

BRIDEE – BRIDGING DESIGN AND ENTREPRENEURSHIP IN EDUCATION

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ABSTRACT

Design and design thinking is being recognized as a valuable approach in business development. Embedding its principles in the curricula of business schools can provide deeper insights to the various stakeholders such as customers, clients and suppliers and result into more creative and innovative business plans. Various pilot projects indicate that combining the potential of business and design students by bringing them together in interdisciplinary project teams results into better learning curves and project results for both business and design students. This approach can stimulate the drive for entrepreneurship and lead to an improved and extended valorisation of student's projects by actually creating start-ups.

Based on these findings a pilot project BRIDEE (Bridging Design Entrepreneurship and Education) was set up in 2012 in Flanders to stimulate the cross fertilization between business and design education. Therefore a co-creation platform was created to bring students from Vlerick Business school, an international MBA program, together with students of the Master program of product development of Antwerp and the ID engineering program of HoWest. The project was based on a similar collaboration between Imperial College Business School and Royal College of Art in London and managed by the same business coach. Woowoo, a creative incubator was engaged to organize the digital platform and the interface with industrial stakeholders.

The goal is to create a win-win situation for all parties. Business students are introduced into a creative, user-centred design approach and learn the value of design in the development of business plans. For designers, it is an opportunity to share business know-how and entrepreneurial skills and to expand insights on financial issues related to valorisation.

Students form interdisciplinary teams to turn ideas into practice by creating product and services in line with business plans for valorisation and commercialization. Workshops are organized to share knowledge, approaches, tools and skills for the other disciplines. Each team is coached by business academics and design coaches during a period of 5 months. The final result is a business proposition that is presented for and rated by a jury of business experts and designers.

This paper describes the approach followed and the results and learnings from various perspectives (business students, design students, ideator) and formulates recommendations for the second edition of this pilot.

Keywords: Interdisciplinary teamwork, business case, design thinking, entrepreneurship, product development

1 INTRODUCTION

BRIDEE stands for Bridging Design, Entrepreneurship and Education (www.bridee.org) [1]. It is a pilot project that promotes cross-fertilization between business and design students.

The idea of the project was based on the observation that the output of project work of business students was often limited because of a lack of creative skills and user insights towards stakeholders (consumers, clients, suppliers). Skills that are strongly developed by designers.

They can contribute to user research, ideation, modelling and visualization. On the other hand, designers often lack a clear view on financial and business related issues, which is essential to bring ideas successful to the market.

Similar European pilot projects that promote the collaboration between MBA and design students have been explored and studied to work out the outline of the project.

The BRIDEE proposal was based on the experience of Kristien De Wolf, a business coach in the Innovation Entrepreneurship and Design Course, a module in the curriculum of the MBA-program at the Imperial College Business School (ICBS London) in collaboration with the Royal College of Art (RCA London). She was engaged to run and coach the BRIDEE project for 2 years. [2]

The project is funded by the Agency for entrepreneurship of the Flemish Government and has the following goal: to create mixed teams of business students and designers that work together to develop a business plan for the valorisation of an idea, delivered by (external) idea owners.

By stimulating entrepreneurial skills and by exploring the complementary potential of business and design students, this approach should result into a more creative output, a better understanding of the contribution of both disciplines towards innovation and a higher potential for valorisation and the start-up of new businesses.

1.1 Organization and partners

The promoter of the BRIDEE project is Vlerick Business School, Ghent and Leuven (B). They run an international MBA program and various management courses and have a long tradition in business development and start-ups. They are convinced that a design thinking approach can be an added value in the valorisation of viable ideas and the development of business plans.

Therefore, Product Development at the Artesis – Antwerp University faculty of design sciences was invited as a design partner to participate in this pilot project. Product development organizes a 5 years master program with a focus on product innovation based on an integrated approach, taking people-centred, technological and market related aspects into consideration. In the program several economic modules are organized and the basics of business development are provided. During their master thesis students have to develop a business plan for the valorisation of the product proposal they have developed. For this reason the collaboration with MBA students promised to be a win-win situation.

Woowoos supported the organization and the communication. It is a creative incubator that transforms ideas into projects and start-ups through an extensive network. They also developed a dedicated digital platform to support the collaboration between idea owners, MBA students, designers and design and business coaches.

1.2 Project description

A roadmap was setup for the BRIDEE project to enable the collection and selection of potential business idea, the matchmaking between idea owners, designers and the MBA teams.

The project started in October 2012 for a period of 5 months -from the call for ideas until the final presentation of the business plan. Several mini courses, workshops and coaching sessions were organized to initiate the collaboration and the synergy between the different backgrounds and profiles.

1.2.1 Call for ideas

The call for ideas was widely spread through various channels and industrial organizations. Idea owners were invited to post a clear description of their idea via a secured part of the BRIDEE website. Ideas were screened by both design and business coaches based on the following criteria:

- The idea must be concrete and powerful enough to create a start-up company to lead.
- The idea must be innovative and leave room for further development and evolution.
- The idea should fit knowledge and skills of the idea owner, who is expected to invest time to assist and challenge the teams and to serve as a sounding board.

