by Dr. Harald von Kortzfleisch

Having taught entrepreneurship for more than 15 years, I really feel challenged, and also inspired, by current developments in the theory and practice of entrepreneurship education. These developments and the related challenges are fundamental: Have successful entrepreneurs really studied entrepreneurship at higher education institutions in order to learn how to start-up their businesses? How do we take into account the research studies showing that entrepreneurship education may even lower entrepreneurial intentions? Does it make sense to continue with entrepreneurship education for potentially everyone, when actual research demonstrates the influence of genetic and hormonal predispositions for entrepreneurial success? All in all, why bother to keep up with entrepreneurship education at all, against the background of these fundamental challenges?

The answer, for me, is obvious: I truly believe that entrepreneurship education reaches far beyond teaching potential entrepreneurs to become successful! Rather, it is about teaching and learning how entrepreneurs think and act, and translating this into a set of core competences, which are especially important in order to deal with the major challenges faced by our societies today! Employment and innovative working worlds, digitalisation of business and society, climate change and energy protection, health and safety, migration and demographic change, financial stability (to name just a few of these major societal challenges) seem to be distinct, clear issues. However, they are complex, dynamic, and interrelated, as well as uncertain, uneven, and unpredictable. To ensure future prosperity and quality of life, it is therefore not sufficient to simply implement scientific-technological innovations in industrial production or service processes in order to address these challenges, be it as entrepreneurs or as intrapreneurs. Only a systemic understanding, integrating the technical, human, organisational and societal sides of innovation, will lead to the desired goals.

Against this background, entrepreneurial thinking and acting is systemic in its very nature (Pamela Hartigan refers to the notion of "entrepreneurialism"). It is a universal core competence, strongly needed in order to cope with the above mentioned challenges faced by today's societies.

My Story

In this story, I set out my rationale as to why we need to adopt a new 'open' approach to the way we interact with our students, to help them develop the core competenc-

Books

es required to support their entrepreneurial ventures.

Entrepreneurial Thinking and Acting as a Universal Core Competence

If we try to understand entrepreneurial thinking and acting as a universal core competence, we can break this down into primary competences, which directly create entrepreneurial value, and secondary competences which indirectly support these activities. These are based on 'The Eight Great Competencies' of Dave Bartram, who developed, empirically tested, and validated eight central competency areas which influence an individual's performance. These are: leading and deciding, supporting and cooperating, interacting and presenting, analysing and interpreting, creating and conceptualising, organising and executing, adapting and coping, enterprising and performing.

The primary competencies of entrepreneurship are: identifying business opportunities, innovating, visioning, setting and developing strategy, focusing on customer needs and satisfaction, monitoring markets and competitors, demonstrating financial awareness, identifying and recruiting talent, making decisions, taking action, taking responsibility, taking calculated risks, remaining aware of organisational issues, controlling costs. The secondary, supporting competencies of entrepreneurship include: providing direction and coordinating action, motivating others, upholding ethics and values, showing social and environmental responsibility, networking, negotiating, analysing and evaluating information, presenting and communicating as well as documenting information, working systematically, working energetically and enthusiastically, managing projects in time and budget.

Both primary and secondary competencies for entrepreneurial thinking and acting need to be considered when teaching entrepreneurship, be it with a focus on business, culture, society, or even academia.

Teaching Entrepreneurship the Entrepreneurial Way

Very often, scientists too are very entrepreneurial within their higher education institutions. These 'scientific entrepreneurs', as Norbert Szyperski labelled them, behave like entrepreneurs within the academic context of their institutions. For example, they take risks in order to develop innovative research projects without the resources to implement them, and try to get third-party funding for their projects and teams. They create centres of expertise around new topics, organise conferences or workshops, and, finally, cooperate with others, such as industry or public authorities. Since many scientists already behave like entrepreneurs, it is not surprising that some researchers suggest that entrepreneurship educators should also be entrepreneurial, and perhaps be even more entrepreneurial, when teaching entrepreneurship. I would argue that, in our approach to teaching, we need to mirror the business practices and concepts used by today's entrepreneurs, such as 'agile', 'effectuation', 'bricolage', 'lean startup' and 'open innovation'. A key element of all

Bartram, D., (2005) The great eight competencies: A criterion-centric approach to validation, Journal of Applied Psychology, Vol. 90, No. 6, 1185–1203.

