform in this section include the following ones:

- Visualisation of the idea using a **mood board**: this task helps the team to align on the key characteristics of the initial idea by creating a visual mood board.
- Development of a **press release**: this task, inspired by Amazon’s practice of requiring press releases before developing a new product or service, helps sharpen the initial ideas and thoughts

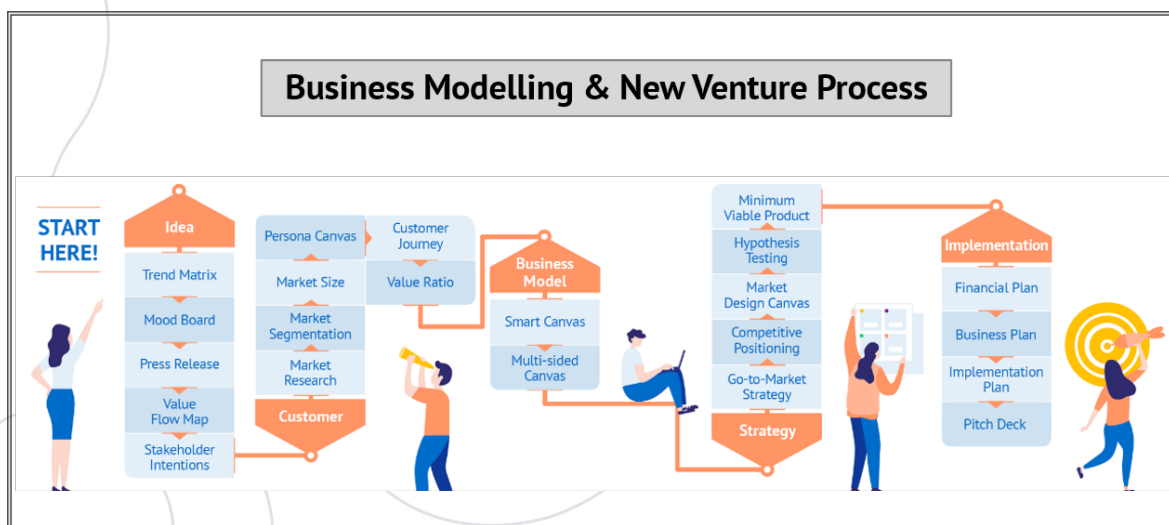


Figure 1: Idea development process via the online business modelling platform

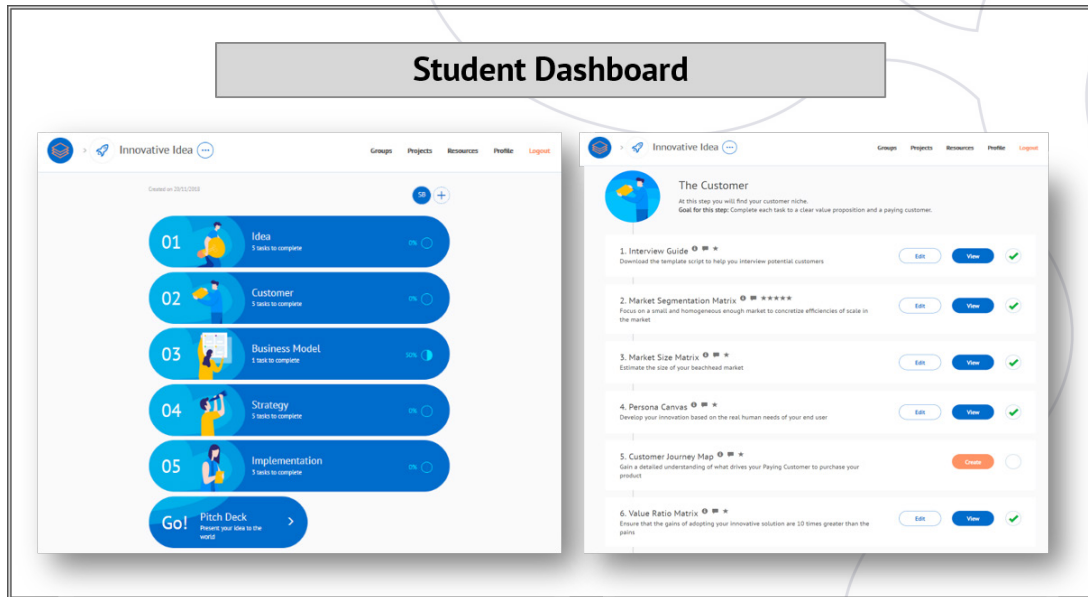


Figure 2: Dashboard on the online business modelling platform

about the target customer; the exact problem customers face; and how the proposed product/service solves the identified problem.

- **Stakeholder identification and mapping:** in this task, the team analyses the relationships between different stakeholders directly involved in the development and delivery of the product/service to the potential customer. It also helps identify all the different parties indirectly affected by the implementation of the idea (i.e.

