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Applying “Design Thinking” as a Method for Teaching in Media Education

Artur Lugmayr
EMMi Lab.
Tampere Univ. of Technology (TUT)
POB. 553, Tampere, Finland
+358 40 821 0558
lartur@acm.org

ABSTRACT

Design Thinking is a method for creative thinking and fostering idea development. This method has been selected as part of a university course to stimulate students in the creation of new ideas in the field of media industries. This paper describes the practical arrangements for organizing a Design Thinking course in a university context. It presents a hands-on guideline for conducting a similar course in an university setting on the basis of the “Frontiers of Media Management” course that has been organized by the EMMi Lab., at the Tampere University of Technology.

Categories and Subject Descriptors

K.3.2 [Computer and Information Science Education]:
Computer Science Education

General Terms

Management, Design, Economics, Human Factors, Theory.

Keywords

Design Thinking, Media Education, Teaching, Media Courses

1. INTRODUCTION

This paper is based on the publication [8] submitted to the 4th Semantic Ambient Media Workshop (SAME) 2011 that took place in conjunction with Communities & Technologies (C&T) 2011 in Brisbane, Australia. This paper is a shorter version of the original publication, therefore for further reading it is referred to the original publication.

“Design Thinking” is a method to foster creative thinking and applying methods coming from design into other fields that require ways of organizing creative team works. In general, designers “think” between consumers, creators, and business – they think somewhere between ‘rational’ and ‘artistic’. This is

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where the method had its origin.

In the year 2011, the project course “Frontiers of Media Management” organized by the EMMi Lab., Tampere Univ. of Technology (TUT) was held in cooperation between Tampere University (UTA) and the Tampere Univ. of Applied Sciences (TAMK) in the premises of Tampere New Factory (Demola)¹. The objective of the course was to bring together a team of multicultural and multidisciplinary students to develop products and services for ambient media environments. Ambient media environments are environments, where media objects are embedded throughout the natural environment of the consumer (see e.g. [6], [7], and [5]).

Design Thinking has been applied in practical settings in various industrial and academic settings (see e.g. [10], or [2]). However, as introduction reading it is advised to take a look at [4]. A good method for performing experience or consumer oriented research is e.g. [1]. Other good background literature is e.g.: [9] or [12].

2. COURSE DEVELOPMENT

The objective of the course was to foster creative team work and providing students with a method for idea-generation and development. Especially the media market is a rather rapid evolving market, and lives from creative thinking and new product ideas. Consumer orientation, closeness to markets, working within creative teams, and new ways to attract people to products and services are major concern. To develop these skills for students the course has been designed for students with a multidisciplinary background (psychology, business, media management, human-computer-interaction, and IT).

The course was structured into 5 teaching units of 4-5 hours duration, plus 4 student homework. Each homework accounted for approx. 8h work outside the lectures. In addition, a first introduction lecture of 1 hour duration should guide students through the administrative issues of the course. Each lecture represented one or more phase of the design thinking process.

The teaching location had to be selected to fit the purposes of a Design Thinking course, and be outside of the daily university environment. Therefore the Tampere New Factory (Demola) was the most suitable space, as it provided an idea stimulating

¹ See www.tut.fi/emmi, www.uta.fi, www.tamk.fi,
www.demola.fi.

environment due to its purpose as innovation center (see Figure 1). The resources of the course were rather minimal: an online Moodle, email lists, software tools (e.g. PowerPoint), Postix, colored paper, and other office materials were sufficient to conduct the course.



Figure 1. Design Thinking Environment.

3. PRACTICAL ORGANIZATION

The course offered a wide range of practical material and background information. In the following the key-materials are presented: [13], [2], [10], [10], [9], [12], [3], and [11].



Figure 1. Design Thinking Phases

The overall process of Design Thinking is illustrated in Figure 1. The complete course and its learning events were arranged accordingly. To train students in this different way of thinking, a test-run for Design Thinking has been performed in the second lecture. This was especially of importance, as students should be getting aware about the obstacles, and different way of thinking. Table 1 presents the schedule of organizing a Design-Thinking test-run.

| |
|--|
| 16:15-16:30 Introduction (10 minutes) Warm-up Game 'introduce each other' Form teams (multidisciplinary, with 'strangers'...) |
| 16:30-17:30 (5 minutes) Challenge Presentation (55 minutes) Observe & Interview |
| 17:30-18:20 (10 minutes) Introduce Point-of-View (10 minutes) Define Common Point-of-View (30 minutes) Ideate |
| 18:20-19:00 (60 minutes) Prototype (30 minutes) Presentations |

Table 1. Schedule for a 'Mini-Design-Thinking' Session.

Table 2 shows the basic layout with a brief description of the content of each lecture, including the tasks that students and the teacher had to perform. The main issue was that the course should be a learning-by-doing course, as well as that the teacher only trained students in performing various tasks in the progress of the course. Between each lecture, students had to conduct practical homework together with their peers.

| | Teacher | Students |
|--|---|---|
| Lecture 1 Introduction | Introduction of the practical issues around the course | Selection of a presentation topic as self-learning exercise |
| Lecture 2 Design Thinking Challenges | Presentation of the key-issues of design thinking, and guiding students through the design thinking test-run Organizing of a Design-Thinking test-run to train students in the methodology with a small design challenge Presentation of the Design Thinking challenges | Presentation of a theoretical paper about design thinking Executing the tasks related to the Design Thinking test-run Report about the design thinking test-run as homework and consumer empathizing homework |
| Lecture 3 Point-of-View, Common Point-of-View, Ideate | Guiding students through the Define and Ideate phases of Design Thinking Introducing students to possibilities how to create rapid prototypes | Presentation of the results of the consumer research study Conducting the practical execution of the Define, and Ideate phases |
| Lecture 4 Prototypes and Testing | Stimulation of discussions around the prototype and evaluation of the actual prototype | Presentation of the prototypes Final report in form of a business analysis and learning diary |
| Lecture 5 Roundup and Discussion | Organization of a guest lecture | Guest lecture and practical hands-on work |

Table 2. Course Organization Overview.

4. DISCUSSIONS

For a more extensive and detailed description of how to integrate Design Thinking as teaching method in courses, it is referred to [8], which provides a more hands-on description how to organize such a course on practical level.

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