MGA 676 Design Theory and Methodology

4 ECTS, Fall 2021, 16 weeks

Course overview:
Most design practitioners work instinctively when they are engaging with the practice of design. This has been cultivated through their education and experiences. Many people think it is their genes; you are either a creative person or not. In reality, design theory shows that there is a method (or methods) to design that can be acquired. Moving away from thinking about how we design and engage with design theory, designers fail to realise that there is a method to their practice they can use, evolve and develop. If you have ever thought 'this is too theoretical for me' or 'this theory doesn't have a practical application' while taking a course, during these 16 weeks you will be offered a learning opportunity to think creatively and critically on how various theories and methods have been applied by others and how you can adopt and adapt these to suit your practical needs. Moreover, you will get into the habit of being reflective of your own practices to improve your confidence and ability to shift between a reflective mode and rational problem solving. This course will help you apply the methodologies and theories of design in a broader set of problems in business and society by looking into concepts such as creativity, critical thinking, lateral thinking, divergent thinking, user-centred design, design thinking, framing and others. You will engage individually and in groups in a variety of activities that include writing, creating, peer-reviewing and applying methods in the field.

Instructor:
Andreas Papallas (http://www.andreaspapallas.com/) papallas@idmaster.eu
Here is a little bit of information about me and why I teach this course: My background is in architecture, urban design and sustainable urban development, I am both an academic researcher and teacher at the Cyprus University of Technology and a practicing architect, therefore I have experience of combining the two worlds not just in day-to-day life but how can methods used in academia thinking about questions such as the one we will be asking in this course. I use various ethnographic design research methods in my own doctoral dissertation (in progress) at the University of Oxford trying to engage with sensitive populations, in particular migrants. I hope through this course you help you approach theory and methodology in ways that can be applied in your own work in ways that are meaningful and inform the design of products and services. I am here to facilitate and guide you through the topics we will examine. I do not have all the answers, but I will share what I know and will do my best to make this journey interesting, relevant and challenging. However, it is important for you to understand that you are the captain of your learning journey and therefore determine what you get out of the course. I encourage you to make the most out of the opportunities presented.

Tutor:
Katie Tzanidou (www.linkedin.com/in/katerinatzanidou)
Katie has a background in Psychology and Human Computer Interaction. She combines theory and practise with 20 years of experience working in various organisations spanning from agency side informing various clients for better user experiences, to leading research and design teams at PayPal and spending the last 10 years as Head of Research at Google in the Ads and Apps teams. More recently she has joined Thomson Reuters as VP of the Global Research team. She is currently based in Zurich, Switzerland and enjoys making connections between the academic world and industry.

Contact Details:
Best way to get in touch with me is via my idmaster.eu email (papallas@idmaster.eu), a second way is through posting in the google classroom environment or if you see me 'online' in the chat on hangouts feel free to drop me a message. In addition, special online "office hours" can be set up for group or individual mentoring if needed through google hangout/chat.

Learning outcomes:
Upon successful completion of the course, you will be able to:
- Compare the divergent approaches to defining design
- Summarise how design practitioners can approach design practice
- Recognize the methods through which designers think and act
- Describe the following design theory concepts: user-centred design, design thinking, lateral thinking, divergent thinking.
- Use a combination of design theory concepts to frame a design problem
- Develop and apply an appropriate sequence of methods (toolkit) to explore the design problem space.

Schedule:
The delivery of the course is organized in 8 bi-weekly segments called 'sessions'. Each session kicks off with an assignment release on google classroom every other Wednesday at 8am Cyprus time. The deadline for your assignment submission is the Tuesday before the new assignment release at midnight. Subscribing the course calendar will automatically register all the submission deadlines to your calendar.

Each assignment release includes a series of activities which you will need to complete in sequence. Some activities are individual, and some require working in groups. Groups will be assigned at the end of the first bi-weekly session and will take into account your location to match time zones as much as possible.

Contents:

In the course you will be answering questions such as "what is design?" "how do designers think and act?" and "why do we design?" To help answer these questions, in the first session you will learn from other designers and academics, either as documented in interviews (written and recorded) provided and discovered and then critically reflect your own practices. You will engage with the concept of creativity and thinking about how one can recognize and nurture creativity. To do so you will reflect on literature and some well-known TED talks that talk about creativity. At this stage you will also select a desired SDG challenge you wish to address and groups will be created based on your interests. The first session concludes with a class discussion forum.