local community, environment). In this task, students can map the relations between these various stakeholders and consider the exchange of tangible and intangible values between them. What is more, in this step, teachers can implement sustainability elements, i.e. by encouraging students to do social and environmental value exchange mapping. This assignment is inspired by the Value Flow Model developed by Ouden and Valkenburg (2011).

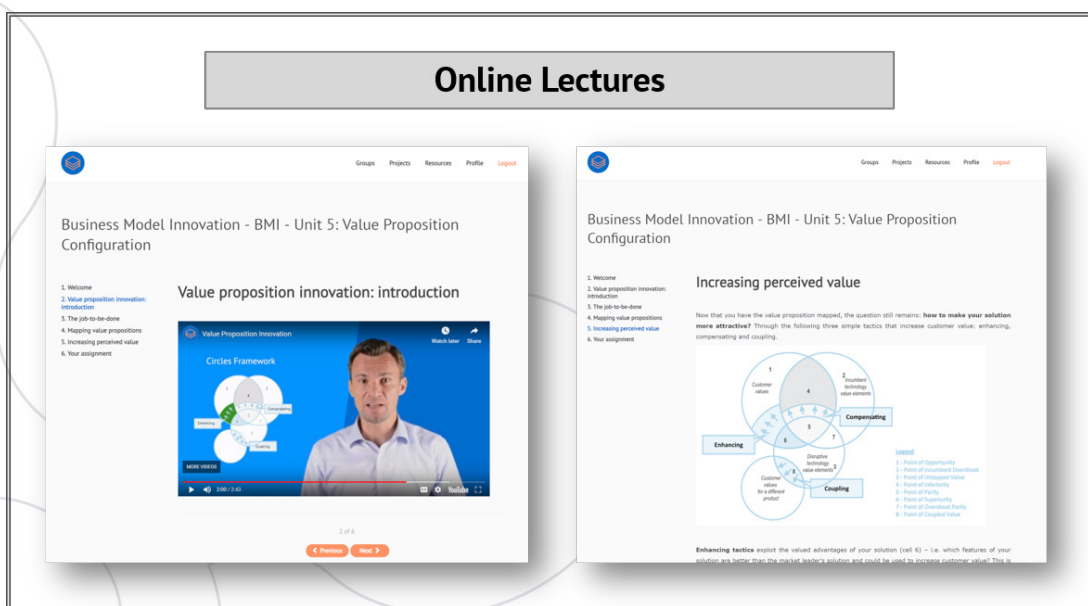


Figure 3: Online knowledge transfer via videos, texts and assignments

2. Customer

The second step, "Customer", is focused on helping students to explore the market potential, test their customer hypotheses and refine their value proposition based on the results. The goal of this step is to come to a clear understanding of who the users and who the paying customers for a product/service are, and what value the product brings to them. Some of the main tasks considered in this step are described below:

