Light through Culture

Findings of a two-week Intercultural and Multidisciplinary Workshop on the Expression of Culture through an Interactive Light Installation

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Abstract—**In this paper the most important insights are explained that were gained from a two-week Light through Culture workshop in Ankara (TR). In this workshop, cultural insights were used to create an interactive light installation that bridges cultural differences.**

The process of creating the installation showed important findings, like the essence of actively creating involvement for all team members, the importance of research in context in cultural research and how interactivity is a must in the presentation of cultural research.

Apart from explaining these findings, this paper gives tools for making intercultural teamwork contribute to cultural research, and methods to optimize multidisciplinary teamwork in short but intense projects.

Light through Culture; Culture through design practice; Intercultural teamwork; Multidisciplinary design teams; Interactive light installation.

I. INTRODUCTION

This paper presents the findings of a two-week workshop, Light through Culture, held in Ankara (TR) [1]. This workshop formed an intermezzo in personal projects on cultural design research done by Industrial Design students from the Eindhoven University of Technology, Social Design students of the St Lukas University College in Brussels, and Industrial Design students from the Middle Eastern Technical University of Ankara. The goal of the workshop was to create a joint installation to express and bridge cultural differences between the Belgian, Turkish and Dutch cultures based on first hand experiences.

Through the workshop, three light installations were built that create an experience based on design research and cultural insights towards visitors of the exposition. 'Memnun Oldum' or 'It's a pleasure' is one of the installations, which focuses on the way people in different cultures enter and become part of a group. The visitor of the installation experiences the process of entering a group by adding a part of his/her personal 'DNA'

to create a common interactive piece of light. An understanding or a common ground among individuals can create a connection and a new entity. To find such a common ground requires a process that can be followed via multiple ways, but that always requires a so-called mediator. The installation is inspired by the traditional 'Ebru' art techniques, a method to create natural aqueous pieces of art with water and ink (see figure 1 and 2).
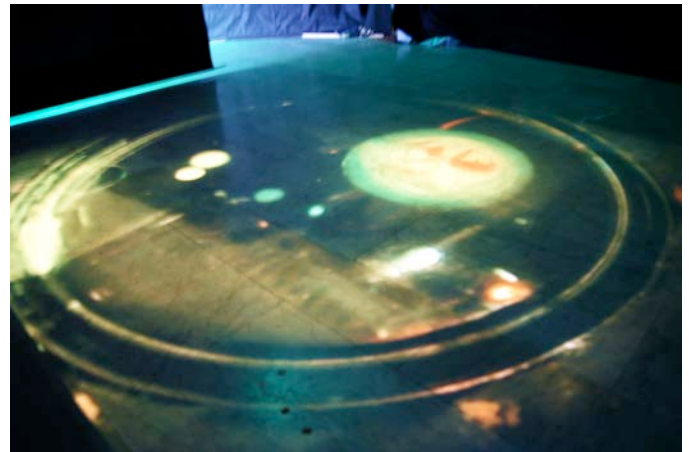

Figure 1. Memnun Oldum (It's a pleasure) is an interactive light installation that simulates the process of people entering a group.
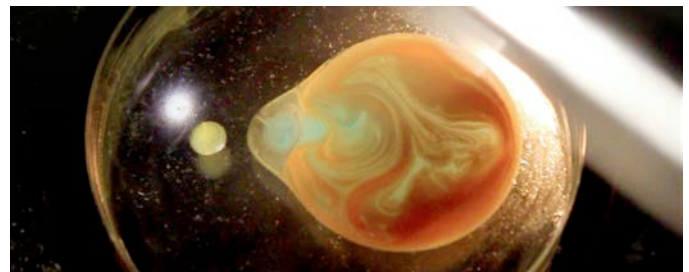

Figure 2. Each visitor creates a new drop of ink that will eventually merge with the large drop representing the group. In this way, the visitor brings his or her 'DNA' in the installation, becoming part of the group while changing the group dynamics.

II. THE PROCESS

The process used to develop the installation exists of four general phases:

1) *Exploration of Culture:* finding and analyzing a subject for the installation.
2) *Translation:* ideation phase to translate the subject into a concept of an installation (figure 3).
3) *Implementation:* the development and building of the installation.
4) *Confrontation:* testing out the installation with the visitors to gather new insights into the subject.

