

Exploring Participatory Design Methods to Engage with Arab Communities

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WORKSHOP ORGANIZERS

Ebtisam Alabdulqader, Newcastle University, UK
e.abdulqader1@newcastle.ac.uk

Shaimaa Lazem, SRTA-city, Egypt
slazem@srtacity.sci.eg

Mohamed Khamis, LMU, Munich
Mohamed.Khamis@ifi.lmu.de

Susan Dray, Dray & Associates, USA
susan.dray@dray.com

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A Personal, Critical View on Current Practices in the HCI4D Community

Konstantin Aal

University of Siegen
Siegen, 57072, Germany
Konstantin.aal@Uni-siegen.de

"I wanted nothing more than to see innovation triumph, just as it always did in the engineering papers I was immersed in. But exactly where the need was greatest, technology seemed unable to make a difference."
(Kentaro Toyama, Geek Heresy)

Abstract

This paper should reflect my views as a researcher in the ICT4D and HCI4D area. Over the past five years I worked in various countries with Arabic people and learned a lot while working with this target group. Our research team experienced success stories and failure stories, even in the same environment. Currently I'm reflecting these insights and experiences and want to take the role of a critic in the workshop. I practice criticism on the basis of three pillars: *Incompleteness and complexion of translation, Ethics and Influences of the field.*

Author Keywords

ICT4D; HCI4D; Participatory Research; Critique

Introduction

This paper may be different from other workshop contributions: I will let you into my head and share my thoughts and sorrows. Five years ago, I never imagined that I would work somewhere else than Germany and I never thought that I would travel around the world. During the last five years I worked in Palestine, Morocco, Botswana and Australia. I worked with people from Syria, Turkey, Tunisia, Morocco, Libya, Algeria, Palestine, Lebanon and Jordan.

The projects (more details in the following chapters) we established in the countries should influence the participants' lives in a positive way: it should teach them how to use ICT for their own goals and it should help them in their current situation. We experienced many great moments and learned a lot together with our participants; most of our projects influenced the lives of the attending people in a positive way [15], but we also experienced negative lessons, which would count as a failure for many researchers.

In the last year, I struggled with the kind of research we conducted and one of the big questions I asked and I'm still asking myself is: "Does technology really cause positive social change?" And if it does: "what are the factors which cause this change" and "how can we make sure that all relevant stakeholders benefit from our project".

Based on these thoughts I wrote this abstract to discuss my points of critic in the light of my western background.

State of the Art

The HCI-community changed over the last conferences and many discussions arose about the influence of researchers in the HCI4D and ICT4D area [1,2,10,11,12].

An important contribution was made by Lilly Irani et al., which created a debate around the term of "post-colonial computing" [8] and how different issues emerge when HCI migrates into new areas. The authors state that they want "to expand the conversation around cross-cultural technology development by

placing it in a broader context" instead of criticizing ongoing work in this area [8:9].

Kentaro Toyama follows the same tradition by reflecting his own work during a long-term research project in India [13]. He concluded, that technology alone cannot solve social issues and if we want to understand how technology can influence the participants' lives, our view needs to be broadened: "*When evaluating theories of technology, we should look at a wide range of contexts. Our conclusions should come not just from isolated instances or personal experience, but from all kinds of uses in all kinds of circumstances.*" [13:93]

These two papers should be exemplary for the current reflection of the researchers going on in these areas (HCI4D and ICT4D).

Methodological Approach and Process

In our research department we follow a participatory action research PAR) [9]. By being part of the intervention, the researcher tries to understand the local situation, infrastructure, problems and various actors. It uses mainly observational, qualitative methods which are completed by informal interviews. I spent a huge amount of time on the field site in each of these projects.

In Morocco, I stayed in a guest house for several weeks to meet the sheikh and other important stakeholders; it took huge efforts to convince the inhabitants that I'm not a tourist. The establishment and success of our intervention depends on the collaboration of the locals for whom we try to design it.

In Palestine, I spent in the past years several weeks each year at different places to gain or sustain trust and continue our projects: Being in the house of a political activist was not only helpful for me to understand his daily routines of ICT usage, but also a security factor for him, that the IDF (Israeli Defence Forces) won't attack him while he hosts a foreign researcher.

In Germany, I worked and I'm still working in a language café where each week many forced migrants spent their free time to get in touch with locals, but also seeking help with various issues (e.g. looking for an apartment, bureaucratic problems). Based on these experiences we are building a platform for orientation and information for newcomers in Germany.

Current Research

My current research is based in three different areas: The High Atlas of Morocco, Palestine and with forced migrants in Germany. Following, I describe shortly the target groups I'm working with in all of these projects.

Morocco

The valley our research team chose to work with is located in the High Atlas and about 80km south-west of the city Azilal, which at the same time hosts the municipality of the province. The valley is divided into six smaller villages and has in total around 10.000 inhabitants (Imazighen¹). The whole region looks back on a rich socio-cultural history and significant religious

¹ In this paper I use the terms ‚Amazigh‘ (singular) and ‚Imazighen‘ (plural) as mainly used by activists in the linguistic and cultural rights movement, instead of the term ‚Berber‘. Still, there is an ongoing scholarly discussion about the use and connotations of terms [6].

tradition. Arabs and Imazighen make together 99,1% of the Moroccan population [5]; while Imazighen are living in this region for several thousand years [4,7] and are referred to as the indigenous people of the region. Nearly all of them converted to the Islamic belief [5]. The more remote mountainous regions are in great part lacking basic infrastructures or medical care, but also often access to job opportunities or education. Those regions are primarily inhabited by Imazighen. Since the mid-2000s important infrastructural improvements and development took place. Households in the main villages now have access to running water and electricity. We established in collaboration with a local NGO a so-called MediaSpace, a place where inhabitants can use state-of-the-art ICT to work on problems, for fun or for other reasons.

Palestine

Palestine and the ongoing conflict with Israel is a very sensitive topic to work with. Our ongoing research is located in the West Bank which is a part of the Palestinian territory. Israel occupied this area during the Six-day war in 1967 and has it under military control. Also since 2003, during the Second Intifada, the Israel government started to build a separation wall around and within the West Bank, which is nearly finished nowadays. The wall is mainly built on Palestinian land, disconnects the Palestinian population and, from their point of view, contributes to the expropriation of their land [3]. Several Palestinian villages started weekly demonstrations to protest the continuing building of the wall. One of these villages is Al Ma'sara, located on the southern hills of Bethlehem. Over a period of five years our research team kept a detailed look at the actions of this village and how the IT usage is intertwined with the weekly demonstrations.

How they use social media to spread their activities and stay in contact with other political activists [14].

Another problem occurred with the establishment of Israel in 1948, many people were forced to leave their home and residents of refugee camps. Here, we tried to create a safe environment in refugee camps, where camp inhabitants and 'normal' Palestinians can meet and work on projects together to overcome the gap between these two groups. We founded two of these computer clubs, one is still active, while the other one is no longer available.

Forced Migrants

Another project started a year ago based on the experiences forced migrants made in Germany. Our research team built in close collaboration with the target group. The design was presented to them to gather feedback and adjust the system to their needs and preferences. Here again, I could observe how important it is to first get to know the participants to gain their trust and then work jointly on the project.

Pillars of Critique

This chapter should describe some of the topics I would like to discuss with other workshop participants. Based on my experiences in the different projects and in the MENA areas, I tried to reflect my own role as a researcher: What can I do, when I'm around vs. what should I do vs. what do other people expect?

Since our research approach tries to fully understand how people use technology in their daily life, how they appropriate ICT in general and what is their goal when using ICT, we (as researchers) spend a lot of time "on the ground". This was sometimes challenging for me, especially in conflict areas such as Palestine.

I tried to rationalize what I saw and how I could come up with ICT to support the people, but again, my time was limited and I couldn't spend as much time as possible in the research setting. Based on these experiences (in the projects) I tried to understand the limitations of doing research in my research areas and identified some topics which are critical to me: *Incompleteness and Complexity of Translation, Ethics and Influences of the Field on the Researcher*.

Incompleteness and Complexity of Translation

One of the main issues, when working with a different target group than usually, is the complexion of the situations. As a western researcher, it is often hard and very complicated to fully understand what participants do when and how they use technology. We cannot fully grasp since we don't share the same background. Translations fail here, since they describe the situation only partly and can lead to wrong conclusion.

Ethics

During the field work in Morocco I challenged myself, if I'm doing the right (project). We involved the local population from the beginning and tried to adapt our concepts and ideas to the needs of the participants; so we did participatory design. But again, we go there as western researchers and think that our concepts, interventions and ideas are the right thing to do, we want to change their lives in a positive way. Are there ways how we can avoid the (western) influence and how the concept of PD is tied to the U.S. and Western Europe? Should we even try to avoid it? How can we combine both worlds (researchers and the local population)? And yes, others can toss in that we do participatory design (PD), but again, this is our

methodological approach and our idea which we impose on the participants.

Influences of the Field on the Researcher

While performing action research you actually go into the field and participate in different activities to understand the motivations and goals of different actors; observe them while they are doing what they are supposed to do. But this can cause many conflicts inside the researchers' mind. He actually experiences often the same struggle as the observed actor (e.g. security checks while traveling to a specific country, chicanery during the research). Or he observes events which are not compatible with his personal views. Following this line of argumentation, our methodological approach requires the researcher to be open-minded.