- Conducting **primary market research**: this task provides guidance on how to do a first-round of interviews with the potential customers to start validating hypotheses about the customer. The logic of this assignment is inspired by the techniques put forward by Blank and Dorf (2014) and Erik Ries (2011).
- Exploring the **market segments**: in this task, based on the results of the interviews, teams are guided through the process of identifying several potential market segments and making a first-round decision on which one can be considered as the most favourable one.
- Describing the **persona** of the target customer: after conducting several rounds of exploratory interviews, this task is an important step in summarising some of the key characteristics of the target customer, such as behaviour, attitudes, problems they experience and reasons to use the product/service. This assignment is an adaptation of the Persona Canvas used in the Lean UX methodology (Gothelf & Seiden, 2016).
- Evaluating the **value-ratio** that the potential product/service creates for the target customer: in this task, students are guided through the process of analysing the gains and pains associated with a product's acquisition and usage, and defining whether the gains substantially outweigh the pains.

3. Business model

The third step, "Business Model", is the one where all the previously considered and defined pieces come together to help prototype potential business models and ultimately define the most suitable one. The main tasks suggested for students in this section include:

- Prototyping **business models** using the smart business model canvas: in this activity, teams

use the **smart business model canvas** to ideate different alternatives to create and capture value with their business idea. By dragging and dropping post-its onto the business model canvas, the business model unfolds (Fig. 4). In this step, students optionally give monetary values to each post-it (this is relevant for the cash flow analysis in step 5). The layout of the Business Model Canvas is based on the layout developed by Osterwalder and Pigneur (2009).

- Furthermore, the teams can browse the **business model database** that aggregates business model patterns from several studies. Business model patterns are considered to be a valuable tool for business model ideation (Lüttgens & Diener, 2016). At the moment, the platform includes the following selection of pattern packs: an Essential Pack, a Digital Transformation Pack, a Circular Economy Pack, an Energy Pack and a Sustainability Pack. Studies on which these pattern packs are based include Remane et al. (2017), Lüdeke-Freund et al. (2019) and Lüdeke-Freund et al. (2017).
- Developing a **business model for projects with multiple stakeholders** being involved: this task is particularly relevant for students who are looking into tackling complex problems, where the participation of multiple stakeholders, such as government, municipalities, citizens and various technology providers, is vital for the success of the product/service. Such complex solutions can often be found in the energy, mobility, or health industries. The Multi-sided Business Model Canvas helps teams to understand which stakeholders must be involved in the development and delivery of the value proposition to the customer, which key activities and resources are required from each partner, what benefits can be derived by each party from the value proposition and how the relationships with the user are established and maintained.

4. Strategy

The fourth step, "Strategy", covers aspects that should be considered to further test the idea and analyse the context for the idea. In this section, the students are suggested to complete the following assignments:

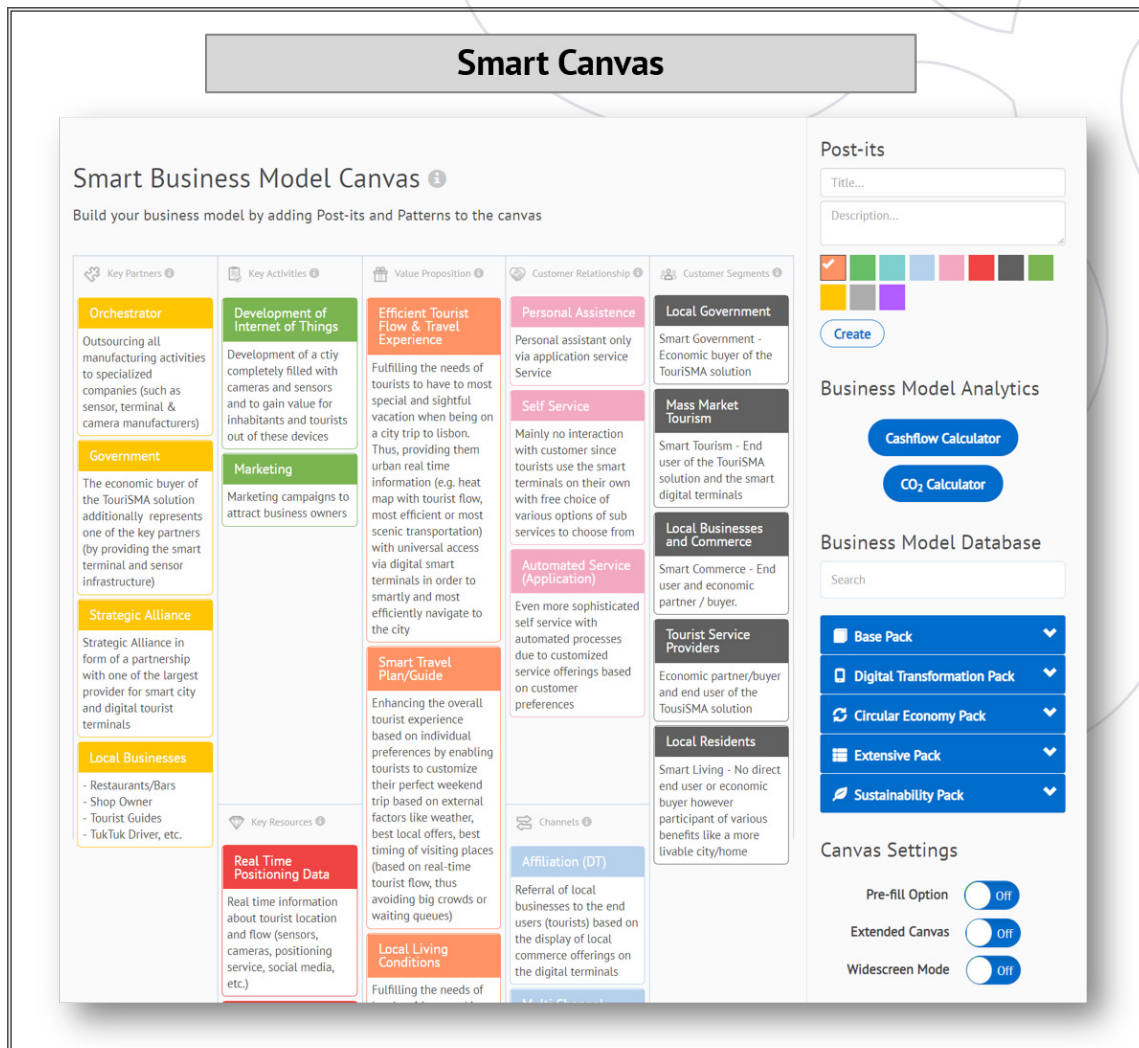


Figure 4: Smart canvas with business model database and link to cash flow analysis (adapted from Business Model Canvas layout by strategyzer.com)

- Defining a **go-to-market strategy** for the idea: this task focuses on defining how the visibility for the product/service can be created, how customers can be acquired and retained, and how they can be transformed into ambassadors of the product.
- Analysing competition and developing a **competitor analysis**: this task helps teams to establish their understanding of the competition and find a clear and compelling competitive position for their product/service in the market.
- Adapting the developed business model to **international markets**: in this task, teams can choose a foreign market and analyse how the developed business model fits the conditions of that market following several dimensions – political and legal conditions, user practices,

economic conditions and technology infrastructure. The outcome of this step is a clear understanding on how business model elements need to be adapted to fit the chosen foreign market.

- Testing business model assumptions and developing a **Minimum Viable Product**: in this task, teams define hypotheses their business model is based upon, and learn how to identify the critical features their Minimum Viable Product should include. The logic of this assignment is inspired by the methodology developed by Ries (2011).

