User-Centered Design applied in a Learning Environment - International EdTech Startups meet German Master Students

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Technology enables us to bring together people from all around the world, who would have never had an opportunity to meet and work together in any other setting. This example from Kempten University of Applied Sciences shows how both – entrepreneurs and students – can benefit form this kind of collaboration.

BACKGROUND

Seven in ten innovations fail on the market – they do not meet the customers' needs. Thus, understanding what customers really want, what makes a difference to them and what they would actually be willing to pay for is crucial for companies and startups.

This in mind we started a teaching approach applying User-Centered Design principles onto the interaction between EdTech founders and potential customers – our master students.

Kempten UAS' master program "Global Business Development" is an international program with strong focus on new markets, business models and Innovation Management. Long before Covid19 hit our societies, each year master students enrolled in this program worked virtually on new business ideas in international teams with Finnish and Northern Irish peers.

The module "Innovation Management" highlights how management theory responds to the contingencies of a business environment which is increasingly complex and volatile. In contrast to classical inhouse and R&D-focused Innovation Management companies today are operating with a wide range of approaches with the main driver digitalization and globalization of

value chains. Especially User-Centered Design and related concepts like Design Thinking or Human-Centered Design and other iterative approaches gain momentum as they put the customers' need in the center, allow early insights and thus reduce risks.

DESIGN MATTERS

"Coffeepot for masochists" by the French artist Jaques Carelman,
reference by Don Norman in his book "The Design of Everyday Things"
Source: https://www.commencis.com/thoughts/experience-design-is-everywhere/

Many of us are familiar with non-linear innovation practices via workshops or agile projects. Especially Design Thinking is en vogue, popular since the design company ideo coined the term and since then applied by many companies. However, scholars and practitioners discuss if User-Centered Design, Human-Centered Design and Design Thinking are interchangeable concepts or if simply the latter are the old hiding under the cloak of the new. Indeed, the approaches are slightly different. User-Centered Design is a narrower concept in comparison to Human Centered Design or Design Thinking. UCD is especially targeting digital processes and interfaces and as such is part of the ISO92400 regulation with Don Norman, director of the design lab at University of California, San Diego, advocating the approach since 1986. Human Centered Design is also defined by an ISO standard and focusses on computer-based interactive systems, but not limited to user interfaces. Design Thinking in comparison is a wider concept, a certain mindset as well as a collection of principles and methods. Ideo describes it as a systematic, human-centered approach for complex problem solving.

Nevertheless, though the terminology is different, the practical process is very similar. Based on observing and understanding the user, diving deep to understand the problem, in all three approaches the process focusses on

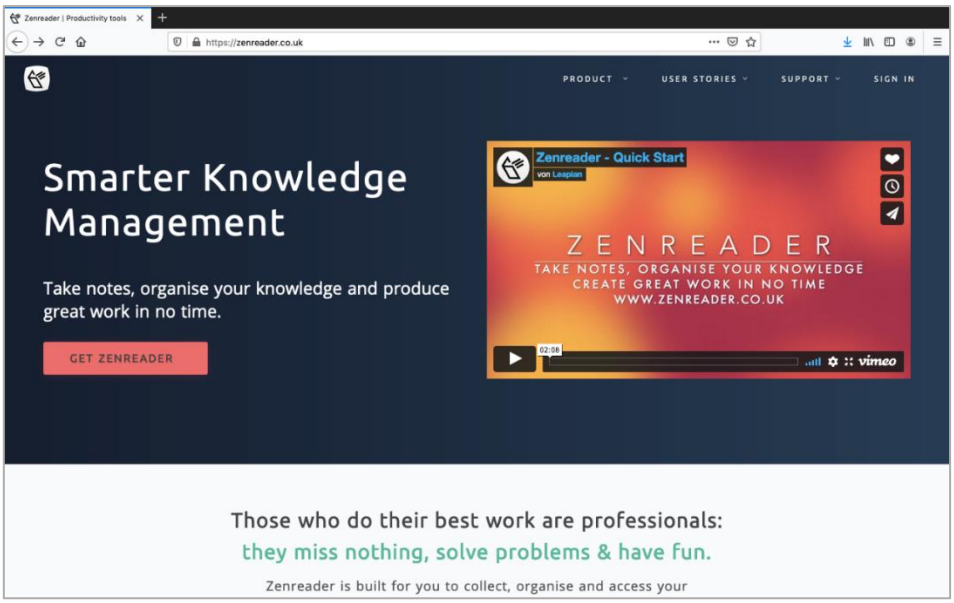
iteration and thus on improving the product or service step by step to make sure the customer's need is met.