Conclusion

I can't provide a final conclusion, just more questions. In my opinion, we should critically see how PD is embedded in the context of each project and what we can learn from these project stories (failures and successes). Here, we need to create together a research agenda (maybe even a manifest), as proposed by the organizers and discuss, how the current PD approach can be extended or can be reinvented.

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Challenges When Doing Research In Saudi Arabia

Adel Al-Dawood

College of Science and Engineering
University of Minnesota
Minneapolis, MN 55414, USA
aldaw004@umn.edu

Abstract

Studying Arab populations is like discovering unexplored territories, challenging yet rewarding. In the past 2 years, my research has focused on studying the Saudi population, which was a unique research site that comes with its own challenges and opportunities. Some of the unique challenges included were the IRB approval process, designing effective interface rating for questionnaires, and including minorities within the Saudi population. As much as these challenges have created obstacles for my research, they provided an opportunity to develop a deeper contextually grounded understanding of the Saudi population that would be otherwise disregarded. In this position paper, I aim to enrichen the conversation about research in the Arab world, discuss challenges and opportunities during my work, and gain insight about research methods conducted by other in the Arab world.

Author Keywords

Culture in Computing; Saudi Arabia; Islam; Muslims; Social Computing; Matchmaking; Social Media; Arab Studies.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous

Introduction & Motivation

Even though technology is heavily used in Saudi Arabia [12], there is still room for research that addresses technology appropriation and design that is sensitive to the Saudi context [1–10]. In a religiously conservative culture like Saudi Arabia, it can be a struggle to balance between leveraging technology and preserving religion and culture. In my research, I have focused on understanding how Saudis view the use of technology to find their spouses [5]. Even though many found that technology can be useful to find a spouse, they had worries about their parents accepting it.

As a Saudi, I have always been fascinated with the marriage process in Saudi. While arranged marriages did work for many, it seems like it could use some improvements. With the huge growth of social media usage in Saudi recently [11,12], many have found them as a venue to get to know potential partners better. Unfortunately, most users had to appropriate present technologies to fit their needs. My work hopes to build a better understanding on how to build a matchmaking technology that is inclusive of Saudi values both religiously and culturally.

Methods

I made interviews with Saudis and conducted a recent questionnaire to explore and understand how marriage and technology interact in Saudi. Between September 2015 and May 2016, I conducted interviews with Saudis to understand their views on technology and marriage in Saudi Arabia. Interviews allowed more exploration with open ended questions and follow ups. Since no previous work has been in the topic, interviews were suitable to generate groundwork for future work. Due to interviews being qualitative and exploratory in nature,

questionnaires are more suitable for more concrete quantitative results. For that reason, a recent questionnaire was conducted during the months of August and July in 2017. The goal was to gain a general understanding on the topic through interviews and follow up with a questionnaire to guide the design of prototypes that would be later tested by Saudi users.

For the interviews, I had 18 participants, 9 males and 9 females. Interviews averaged about 90 minutes in length and consisted of 3 major parts: the current marriage process, what role can technology play and what type of media would participants share with their potential partners. For those with previous marriage experience, we asked about how they can relate their experiences to the topic. Recruitment was done through snowballing but also used Twitter to reach more participants. For the questionnaire, there were a total of 736 participants that completed it, 298 males (%40.49) and 438 females (%59.51). Participants started by rating 12 randomized variations of an interface from "I liked a lot" to "I do not like at all" on a 7 Likert scale. After that it asked participants to rate 23 items about info and features from 'Really important' to "Not important at all" on a 7 Likert scale. Lastly, demographics were collected and a space for comments was provided. Again, the questionnaire used Twitter to reach participants. Both the interviews and the questionnaire were conducted in Arabic.

Research challenges

During these investigations, I have faced some challenges that were both, a hindrance and a learning opportunity. In terms of interview challenges, it originates from imposing a western perspective of the Arab world rather than considering the local Saudi

context by the IRB. In specific, female participants were given a specific clause in the consent form about their male guardians being aware of their participation in the study. For the questionnaire, it was participants struggling to realize that interfaces were changing, and participants not satisfied with the cultural and religious categorization in the demographics section. I will discuss these challenges in more detail along with what I have learned from them in the following subsections.

Interviews with Saudi Females

It began with the IRB being concerned that conducting interviews with Saudi females without approval from their male guardians might violate cultural norms. I insisted that permission is not legally required in these situations and it may be a personal preference for some. Their concern was that female participants might take part without the knowledge of their male guardian and place themselves in a risky situation. Eventually, we reached a middle ground that we would include a clause in the consent form for female participants that we recommend they inform their male guardians of their participation to avoid any unforeseeable risks.

Many Saudis complained about the female clause and some threw labels such as "backward" and "sexist". We explained to them that we are not endorsing male guardianship, but practicing preventative measures to protect participants. A social media campaign to abolish male guardianship was underway during the same time, which explains the reaction. I have learned from this experience the importance of a local IRB in Saudi Arabia. I have found similar committees within Saudi, but they seemed to focus on medical studies and not much on social studies. After a thorough search, I found a committee that handles social studies in King Saud

University [13], but it seemed to be buried and given less importance. I hope to utilize it in my future work, even though it seems to state that it is for research done within their departments.

Questionnaire interface rating struggles

When conducting the questionnaire, many participants were confused and struggled with the 12 randomized variations of the interface. The aim was to get independent ratings for each interface, but might have compromised the ratings. Most thought the interfaces were not changing because the changes were minimal. Having clear instructions before starting the ratings seemed to be useless as many most likely did not read them. After many efforts to convey this to participants, I realized it would be better to place a label giving each interface a number and a note that changes might be minimal. Even though this may compromise the integrity of ratings, it is the best compromise that can preserve independent ratings that are correct.

I have learned that having instructions and assuming participants will read them was a mistake. The participants should be able to know the instructions without having to read them if a questionnaire is designed well. Small hints and notes might be needed and are more likely to be noticed by participants. What is interesting is that these issues did not arise during pilot tests of the questionnaire. This could be since most pilot testers were personal acquaintances and were not monitored in person to detect their reactions and complaints. It is possible that some participants did not care to point out the issue or did not even notice it. For example, some might have thought the questionnaire was intentionally asking to rate the interface again or that it was acting up and a couple of attempts would fix

it. This was another issue that I realized about questionnaire design. It is important to understand what a potential participant would think while taking the questionnaire to make sure it is serving the intended goal.

Religiosity rating

Toward the end of the questionnaire and part of the demographics, participants were asked to rate themselves on a scale of how religious and cultural they are. The goal was to measure how does their religious and cultural ratings correlate with their opinions. Interestingly, this brought attention to a flaw in the religious ratings. Participants complained how being religious was associated with doing more religious rituals good deeds and less sins. They also argued that sins were relative as they may view a certain act as not sinful while others would consider it sinful. The most interesting were those who identified as atheists and said they neither did religious rituals or committed sins. They felt the rating assumed that not being religious meant they committed sins, which is not always true.

I did not intend for the ratings to be perceived as judgmental toward non-religious participants. Having a relatively religious background may have caused this bias to pass unnoticed. At the same time, atheists usually do not speak out as it is not socially or religiously acceptable. This was a great opportunity to hear the voices of a group of Saudis that would find it challenging to voice their opinions honestly in public. This is an opportunity to realize that being inclusive of minorities is important. Also, we should not make assumptions that may exclude participants that cannot voice their opinions publicly.

Conclusion

Arab populations can be interesting to study, but also tricky to navigate. At the same time, they provide opportunities to learn how research methods should take into consideration the context of the population being studied. In the case of studying the Saudi population, the following three challenges came up. First was struggling between IRB approval and how Saudis perceived their measures being inadequate. Second was designing interface rating properly to avoid participants confusion and misunderstanding while preserving independent ratings. Lastly, the inclusion of minority groups that would be otherwise silenced in the public sphere, which was an unintended surprise. When conducting research, it is important to realize that challenges can be interpreted as opportunities to understand the research topic better. This is especially important with Arab populations since not much work has been done previously, but that is what makes it worthwhile.

My goals of attending the workshop are as follows:

- 1) Through my experience, I seek to enrich the workshop conversation regarding research in the Arab world by providing the insights I gained from conducting research with Saudis.
- 2) I will discuss both challenges and opportunities I have encountered during my work on matchmaking in a conservative culture such as Saudi Arabia
- 3) Lastly, I aim to gain insights from research methods conducted by others on Arab populations.

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Conducting Qualitative Fieldwork with Older People in Saudi Arabia

Soud Nassir

Interaction Design and Human Practice Lab (IDHuP)
Faculty of Engineering and IT
University of Technology Sydney
Broadway, NSW, Australia
soud.a.nassir@student.uts.edu.au

Abstract

As HCI expands its boundaries through various efforts including cross-cultural research, many researchers have noted that current HCI research methods are not culturally universal. With the aim of adopting, 'appropriating', and developing current HCI research methods, Arab HCI researchers/practitioners have increasingly highlighted various social considerations, challenges, and opportunities to conducting qualitative fieldwork in their local context. Similarly, this short paper discusses my experiences of conducting qualitative fieldwork with ageing Saudis. The paper highlights some of the methodological considerations and challenges of conducting qualitative research with older Saudi participants, including privacy, cross-gender communication, and power dynamics (across age and gender). The paper discusses how these considerations influenced shaped my research design and how technology, particularly social media, can aid in traversing boundaries.