In the second session, you will engage with design thinking and user-centred design as interrelated but different concepts of design theory and practice. You will look at the concepts individually and then unite in groups to write about how different design thinking patterns and structures can assist the creation process and devise a group design challenge and a framing brief.

In the third session, you will adopt 'learning' and 'unlearning' practices to individually carry out basic research and explore how others have attempted to address your challenge topic area thinking laterally. You will respond to a case study, read about ethnography and create a methodology plan based on your reading and specific project.

In the fourth session you will engage with theories on how people feel, think or do and how feelings, thoughts and doings can be elicited by researchers. You will be provided with examples on methods that can achieve deep elicitation and will be asked to create your own method which you will apply with a peer.

In the fifth session, you will be introduced to design toolkits that aim to nurture creativity in the design process. Working in groups you will develop a selection of methods to formulate a toolkit on your specific challenge. You will engage in group discussions on whether the toolkits and methods have been helpful as well as their potential shortcomings.

In the sixth session, you will get to see your toolkit in action! You will apply your toolkit either: a) as a group to a group of peers from the course, b) each member of the group to a person or persons from their locale or c) each member of the group to a peer. However, before you apply your toolkit you will be introduced to ethical considerations to fieldwork and research and will be asked to complete a fieldwork ethical assessment form. Every group member should apply a part of the toolkit either individually or as a group to others.

In the seventh session, you will think about how design theory and methods can be shared and disseminated to others. You will look at examples of how designers present their thinking and reflect on how effectively (or not) they communicate. You will document your findings in a poster format. You will develop and present a group design theory and

methodology manifesto that builds from the knowledge gained during the course in a class-wide session.

Workload:
In order to successfully conclude this course, you are required to do both individual and group-based activities. Theoretical topics are presented as short modules through google classroom and other forms of synchronous and asynchronous communication. The course work is divided into three parts: work on a group project; work on individual assignments; peer review.

Assessment:
The course grade consists of the following components: written assignments (individual) 30%, written assignments (group) 40%, final presentation 10%, peer review activities 6%, reflective journal 14%. Final mark will be on a 0-10 scale in increments of 0.5 points. Passing grade is 5 out of 10. Group activities are marked individually.

Grading system:
A, 5 := 100% — excellent: an outstanding and excellent level of achievement of learning outcomes characterised by free and creative use of knowledge and skills beyond a very good level.
B, 4 := 80–99% — very good: a very good level of achievement of learning outcomes characterised by purposeful and creative use of knowledge and skills. Un-substantive and non-conceptual errors may occur with regard to specific and detailed knowledge and skills.
C, 3 := 70–79% — good: a good level of achievement of learning outcomes characterised by purposeful use of knowledge and skills. Uncertainty and inaccuracies may occur with regard to specific and detailed knowledge and skills.
D, 2 := 60–69% — satisfactory: a sufficient level of achievement of learning outcomes characterised by the use of knowledge and skills in typical situations. Deficiencies and uncertainties may occur with regard to non-standard situations.
E, 1 := 50–59% — poor: a minimally acceptable level of achievement of learning outcomes characterised by limited use of knowledge and skills in typical situations. Significant deficiencies and uncertainty may occur with regard to non-standard situations.
F, 0 := 1-49% — fail: the level of knowledge and skills acquired by a student remain below the required minimum 'F' is a negative outcome.
https://www.tlu.ee/en/taxonomy/term/90/assessment-learning-outcomes

Technology needed:
Basic knowledge of computers and a desire to learn how to use some basic drawing tools. The submissions and assignment completion will be through google docs and google slides via google classroom.

CoVid-19 notice:

We always ask you to put your own health and well-being first and depending on context and circumstances you might have to adapt your activities and toolkit implementation in a way that is flexible and can run both online and in face-to-face contexts. I will remind you of this throughout the course but make sure to get in touch if you have any specific queries, worries or concerns or especially if you have been affected directly or indirectly by the pandemic and the events surrounding it.