THE PILOT COURSE DESIGN

In September 2020, with the positive experiences of our online teamwork in previous years in mind, we decided to bring textbook wisdom to life: our project aims to gain practical insight into a real-world User-Centered Design process. The course design builds on two parts: A theoretical part as a foundation to understand Innovation practices, especially iterative approaches, and a project part where the students meet EdTech startups.

With the support of Alison Clark-Wilson (UCL) and the European EdTech Network (EETN), we were able to invite EdTech startups to participate in our pilot and were overwhelmed by the positive response. Getting access to universities and potential users is obviously an interesting option as one of the entrepreneurs explained.

As we had not anticipated to get so many applications, we acted in a comes first serves first manner and chose simply the first six startups to participate. Over the course of the module, six EdTech startups from Singapore, Norway, Sweden and the UK presented their early-stage products to the 25 students to get feedback and improve their MVPs. We chose deliberately EdTech startups, because master students are often the addressed target group for this industry and able to give sound feedback on customer's needs, so this seemed to be a perfect fit.



Landing Page of Zenreader, an early stage product
of one of the participating startups, Source: https://zenreader.co.uk/

Starting with an introduction lecture by Prof. Alison Clark-Wilson in November 2020, each week the students met the founders of one start up presenting their product in an online meeting, then had the opportunity to test the product for one week and finally gave structured feedback and discussed their user experience with the founders, again in an online encounter. Within the testing week they had the possibility to get into contact with the founders in case of questions or for further investigations.

PILOT CONCEPT "APPLIED USER-CENTERED DESIGN" - OVERVIEW

Step 1 - Theoretical foundation, six lectures on Innovation Management

Step 2 - Start up Founders present their early stage EdTech product online to the students, the target users

Step 3 – Students have the possibility to try the product for one week and contact the founders if necessary

Step 4 - After one week of assessing the product the entrepreneurs and students meet again via zoom with the students giving feedback

Step 5 – The students fill in prepared Evaluation Templates to quantify the feedback quotes

Step 6 – Step 3 to 5 are repeated overall for six times; finally 25 individual evaluation sheets were sent to the respective founders

Step 7 – Students write a term paper applying the theoretical knowledge about User-Centered Design onto one of the start ups.

Step 8 – At the end of the term after grading the respective 4-5 term papers were handed over to the founders

Prototype Werkabee App, founder Adam Dimitroff

All students filled in the evaluation template for structured feedback. Furthermore, each student wrote a case study on one of the six start-ups; each 4 students had the same case but were writing individual term papers which allowed then comparisons. The term paper aim to describe the User Centered Design Approach and to apply the theoretical knowledge onto a real case. At the end of the term the case studies were sent to the founders for documentation.

RESULTS

What we designed and expected as learning outcomes:

1. The students understand and apply the concept of User Centered Design and related approaches
2. Students are able to critically evaluate and apply the process and practice of new product development with customer involvement
3. They develop evaluation criteria and explain reasons for a certain judgement regarding new products

What the surprising outcomes were in reality:

Though students understood the concept of User-Centered Design on a theoretical level, it turned out to be challenging for them to differentiate between the quality of the presentation and the product. Even after trying the product during one week, the feedback seemed to be strongly biased by the founder's presentation style.

Furthermore, we had not taken into account the striking cultural differences when it comes to articulate feedback. German students, having a low context communication style, were showing very direct and explicit feedback and felt entitled to criticize the product very openly, which might have been considered rude or at least unpolite by the founders. Indeed, there is still little known about intercultural differences in User-Centered Design processes and it would be interesting to further investigate the impact of culture on feedback styles in iterative innovation processes.

The success of the projects became finally evident in the term papers; reflecting the ideal feedback loop in comparison with applied iterative processes brought interesting insights for future business developers.

Without the current circumstances it would have been unlikely for us to set up a project with international start-ups meeting online. While of course we

previously offered also online lectures, the possibility of having a workshop-like virtual project over the course of a whole term was completely new. The pandemic fostered the development of new formats and experimental approaches what finally turned out to be quite positive.

Overall, the students were enthusiastic about the project and we will continue with a next cohort in autumn 2021. Founders told us that the project was a chance to get access to their target group which seems to be rather difficult. They also appreciated to have the possibility to get detailed feedback. In September 2021 we will announce the next start; EdTech start-ups are welcome to apply.

COURSE STRUCTURE

90 Min – Structure: weekly, Tuesdays 3:45 – 5:15 pm

Innovation Management Knowledge Base
October 6 – November 3
20 Min Lecture
20 Min Discussion
10 Min Break
40 Min Workshop Strategic Tools for Innovation

Project User Centered Design - Testing MVPs
November 10 – December 22
20 Min Lecture
10 Min Break
30 Min Feedback EdTech StartUp
30 Min Introduction EdTech StartUp