Author Keywords

HCI; methods; Saudi Arabia; Ageing; older people, privacy; cross-gender communication.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Designing ICTs to Support Ageing-well in Saudi Arabia

My PhD research aims to design information and communication technologies to support older people in Saudi Arabia age-well. My review of ageing research, within HCI and other domains (e.g. gerontology), led to a realization that current ageing efforts offer a western-centric perception of ageing [1-3]. This reveals a gap in our current understandings of ageing in non-western cultures, including Saudi Arabia, with regards to the considerations of local culture, gender, religion, and how aged people are cared for. Therefore, I began by conducting an exploratory fieldwork in Saudi Arabia to develop deep and rich understanding of ageing people's day-to-day experiences and the role technology plays in supporting/shaping their values and aspirations as they age.

Understanding the Experiences of Ageing Saudis: The Fieldwork

This fieldwork is the first phase of an ongoing larger research project. The focus is understanding the daily experiences of older Saudis. To do this, we chose to use open-ended interviews and some research probes. This section of the paper introduces our participants and discusses some of the local and cultural consideration that influenced/shaped our approach to conducting the fieldwork.

Approach and Methodological Considerations

Despite the lack of methodological reporting, there are a number of considerations and challenges associated with conducting fieldwork in Saudi Arabia. These include privacy and cross-gender communication. Privacy to Saudis extends beyond personal boundaries to one's community as a whole. This means that one is

protective not only of one's personal privacy but of others within the community. This includes preventing or limiting discussions of personal life and views with 'strangers' [4, 5]. This maintenance of privacy is further heightened when communication is conducted with a non-familial individual of a different gender [4]. A number of papers (e.g., [6, 7]), used by 'foreign' health professionals as a cultural guide when working in Saudi Arabia, have noted that cross-gender communications - male-to-female conversations (and vice versa) - are often mediated through a proxy, i.e. a chaperon/guardian. Traditionally, this chaperon is a male relative who is tasked with the role of maintaining this privacy.

These two factors create interesting challenges for researchers aiming to conduct qualitative fieldwork in Saudi Arabia [4, 8]. Although researchers have reported these challenges', surprisingly little have been discussed as to how to mitigate them.

Participants & Recruitment

We recruited 14 Saudi participants (6 females) ageing from 55 to 71. Participants came from different socioeconomic backgrounds and various tribes. We conducted the study mostly in Western Saudi Arabia, as segregation laws are more relaxed.

Just like [4], we used snowball sampling methods to recruit participants. This method relies on recruited participants to recommend others for the study, acting as gatekeepers who provide contact points to other potential participants. This form of personal referral helps generate a sense of trust in participants because this referral somehow provides a personal vouch for the researcher. During recruitment, we did not initiate any

direct contact with potential female participants. Instead, we relied on their kin to mediate negotiations.

Interviews

We conducted face-to-face semi-structured interviews using a set of open-ended questions. The interviews lasted between about 40 – 90 minutes. 12 interviews were conducted at participants' homes. Another one was conducted in the participant's office and one more in a mosque. Our questions sought to elicit a range of information, including the participants' background, their everyday activities, their state of health and if they receive any care, their social participation, their sense of self and identity, and their use of technology.

We were aware of many factors that may impact face-to-face communications. Religious practices and cultural expectations heavily guide the norms around social and day-to-day interactions. Non-familial cross-gender communication, is considered culturally inappropriate and thus male-to-female conversations are often mediated through a chaperon who is an immediate male relative [9]. Consequently, participants may behave differently or offer answers that are not necessarily of their own volition [6]. As we will discuss next, we decided to also use probes to help elicit and capture the particularities of people's contexts while mitigating some of these challenges.

Probes

Probes allow a desirable minimal external influence on participants' action compared to different research methods [10, 11]. We chose probes to supplement our interviews because we are aware of the potential cultural sensitivities and challenges surrounding the use of interviews. While probes have been previously used

to elicit older people's views and perception (e.g. [12, 13]), we have not found any reports of its deployment in Saudi Arabia.

Our probe pack consisted of a diary, a map, and a set of postcards. We have designed the probes so that participants have a number of tasks to complete over the span of seven days. we also encouraged participants to share their daily activities with us through various online social media apps using their smartphones. We know from local experience that many older people use smartphones. In particular, many have adopted social media apps such as WhatsApp, Twitter, Facebook and Snapchat because they often record voice messages and share photos and videos with friends and loved ones.

Reflection

Recruitment

The use of snowballing sampling method was generally effective. Being recommended conferred us, the researchers, a degree of trust to potential participants. This method provided access to a number of participants.

However, this methods was not always smooth sailing. Firstly, while referrals were useful in helping us gain participants, referrers are not always mindful of the fact that the referred person may not meet the research selection criteria. Furthermore, given that we refrained from direct communications with potential female participants, we had to explain the aims and processes of the research to appropriate chaperons/kin prior to the start of the research. However, at the first meeting with the female participants, we realized that although they were happy to participate, most female

participants only had vague ideas about the research. We spent time introducing and explaining the research and its merits and answering their questions. As such, many female participants felt overwhelmed and complained about the amount information that was presented.

Interview

When conducting interviews in our participants' homes, we also found unexpected complexities and unforeseen challenges. For example, participants homes were often busy domestic spaces that housed immediate and extended families. Although this offers us (the researcher) great insights into the various social interactions and domestic activities in a Saudi homes, our interviews with participants were often interrupted and lacked privacy. Chaperons were present during most of our interviews (regardless of the participants' gender). Our first meeting with participants were longer than anticipated. These initial meeting turn out to be an occasion to build trust. It was a part of developing a participant-researcher relationship, where participants asked about the researchers' origin, studies, work and other personal matters. The researcher did his best to answer the questions freely and openly in order to develop trust and rapport.

Probes

Our use of probes has led us to explore alternative and maybe more productive means of data collection. We encouraged participants to share aspects of their everyday lives with us using social media technologies such as WhatsApp. It turned out that participants were very active in sharing their lives with us through this platform, revealing the potentials for using social media technologies when conducting fieldwork in Saudi. The

use of social media in this fieldwork allowed us greater access to domestic spaces beyond the guest room, where interviews were often conducted. This technology offer almost 'live' insights into participants' lives because messages or media are created and captured just before they are sent. The use of WhatsApp, in our research gave us a kind of vicarious snapshots into participants' daily lives as it unfolded often close to real time. WhatsApp also allowed us to engage the participants in bursts of ongoing conversations, giving us opportunities inquire further about their current contexts and particular situations.

With our participants, we found that once trust has been established, cross-gender communication and privacy concerns did not become a problem during online conversations. This contrasts strongly with physical face-to-face interviews where there is still a strong barrier during cross-gender communications. The male researcher could contact the female participants directly using WhatsApp without the need for a chaperon to mediate the conversation. In our research, the use of social media was also useful in fostering the ongoing development of researcher-participant rapport.

Final Note

As I move forward to the next stage of my research, I wonder how these methodological considerations, challenges and opportunities can influence/shape the co-design approach in our next fieldwork; e.g. what are some of the assumption that traditional HCI research methods make about participants? how can we manage cross-gender communication and power dynamics? Is user-centered design a more appropriate research approach to working with ageing Saudis? and more.

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Creative Participatory Techniques Nurturing Arab Youth Collective Identity and Agency

Sarah Armouch
Open Lab
Newcastle University
s.armouch2@ncl.ac.uk

Abstract

Most of youth-oriented HCI research is conducted in Western settings whereas the biggest number of young people resides in developing regions such as the Middle East and North Africa(MENA). Building an understanding of young people's experiences about the future and foreseen challenges in a region like the MENA is crucial to have design processes adapted to that context. We present a case study from Lebanon where 'design probes' were used as participatory conversational instruments with a group of six young people; to unpick through an empathetic and creative manner their perceptions of the future. This was coupled with the use of PosterVote as a community engagement tool in which young people find themselves manifesting their agency by becoming researchers themselves. Findings highlight the adaptability of 'design probes' into a group setting and within complex contexts; creating a collective identity among participants which eventually can inform subsequent processes capitalizing on youth agency.

Author Keywords

Youth; MENA; Participatory Methods; Design Probes; PosterVote; Perception of Future

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous

Introduction

When exploring ICT and HCI design research, there is scarce research which attends to the specific needs of young people residing in developing countries [10,24]. Yet, out of the 1.8 million young people in the world, 9 out of 10 reside in less developed countries [27] and evidence indicates that investing in youth positive development paves the way for constructive adulthood [21] and is necessary in challenging contexts for youth. In the MENA region, there is a research gap in using interaction design methods to elicit perceptions among young people and even fewer attempts to operationalize such insights as digital design recommendations. Through a case study conducted in Beirut, Lebanon, with six young people, 'design probes' were developed and used in order to enable them to discuss their perceptions of the future. The contribution from this case study is both empirical and methodological. It aimed at illustrating how the adaptability and the interaction with 'design probes' opens the space for building a collective experience and identity among young people which can inform future design visions in complex environments. It also highlighted the importance of cultivating young people's sense of agency and enabling them to enact it within their communities through, for example, the use of PosterVote [30]. As such, it consequently informs the design of technology that responds to the complexity of that context.

