Fictional characters in participatory design sessions: Introducing the "design alter egos" technique

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ABSTRACT

In recent years, the discourse concerning the relationship between narrative theory – storytelling in general – interactivity, and design is undeniably noteworthy. A significant part of this discourse concerns the use of fictional characters in design. Fictional characters have been used as user representatives, either substituting actual users or supporting idea generation, and their foremost objective is to facilitate the identification of user needs and goals and to support the development of detailed and comprehensive scenarios. Motivated by the aforementioned ongoing discourse and inspired by relevant approaches in the use of fictional characters in design, we aim to investigate the applicability and effectiveness of their use as a creative technique in participatory design sessions. We present a novel approach to using fictional characters in collaborative design of educational software with students, one that asks the participants for the formation and use of their own fictional characters – we introduce the term "design alter egos" – as a means to eliciting requirements and design ideas. In order to evaluate our approach, we conducted 20 collaborative design sessions with the participation of 94 undergraduate university students (aged 19–24) for eliciting requirements for the design of an ideal course website. The analysis of the results suggests that the design alter egos technique liberated the majority of the students from the fear of straightforwardly exposing themselves, supported and enhanced their introspection, stimulated their creativity, and helped to establish an informal and constructive atmosphere throughout the design sessions. We suggest the use of design alter egos as an engaging and effective supportive technique for co-designing educational software with students.

1. Introduction

Several methods and techniques have been developed that aim at facilitating the inclusion of students of all age groups as active participants in the design of more situated and appropriate technology products. Students' involvement in the design process is a challenging endeavor for several reasons, such as their extreme diversity as a group per se, the difficulties they face in expressing their ideas in a comprehensible and explicit way, or the obstacles that arise when they interact and collaborate with other, mostly adult, team members, caused by the inherent power relations between them (Nesset and Large, 2004). It is thus necessary for any student-centered participatory design approach to set up a solid ground for collaboration through the use of the appropriate mediating tools and techniques, establish an environment that respects, motivates, stimulates and rewards students for their contributions

(Bekker et al., 2003) and, eventually, allow for them and their needs to become the central focus for both the designers and the design process.

Given the complex, communicative and multidisciplinary nature of software design, and especially of the requirements elicitation process (Zowghi and Coulin, 2005), design approaches that exploit fictional characters (e.g. personas and pastiche scenarios) and imaginary landscapes as settings for design exploration have been proposed as powerful alternatives for coping with users' needs. In this paper, we present a novel technique for working with fictional characters in participatory design sessions with students. Its overall goal is the establishment of a design context that facilitates students in recalling existing needs and problems and encourages them to search for new situated interactions supported by technology, as opposed to mere technological solutions, to understand and appreciate their internal motives, identify the causal links between these motives and their personality traits, and situate their design ideas and proposals in entrenched social behaviors. The focus of the technique in the use of fictitious characters and the establishment of an imaginary and playful design context allows students to participate in the design process in

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equal terms. The technique sees students as actual "insiders" of educational practices and, essentially, experts in dealing with their everyday educational reality, in a manner similar to Iversen and Brodersen (2008) who argue that even children should be seen "as technically competent, resourceful partners with a distinct social practice, able to make key decisions in the design process on the same terms as any other stakeholders" (Iversen and Brodersen, 2008).

Following a concise presentation of the two most prominent techniques concerning the use of fictional characters and studies discussing the use imaginary landscapes in design, we introduce the design alter egos technique and present two case-study applications. We then report our findings and discuss the strengths and weaknesses of our approach.

2. Prior relative work

2.1. Personas

Personas as a user-centred design technique were introduced by Cooper (1999) and have been widely used in design research and practice ever since (e.g. Blomquist and Arvola, 2002; Chang et al., 2008; Grudin and Pruitt, 2002; McGinn and Kotamraju, 2008). They are considered to be abstract representations of archetypal users that were developed based on real user data that derive from interviews, observations, field research and/or quantitative data analyses (Cooper et al., 2007; Pruitt and Grudin, 2003) and they have been used as guides to the design process. They are fictional characters that embody unique users' characteristics, histories, thoughts and feelings (Blythe and Wright, 2006) and have precisely defined aspirations, needs and goals (Blomquist and Arvola, 2002). Personas work complementary to other design methods and techniques, primarily aiming at the creation of scenarios, and can greatly enhance their effectiveness (Grudin and Pruitt, 2002). They become a replacement of "the user" throughout the design process, provide a shared language for communication between various stakeholders, allow designers to measure their designs' effectiveness, avert the risk of self-referential and/or elastic interpretations of "the user" on behalf of the designers, and, eventually, act as an effective means towards committing design team members to the process (Chang et al., 2008; Cooper, 1999; Goodwin, 2001; Pruitt and Grudin, 2003). However, their most important benefit is that of being generative, allowing designers to easily project them in diverse contexts and situations and make inferences on their prospective behavior (Grudin and Pruitt, 2002). To achieve this, however, personas have to be believable and, as Nielsen (2002) stated, they have to be represented as round characters, with multiple physiological and sociological traits, inner needs, motivations, and desires.