Next step was to present the approved ideas to the business students as input for their business plan development. They explored the ideas, selected one, formed teams of 6 business students and presented the combination of idea, idea owner and team to the designers. To support the matchmaking, a set of short meetings with designers was organized to allow them to explore the different ideas, to brainstorm and refine the ideas. During this co-creation session, students learned to know each other's insights, visions and approaches.

1.2.2 Workshop sessions

In order to stimulate the collaboration the design and business coaches organized three workshops. Design students were initiated into the business model canvas based on Osterwald [3] and the step by step approach of the Vlerick tool pack for start-up entrepreneurs [4]. This framework guided designers to define their contribution to the development of a business plan and the selection of useful design

tools and techniques for observation, exploration and ideation of the various building blocks of the canvas.

Business students were invited to an introduction to design and business co-creation. The workshop focused on the meaning and added value of design. The principles of design thinking were introduced to give business students a better understanding of the designers' approach [5] [6]. Specific attention was given to a people-centred approach to provide user insights for all people involved (users, clients, service and maintenance) and techniques like scenario writing and personas were introduced.

During a third workshop the principles of service design and 'the INNOWIZZ method' to stimulate creative thinking and to optimize brainstorm sessions were introduced and practiced

A last session 'we build to think, we prototype to learn' offered, illustrated the opportunities of modelling and prototyping as a design and verification technique.



Figure 1. Co-design session with mixed teams, guided by a design coach [5]

1.2.3 Co-creation and coaching sessions

The cross-fertilization between design and business students was formally organized during the workshops and coaching sessions. The intent was to facilitate the cross-fertilization by several complementary skills of both groups to emphasize. This was intensified during the co-creating and the coaching sessions. During these sessions feedback was given about the interpretation of the idea, the steps to be taken towards a real business case, and the opportunity for design to provide added value. These coaching sessions were supervised by coaches composed of people with a business and / or design background. At the end of the project the business students had to present the results of their project work to a jury, in the form of a business plan and presentation. The jury consisted of entrepreneurs and academics. Finally, business students had to present their business case proposals in a final event, where various organizations that stimulate entrepreneurship and valorisation of good ideas were present. Designers were asked to deliver a documented and illustrated report of their contributions and deliverables. They were also asked to reflect on the co-creation and to evaluate the collaboration.

A more detailed description of the designers' contribution is listed in project results.

2 PROJECT RESULTS

The output of the co-creation session resulted in business plans based on external ideas into various domains: services for leisure and wellness (taxi service, cosmetics, ...), food distribution (catering, fresh market, ...), investment goods (building and construction, simulation systems, ...), consumables (earplugs, fragrance, ...), systems for public services (information systems, lighting solutions, ...) and web-based services and apps.

2.1 Facts and figures

The first pilot project yielded the required positive results:

- The initial partnerships with educational partners was consolidated and expanded towards industrial organizations and networks.
- The communication platform and the call for ideas delivered 260 external ideas, 80 were selected and 13 ideas were worked out.
- Idea owners are entrepreneurs, spin-off cells, investors and students.
- 50% of the business students participated in multidisciplinary teams (21).
- Minimum 9 project teams have the intention to valorise the results.

2.2 Cross-fertilization

Participating MBA and design students take another approach towards problem solving. Students from economic background generally have a structured and analytical mindset. Design Students tend to approach the problem more intuitively, supported by visual information and prototypes. Bringing the disciplines together and matching each other's approach creates a mutual understanding and provides new insights in the mindset and the complementary techniques used.

This cross-fertilization results in an improved learning in both directions and a better understanding of each other's contributions related to a successful valorisation of ideas, concepts or services.

A recent evaluation based on Team Diagnostic Survey (TDS) [7] of a similar 2 days pilot project with mixed teams of our design students and MBA students at the Antwerp Management School pointed out that mixed teams were more satisfied with the team, with the improved team dynamics and the team skills [2]. The same inquiry indicated an improved level of Creative Self-Efficacy, Entrepreneurial Self-Efficacy and innovation [8].

2.3 Business perspective

A survey taken from the mixed teams business students clearly shows that the collaboration was positively evaluated. 81% indicated that working in teams had a positive influence. They indicated that the quality of the business plans was improved. The process with designers was perceived more complete and the results more realistic. The collaboration went smoothly and in addition gave them new insights in the potential of 'people-centric thinking', creative problem solving and the way design tools can be used to discover and understand the real underlying problems. 55% of the students stated that exploring the broader context, building user scenarios and dealing with qualitative data resulted into a more balanced business plan.

Design skills and visualization techniques proved their value through the project: from simplified models revealing patterns and creating a good understanding of user expectations, to product presentations and corporate image design.

2.4 Design perspective

The collaboration with the business students was a strong driver for design students to get involved in this initiative. Especially personal entrepreneurial ambitions and the networking aspect were identified as strong advantages. Clarity regarding the commitment and planning at the start of the project however tempered their commitment. For some of the selected ideas, design students estimated their potential contribution as limited because of a too low degree of innovation.