Background

Youth in MENA and Lebanon

Young people aged between 15 and 29 years old in the MENA region account for approximately 30% of the whole population. This is found to be the highest number of young people transitioning into adulthood in the history of the region [5]. With the proliferation of

violence and conflicts, the region is going through deep transformations, and inequities are rising, hindering youth's ability to thrive [28]. Young people find themselves marginalized on economic, social, and political levels [28]. Young people in the region are now at a stage where they are more educated, active and connected to the rest of the world and express higher aspirations for the future, while reflecting awareness of their own reality. Nevertheless, the various challenges revolving around health, education, employment, security and so forth constitute a burden on the young people as they find their capabilities blocked by a prevalent reality, preventing them from expressing their opinions freely and impeding their ability to earn a living [26]. It is crucial to note that Arab societies vary within specific countries, or in comparison to each other. Yet, overall research in the region reveals that kinship, family, religion and community influence youth's personal identity and personality and confer an idiosyncratic aspect to it [8]. Arab youth tend to identify themselves within a collective identity rather than an individualistic one [6,7].

Looking particularly to Lebanon, youth constitute anywhere between 29-32% [8]. The lack of motivation felt by the young people or the inability to fulfill their potential is usually linked to an increased dependency on parents and ineffective educational system [8]. A study involving Lebanese youth reveals that youth rely heavily on their parents when it comes to life decisions, social behaviors, and relationships [18]. Political and religious leaders also tend to mobilize young people, yet real youth needs and aspirations are not properly tackled [8]. Comparing regional to global youth, Lebanese youth have on average lower subjective wellbeing than their

counterparts in the United States; which is potentially attributed to socio-economic factors [19].

Arab Youth in HCI Research

In HCI research, youth are often under-represented especially when it comes to data gathering and design methods [12,13,20,22]. Design for teenagers who fall under the broader category of youth is portrayed as challenging, since their motivations, perceptions and experiences are very different from their adult counterparts [23]. Some researchers choose to rely on conventional qualitative methods to engage young people as they support understanding users' needs, preferences, or contexts [23]. There has been work done where children and teens have been involved as design partners and engaged in creative participatory design techniques [15]. Comics [16], scrapbooks, scenario centers [2] and roleplaying as journalists (i.e. KidReporter) [3] were used as techniques to extrapolate perceptions, realities and understandings of children and young adolescents while encouraging creative abilities. Webster et al. [32] used storyboards as a technique to capture the daily life of adolescents who have diabetes, rendering the research process less overwhelming especially when tackling a sensitive topic such as chronic disease among youth. Fisher et al. [11] introduced the Teen Design Day (TDD) methodology, which was conducted with immigrant and refugee young people, encompassing several participatory techniques such as skits, stories, drawings, posters and development of prototypes; all accompanied by discussions and dialogue. Through the project Connected Messages, Telhan et al. [26] examined the notion of agency among youth through the making of an interactive community mural. By building a collective

representation, the young people's sense of ownership was nurtured.

Such studies relying on creative participatory design techniques are rare in the context of the MENA region, with the exception of few examples such as the recent work of Fisher et al. and others [10,24] within refugee camps. Yet, the proliferation of ICT within the MENA region is quite extensive and the Arab Spring movement which was primarily led by young people was believed to have been planned, facilitated and propagated through ICT and other means of modern communications [1]. Previous work is mostly framed within a refugee context and how young people can advance ICT within that setting. We tried to build on that and further expand the role of young people as agents of change within their communities beyond ICT wayfarers, while emphasizing the need to capitalize on their social ties for design at later stages.

Methods

Deriving from cultural probes [14,17], 'design probes' are used as tools for design and understanding within experience-centered design. They are small scale objects with specific form and materiality encompassing a provocative question related to a specific context [29]. They are considered a creative engagement with participants who have to create the final probe which is meaningful to them [31]. Participants feel in control and take responsibility for the information they choose to report or share through probes [4]. By triggering the participants' curiosity, they explore unobvious, idiosyncratic and real facets of their lives and personalities [31]. The main difference between cultural probes and design probes is that the latter are more orientated towards a specific phenomenon that researchers try to explore through the lens of an



Figure 1: (Left)Jar of Things to Change (Right) Jar of Dreams



Figure 2: Egg Shells



Figure 3: Suitcase to the Future

empathic understanding [31]. Like 'cultural probes', the level of participation envisioned in the use of 'design probes' leads to rich results while having a very engaging process which is often viewed as more enjoyable than methods such surveys or interviews [56]. Through previous research [9,19], it was clear that using probes needs to be carried out *in situ* and adapted depending on the context while accounting for cultural and gender differences.

Recruitment

Based on the broader UN definition of youth as those aged between 15 and 29 years old; six young people (three males and three females) aged between 18 and 28 years old were recruited from an international NGO's youth center in Beirut, Lebanon.

Project Activities

Phase 1: Three design probes were used with the young people over the course of five sessions, each of a duration of three to four hours.

Design Probe 1: Glass Jars (Figure 1)

We started with glass jars because it was a familiar concept for the young people and we did not want them directly engaged in something that might feel too novel or intimidating from a creative perspective. As a design probe, the choice of glass was attributed to the idea that it is a firm material which safely shields the valuable content in the jar. Young people were also provided with pieces of papers on which they had to write and use to fill two different jars that they had to customize as follows;

- Jar of Dreams: a jar that contains separate pieces of paper on which they wrote ambitions that they wish to achieve in the future.

- Jar of Negative Things or Things to Change: a jar that contains separate pieces of paper on which they wrote either negative things about their surrounding or something they hoped to change in that surrounding.

Design Probe 2: Egg Shells (Figure 2)

Egg shells were used to explore social networks around young people and the dynamics with these networks. The nature of the egg shell is quite significant as it is both rigid and fragile which metaphorically alludes to social ties which are both strong and easily breakable at the same time. On each egg shell, young people wrote the name (or nickname) of a person they considered themselves strongly connected to in their social network and write why this person is significant on the outer layer of the shell which is meant to be visible to everyone. On the inner layer, they had to write things that upset them about these persons and are not necessarily visible to the rest of the world.

Suitcase to the Future (Figure 3)

Building on the previous sessions with the 'Jars' and the 'Egg Shells' design probes, we implemented the idea of a suitcase to the future. The aim of the suitcase was to encompass some of the elements discussed before and add further aspects pertaining to the young people's envisioning of the future. Young people had more space with this design probe to creatively build different elements within the suitcase and interact with objects of different materiality. This design probe required writing, drawing, building characters and pouches made out of fabric and included visual material such as photos that young people retrieved from the internet.

Each suitcase had to include the following:

PosterVote

Rationale: It was developed by Vlachokyriakos et al. [30]. The aim was to build on the topics that emerged from sessions with 'design probes'. It also goes back to the novelty of the tool in the context; aiming to trigger the curiosity of the young people in exploring interactive tools and enabling them to become the researchers within their communities.

Preparation: Each participant designed an A4 poster (Figure 4) which included a question they formulated in Arabic, two photos-they each took - that respond to the question and buttons on the side that people can press. At the back of the poster was an attached electronic strip with the buttons (details about the hardware are documented in [30]).

PosterVotes were hung in public locations by the participants.

- Places they would like to live in or visit in the future
- Significant people they see in their future
- Obstacles they might encounter in the future
- Skills they need in the future
- Objects they would take with them to the future
- Most important ambitions for the future

Phase 2: PosterVote (see side bar)

Main Findings

As a result of thematic analysis, two sets of findings emerged from this research project; one pertaining to responses obtained from the young people through the design probes and insights around design probes as a research method. The second part of the findings was related to the interactions with PosterVote.

The extensive findings can be summarized by the following points:

- 1) Social ties and networks have been found to be vital influencers on Lebanese young people for future orientated goals and plans which is necessary to account for in design processes.
- 2) Design probes were found to be a participatory research method that promotes self-expression, builds and consolidates a relation of trust between the researchers and the participants and incites reflection about significant realities. The act of knowledge creation through the 'making' of the probes fosters the young people's sense of agency [25].

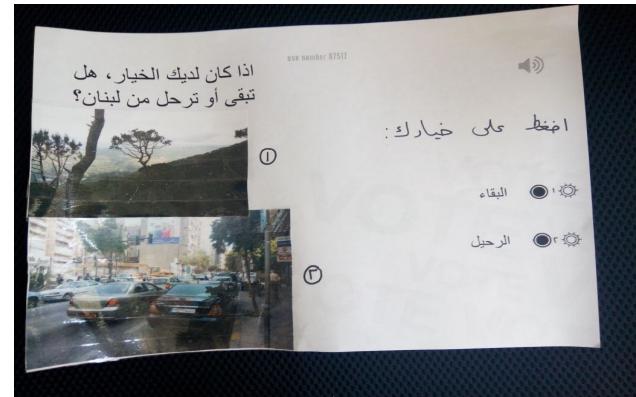


Figure 4: Sample PosterVote (question: if you had the choice, would you stay or leave Lebanon?)

3) The adaptation of design probes to a group setting was novel and appropriated to the collective mind-set prevailing in the Arab culture. It facilitated the creation of a collective identity and empathetic relationship among the young people who found themselves sharing common ambitions and barriers. This collective identity is a key element to build on when thinking about future designs.