In Cooper's initial approach, prospective users' participation in the design process is limited to providing appropriate data for the creation of the personas (Cooper, 1999). This practice, however, has been questioned and personas have been used by designers in flexible and creative ways (Chang et al., 2008). For example, in order to further develop and explore "who the personas might be in different contexts," Johansson and Messeter (2005) propose an approach where exploration of the user becomes an integrated part of the design process, and, thus, a way to reframe the design situation and allow for new ideas to emerge (Johansson and Messeter, 2005). In another study, McGinn and Kotamraju (2008) employed their clients' team early in the design process to define the most meaningful attributes of personas, and, subsequently, conducted a survey of a larger collection of representatives focusing on those attributes. Finally, Kantola et al. (2007) discuss the use of dramaturgical methods as an effective way of rendering personas more dynamic, believable, and well-communicated.

However, when personas lack the necessary details that could render them as real characters (McGinn and Kotamraju, 2008), they could be reduced from user archetypes to user stereotypes (Blythe and Dearden, 2009). As such they can lead to erroneous and superfluous assumptions and, eventually, mislead design decisions.

2.2. Pastiche scenarios

As an alternative to personas, pastiche scenarios propose the use of fictional characters from well-known cultural sources, such as literature, film, pop culture, throughout participatory design processes (Blythe and Wright, 2006). Their overall goal is to provide design stakeholders with the ability to "explore alternative understandings of how different people might respond to proposed technologies" while offering "a space where personal and upsetting issues can be discussed in a distanced and safe way" (Blythe and Dearden, 2009).

Pastiche scenarios take advantage of the complexity and specificity in which fictional characters are described and also of people's tendency to strongly engage (Grudin and Pruitt, 2002) and, at times, identify with them. Such characters can act as common denominators for all participants and reference points for further exploration of social, political or emotional contexts (Blythe and Wright, 2006). Furthermore, by introducing individual characteristics and behaviors in the design process it is claimed that design issues otherwise left unexamined can be brought to light (Dearden et al., 2006).

Nonetheless, pastiche scenarios do not come without problems. There is a difficulty for the designers to identify suitable characters, both familiar and engaging for the whole group of participants, especially when working with young people (Dearden et al., 2006). Additionally, intense engagement with the fictional characters could lead to unfavorable, fruitless discussions where hilarity and fantasy prevail over productive design space explorations (Dearden et al., 2006).

2.3. Designing in imaginary "landscapes"

The use of imaginary/fictitious landscapes as the setting for participatory design has been proposed by several authors. Iversen and Dindler (2008) discuss Fictional Inquiries, a participatory design technique which, through the use of narratives and the appropriate staging, aims at the creation of imaginative places where design collaboration takes place. The technique seeks to establish a design setting where fictitious narratives and imaginative artefacts direct the participants towards detached reflection and aesthetic inquiry – a term referring to a more profound sense of wanting – thus, focusing on and inviting transcendence, the creation of new knowledge (Iversen and Dindler, 2008). In a similar context, Brodersen et al. (2008) discuss participatory prototyping and the use of elements of transcendence and imaginative places in order to create a radical distance from the places of current practice, and, consequently, extend the space for imagining future practices (Brodersen et al., 2008). The Future Workshop technique (Kensing and Madsen, 1991) is another example of a technique that gives participants the freedom to generate alternative, imaginary spaces where new practices or artefacts could reside. Fairbrother (2006), in a series of collaborative scenario-planning projects exploring alternative futures for the media scenery of 2014, used Fictitious Retrospectives and Mockumentaries. Fictitious Retrospectives refer to "narratives written from the point of view of characters living in the future, describing how the 'past' 10 years had affected their lives – working back to the present day" (Fairbrother, personal communication, November 10, 2009). In a similar way, Mockumentaries refer to documentary-style filmed