Chapter 6
Including Dyslexic Users in the Early Design of the LITERACY Portal

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ABSTRACT

Human-Centered Design requires end-user consideration and involvement in all steps of the human-computer interface design, but how can this be accomplished if the primary user group is users with special cognitive and affective needs? Would “classical” tools and techniques be sufficient or would they need to be adapted and complemented with special effort? This chapter shares the strategies the authors adopt and the experiences they are gradually gaining in including users with dyslexia in the design of the LITERACY Web-Portal. LITERACY is a project of the European Union aiming at improving social inclusion of youth and adults with dyslexia. The authors hope this case study provides insight on and gives courage for inclusion of end-users even though—or particularly because—they have special needs.

INTRODUCTION

In this chapter, we describe the strategies we applied and the experiences we gathered while designing a web-portal-interface for users with dyslexia by including dyslexic users in the early phases of the Human Centered Design process. We believe that end-user inclusion is a critical success factor because we are convinced that the acceptance of any software-tool hinges on the...
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degree to which we manage to meet the (special) needs of the primary target groups. Therefore the Human Centered Design process makes an optimal fit for the goals we are trying to achieve.

Before we were able to start including any users, we had to apply the initial steps of the Human Centered Design process. We began with analyzing the future users, by studying articles, looking at existing web-applications targeted at them, and personally talking to dyslexic persons we already were in contact with. Based on this information we extracted and described potential tasks that might be performed on the Literacy Portal. To achieve this we used three of the core elements of the HCD process: personas, context analysis and task analysis.

Regarding the strategy, we tried to contact people with dyslexia as soon as possible to get a feeling not only for their special needs but also for their special strengths. Initial contact with persons with dyslexia followed literature research and preparation of key questions such as to be knowledgeable partners in the dialogue, but otherwise as open as possible to learn from their life stories and experiences. Following this mindset, we considered it most helpful to engage in semi-structured interviews with dyslexic persons in various stages of life, and to gradually focus on some of their core issues that crystallized from the interviews such as finding work, using the internet, interacting in/with educational institutions, etc. Also very early in the process we asked dyslexic persons about the preferences for screen designs and what terms they found relevant or interesting to look for on the LITERACY portal.

Regarding our experience, we are going to point to issues worth specific consideration in order to share our experience with interested peers, thus make it reusable in the community of interface designers. In a nutshell, getting in contact with users with special needs may need special provisions, contacts with counseling centers, more time than talking to “ordinary” users, and an adaptation of methods and/or tools and procedures to accommodate for the particular special needs.

This chapter is structured as follows: the next section discusses the background in which this research was conducted and provisions we are taking to maximize end-user inclusion in all aspects of the design process. Additionally we are going to mention related work and studies that influenced different aspects of our research design. The subsequent section describes our applied design strategies and how we included people with dyslexia into the design-process through individual direct and indirect means of end-user inclusion during the early stages of human centered design. The particular experiences of included dyslexic users will be highlighted throughout this section. The final sections summarize our work and experiences so far and give an outlook on further work. The contribution intends to confirm that the inclusion of end users in early stages of web-design is essential and that it should be done regardless of whether end-users have special needs or not. Furthermore, the article illustrates some concrete techniques and steps to include end-users with dyslexia and thus can serve as an example or inspiration on how to accomplish and exploit end-user inclusion for increased usability of a web-portal.

BACKGROUND AND RELATED WORK

As the British Dyslexia Association defined (BDA, 2013), “dyslexia is a specific learning difficulty that mainly affects the development of literacy and language related skills. It is likely to be present at birth and to be life-long in its effects. It is characterized by difficulties with phonological processing, rapid naming, working memory, processing speed, and the automatic development of skills that may not match up to an individual’s other cognitive abilities.” It often