5. Implementation

The fifth step, “Implementation”, is an important step that helps structure and sharpen the business idea, considering all the previous steps in the idea development process. The following activities are a part of this:

- Developing a **cash flow forecast**: in this task, students are guided through the process, which helps them to create a cash flow analysis for their product/service. The analysis assists teams in understanding the financial value of various revenue models and their combinations. Ultimately, teams can make a decision on the most suitable revenue model, based on the value each revenue model can potentially generate, taking into account a pre-defined set of assumptions. This is also assisted by the cash flow calculator included in the smart canvas. For each post-it, one can define monetary values, which then are automatically translated into a cash flow for the first year. Overall, integrating the cash flow analysis into business modelling activity helps students in understanding the importance of financial accounting and ultimately supports in making appropriate decisions (Roslender & Nielsen, 2018).
- Designing the **implementation** plan: this task helps teams to define the activities they will need to focus on in the first 90 days, if they decide to implement the developed idea in real life outside of the curriculum. The structure of this assignment is inspired by concepts Guy Kawasaki puts forward in his book “The Art of Start” (Kawasaki, 2004).
- Developing a **business plan**: teams can develop a succinct and clear business plan that can be presented to an investor. For team members, this step is essential for agreeing on and clarifying

various aspects of the business idea, particularly related to the paying customer, business model, required resources and financials.

6. Pitch

The final stage in the process consists of creating a pitch deck (Fig. 5). In this step, teams work on preparing a compelling presentation that would explain their ideas and outcomes. The pitch deck generator provides the structure and synchronizes information from previous tasks into the pitch deck. It is flexible in terms of design, content and selection of slides. The current version of the pitch deck consists of the following eleven slides: presentation cover, problem to be solved, solution to the problem, market size, business model explanation, go-to market strategy, competitor analysis, team, definition of a competitive advantage, the ask. The developed pitch deck can be presented directly via the website or downloaded as a PPT or PDF.

All in all, the idea development process covers the steps each team has to go through to define a viable and scalable business model.

Supporting educators with a blended learning backend solution

The online platform helps instructors to integrate and manage the above described process (or its adaptation) into their teaching activities and provides easy cohort management functionalities. Instructors can create multiple cohorts and are able to track how their

