Applying Theatre, Storytelling, and (Card) Games in low-literate settings:

Exploring the Future of UX Design & Research through non-technical Lenses

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ABSTRACT

Literacy is mostly understood as the ability to read and write, completely leaving out knowledge and expertise gained through shared stories, oral transmission, and lived experiences without written documentation. Bridging this perspective to UX design allows for the question: "How do we address technological inquiries and UX-related questions in and for contexts, that are not digitally native, but orally-literate?" Our position paper presents three cases of creative and non-technical approaches to technological issues, rooted in contexts and communities with various cultures and languages and different degrees of literacy involved. Through theatre activities, storytelling, and games, we mutually explore the potential of these entrances to technological questions and, in a second step, the implications for the future of UX design and research.

KEYWORDS

Literacy, theatre, games, fiction, storytelling, UX, design, WEIRD

ACM Reference Format

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Introduction

Literacy as a concept, understood in the contexts of WEIRD (Western, Educated, Industrialized, Rich, and Democratic) [12] countries, describes in its most basic understanding the ability to read and write. It can also mean 'knowledge of a particular subject, or a particular type of knowledge'. The latter definition does not specify on the form of knowledge, nor the way expertise can be gained or transferred.

Our research lies at the intersection of (digital) literacy and informal learning, largely in non-WEIRD contexts. We work with Palestinian refugee children inside and outside of Palestine [1, 3], and with Imazighen, North Africa's indigenous population in a remote area in the High Atlas Mountains of Morocco [2, 17]. Further, we work with people with a refugee or migrant background in Germany, exploring ways on how to digitally support them in their arrival and settling process [19, 20].

When thinking about participation and user experience in technological spheres, literacy plays a major role. In our work, we are looking for ways of approaching technological questions and concerns through non-technical lenses. Respecting the traditions, and the types and layers of literacies of the people we work with, we identified different forms of storytelling and games as a potentially beneficial way of getting in contact with context-sensitive technological development and design.

Creative Methodological Approaches for Design

Frohlich et al. have presented a study of local non-textual, audio-visual, and mobile story creation and sharing activities for semi-literate communities in the context of an Indian village [10]. They argue that "too many existing ICT-for-Development projects apply existing technologies "without sufficient adaptation or re-invention, and often without regard for user needs" ([10], page 9). Therefore, HCI carries an obligation as well as an opportunity to creatively apply emerging technologies in contexts outside of Western settings. Bidwell et al. have undertaken several studies with "primarily oral" communities in rural areas, mostly in Australia and South Africa, where they have explored requirements and implications for potential technological designs in the areas of storytelling, communication, and data collection. Bidwell and Hardy, for example, explore and reflect upon dilemmas in participation processes with indigenous communities in rural areas who value "primary orality" and the tensions that can arise when collaboratively working on text-based designs. They also stress that values of power distribution in oral and rural communities might differ from more urban and text-based townships [5]. In "Anchoring Design in Rural Customs of Doing and Saying", Bidwell reflects upon the challenges posed when designing for rural communities. Instead of just implementing non-text based features to digitally preserve culture and stories,

