COURSE TITLE: Research as design

ECTS credits: 4

Course schedule: from 9:00 to 13:00

Lecturers:
- Kernbach Sebastian, University of St. Gallen, Institute for Media and Communication Management, Switzerland
- Svetina Nabergoj Anja, Stanford University, Hasso Plattner Institute of Design, USA & Faculty of Economics, University of Ljubljana, Slovenia

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Aims of the course:

Background
Producing quality original research requires advanced analytic skills, but also the creative intelligence to design a project as well as the ability to handle the inevitably ambiguous research process.

Innovative and creative research is primary goal of doctoral education (Bargar & Duncan, 1982; Halse & Mowbray, 2011; Jones, 2013; Lovitts, 2008), however creativity is rarely taught explicitly in doctoral programs (Bargar&Duncan, 1982; Lovitts, 2005). In 2014 we conducted interviews with nine faculty members at Stanford University and conducted a qualitative analysis of doctoral classroom sessions in order to unveil important aspects of how successful interdisciplinary scholars understand their research process and how they mentor students through research; more details can be found in Cravens, A. E., Ulibarri, N., Cornelius, M., Royalty, A., & Nabergoj, A. S. (2014). Reflecting, iterating, and tolerating ambiguity: Highlighting the creative process of scientific and scholarly research for doctoral education. International Journal of Doctoral Studies, 9,229-247.

We investigated the mindsets and behaviors that experienced scholars bring to their work. Results suggest that innovative faculty:
- See creativity as central to their research and actively seek to balance the creative and analytical aspects of their work
- Use an iterative “learning by doing” approach to refining research questions and methods
- View setbacks as opportunities for further learning
- Apply the mindsets of a bias toward action and embracing experimentation to their research
- Are mindful of their research process
- Innovative researchers seek early feedback on their ideas, their mental outlooks allow them to tolerate and even embrace uncertainty, view failure as a learning opportunity, and be confident that a seemingly-disorderly process will yield results

However, faculty varied in the extent to which they made this messiness and comfort with ambiguity as well as mindfulness of their process explicit for their PhD students. So in this program, we aim to emphasize the importance of creativity in scientific research and equip PhD students with the tools they need to incorporate it into daily work and practice.

**Aim of the course**

The aim of this course is to recognize the creative, playful mindset that underlies successful innovation in scholarship and explore how design thinking can improve the research process to make us more innovative scholars. And with this, to increase the ability of researchers to create quality research and a systematic application of creativity in their own research development. Participants will have the opportunity to apply design thinking tools, methods and mindset to their own research projects. They will apply simple and easy to learn visual tools to structure their ideas, literature, academic discourses, and potential contributions, among others. Through the process of prototyping and iterating they will gain ability to present their ideas and ask for feedback. We will use storytelling techniques to teach PhD students how to present their research to different audiences and achieve the intended impact.

**Course syllabus:**

Based on the design thinking framework and mindset established at the d.school, Stanford University, participants will gain creative confidence in their research process and when facing challenges, get problem-solving abilities to better deal with ambiguity using analytical skills and creative intelligence and improve their emotional well-being by being proactive about their emotional needs which ultimately leads to improved productivity. Participants will explore a variety of design skills and mindsets, but focus especially on how being mindful of your own research process, work styles, emotional state, and sometimes hidden assumptions can help you get “unstuck” when facing research bumps in the road. The instructors seek to help participants to explore potential solutions to problems in their research efforts.

In this program our focus is to help PhD students:

- **Creative confidence by**
  - learning tools, techniques and abilities that innovative scholars bring to their scholarly research
  - practicing how to get “unstuck” in times of research blocks
  - learning improvisation skills
- learning to communicate deliberately to different communities (scientific, lay, media, funders, etc.).