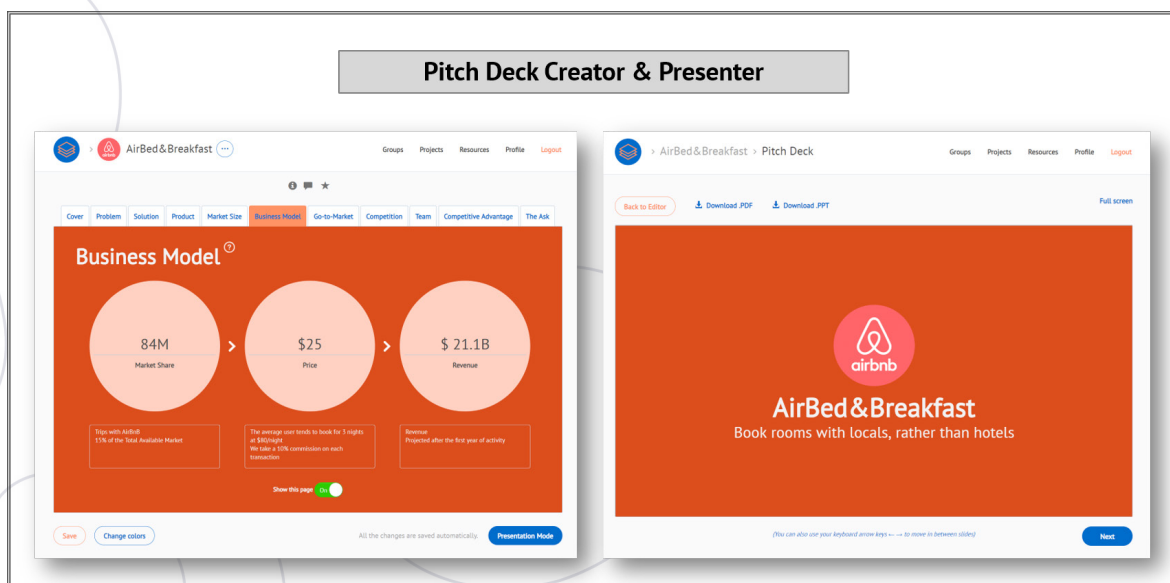


Figure 5: Pitch deck generator and live presenter

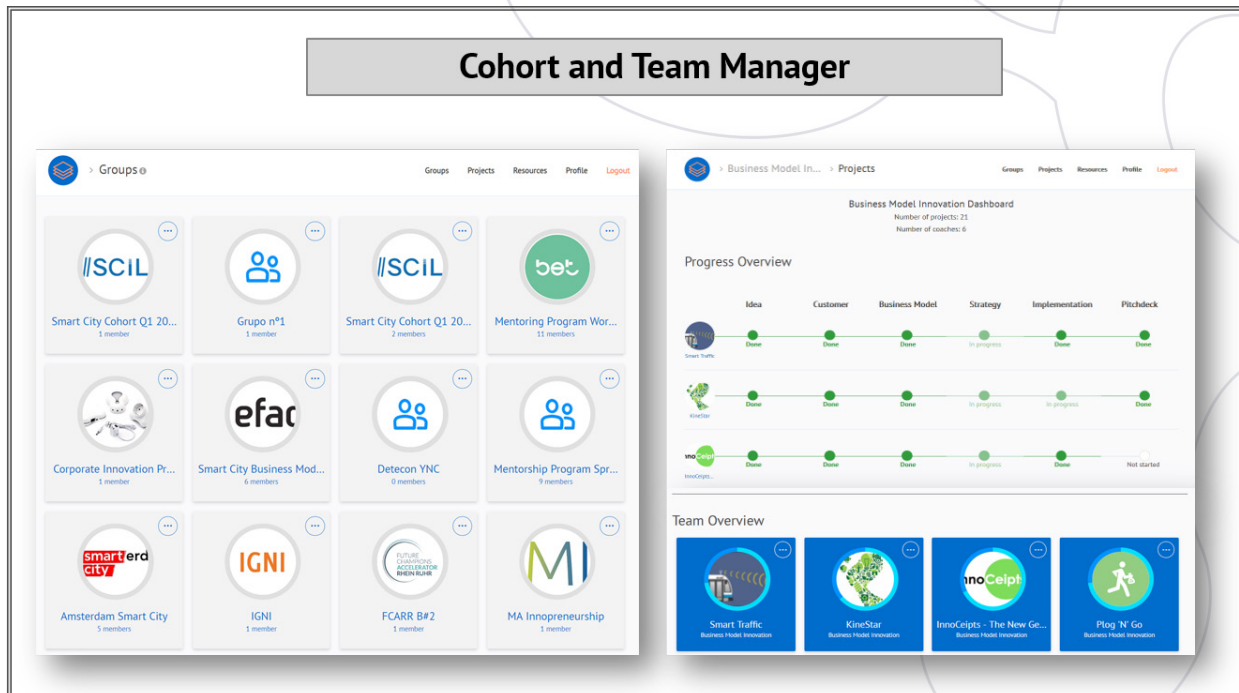


Figure 6: Cohort management (left) and overview of teams in the cohort (right)

students perform as they go along the idea development process (Fig. 6).

Instructors can access all assignments and content created by students (i.e. no more email flood or Dropbox mayhem), as well as comment on each step and their progress using the Message Board. This way teaching staff can easily see what their students struggle with and how to help them, making the teaching process in the online domain more personalised. In addition, the platform facilitates the process of grading the work performed by teams in the cohort. Educators can evaluate each task based on a five-star rating and provide grading justifications via comments, which become visible to students in the Message Board.

