HOW STUDENTS-MANAGERS USE DESIGN THINKING TO COLLECT IT-PROJECT REQUIREMENTS

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ABSTRACT

The paper discusses a case of applying the design thinking method in studying one of the key areas of project management - the project requirements gathering. This case is about the study of IT project management on a bachelor program of a business school. The students without special technical background shall understand what characterize the project and product requirements and how to manage the requirements. The results of the experiments with usage of whole cycle of the design thinking process and usage of some of the cycle phases into the different student groups are discussed. The importance of an "empathize" phase in the learning process is highlighted.

KEYWORDS

Design Thinking, Business Case, Project Requirement

1. INTRODUCTION

The requirements management is an important part of every project, especial IT project. Basically, the students-bachelots of the managerial program do not have an experience in IT area and need some additional clarification of the specifics of the product and project requirements. Every project should start with a business case determination. Usually the students get some predefined business case for a training project and collect the requirements using one of the suitable methods. Starting with the suggested predefined business case, the students not always understand its specifics and, as a result, they get a big gap between the proper product requirements and collected ones. To use the design thinking method for the training project, only a problem area is identified and the students shall define a type of IT product and an appropriate business case.

2. USAGE OF THE DESIGN THINKING METHOD FOR EDUCATION

The design thinking method was originally widely used in the technical fields, than it was successfully applied in humanities, including education (Melles G. et al, 2015). The researchers in the education area propose to design curricula on the basis of the design thinking for the different levels of the schools, i.e. the higher education, the secondary school and so one. The special recommendation is to use the design thinking in the business school (Matthews J. and Wrigley C., 2017) because the students in the business school usually study the business case targeted for the result, at the same time the design thinking is a process-oriented that is also very important in management.

The main characteristics of this method are human centered design, integrative thinking, design management and design as strategy. All of these characteristics are important for the manager education. According to the Stanford University design school, the design thinking method composes of the five steps: empathize, define, ideate, prototype and test. The particular attention is paid to the usage of the design thinking method for the project management education (Matthews J. and Wrigley C., 2017), as the steps of the design thinking method are close to project management cycle. Some researchers declare that this method is successfully used for the development of the soft skills, such as communication, negotiation, understanding the other people needs, working in a team, making decisions, etc., what is especially important for the

manager's work. Some researchers propose not to implement the whole design thinking cycle into the learning process, but to include some of the steps, arguing that this also benefits the development of soft skills (Ewin N. et al, 2017).

3. USE THE DESIGN THINKING METHOD FOR THE BUSINESS CASE DEVELOPMENT

For the course of IT-project management, the following scenario was chosen: the students should define what a system they would propose for the learning process and what would be a business case for its usage. This scenario used a familiar and understandable situation for the students and they were able to discuss and to collect the system requirements with the full understanding of the system. As pointed in (Wang S. and Wang H., 2008), to better understand the business case it should be based on the previous practice and experience.

Following the design thinking method, the students determined the necessary functionalities of the future system and tested the system design in the student audience. During the discussions about the system, the creators of the business case better understood the main idea and the scope of work for the proposed prototype, what was useful for the next step for the system development – for requirement collection.

The usage of the design thinking method for the development of the business case for the project requirements gathering showed the following benefits:

- the students working on the business case understood the essence of the planned system and well formulated and understood the functional requirements for the system,
- the collaboration for the task execution and the human centered orientation following to the design thinking method allow to develop the soft skills,
- given the different levels of the students familiarity with the information systems, the joint work required the students to exchange knowledge, to learn from each other,
- understanding of the problem area and the business case allows to better execute the next tasks.

4. CONCLUSION

The different scenarios of the design thinking method usage in the learning courses were tested. In the case when the first "empathize" step was skipped and students were given the predefined business case, the solution proposed by the students was limited in comparison with the potential possible solution, the discussed questions were non-specific and did not reflect the features of the business case. In the case when the "empathize" step was included, but the testing step was skipped, the business cases proposed by the students were diverse in topics and functions. Thus, based on this observation, it can be summarized that the inclusion of the "empathize" step opens up the opportunities for the creative approach to the problem solving and allows to get the most interesting cases.

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