- **Problem-solving abilities by**
  - enhancing their creative problem-finding and problem-framing ability
  - reflecting, iterating and tolerating ambiguity
  - refining questions, processes, and methods and viewing setbacks as opportunities for further learning
  - learning how to combine analytical skills and creative intelligence

- **Emotional well-being by**
  - being intentional about designing their research journey
  - being proactive about emotional needs (as it leads to greater productivity)
  - creating a social-support network (academic, non-academic)
  - creating a supportive, non-judgmental environment
  - work in tandems and experience peer-coaching

The workshop is characterized by a positive, intimate and encouraging atmosphere in which exchanging successful practices and failures (also known as “learning opportunities”) is central to the learning success of all participants.

**List of readings:**


**Teaching methods:**

Participants will be given short input sessions from the instructors and will have time to apply design thinking to their own research project(s), giving and getting feedback from their peers and improving their research project.

Participants will present their prototypes and iterative developments from throughout the week and will present their research story in new presentation and storytelling formats such as Visual Storytelling. The Visual Storytelling Canvas will help participants to shape a story of the current research.

**Lecturers’ Biographical Note:**

Dr. Sebastian Kernbach is lecturer, project manager and researcher at the Institute of Media and Communication Management at the University of St. Gallen in Switzerland. His field of expertise is knowledge visualization, visual thinking and design thinking. He is Visiting Professor at the African Doctoral Academy, the Central University of Beijing and the Swiss Summer School. He has worked with and consulted organizations such as Art Basel, ABB, European Central Bank, Hilti, Interbrand and Xerox. His passion is to equip individuals, teams and organizations with not only the tools and techniques but also the mindset of design thinking and visual thinking to enable them to be sustainably productive. His focus is particular of adding this type of working style to doctoral education and scholar training to support productivity, excellence and flourishing in research.

He is the Founder and Head of the Visual Collaboration Lab (www.visualcollaborationlab.org) at the University of St. Gallen. He is Chair of the International Symposium of Knowledge Visualization and Visual Thinking. He has a background in business, communication and psychology studying in Düsseldorf, Breda, Copenhagen, Lugano, St. Gallen and Zurich. He has published in the International Journal of Business Communication, Design Studies and has contributed chapters to books such as “Design Thinking for Innovation – Research and Practice” published at Springer.
Anja Svetina Nabergoj (PhD) is Lecturer at Hasso Plattner Institute of Design at Stanford University, where she teaches Executive Education programs and co-teaches graduate classes including “Collaborating with the future: Launching Large-Scale Sustainable Transformations”, “Creative Cultures in Organizations” and “Organizational Psychology of Design Thinking”. In her work she focuses on helping individuals, teams and organizations build their creative confidence and reach innovation potential.

She has been working with organizations across Europe, Asia and USA including Bill & Melinda Gates Foundation, JetBlue, Uber, GM, Genentech, Leo Pharma, Symbio, Coca Cola, Telenor, Kellog’s, Highlands, Microsoft and Visa.

Anja facilitates design thinking workshops, teaches ethnographic research techniques and leads senior leadership sessions on user-centered innovation sessions.

She is the founding member of Research as Design team at Stanford University that developed the curriculum for applying design thinking to scientific and scholarly research and teaching programs for graduate students and faculty members. With her research team at Stanford, she has conducted a study that uncovers and analyzes the creative process behind innovative scientific research. Results suggest that innovative faculty see creativity as central to their research and actively seek to balance the creative and analytical aspects of their work. Inspired by the findings, her team developed a pedagogy to nurture creative potential young scholars and empower them to combine scientific process with design principles and creative practice to produce original research in their field.

Anja is also appointed as Associate Professor of Entrepreneurship at the Faculty of Economics, University in Ljubljana in Slovenia where she teaches undergraduate and graduate entrepreneurship and innovation courses. She focuses on developing design thinking methodology for entrepreneurship courses and business school curriculum. She has contributed chapters to books published by Edward Elgar and Routlege and is publishing in scientific management journals, including European Management Journal.