Since this whole process took no more than two weeks there was no opportunity to perform multiple iterations, as one would preferably do within a design process [2]. In order to reach the desired depth there was a continuous process of implementing the other steps within each phase. As an example, within the exploration phase moments of confrontation were implemented, e.g. at the moment of presenting the topic to the students from Ankara. And through daily feedback sessions between all students and coaches, moments of confrontation and exploration were implemented within the translation phase (figure 4). Through these ongoing switches between the different phases, the overall process becomes more reflecting [3]. This method can be used to efficiently perform multiple iterations in a short project that normally only gives space for one process cycle.

Figure 3. Brainstorm session in the translation phase by the Dutch and Belgian students to translate the insights from the cultural research into a concept for an interactive installation.

Figure 4. Confrontation session in the translation phase: the Turkish students give feedback on the concept created by the Dutch and Belgian students.

III. CULTURAL RESEARCH IN INTERCULTURAL TEAMWORK

Culture and experienced cultural differences always are a sensitive topic, since they form personal conclusions that can come very close to ones norms and values [4]. Therefore, when exploring cultures, it is important to create an open environment, where personal and intimate information can be shared without judgments. A way to create such an open situation is by focusing on one culture instead of comparing multiple cultures.

In the case of this project the focus was on Turkey, making the Turkish students in the team experts. To avoid discussion, the Dutch and Belgian students became listeners. Discussion mostly tries to find a good or bad ranking. In this first phase unbiased openness was key. By creating an open expert-position for the Turkish students, the findings became deeper and more personal.

Another advantage of a focus on one culture is that it creates moments of reflection and confrontation by the Dutch and Belgian students within the team As a result the implementation of the findings on the Turkish culture into concept directions comes from a different perspective. The comparison is automatically made, tackling the problem of sensitivity and taboos.

By focusing on one culture only, different roles within the team automatically are constructed. This creates an open environment for further exploration. Maintaining these roles throughout the ideation phase will bring the comparison back, since the concept directions will come from a different perspective than the focus culture. The moment of confrontation between the cultures that this creates after ideation is an extra advantage of this method.

IV. MULTIDISCIPINARY TEAMWORK

In this project we worked with students coming from different backgrounds, namely interaction design in Eindhoven, industrial product design in Ankara and graphical social design in Brussels. Even though all students are active within the creative industries and their abilities have a lot of overlap, the emphasis, methods and personal expertise are in distinct fields.

When working together with people from different backgrounds and different institutions, it usually takes some time to build up a trusting cooperative relationship. In a short and intensive project like the workshop was, this process needed to be speed up. During the first day a lot of emphasis was put on getting to know each other and each other's expertise and background. This created a common awareness of the opportunities of the team. After these sessions it was decided to take the first steps in the process as a team, so no tasks divisions were made yet. Even though dividing the team into subgroups might have speed up the process, staying together during the first analytical and conceptual stadia turned the previously buildup awareness of each other's capabilities into trust. The created confidence in each other's expertise made it possible to divide tasks in the later phases of the project, which speeded up the process and enhanced the outcomes.

Another important aspect in multidisciplinary teamwork is that all members should share the same level of involvement in the project. During an intensive process like this, it is important to actively maintain this involvement of every member. The way this was achieved in this project was by integrating everyone's specific expertise within the concept. Usually a concept is already based partly on the available knowledge and skills since this frame the possibilities for exploration. But by actively reorienting a concept to fit *all* the available expertise, the involvement of every member can be assured.

Within this project for example, the first concept direction mainly required technological expertise, which could be provided by the industrial design students. The graphical and communicative expertise of the Belgian student was not actively integrated. Of course a contribution could have been found, but when one person's expertise is not a crucial part of the concept, this could lead to a feeling of being less needed by the group and as a result in less ownership of the project. Therefore the concept was actively reoriented to a combination of digital and analog input by adding the graphic 'Ebru' art technique into the concept. Feeling needed created a sense of responsibility that led to a continuous involvement into the project by every team member.

To conclude: by making every member of the team an expert in a certain field and by mutual trust in this expertise, equality, shared responsibility and involvement is created, leading to better and more caring group results.