Supplementary Bibliography

Dorst, K. and Cross, N. (2001). Creativity in the design process: co-evolution of problem–solution. Design Studies, 22(5) pp. 425–437.

Dym, C. L., Agogino, A. M., Eris, O. , Frey, D. D. and Leifer, L. J. (2005), Engineering Design Thinking, Teaching, and Learning. Journal of Engineering Education, 94. pp. 103-120.

Preece, J.; Rogers, Y., & Sharp, H. (2002) Interaction design: Beyond human-computer interaction. New York: John Wiley & Sons, Inc.

Andrea F. Kravetz (2010) The role of user centred design process in understanding your user: Vice President User Centered Design Elsevier 8080 Beckett Center, Suite 225 West Chester, OH 45069 ,USA

Cardoso C, Badke-Schaub P, Eris O (2016) Inflection moments in design discourse: how questions drive problem framing during idea generation. Des Stud 46:59–78

Gao S., Kvan T. (2004) An Analysis of Problem Framing in Multiple Settings. In: Gero J.S. (eds) Design Computing and Cognition '04. Springer, Dordrecht

Kruger, C. and Cross, N. (2006). Solution driven versus problem driven design: strategies and outcomes. Design Studies, 27(5) pp. 527–548.

Blommaert, J., & Jie, D. (2010). Ethnographic fieldwork: A beginner's guide.

DeWalt, K. M., & DeWalt, B. R. (2002). Participant observation: A guide for fieldworkers. Walnut Creek, CA: AltaMira Press.

Madden, R. (2010). Being ethnographic: A guide to the theory and practice of ethnography. London: SAGE.

D. Maurer, and T Warfel, (2004). "Card sorting: A definitive guide." [Online.] Available: http://www.boxesandarrows.com/view/card_sorti

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Goodman-Deane J., Langdon P.M., Clarke S., Clarkson P.J. (2008) User Involvement and User Data: A Framework to Help Designers to Select Appropriate Methods. In: Langdon P., Clarkson J., Robinson P. (eds) Designing Inclusive Futures. Springer, London

Hanington, M.B. (2007). Generative Research in Design Education. Proceedings of International Association of Societies of Design Research Conference 2007. Hong Kong.

Hanington, M.B. (2010). Relevant and Rigorous: Human-Centered Research and Design Education. Design Issues. 26:3. pp.18-26.

Etches, A. (2013) Know thy users: user research techniques to build empathy and improve decision-making. Reference & User Services Quarterly, Fall 2013, p. 13+. Gale Academic Onefile.

Lawton and Martinson, (2008). "Notes on User Centered Design Process (UCD)". http://www.w3.org/WAI/redesign/ucd
Sanders E.BN. (2000) Generative Tools for Co-designing. In: Scrivener S.A.R., Ball L.J., Woodcock A. (eds) Collaborative Design. Springer, London

Blomberg, J, J Giacomi, A Mosher, and P Swenton-Hall (1993), "Ethnographic field methods and their relation to design," in Participatory design: Principles and practices, Douglas Schuler and Aki Namioka, eds. Hillsdale, New Jersey: Lawrence Erlbaum, 123-55.
Kitzinger, J. (1996). The methodology of focus groups: The importance of interaction between research participants, Sociology of Health and Illness, vol. 16, pp. 103-21.

Walker D. J., Dagger B. K. J., and Roy, R. (1991) Creative techniques in product and engineering design: A practical workbook. Cambridge: Woodhead Publishing.

Maguire M., Bevan N. (2002) User Requirements Analysis. In: Hammond J., Gross T., Wesson J. (eds) Usability. IFIP WCC TC13 2002. IFIP — The International Federation for Information Processing, vol 99. Springer, Boston, MA

Rekha Devi, Kh, Sen, A.M., and Hemachandran K. (2012). A working Framework for the User-Centered Design Approach and a Survey of the available Methods International Journal of Scientific and Research Publications, 2:4.

Chenail, R. J. (1995). Presenting Qualitative Data. The Qualitative Report, 2(3), 1-9. Retrieved from https://nsuworks.nova.edu/tqr/vol2/iss3/5

Ponterotto, J. G., & Grieger, I. (2007). Effectively Communicating Qualitative Research. The Counseling Psychologist, 35(3), 404–430.

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