In addition, the platform allows educators to adapt the process of the aforementioned online course, which can consist of as many steps and units as needed. These online units can be dedicated to theoretical concepts that need to be explained to students as a part of the curriculum, or to the material already explored during the in-class session. Educators can add video content, graphs, images and links to the content of each online unit.

All in all, the described business modelling platform strives to help educators to make the delivery of a

blended learning approach to teaching business modelling and entrepreneurship an easier to perform task.

Feedback and Lessons Learned

The first iteration of the courses received very positive feedback from students who participated. After the completion of the respective courses, students were asked to fill in the online survey and provide their feedback on their learning experience. In total, 98 students participated in the survey. The results revealed that 82% of students found the online lectures very useful and helpful; 78% of students assessed the online case studies included in the online course as very helpful and useful; 70% of students found the online assignments in the idea development process as useful and helpful, with some improvements required; 65% of students found the submission process helpful (Fig. 7).

The first iteration of this blended-learning course also revealed several areas that need close attention and could be improved in the design of a similar blended learning course in the future. Firstly, six weeks (with four academic hours per week) is not always the ideal timeframe for the course, however this depends on whether ideas are given by the instructor (in that case it is suitable) or whether the students develop ideas

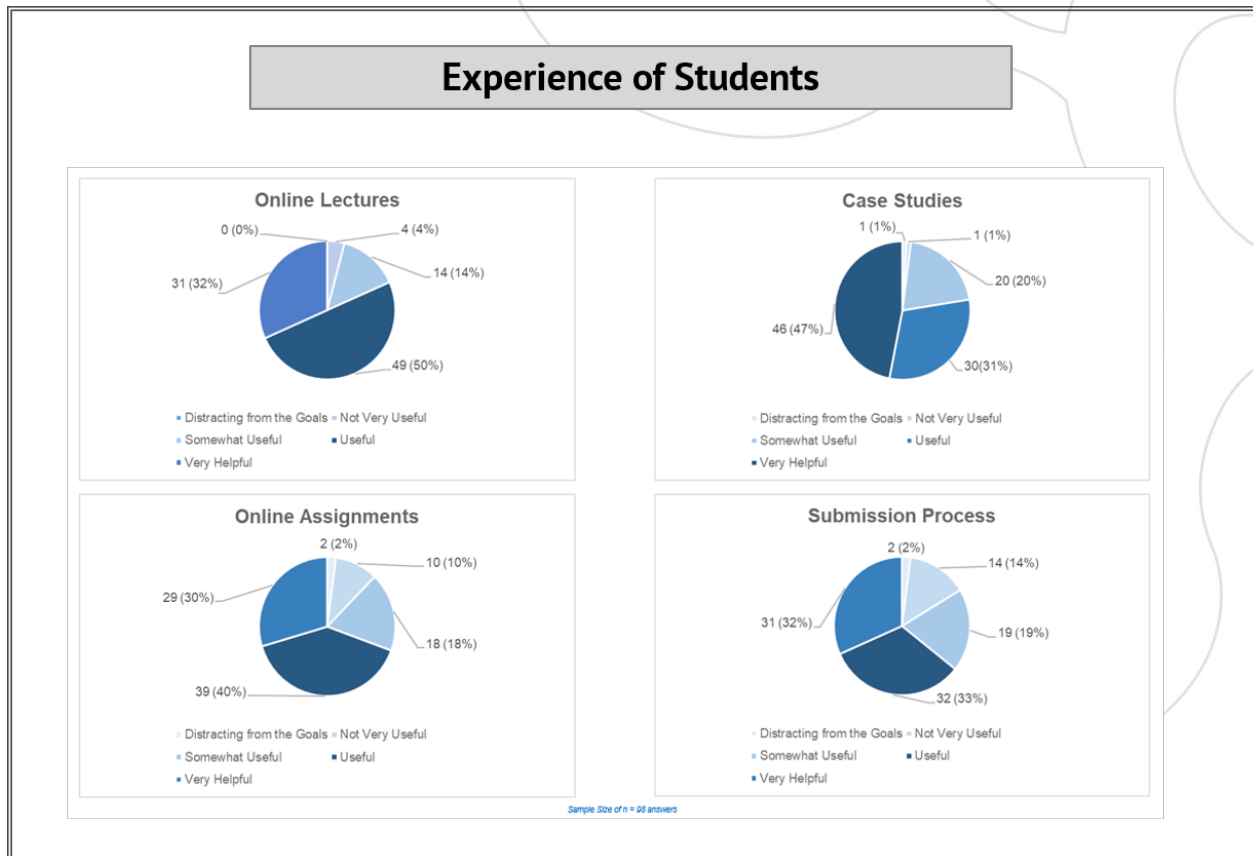


Figure 7: Results of a survey conducted among students

themselves (in this case more time is needed). In addition, the process described in this paper includes six steps and multiple assignments. Limiting time for the course to less than two months can have certain drawbacks (depending also on the additional course load of students), such as students not having enough time to work on each framework, and thus not being able to spend time on elaborating thoroughly on their results. Therefore, such a course might need to be extended to at least four months.

Secondly, an important aspect is related to communication and its consistency. In this iteration, online and in-class parts of each session were separated in time and space. To ensure that every student is aware about various organisational aspects of the course, homework and submission deadlines, it is important to clearly communicate the structure, conduct and deadlines of the course.

Conclusion

Teaching business model development for new ventures in a blended-learning setup is a challenging task