4) Design implications; the physicality and simplicity of operation of interactive tools are crucial elements to consider when designing for interactions within communities in such context. This was one of main factors that made PosterVote successful and that triggered the curiosity of the community members. Also, by transferring the researcher's role to the young people, their sense of agency was clearly manifested as they felt ownership of the research and were keen on capturing people's engagement with PosterVote and they engaged in dialogue beyond the posters.

Workshop 'Exploring Participatory Design Methods to Engage with Arab Communities'

This case study opened the space to explore other participatory tools that can be re-appropriated to fit the context of the MENA region. Going beyond that would be to conduct further engagements where participants find themselves engaged as co-researchers which nurtures their sense of agency which translates into more-adapted and effective design outcomes. The workshop offers a space for dialogue and experience-sharing between researchers who engaged with Arab communities. Being a Lebanese PhD student myself — who is interested in conducting further participatory design engagements within the MENA region — I find it the perfect space to explore HCI design techniques and research work that has already been conducted, main lessons learned and challenges that we need to collectively account for and document for future research.

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Designing for Social Participation and Safety of Arab Women

Hawra Rabaan

Indiana University, IUPUI
Indianapolis, IN 46202, USA
hrabaan@iu.edu

Alyson Leigh Young

Indiana University, IUPUI
Indianapolis, IN 46240, USA
youngaly@iupui.edu

Abstract

In this workshop position paper, we propose a study to understand the safety concerns of Arab women in the MENA region and how these concerns impact their social participation. Using semi-structured interviews, social media analyses, and participatory design sessions, we intend to first understand Arab women's experiences and uses of technology, and second to co-design technical tools that seek to provide safety features to mitigate domestic violence against women.

Author Keywords

Arab HCI; safety; social-participation; collective-societies; MENA region; Arab Gulf.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous; K.4: Computers and society: Social issues.

Introduction

The patriarchal nature of Arab societies has had its toll on women. Women with roots from or living in the MENA region are faced with innumerable obstacles. One

example is the male guardianship law in Saudi Arabia. Guardians are male relatives who are systematically assigned to their related females to provide protection by law [14]. This law, however, also allows for the exploitation of women, as it gives guardians control over many aspects of a woman's life including her education, health, and career. Variations of this law exist in other Arab countries, with the common factor being its manifestation as an ideology hindering women's advancements. In this context, women could also face significant risks to their safety when attempting to use social media, as the public disclosure of self-identifying information may lead to unsafe exposure to their guardians, especially when women express views in conflict with family values or state controversial public opinions (see for example [4]). Unfortunately, the current design of social media tools does not account for the need to increase women's social participation while concurrently protecting their safety.

Related Work

A growing body of HCI research has started to examine the Arab context. Researchers have examined a variety of issues including the value of educational games and promoting education in the Arab world [1,2], privacy dimensions and concerns [5,6,9], photosharing and general social media practices [4,6,9,11,12,13], self-identity management, including modesty [3,4,5,6,11], culture [3,4,10,11,16], the use of technology during the Arab Spring [12,13], and safety [7,8]. Despite this, little research has specifically examined the use and design of technology for Arab women for purposes of safety.

Some of this research has provided insights into the challenges of designing for this context and additional considerations that researchers and designers working in this region must take into account. Young [7], for instance, presents a case study of HarassMap – an advocacy, prevention, and response tool, which uses crowdsourced data to map incidents of sexual harassment in Egypt. While crowdsourcing technology can be used to overcome cultural and environmental constraints that have historically impeded the collection of data, she also found that this type of data collection has the potential for ethical conflict when trying to inform policy changes.

Researchers have also examined how privacy is understood and practiced in technology-mediated environments in the Arab world [5]. Paying particular attention to the role of Islam and cultural traditions, they found that privacy differs vastly and impacts how users navigate social media. Thus, they argue that the design of technology must consider culturally sensitive design principles that incorporate previously unexplored characteristics of privacy. When designing for safety concerns, an understanding of how privacy is enacted in this context is particularly relevant.

Furthermore, Vieweg and Hodges [9] have investigated how social media platforms are adapted to cultural contexts beyond their original intention. The study identifies how predominantly Qatari women practice modesty on these platforms, manage their own and their family's reputation and, most importantly for our purposes, use social media to monitor and protect others. Placing the findings in a framework of participatory surveillance, the authors show how

surveillance has a potential to be empowering in this particular context rather than controlling.

One particular study showed how smartphones can be transformed into harassment protection devices for women [8]. In this study, the researchers developed MehfoozAurat, translated as "safe woman", which is intended to support women from low socio-economic statuses who use public transportation in Pakistan. Key features include safe routes, emergency alerts and audio recording in the native language of Urdu. While not developed for the Arab context, which has its own unique cultural and social challenges, this work provides insights for the development of technology to minimize the safety concerns faced by women.

In another study, the authors propose the use of "nudging" as a privacy protection strategy for use with front facing cameras, particularly for those with low technical skills [17]. While again, not specifically related to the Arab context, one could imagine a scenario where a woman wearing a hijab wants to send "selfies" to her female friends and family. An application installed on her smartphone could nudge her to warn about a potential privacy invasion and encourage her to apply a filter. In line with this, gaze detection based on the whites of the eye [17] could be used for authentication by women who wear a niqab and are using their smartphones in public settings.

Methodological Approaches

In our review of the literature, we found that most HCI researchers studying the Arab context have used interviews [4,6,8,9,10,11,12,16] and research probes [3,16] to discuss sensitive topics such as privacy, identity, surveillance, and cultural dimensions. Others

have gathered data using online questionnaires [3,5,11,17] to answer more direct questions such as social media usage. A couple of studies used log files to track usage of CMC tools and game performance [1,3]. One case study used videos to record children's interaction with an educational video game [1]. While another study involved participatory action research and ethnographic methods to inform culturally appropriate and socially conscious technology development [2]. From the limited research above, it was evident that the main recruitment method for interviews in the Arab context was using snowball sampling [4, 6, 9, 10, 16]. This was primarily due to the private nature of Arab societies, hence, the need to build trust when conducting face-to-face data collection [16]. The use of online communication tools has also been recommended to allow for more freedom of expression [6, 16].

The research to-date, however, has mostly superficially portrayed the Arab population, ignoring its cultural depth and richness, and the region's diverse socio-political and economic aspects [12,13]. One notable exception is the work by [16], which took the Saudi Arabian context into account when designing their field study. Despite this, they encountered a number of challenges that impacted recruitment, cross-gender communication, and participant reporting. One method that could assist with this, and which was not been used previously in the literature summarized, is Participatory Design (PD). PD is particularly relevant as it can be used to highlight cultural practices particular to a location, and its bidirectional nature helps guide designers to think about what people bring to the table and what they take from it [15].

Open Questions for the Workshop:

Q1: How to recruit women from a historically highly conservative region to participate in sensitive research that could potentially put them at risk for harm?

Q2: How to recruit women who might be required to have consent from their male guardian to participate?

Q3: How to protect the anonymity of the participants?

Proposed Research & Approach

We are interested in identifying ways to leverage technology to minimize safety-threats of women in this region in order to increase their social participation. Our work is informed by this prior research on the region that has examined the design of technology for this particular context.

We intend to collect data for this study in interviews, social media posts, and participatory design sessions with Arab women. The first author is a native Arabic speaker who is very familiar with the culture and who has access to women who live both within and outside of Saudi Arabia. Further, Saudi Arabia has one of the highest penetration rates of social media in the MENA region [13]. Thus, the researcher will be able to utilize social media platforms to conduct surveys and perform social media analyses. This research proposes three stages of data collection and iterative design activities:

Activity 1: Identify how Arab women are using technology, if at all, to address their safety concerns and the limitations of these technologies for social participation. We intend to use semi-structured interviews with Arab women and women's organizations in the region to understand what women perceive to be their greatest safety concerns, as well as to create an inventory of current technologies used by these women and their limitations. Interviews will be used to inform the second activity, which will consist of participatory design workshops where we will co-design technical tools or features with Arab women to address the concerns and limitations mentioned in the interviews.

Activity 2: In activity two, we seek to explore innovative conceptual designs that will enable social

sharing without jeopardizing safety. Through participatory design sessions with Arab women, we propose to investigate design solutions that will hopefully revolutionize communication using novel mechanisms in social participation and incident documentation and reporting. First, we will seek to identify new design concepts, as informed by the platforms to enhance social sharing safely. Second, we will investigate ways to improve anonymous incident documentation and reporting, such as by using smartphone sound sensors to trigger voice-recording when an incident occurs or nudging as described above. The participatory design sessions will take place in the Midwestern United States with Arab women who are temporarily living in the US or who have recently immigrated.

Activity 3: Finally, we intend to evaluate the proposed design solutions in remote and local evaluation studies with the female community to assess any short-term effects on usability, as well as long-term effects on social participation and safety. Evaluation will include cognitive walkthroughs, and controlled evaluation sessions with previous participants and users who were not familiar with the project beforehand. The successful completion of the project will advance human-centered design knowledge in shaping cultural appropriate designs for the Arab world.