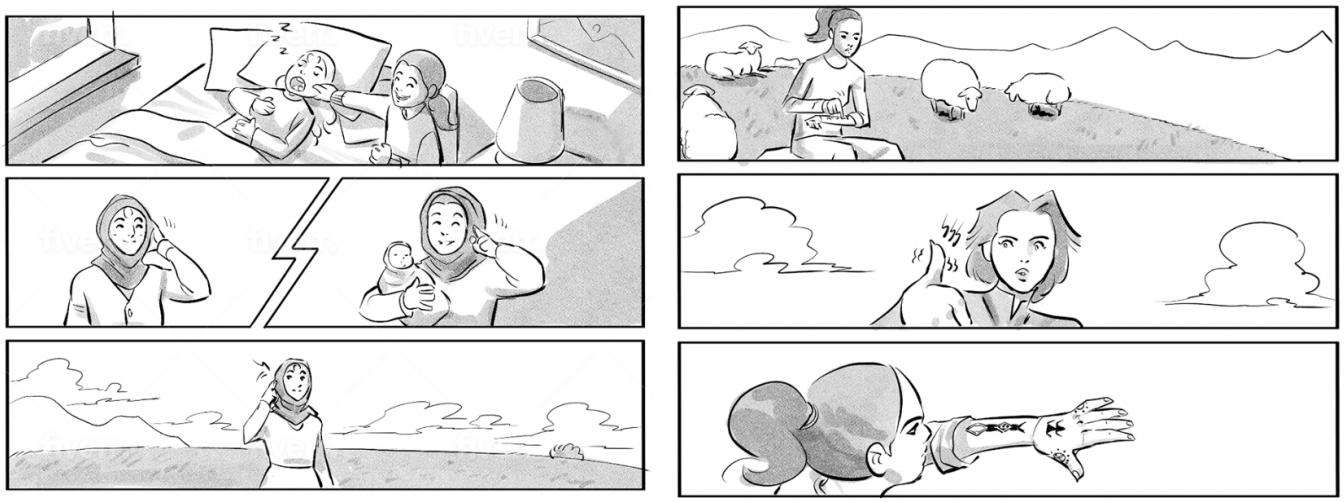

Figure 1: Storyboard examples of two stories (left: touch-sensitive hijab; right: touch-sensitive tattoos)

she proposes focusing on local ways of 'doing and saying', ergo existing communication and sharing practices, and power relations [6].

The interest in 'design fiction' is growing in HCI [4, 9, 13–16, 18] and the technique is seen as a way to explore the value and developing fictional scenarios of use [11]. By using design fiction, the scenarios can even include the social and political context of a design or a prototype [8].

Baumer et al. outline different aims and traditions design fictions can follow and subsequent evaluation criteria, by drawing upon fictional reviews from peers. They divide the different streams of design fiction foundations as follows: critical design; narratology and literary theory; studio-based design "crits"; user studies; scenarios and persona development; and thought experiments. Beyond the fact that a design fiction potentially "offers researchers a means of working through ethnographic data", following a participatory approach can enrich their use and these design fictions "should be assessed in terms of how good they are at revealing participants' concerns, values, biases, fears, hopes, and confusions (about technology)" ([4], page 7-8).

Current Research Activities

Building on these previous works, different research activities were conducted in the past years: theatre workshops in the High Atlas with Imazighen, Design Fiction as a method to reflect upon new ways of touch-sensitive interfaces and a card game to create fictional worlds thus enabling talking and exchange of perspective about the role of technology in everyday life.

Theatre Workshops

In one of the projects, (online) theatre is used as an ethnographic research tool in a collaborative study around local practices of storytelling and media. During the pandemic, contact between the researchers and the community dwindled. In an effort to re-establish activities and a regular feedback loop with the community in a non-physical way, the project team initiated the idea of online theatre-based workshops on storytelling, guided by a Dutch theatre pedagogue, who is fluent in Moroccan Arabic and also commands some Tamazight, the community's native language.

These workshops focus on the questions, challenges, and opportunities arising from the presence of a media space in the small, traditional community, while making use of theatre and local oral histories to give meaning to the social changes that digitalization entails. The theatre-based activities serve three goals: 1) to provide an interface for the researcher-project and the local community to meet, 2) to offer a place for the community to reflect on digitalization, and 3), to provide data for the overall aim of the funded project: how to create possibilities to mobilize new forms of publicness and cooperation, as well as develop social-technical infrastructures in Morocco.

