Cross-Cultural Empathy: Learning About Diverse Users in Design Thinking Process

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Abstract. This poster explores the concept of cognitive and emotional empathy in the context of *Design Thinking* process when players come from different cultural backgrounds. It discusses the challenges facing the design teams and addresses differences in visual representations in tools that center on empathy with the user. In the light of cultural theories, especially Geert Hofstede's dimensions of culture [1, 2], the poster proposes a framework based on cultural theories that facilitate understanding of the design thinking process in cross-cultural context. The emphasis is placed on the creation of the visual tools that facilitate interactions among the members of the design teams, as well as interactions between the design team and the user.

Keywords: Empathy · Design Thinking · Cross-cultural

1 Introduction

The term *Design Thinking* relates to the set of strategies designers use in the process of creating new interfaces and systems. This solution-based system sees innovation as an intersection of human, technical and business factors. The first step in the process is empathy with users. Empathy in the design process is understood in the broad context of perspective taking [3] both as emotional and cognitive empathy, bridging the concepts of feelings and knowledge [4]. The emotional intelligence can be shared with other project team members through sets of visual tools (e.g., journey mapping, storytelling and metaphors [5], storyboards and mood boards). At this stage of the process, designers gather information about the user and can do so using visual aids.

Since the emotional and cognitive empathy is based on the experience, the cultural differences in experience provide a challenge for the research teams that design products for diverse markets. While current research concentrates on cultural differences in the problem solving, the area focused on empathy and user insight from the perspective of cross-cultural understanding remains largely unexplored, although the results of most recent studies [6, 7] show the importance of cross-cultural studies of the Design Thinking process. Considering that empathy provides the first step that connects the designer and the user, who might come from two different cultural backgrounds, analysis of this part of the process requires special attention.

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2 Design Thinking

The term *Design Thinking* was popularized in a title of a book by Rowe [8], a professor of architecture at Harvard, who used it to describe methods used by architects and urban planners in their design processes. While initial use of the term was confined to architecture, it also found its use in business environment, in a somewhat modified understanding. Its popularity in the current usage is attributed to the consulting firm IDEO [5], and especially its leadership, founder David Kelly [9] and chief executive officer Brown [10]. The process of Design Thinking helps provide a solution to a number of design problems (often wicked problems) and is solution oriented (as opposed to problem oriented approaches).

Commonly distinguished phases of the process are defined as: empathize, define, ideate, prototype and test. Empathy therefore is a starting point of the process (although in some models described as understanding/point of view) [11]. In each of those phases a variety of tools are used to facilitate interactions and design specific artifacts. Common Design Thinking Tools include, among others [5]: visualization techniques (charts, graphs, storytelling), ethnography research, structured collaborative, sense-making techniques (mind mapping, ideation, brainstorming, concept development), assumption identification, prototyping, co-creation and filed experiments). The design of visualization tools is a process in itself.

3 Empathy

Empathy with the user is an important step in a design process. Empathy can be defined in a variety of ways. In layman's terms it might be presented as "walking in someone else's shoes" but the concept of empathy is much more complex, especially in the context of Design Thinking process. Gasparini [4], in her analysis of empathy explains empathy from the perspective of two different dimensions: emotional, when a person instinctively feels experiences of others, and cognitive, when one can through understanding analyze situations of others. Both of those types play a role in design, depending on the function of the process. Emotional empathy will play a greater role when we view Design Thinking as the Creation of Artifacts or a Reflective Practice, while cognitive empathy will play a greater role, when we view Design Thinking as a Problem–Solving activity, Practice Based Activity, and Creation of Meaning. In the latter cases the designers will not have to feel the experiences of users in order to understand them. Cognitive empathy also influences the way the design team works and interacts. The differences are equalized through mutual understanding [4].

Learning about the users' needs through empathy can be done using Empathic Design Research Strategies [12], that include a variety of methods that require empathizing with the user, either on the emotional or cognitive level. Those include informal interviews and conversations, ethnographic type observations, as well as collaborations focused on a shared goal. In this process life-expert-users, with different personal capital, become co-creators, generating real life solutions [12]. The different personal capital, understood as personal and behavioral traits will include culture that might be not shared between the designer and user.

4 Culture and Design Thinking

Just like empathy, culture can be defined in multiple ways. In 1952 Kroeber and Kluckhohn [13] gathered examples of over 160 different definitions of culture, separating them into three categories: definitions based on shared values, definitions based on problem solving and third category that encompassed other definitions. The definitions that present cultures from the perspective of common behaviors and problem solving allow to seek the role of empathy in the *Design Thinking* process, as problem solving provides a common ground. In the crossroads of culture and empathy stands the concept of *cultural intelligence* [14], an ability to function in culturally diverse settings and represents adjustments a person can make to fit into different cultures.

The definitions that describe cultural difference and similarities from the perspective of difference and similarities in the problem solving approaches are especially useful to consider when analyzing design process and its players. Other approaches utilize cultural theories, like, for example dimensions of culture postulated by Hofstede [1, 2]. Hofstede identified initially four, later five different dimensions, in which national cultures vary: power distance, individualism and collectivism, masculinity and femininity, uncertainty avoidance and short vs long term orientation. Power distance relates to the level of acceptance of differences in power, individualism measures the level of collective vs, individualistic approaches, masculinity focuses on achievement and assertiveness, while more feminine cultures focus on cooperation and quality of life. Uncertainty avoidance measures how comfortable cultures are with uncertain situations. Short vs, Long term orientation relates to seeking rewards immediately or working for future gain. Hofstede theory gained popularity in various areas of research, and recently has also been used to examine *Design Thinking*. Thoring et al. [11] in their study examined each dimension in relation to the design process, people, space and mindset attempting to identify which cultures utilize the Design Thinking the best. The authors do not provide any practical solutions and conclude that each dimension has some positive and negative effects on Design Thinking process. The authors' approach is very broad and considering a number of possible variables difficult to test in its entirety.

However, Hofstede's dimensions can be utilized in a smaller capacity. As stated before, empathy and learning about the user relies on a number of tools, many with a visual component. While those tools themselves have not been inspected, the preferences for visual aesthetics with connection to Hofstede's dimensions have already been studied [15–17] and identified markers for the model (Table 1).

The design of visual aids to facilitate empathy is one of the areas where the tools are in itself artifacts of culture. For example, the design of personas, used commonly in USA, and in the majority showing individuals as the typical user, can be modified for the more collectivist cultures to present not only the individuals but also their relations to others. Metaphors could be adjusted to fit a country's preferences. Journey mapping could include limited or multiple choices and different amounts of data depending on culture. Testing Hofstede's theory on a small scale in the countries/cultures on the opposite sides of each dimension could help recognize differences in the approaches to learning about the user in different cultures.

Table 1. Visual cues and Hofstede's dimensions of culture [15–17]

Dimension	High	Low
Power distance	• Symmetry	• Asymmetry
	• Tall hierarchies	• Shallow hierarchies
	• Images of leaders	• Images of both genders
Individualism	• Images of individuals	• Images of groups
	• Images of young	• Images of aged and experienced
	• Emphasis on action	• Emphasis on state of being
Masculinity	• Limited choices	• Multiple choices
	• Orientation toward goals	• Orientation toward relationships
	• Graphics used for utilitarian purposes	• Graphics used for visual appeal
Uncertainty avoidance	• Limited choices	• Variety of choices
	• Restricted amounts of data	• Unrestricted amounts of data

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