In most cases design students perceived the collaboration as open, useful and complementary in both directions. They acquired knowledge, insights and accurate templates for developing business plans, to support their product ideas. 64% of the designers defined insights in business thinking as most important outcome: a stronger awareness for the financial and commercial aspects of market introduction and of the synergy between product and business plan development.

Design students appreciated the co-creation with other disciplines, especially the international and multicultural profile of the teams.

2.5 Idea owners perspective

The survey indicated that the idea owner – entrepreneur was equally interested in Business (38%) and design skills (36%) provide by BRIDEE. Networking (86%), business strategy (68%) and market analysis (68%) were considered as most positive elements.

2.6 Design contributions

In three cases the design student took up a role of coordinator and guided the team through the project, helping them to define their vision and initiating the necessary analyzes (market, marketing, competition, user requirements,...) and the selection of alternatives. But most of the design activities were related to exploration and ideation and presentation.

2.6.1 Observation and interpretation

The designers describe their contribution during the first exploratory stages as broadening. They introduced a more integrated approach with a focus on the full life cycle of a product or service, taking all stakeholders into account. A user-centred design methodology was proposed to give the

team a better understanding on the perception, the insights and the expectations of clients, users, suppliers or service providers. In this stage design students also initiated creative brainstorming sessions, mind mapping and helped the team to define the interdisciplinary requirements for the product or service.

Through visualization of product ideas, processes, models and scenarios they stimulated new insights and visions.

2.6.2 Ideation and design

This is the stage where designers could contribute most because of their presentation skills, their problem solving attitude and the ability to define a variety of alternatives. Numerous design techniques and tools were used to visualize user scenarios and services, to create mood boards, image boards and personas and to optimize the user experience of products and services. Also, product architectures, ergonomics and interaction design concepts were developed. In a few cases design students also defined the manufacturing and cost estimation.

All design students worked on the marketing concept, the branding and the corporate identity of the starter. Most design students also designed websites, logos, interfaces, packaging and the graphic design of the reports and the presentations.



Figure 2. Use of personas and user scenario for Touch point, a multi-touch info system

3 LEARNING'S

After this first pilot project, a survey was organized to question the effects and learning's of all parties. Idea owners, business and design student were asked to evaluate and reflect on the planning, organization, the cooperation, the cross-fertilization and the output [5]. 33 idea owners, 53 business students and 16 designer's responded to the online survey.

3.1 Synchronize project from start

It is important to synchronize both groups from the start to get involved in the project. If design students join later, too many decisions are already taken, thus missing an important contribution during research. Explore the overlaps in both study programs in advance and align both processes. Take these limitations into consideration while setting the planning and the deliverables.

3.2 Optimization of the available time

Achieving cross-fertilization takes time. When the time available is already limited, it is likely that the quality of the results will decrease. Therefore, embedding this project in the curriculum is required. For the design students this was possible by offering it as an option in an elective course (3 ECTS). Clarity on the expected time and the period of this commitment is often problematic. Optimizing planning, communication and structuring the projects roadmap based on the project becomes crucial.

3.3 Openness and mutual understanding

It is important that both groups of students understand from the start what value they can expect from each other. Recognizing the complementary competences is a first step towards better results. Openness and mutual understanding must be facilitated through lectures, presentations and workshops.

3.4 Optimize the incentives for cross-fertilization

It is important that students are encouraged to participate in the project and cooperate with each other. Collaboration requires a strong engagement towards the team and the ideator and is therefore never free of obligation. Clarify the gains and benefits and adapt the deliverables and the evaluation method to the expectations of the projects and its interdisciplinary approach.

3.5 Team Balance

The previously mentioned cross-fertilization depends strongly on the balance within the team. Different attitudes and a more rigid approach can occur when the MBA student is the idea owner at the same time. This might limit the intent to redefine the challenge of the project or to explore it from a different and wider perspective. This will limit the contribution of the designer and restrict the co-creation. Conversely, in a team with a design student as ideator, the added value of design is much easier recognized and the designer is often more strongly engaged.

3.6 Provide adequate funding

For this type of pilot project, an online platform, workshops and intensive coaching are required, and therefore sufficient financial funding is needed to manage the uncertainty of the project and the related financial margins. It is also recommended to organize a systematic financial monitoring.

4 CONCLUSIONS

This first edition of the BRIDEE pilot project with MBA students was perceived by all participants as a successful collaboration, providing inspiring insights in the mutual contribution. The project illustrated the complementarity of attitude towards innovation, the various skills and approaches of both disciplines. The cross-fertilization resulted in sharing tools and techniques and a better understanding of each other's contributions related to a successful valorisation of ideas, concepts or services.

Based on the learning's some adjustments and refinements were made to the concept, organization and planning of second edition BRIDEE 2013. [2]

Coaching sessions and instructive courses for both designers and business students is intensified and situated at the beginning of the project. The matching of the BRIDEE teams is supported by an 'idea fair' that allows idea owners to pitch the idea and to get in direct contact with business teams and designers.

Specific attention was given to the planning and the synchronization of the activities of both disciplines, providing at least 8 days to collaborate.

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