Hartigan, P. & Elkington, J., (2011) The power of unreasonable people: How entrepreneurs create markets that change the world, Boston: Harvard Business Press.

Norbert Szyperski, quoted in: Von Kortzfleisch, H., (2011), Scientific Entrepreneurship: Reflections on Success of 10 years EXIST, Eul Press, Lohmar, 4.

these approaches is looking at potential new products and services from the perspective of the customer.

In our context, the students are our customers, and we should actively involve them in the way we teach entrepreneurship by adopting an 'open' approach (see our own Openeurship.com project).. By engaging students in this way we can:

- Better understand their needs.
- Learn from their innovative ideas.
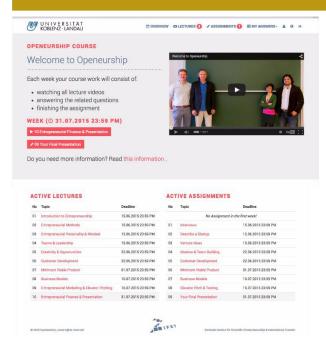- Work with them to co-create lectures.

From the pedagogical perspective this approach is known as action-oriented learning, where students are active partners in the development of educational concepts, and predominantly learn in a self-directed way. From the perspective of technology, modern instructional technologies such as video-based 'massive open online courses' (MOOCs) are especially valuable, as are freely available 'open educational resources' (OERs). At the intersection between MOOCs and OERs, short, free video sequences on YouTube, Vimeo or TED Talks are also relevant, as content is presented by the original authors in short chunks (a format known to suit the attention span of Gen Y learners).
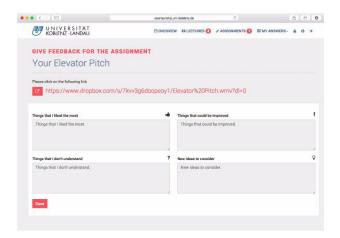
Openeurship.com

Openeurship is an online supported flipped-classroom concept, based around open learning video content. Learning and teaching content consists of freely available, entrepreneurship-related online videos. Each lecture unit is composed of five to ten videos, each with an average duration of three to twenty minutes. The selection of the videos is driven by the content, and by the reputation of the authors who present their concepts in the videos. The lecture units cover the following topics: introduction to entrepreneurship, entrepreneurial methods, entrepreneurial personality and mindset, entrepreneurial teams and leadership, creativity and entrepreneurial opportunities, customer development, minimum viable product, business models, entrepreneurial marketing and elevator pitching, entrepreneurial finance and presentation.
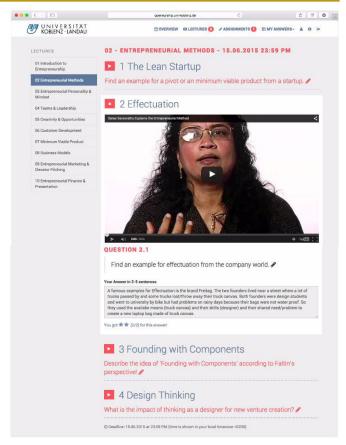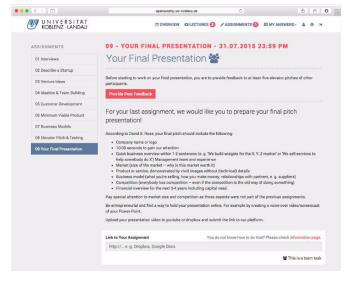
Openeurship

Ahead of each lecture, the students are supposed to watch and comment on the videos, using questions designed to motivate self-reflection. For example: 'What are the three most important aspects which were mentioned in the video?' 'How does the concept described in the video relate to your personal experiences?'