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Developing a Diamond Model for Arab Countries

Fuad EL-Qirem

Al-Zaytoonah University of Jordan.
Amman, Jordan.
fqirem@gmail.com

Gilbert Cockton

Northumbria University, School of Design. Newcastle upon Tyne, NE1 8ST, United Kingdom.
gilbert.cockton@northumbria.ac.uk

Abstract

When designing for specific territories, culture and geography are important. We present an integrated model of both and report on how it developed from the literature and empirical studies

Author Keywords

Culture, Geography, Arab Countries

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous;

Introduction: Culture and Geography

While many differences are very individual and idiosyncratic, we tend to design for groups of people, rather than for individuals. We design for what stakeholders have in common. Such similarities are often cultural, that is, they reflect the social environments that shape phenomena such as motives, values, meanings, obligations and expectations. However, not all differences are cultural. Economic, political and geographic factors also influence the suitability and acceptability of designs. The field of HCI4D (HCI for Development [2]) contrasts with earlier work on culturability [1], by taking a broad view of the territorial factors that influence the suitability of interactive systems. Culturability combines usability and cultural sensitivities to design user interfaces that

are appropriate and acceptable for specific cultures. However, this may not be all that is required to successfully localize interactive software for specific geographic territories.

Target markets for software design are often territorial. A focus on culture alone is inadequate. HCI4D considers economic, political and geographic factors to make software, for example, affordable for buyers, compatible with government policies, and suitable for the climate, country/region size, and technological infrastructure. A territorial focus also makes it possible to consider the range of cultures within a country or region, e.g., youth and organizational cultures.

A Simple Single Model for Designers

Information and guidance on culture and geography are scattered across research literatures, which makes them hard for designers to access. Such resources may be accessed as part of a designer's general professional

education, in preparation for a specific project, or in the course of one. It is unrealistic to expect designers to search research literatures and synthesise a wide range of information. We therefore set out to create a compact model of both culture and geography that could be used to organize and archive information and guidance on designing for specific territories. Such *meta-models* are more prevalent in cultural approaches [4], with geographical approaches focusing on a range of factors.

Meta-models can be too simple for design direction. The *Pyramid Model* [8] locates culture between individuals and nature, in what is little more than a diagrammatic

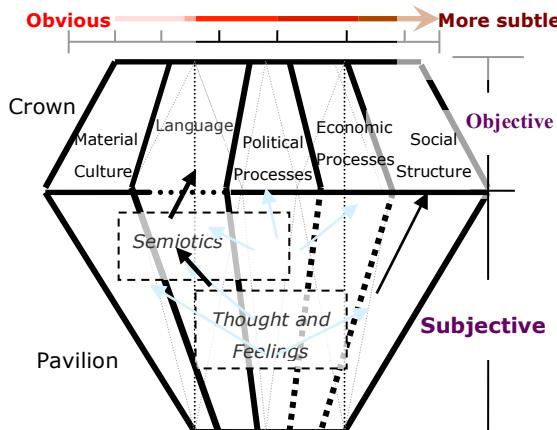


Figure 1: A five segment Diamond Model

definition. The *Objective and Subjective Model* [11] distinguishes between observable objective manifestations of culture and a tacit subjective core. The *Onion Model* [12] uses a natural analogy to relate an objective outer layer of cultural artefacts to two nested subjective inner layers: espoused norms and values; and implicit basic assumptions. The *Iceberg Model* [13] too uses a natural analogy to contrast objective visible surfaces with subsurface subjective unspoken unconscious rules.

These natural analogies make subjective components too opaque or occluded and do not capture the dynamic relationships between objective and subject aspects of culture. A more appropriate physical metaphor is a *diamond*, which like onions and icebergs, has a visible upper surface (over their *crown*) and an occluded lower part (the *pavilion*). However, light emits from the crown, having entered via it and then been reflected within the facets of the pavilion. This better captures the dynamics of relationships between objective and subjective. Light paths pass through all parts of the diamond.

A literature survey identified five large segments. Each sub-segment contains groups, and each group contains specific variables, for which actual instances will vary across cultures. Each group could impact both design preferences and how usage is evaluated. We therefore extended the diamond metaphor with vertical *segments* that could group related objective and subjective cultural variables. Figure 1 relates variables and their objective and subjective sub-segments. Some example groups are labelled in Figure 1. For example; semiotics and language in Jordan reflect the Arabic language and its Jordanian dialect.

In Figure 1, the top (crown) of the diamond contains objective variables that are observable, and the bottom (pavilion) contains subjective variables which become deeper and decreasingly obvious. Arrows show light paths through the diamond, e.g. from thought and feelings to social interaction, or via semiotics to language. Segments are ordered from the left from the most obvious to the more subtle. We can think of light coming from the left, and thus more strongly illuminating the leftmost segments, which are more obvious due to the nature and extent of their objective sub-segment, e.g., material culture is explicit and obvious to any visitor, as is language. Politics, economics and social behaviours are progressively less obvious. A visitor may not even notice a social behaviour, or still less be able to understand its underlying thoughts and feelings.

Filling in a Diamond Model for Jordan

A literature review provided the bases for the model's initial structure of five segments of 25 variable groups. We then added instances of variables through three studies [5]. In the first initial exploratory study, interviews with IT support and developers highlighted the more common types of IT usage problems. The second study repeated a US study [9] to explore reactions to computer usage in Jordan, since US results appeared to be very different to the situations in our first study. We could explore if frustration levels differed between the US and Jordan and, if so (as expected), we could then explore reasons for them through triangulation interviews. The third study studied computer usage experiences in Jordan through semi-structured interviews in the work place. The interview included asking participants to give their explanations for causes of computer problems in Jordan

identified in previous studies. For details of these studies and the Diamond Model, see [5], from which much of this position paper is taken.

All three studies provided Jordanian instances of cultural variables in the initial Diamond Model; however, they also revealed 17 new cultural and other territorial variable groups that had not been considered in the literature, as well as 8 subgroups. Many were related to how users evaluated their usage experience, rather than the acceptability of user interface design elements. Also, no Jordanian instances were found for 11 of the 24 cultural and related two political and one economic variables that we found in the literature. Most of these variables originate in the general literature on culture (e.g., [8]). Their relevance to HCI is open to question, as many originate in research that predates interaction design

Figure 2 over shows the political segment of the Diamond Model after the three studies. For all five segments, see [5]. A three-level numbering system relates variables to segments/groups. Rectangles indicates variable identified in the literature, and ovals new ones identified in our studies [5]. The ovals are: white for variables added in first study, dark grey for the second (none in Figure 2), and light grey ovals for the third study.

Practical Uses of the Diamond Model

The Diamond Model is a *resource* [13] that can support design and evaluation *approaches* across all project stages. Development lifecycles in User-Centred Design (UCD) tend to follow an engineering design structure, with phases corresponding to problem analysis, requirements specification, design and evaluation (e.g., ISO 9241-210). The Diamond Model can be used in all

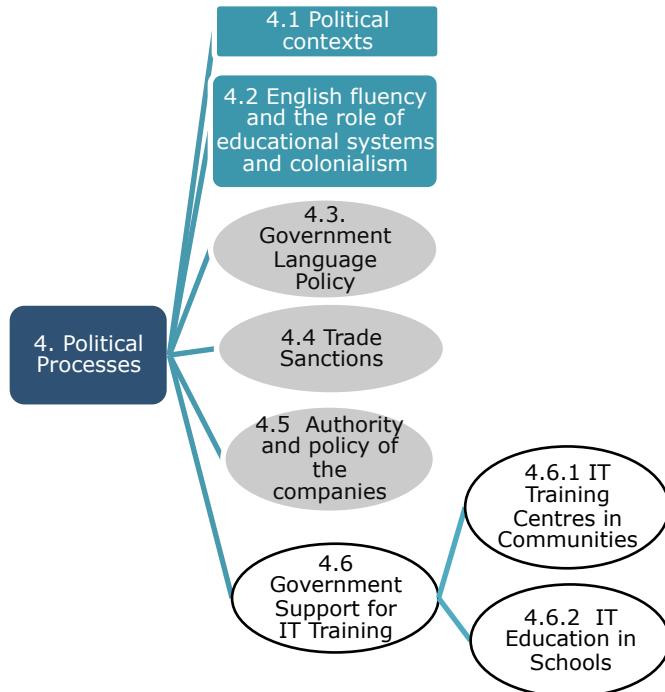


Figure 2: Political Segment

stages, supported by *Dramatic Sketches* [6] as appropriate. A Dramatic Sketch is a scenario in a dialogue format combined with some scene setting (i.e., it is like a part of a script for a play).

During problem analysis, the Diamond Model can guide user research and organise results from it. User studies can add new instances of variables at all levels (including top level segments) for specific Arab Countries, or new variables at any level. For example,

soon after the instantiation of the Diamond Model for Jordan, research carried out in Egypt (Mohamed EL-Zayat) and Kenya (Leonard Mengo) identified further variable groups. These ranged from social variable groups such as attitudes to western media artefacts (production values), and potential additional segments such as technological diffusion/maturity and physical environment/geography (Kenya and Egypt involve much greater distances than Jordan, with 44% of its population in Amman). This shows how other researchers can easily extend the Diamond Model.

Diamond Models instantiated and extended for different Arab countries can become a shared resource for UCD work. Existing models can be used 'as is' in requirements, design and evaluation phases, or they can guide planning of user research, e.g., to find instances of existing variables for new countries. In our research, we were able to update and extend the Diamond Model after each user study.