and necessitates harmonization of theoretical knowledge transfer with practical applications. What is more, the idiosyncrasies of a practice-focused business model course need to be kept in mind, i.e. allowing a team-based and project focused process, inclusion of the business model canvas in a digital format and the ability to track and compare the progress of each venture team over time. The suggested blended-learning course in combination with the online platform can help educators to address this aspect, aligning online and in-class lectures with each other.

The after-course evaluation suggests that an online business modelling platform, such as the one described in this paper, can assist teachers in designing and structuring more effective online content on the topic of business model innovation and entrepreneurship. Comprehensive guidance through the entire idea development process and the feedback system can help guide students and teams when they are outside of the classroom. By providing novel tools and content, students can discover original ways of creating and capturing value with their ideas. The ambition of the platform is

not only to help students to ideate but also to assist them in making a decision on which business model has the most potential to become successful. In the future, this may even be supported with artificial intelligence.

However, we need to highlight that the results described in this paper were based on the experience in one academic institution. Another limitation is the fact that the same instructors conducted all the courses. This means that their teaching experience, professional, and personal backgrounds might have influenced the results. Therefore, more trials need to be conducted in various teaching settings. In addition, the application of the methodology and the online business modelling platform in practice should be validated in different cultural settings as well (e.g. in the Global South). The teaching team is planning to address these limitations in their future research activities by conducting more trials with educational institutions around the world, allowing teaching staff to adapt the online module on the described online business modelling platform to their teaching needs and their students' skills and capabilities. Thus, interested instructors of business model courses as well as entrepreneurship courses are invited to integrate the platform into their curriculum.

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About the Authors

Alina holds a Master's degree in Innovation and Product Management from the University of Applied Sciences-Upper Austria (Wels, Austria) and a Bachelor's degree in Marketing Communications from the Higher School of Economics (Moscow, Russia). Her work in the Lab is dedicated to business model development for sustainability and the smart city context.



René Bohnsack, PhD, is Professor for Strategy and Innovation at Católica Lisbon School of Business and Economics and the Director of the Smart City Innovation Lab (SCIL). His research has been published in leading journals such as Journal of Business Venturing, Research Policy, Journal of Product Innovation, or California Management Review. His latest project is the award-winning venture creation platform: Smart Business Modeler which has also been presented by René at the global idea sharing platform TEDx.