Figure 4. Material explorations developed to find the best effect for 'Ebru' resemblance of entering a group. By adding this analogue technique to previously purely digital concept, every member's expertise became an indispensible part of the concept.

V. INTERACTIVITY AS OUTCOME OF CULTURAL RESEARCH

As an outsider it is easy to look at another culture as a homogeneous whole. But by changing this perspective to the inside through an intensive collaboration process, one starts to see the individuals and their social structures that form the culture [5]. In entering the culture and becoming part of its everyday life, homogeneity is nowhere to be found anymore.

Culture becomes more complex, but therefore more true through first hand experience [6].

In order to make a visitor of an installation experience this dynamic and varied nature of culture, interactivity is key. In an interactive installation, the user plays an active role. By encouraging visitors to form their own conclusions in the active process of meaning making triggered by the installation, static and homogeneous conclusions are avoided. This process of meaning making only takes place if the visitor experiences this interactivity. If the visitor is not aware of his/her influence on the situation created by the installation, this reduces the need for reflection upon that situation.

The interactivity and the resulting meaning making process are not only beneficial to the visitor. By capturing the behavior, or even the conclusions the visitor shaped inside of the installation, the researcher can get a wider variety of insights into culture out of the installation again. An installation originally built as a research outcome can at the same time function as a tool to continue this research together with all the visitors. This will lead to more diverse quantitative insights for the research. Also since the outcomes of the installation can be tracked over time, it creates a dynamic, ongoing process of meaning making for both visitor and researcher.

VI. CONCLUSIONS

The Light through Culture workshop in Ankara gave valuable insights in various directions: how cultural research can be conducted and presented, how multicultural teamwork should be implemented to contribute to cultural research and through what methods multidisciplinary teamwork can be optimized for a short but intense project.

The most important element in intercultural teamwork for cultural research is to create an open environment for a confident conversation about the different cultures. This can be easily achieved by focusing on one culture only, instead of on the comparison of different cultures.

In multidisciplinary teams, the crucial element is confidence and involvement of the whole group. Confidence can be created by making the team members as fast as possible aware of each other's knowledge and skills. This can be accomplished by time investment in the beginning of a project in extensive introduction sessions and by shared first phases of the process. In this way team members start to see the added value of the other disciplines. Involvement can be maintained by actively reshaping a concept to fit all the expertise present in the group. If every member owns an equal share in the expertise needed to finalize the project, the result is shared responsibility.

Next to that it can be concluded that the outcome of cultural research can never be a static conclusion because of the dynamic nature of culture. The resulting installation of a cultural study should be an active and ongoing process of meaning making, which makes interactivity key. An interactive installation creates a platform for the visitor to draw his/her own conclusions from personal experiences in the installation. It is important to keep in mind however that

this interactivity only has the desired effect when implemented in a communicative way.

By experiencing and living within the culture one is researching, it is easier to develop a sense for the subtlety and diversity of culture. Culture only seems homogeneous when looking from the outside. When zooming in, the cultural perception is becoming more complex, but more fitting to the real life situation.

REFERENCES

[1] P. Marti & C.J. Overbeeke, "Designing Complexity in Context: Light through Culture" AMC New York, 2011.

[2] C.H. Dorst, "Understanding Design", BIS Publishers, Amsterdam, 2003.

[3] C. Hummels & J. Frens, "Designing for the Unknown: a Design Process for the Future Generation of Highly Interactive Systems and Products" International Conference on Engineering and Product Design Education, September 2008, Universitat Politecnica de Catalunya, Barcelona.

[4] G. Hofstede & G.J. Hofstede "Allemaal andersdenkenden, Omgaan met Cultuurverschillen" Uitgeverij Contact, Amsterdam, 2005, pp.: 18-28.

[5] S. Wright, "The Politicization of 'Culture'", Anthropology Today, 1998, v.14, no.1, pp.: 7-15.

[6] O. Tomico, J. Kint, I. Ferwerda, "Nextdoor Quartier: Teaching Young Designers Social Conscience" International Conference on Engineering and Product Design Education, September 2010, Norwegian University of Schience and Technology, Trondheim.