For requirements and design phases, it may be easier to work with Dramatic Sketches. For example, in *Dramatic Sketch 3: Anas and his teacher* in [6], the pros and cons of user interfaces in English for Arab users are discussed. One design recommendation arising from this discussion is the provision of help such as tool tips in Arabic within an English Language user interface (Figure 1 in [7]). This can become a requirement for English Language user interfaces in Arab Countries. Further examples of potential design requirements are given in [7], along with requirements at organisational and national policy level. Some cultural factors in computer usage cannot be addressed solely by Interaction Design.

During evaluation, both Diamond Models and Dramatic Sketches can be used in design reviews as part of an inspection method. A first pass would identify aspects of an interaction where variables in the Diamond Model may be relevant. A second pass would evaluate the current design (and perhaps associated field trials and training) against relevant variables. The results of such inspections can feed back into iterative redesign, and/or forward into planning for user testing, where features identified as culturally sensitive could be a focus for test tasks, questions during usage, or debriefing interviews.

As with any design resource, usage of the Diamond Model and Dramatic Sketches is project specific [3,13] and must be carefully planned. There are few if any 'shrink wrapped' UCD methods that can be used 'as is' from professional documentation. At best, what we call methods are approaches that need to be adapted, extended and filled in for specific projects, with reflection during and after use to fine-tune them. For example, there are hundreds if not thousands of ways to carry out user testing once all variables are fully considered (e.g., user recruitment, test settings and scenarios, user instructions, think aloud approach, data recording, debriefing interviews, data analysis and results reporting [13]). The same is true, although to a lesser extent, for the Diamond Model and Dramatic Sketches. Design is a creative practice and projects are unique, and thus we should expect the need to plan, adapt and extend when using any public design or evaluation resources [3].

Conclusions

The main aim of our Diamond Model is to support designers to understand users from different cultures

and how this and territorial variables can affect not only design preferences, but also their usage behaviours and their evaluation of their own user experiences. The model can be readily extended and populated with examples from literature surveys and field studies in relevant countries. The Diamond Model has been communicated through innovative design resources such as dramatic sketches [6]. It also identifies factors that are beyond the control of designers [7].

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“Fear” as a Key Challenge Facing the Introduction of UX Design Process in an Egyptian Bank

Maha Aly

Technical University of Dortmund
Hamm-Lippstadt University of
Applied Sciences
Lippstadt, Germany
Maha.Aly@hshl.de

Abstract

The aim of this paper is to: (1) emphasize an ongoing problem hindering the application of UX design process in corporate and (2) suggest a strategy as a solution to overcome such major challenge. This challenge is a psychological barrier called “Fear”. Fear was observed when introducing the UX design process in one of the biggest banks in Egypt. Banking is a major industry sector that is supposed to be changing fastly from the technological perspective; however, changing the design process in corporate environments is not an easy attempt! “Fear” in this context takes the form of “Fear of Change” that was felt among team members responsible for the design and usability issues of the Internet banking system.

Author Keywords

Arab CHI; Fear of Change; Change Management; UX Design Process; Process Change, Leading Change; Egypt; Banking; Corporate.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (HCI, Human-centered computing, Interaction design).

Introduction

During the past few years, user experience (UX) design has been perceived as an emerging attractive field changing the quality and the direction of design in different industries. UX design principles encourage the shift of the design focus from traditional designing procedures to design for improved experiences [1]. However, this shift is a complicated process, especially in the Middle East, where people are more conservative by nature and not easily open for change.

Introducing the concept of being user-centric and designing for the pleasure of the end user in corporate have been met with hundreds of questions. Such questions range from calculating resources to wondering why to care about the end user feelings, since the user is the party who needs our services or products! Some monopolists understand that they have strong competitive advantages in the local market and they know that switching is a very expensive or nearly impossible alternative for their customers! Therefore, they think that there is no need for them to exert more effort, invest in a new solution or create a new process to increase customer retention. It is even harder to think about changing a process in a big corporate, especially when considering the difficulty of resources planning and allocation, the number of approval cycles and the amount of time required to launch it. These factors are relevant to the managerial or administrative aspect, but when looking at a finer granularity level where employees are, there is another set of challenges rising up to the surface. Employees are afraid of change! Noteworthy attempts of change will stimulate doubts of discovering the unknown, cost them time to learn, cause them turbulences in their performance for some time to get the grasp of the new procedures and

will make them feel at unease letting go of the design processes they already master for years. This "Fear of Change" generates huge resistance manifested in the employees' behaviours and prejudgments [2].

The following examples show how a group of employees- working for one of the biggest banks in Egypt in 2014- reacted to the change of the design process. This happened when UX design process was introduced to them in order to improve the screen design and the usability testing process for the new version of the Internet banking system.

Case1: Fear of Change - Screens Design

Joining the Internet Banking team in one of the biggest banks in Egypt was a very promising career step. However, the experience was shocking at the beginning as the existing team was using a legacy of old set of techniques for designing and testing Phase I of the new version of the Internet banking that was already in production (went live) for few weeks. The amount of customer complaints received by the technical team and the call centre exceeded 350 cases per day.

Screens were designed according to the functionality requirements taken from the old Internet banking system that the bank threw away and replaced with this new version. Account summary page was not easily readable or understandable by the end users and the control icons were showing graphical representation of different meanings from what they should indicate. In the previous version of the Internet banking, a hard token was used when conducting any online transaction. Users were suddenly shocked that their hard tokens were no longer working. The transactions in the new system were being done by using One-Time

Password (OTP). Users did not know what it was, how to get or how to use. The transfer screen did not leave any message for the surprised users to tell them what to expect or do! Many more usability issues were there. This is just to name a few!

A new design was suggested to the manager of the Internet Banking Operations department for improving the problematic screens. The new design was done according to the noticeable repeated customer complaints received by the customer care unit. The manager welcomed the new design as it was logically solving many issues with very low cost. The team members rejected the change and were very sceptical about the new design being user-centric. Their argument was that they had to follow the basic functionality requirements and the users should get used to the new system sooner or later. They showed so much bottled-up anger with their eye contact and voice tone, and demonstrated resistance by acting very slowly to deploy the suggested change. Few weeks passed and the new user-centric design was just parked aside by the old team members. They were thinking that the new member would excel in performance and would be awarded if this design made a real change as it seemed. This is another type of fear. It could be interpreted as the risk of losing power or losing their positions at work because of the design being presented by the new colleague!

The manager of the business department responsible for the Internet banking was tired of the increasing number of complaints. He took a step forward by inviting a British Internet banking expert consultant, paying him a huge amount of dollars to get his consultation for an effective change. The expert

approved the changes suggested by the new team member and added more improvements to be considered in the coming phases of the software launch. At this point of time, the team felt the risk of having the new colleague's work approved and then they felt obliged to apply the design changes. The team could not reject as the task was coming from a higher hierarchy. They kept questioning the design while trying slowly to apply it, wondering about the style that seemed to be so much customer spoiling. They showed resentment in the way they talked about the procedures. Procrastination was a reflection of resistance and fear of change. The situation was very interesting to understand in order to find a possible future method to use with the resisting team. Due to the need for understanding, it was important to expect and analyse the team members' feelings. The arising resistance could be towards one or more of the following observed incidents:

- Following a new process means change and facing the unknown. People hate change!
- The threat of altering perception or design focus from functionality to user preferences means they were using a poor method before.
- Fear of losing pride and conceding the ego taken in their own design. They felt compelled to accept the change and focus on the end users' preferences.
- Fear of losing control or jeopardizing their jobs in case this change was effective being presented by a new team member.
- Fear of feeling less efficient/effective in their job if the new concept showed success and the number of complaints decreased due to the change.



Figure 1: Dr. John Kotter's 8 step Process for Leading Change.
<https://www.kotterinc.com/8-steps-process-for-leading-change/>

Case2: Fear of Change – Usability Testing

The software testing process was not professional enough. The team used to test against functionality only. It was done by taking screen shots of issues, pasting them on a Word file and then sending them to the technical team to solve them. That's all! Again, the new colleague suggested a full testing professional procedure including usability testing, which involves real end users to come over and test Phase II of the Internet banking system. The department manager was supportive enough and immediately involved the project manager to take the new testing process into the approval cycle. It took months to have the new process approved. The time for the testing phase started and the team members started resisting again. They showed objection and criticized allowing the real end users to test such critical system, which may contain true figures about some customers' accounts. They could successfully influence the project manager to ban the real end users from coming over and performing the usability test. Luckily, the project manager asked the technical team to create some fake accounts to ensure the safety of the data and finally allowed some users to participate in the usability test.

Six end users from different ages and genders joined the test curiously as test participants. They were very helpful and their comments indicated new areas of improvements which were unseen by the whole team. The usability test took a week of hard work and high pressure. Yet, the results were unexpectedly amazing. The participants unanimously highlighted the when they got stuck, the steps where they felt confused and they almost shared the same impressions about Phase II. At this point of time, the old team members understood the importance of usability testing, although they

showed irritation and dudgeon regarding the new process during the whole testing week. Eventually, they could not admit that they were fine with the results, but they followed the participants' comments that guided their efforts to a more fruitful user-centric design.