Storytelling & Fiction

In a first trial, several Design Fictions were created based on the researcher's experiences in the valley over the past years. These fictions addressed the following topics: new ways of touch-sensitive interfaces where traditional tattoos are combined with technology; technology interwoven into daily accessories (such as a watch or sunglasses) and clothes (e.g., hijab or turban). These stories were translated into Moroccan Arabic and illustrated for future participatory workshops with the target group (see Figure 1).

potential of new technologies as well as directions of research [7]. The technology of presenting possible future technologies is not limited to researchers or authors; large IT companies also try to convince users about their own (current or future) devices by

Here, experts provided their thoughts about the rationale of the stories and whether they felt our proposed approach was appropriate for the target group. All the people who gave feedback have an academic background and/or extensive knowledge about the daily life of the Imazighen; two of them are undertaking their own research into Amazigh culture; another two are working in the tourism sector in the valley; the other male respondent is studying at a German university right now; the female respondent has a background in media science and is of both Amazigh and Arabic origin.

After receiving valuable feedback, we are currently planning activities to further shape both the way stories can be told and the content and plot of these stories. In addition, participatory prototyping sessions are planned. Due to the illiteracy issue driving this study, it is intended to address further activities through arts and storytelling as well as with rather low-level technologies, such as skintimacy[1] to play around with the notion of touch-sensitive and wearable technology.

Card game

This project activity evolved from an open and low-threshold technology learning space. It has turned everyday life experiences with technology into a card game. The basic idea of the game is to create a world with the help of the card set and to expand it in the course of the game in order to then talk to each other about the role of technology in this world and in our own everyday life.

The cards of the game were created to openly collect and visualize real and imagined situations, problems and questions concerned with (computer) technology and modern media. There are different types of cards for this purpose.

General cards represent all the details of the game world. The main characters and their constellation can be determined with person cards at the beginning of the game. Based on this, the further environment is designed with details such as living situation, school, nature, animals, etc. Technology cards depict the ICT (Information and Communication Technology) equipment of the game characters.

Event cards mark specific situations that can arise around the use of ICT in everyday life.

Action cards describe potential responses to such events.

Blank cards allow the game to be expanded with details and ideas that the players bring in. They allow for the game to be responsive to the specific context.

The participation structure with people from different language areas and different levels of literacy demanded for a card design that concentrated on pictures and was self-explanatory with little text (see Figure 2).

[1] https://www.drlab.org/project/skintimacy/

Figure 2: Card game examples used to create situations

There is one person who leads the game. In a virtual constellation, this person is the only one who lays cards and thus (at the behest of the participants) influences the progress of the game (the role is comparable to a dungeon master in Dungeons & Dragons). Played in-person, all players can lay the cards, but it is still the role of the person who leads the game to guide players along and foster discussion. Two scenarios are currently explored further: a collaborative version of the game, where all players joinedly help the fictional game characters to solve the technology situations in the game world, and a competitive version, where two teams are created that then compete with their approaches to the technology situations raised in the game.

Conclusion

Technology und UX-related questions, that are rooted in WEIRD mindsets and understandings of ICT, are not easy or even natural to discuss in non-WEIRD contexts. The workshop's goal is it to '*envisage new forms of design tools that encourage best practice, for example, linking representations, analysis tools, just-in-time evidence, physicality, experience, and crucially, put context at the centre of design.*' Instead of bowing down to what the West thinks ICT should look like, we want to see what specific contexts look like, and what they tell us about appropriate formats of entering discussions on technologies and their design. At the end of the day, digital platforms are not about the technicality – at least for users, for humans. They are supposed to be a service to people in a specific situation or context.

Theatre, storytelling, and games are just a few examples we tried out yet, and we still in an early stage of making sense of them for the sake of design and user/human experience in technological

spheres. However, the results of our first activities are positive in terms of finding alternative and grounded ways to approach design and research that allow us to be responsive to a broad spectrum of literacies and perspectives.

Participating at the workshop provides for us the opportunity to a) present our experiences from working with vulnerable groups and developing alternative ways to engage in (participatory) design and b) to exchange with like-minded researchers, practitioners, and stakeholders who also share their insights.

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