During classroom hours, the videos are summarised and discussed by the students. Additional topics related to the content shown in the videos are also presented and discussed. Students have the opportunity to suggest ideas to improve the material on 'Openeurship.com'. Finally, each lecture ends with a list of important issues, representing the "classroom knowledge" collated during each session. Approximately half-way through the course, a team-based creativity workshop is held in the "School of Entrepreneurial Design Thinking®" (www.ed-school.com). Teams are built, and a design thinking process is started, in order for the student teams to come up with their own business startup ideas. In the second half of the course, the student teams work on developing their business ideas. The remaining Openeurship lectures are used to support this process. Class time is used for the students to review and reflect on the lessons learned as they evolve their startup ideas!

Videos, as well as answers and assignments, are rated online by the students, and also peer-reviewed. Furthermore, the students can suggest additional videos that they find relevant to the main content of each lecture unit.

Experiences with Openeurship.com

The flipped classroom concept changes the role of the professor or lecturer. Composing, moderating, complementing, synthesising, and summarising replace the classical ex-cathedra teaching. Furthermore, feedback from students on the quality of the videos has led to a range of different approaches:

- Attention-promoting visualisations, such as animations or illustrations of specific learning content.

- Emotionalising content, for example through story telling and visions.

- Authenticity by well-known entrepreneurs, authors, or other stakeholders, fulfilling the demand for role models.

- Presentation of important theoretical concepts, in the format of 'short digital ex-cathedra teaching sessions.'

- Short content 'snippets', which provoke students to either challenge or complement them.

The overall result of using the 'open' approach has been a much higher engagement of students on the programme compared to other lectures.

Implications for Entrepreneurship Education

The digitisation process is already transforming education, not only in terms of content but also as a factor influencing how we support 'learning and teaching'. As entrepreneurship educators, we need to embrace techniques such as E-Learning and related concepts like 'open source', and use them to develop a more 'authentic' learning experience for our students. Openeurship.com has been very successful, but is only one example of what is possible. In my experience, the important elements are:

- Participative design of the teaching and learning format, together with the students.

- Usage of open online learning video content.

- Constant feedback and improvement.

- Self-reflection and peer-review.

- Individual and team work.

- A flipped classroom approach.

Today, Openeurship is just one course. Tomorrow it will be a complete study program!

Resources

To find out more about how you can use an 'open' approach to support your entrepreneurial teaching please visit Openeurship.com.

In addition, search for 'Open' on the Coneeect online compendium of learning materials.

To find out more about 'Open Innovation', watch the video by Thomas Holzmann: Open Innovation.
https://www.youtube.com/watch?v=4a2O-DiDSy1k&list=PLyXAaocQQ2XZAG1_-Fza3I5uoDzlSjIF-O&index=33

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For more than 10 years, I have been a full professor for entrepreneurship, technology and innovation management at the University of Koblenz-Landau. Before that, I completed my studies in business administration and my doctorate at the University of Cologne in Organisation Design. In addition, I wrote my second thesis at the University of Kassel and was officially awarded University Lecturer in Business Administration by the federal state of Germany. In between, I was a visiting scholar at the Sloan School of Management, MIT, the NYU Stern School of Business, and the Japan Advanced Institute of Science and Technology. At the University of Koblenz-Landau, I developed the concept of scientific entrepreneurship and laid the groundwork for 22 universities of entrepreneurial excellence in Germany. I founded the "School of Entrepreneurial Design Thinking®" (www.ed-school.com) and the Zentral Institute for Scientific Entrepreneurship & International Transfer" of the University of Koblenz-Landau (ZIFET; www.zifet.de). More than 100 publications cover the topics of entrepreneurship, innovation, management, and organization design. I also have founded or co-founded more than 10 companies.

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