It is worthwhile mentioning that after this phase of testing had ended with satisfying results, the oldest team member asked the manager to stop this type of testing and go back to the old method they already knew, even if it was unprofessional, inefficient or unhelpful. That was a strong manifestation of "Fear", which can be summarized as follows:

- Fear of change.
- Fear of losing power or manager's trust.
- Fear of losing their jobs.
- Fear of being seen as mistaken/inefficient.

Understanding the team intrinsic fears was inviting enough to think of an alternative way to convince them with the user-centric approach in design and testing.

Change Management as a Strategic Solution

In 1989 in his paper published by Harvard Business Review, John P. Kotter [3] recommended the "*Diagnosis of Resistance*" as one of the very first steps to analyze the situation in order to manage any change adventure. He stated that "*most change initiatives backfire*", and thus change must not be imposed on employees unless they are well informed with the change implications and impact [3]. He also highlighted that the step of "*Creating Sense of Urgency*" is very essential in order to lead the change, as shown in Figure 1. To apply this on the cases presented here, it would have been more effective to start by raising the

flag of the "Risk of Stagnation". Accordingly alerting the team from the coming consequences of having a poorly designed system. This would probably stimulate the sense of real need for change. The alert should address the hidden losses and the failure of the system in front of the executive level. Such threat would be enough to prepare the employees psychologically to be ready for change and not afraid of it. It would be very convincing to emphasize how this change leads to an improved state of welfare to everyone. Employees would then own the change when they feel empowered. This would make them at ease to adopt the shift from traditional design to user-centric design in such a big corporate.

Conclusion

In corporate environments, switching the design process from traditional to user-centric is considered a paradigm shift or a major process change. This happens when employees feel the need to change their focus to consider the holistic user experience rather than just delivering the required functionality. Change generates fear and resistance issues, which could be smoothly handled by following the model of John Kotter for "Leading Change in Institutions". Change management could be a good strategy solving the issues of fear and resistance stemming from design process shift.

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Graphical User Interface Design for Low-Literate Users

Mennatallah Saleh

Hamm Lippstadt University of Applied Science
Marker Allee 76-78, 59063 Hamm,
Germany
menna.esaleh@gmail.com

Abstract

This paper contributes to the understanding of illiterate users' GUI interaction. It looks at text-free user interface elements for software applications. A field test was conducted ($N=20$) with illiterate participants of both genders in Egypt to evaluate the preferences and performances with different types of graphical representations. The participants were shown five groups of different signs to identify meanings and create stories with the preferred signs. The signs were associated with common user interface elements and with objects participants observed in their daily life. The results show that participants tended to interpret signs differently than their commonly intended meanings in interfaces. Results also show that participants failed to create coherent stories implying difficulty in following sequential wizard interfaces. Challenges encountered during the study included fear, structural unfamiliarity and cultural differences between researchers and users.

Author Keywords

Design; literacy; ICT4D; semiotics; challenges.

ACM Classification Keywords

Human-centered computing~User studies

Introduction

The theory of semiotic engineering suggests that software is an artifact used by the designer to communicate with the user [2]. Software is perceived as an encoded one-way message from the designer to the user. However, for this message to be correctly decoded, the designer must understand the user's background.

Designers face multiple challenges when designing text-free software to illiterate users. Text-free user interfaces can take many forms, most commonly graphical interfaces and dialogue-based interfaces. The difficulties encountered in many dialogue interfaces especially in informal languages has made graphical options more popular [3]. In addition, graphical interfaces have a higher learnability according to Chandal et al. [1].

Hence, in order for designers to design to illiterate users, they must encode their messages in graphical interfaces. These interfaces consist of signs and images that are commonly used in interface designs and should be understood by the target end users.

An ethnographic research was conducted with illiterates from a developing country. The purpose of the research was to identify how applications can be designed optimally for them.

Study Design

In this study, we attempted to identify how illiterates understand and respond to different user interface signs. In addition, we analyzed their cognitive response

with the sequential process associated with wizard interfaces.

A study was conducted with 20 illiterate adults, 10 males and 10 females in Egypt. The participants were targeted through literacy campaign classes in Egypt. Participants ranged between 20-45 years. Most of them worked in manual labour such as cleaning houses, driving cars, etc. The objective of the study was to test the acceptance and understanding of common signs used in Graphical User Interfaces by the illiterate population. Participants were shown five groups of signs. Each group consisted of 3 signs. These signs were what is referred to as canonical icons or signs. Canonical icons are commonly used in daily life and some mainly in Graphical User interfaces and are common design standards. Each participant was asked to identify the meaning behind each sign and its common usage. Next, participants were asked to choose their favorite sign from each group. Each participant had five signs by the end to which they were asked to narrate a story.

Results

Despite the common usage of these signs in user interfaces and other applications, study participants showed no familiarity with these signs. They also did not state that they didn't know the signs, but rather attempted to create answers from their own perceptions and backgrounds. This can have implications on GUI design, where designers attempt to create a message through displaying a certain sign, but its complete incorrect interpretation can have serious consequences.

Surprisingly, almost half of the incorrect sign interpretations results were similar. For example, when shown the sign of email (a closed envelope), participants stated that this is a sign for "school". These results show that not all interpretations were random, but rather based on cultural understandings and perceptions that need to be investigated further by designers.

In addition to that, after participants reported their stories, most of them created stories that did not follow a logical sequence. Almost all participants jumped from one sign to the next without creating a link in between both signs, they also added new characters into the story on the go and dropped original characters without explanation. Hence, it was concluded that the participants had no proper working memory flow in story generation.

Challenges

At the beginning of the encounters, participants were very hesitant to participate in the study. Many of them reported that they were afraid of the consequences of the participation. Participants asked the researchers repetitively about the motivation of the study and whom the results would be reported to. Many fell into the common cultural pitfall of fear of the unknown. Some of them expected the researcher to have hidden agendas and were only consoled by constant reassurance by the researchers as well as by other familiar figures such as teachers in an illiteracy eradication class.

Another common reason for hesitation reported by participants and observed by the researcher is fear of the effect of the study on their image in case of failure.

Participants reported that they did not know all the "correct" answers. They reported fear of being looked down on due to their lack of formal education. Despite consistent reassurances of the subjective nature of the study and that there were no "correct" answers, some participants declined participating for that reason. When this issue was investigated further, some participants reported that in their lines of work such as cleaning houses, working in garages, etc. they were highly penalized when making mistakes by individuals from higher literacy backgrounds and hence no longer felt comfortable making mistakes around them.

Participants' lack of structure familiarity was not only reflected in their story narration but was also demonstrated by their behavior during the study. Participants interrupted the study to answer the phone, ask questions to the researchers or talk to people outside the study. Participants also frequently asked the researcher to help them with answering the questions of the study. These behaviors reflect their lack of familiarity with structured sessions.

Findings of this study emphasize that designers should consider all the cultural differences due to the literacy cognitive gap as well as accommodate for the fear experienced by these groups during introduction of new technologies.

In the future, participants should be approached in groups initially to reduce the element of fear by having a more comfortable environment. A platform should also be given to them to address their concerns prior to the beginning of the study. The study objective should also be explained in simple terms to show where the results are going. Finally, an emphasis should be given

that the participants control the experiment and that they can end it at any given time.

Conclusion

A field test (N=20) was conducted to investigate the effect of literacy level on sign interpretation performance and working memory use. The objective of the test was to develop initial recommendations for designers on sign usage especially those designing applications for illiterates. Results show that illiterates interpreted signs differently from their original intended purpose in GUI design. This acts as an indicator for designers of the importance of sign selection and testing signs with relevant target groups before application release. Participants also showed poor performance in sequential working memories. The impact of this for application designers is very strong because applications that rely on working memory use such as wizards and follow-up tasks may not yield satisfaction or acceptance in the illiterate community. It is, hence, of critical importance to not only test applications' concepts when designing for illiterates, but to also test memory load and use high-fidelity prototypes of the intended applications.

During the field study, participants showed a high level of fear from the study, fear of the unknown, fear of the motivation of the researcher and finally fear of making mistakes. In addition, participants also showed low structure familiarity that the researchers should learn to cope with and perhaps create the relevant strategies to avoid it affecting the study results as well as create the correct and comfortable environment for these participants in the future.

Our research contributes to remind and alarm designers of the cultural and User Experience differences that exist across the literacy spectrum even within users of the same nationality.

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Grounding AI-Driven Cross-Cultural Analysis with Community Insights

Ali Jahanian

MIT
Cambridge, MA 02139, USA
ali-design@csail.mit.edu

Haewoon Kwak

QCRI
HBKU, Doha, Qatar
haewoon@acm.org

Sercan Şengün

CSAIL, MIT
Cambridge, MA 02139, USA
sengun@mit.edu

D. Fox Harrell

CSAIL, MIT
Cambridge, MA 02139, USA
fox@csail.mit.edu

Peter Mawhorter

CSAIL, MIT
Cambridge, MA 02139, USA
mawhorter@mit.edu

Abstract

AI-driven cross-cultural analysis of virtual identities can provide important insights when supplemented with information from dialogue with people of the culture being addressed. We position cultural considerations of color representations by introducing a tool for topic modeling and semantic analysis of color data as part of the virtual identity *AIR-avtar* toolkit [13]. The insights gained by using this toolkit on data from MENA (Middle East and North Africa) region users, are enhanced by interviews with people from the region. We show that, when paired with cultural knowledge, AI-driven analysis augments our understanding of a population's values and needs, and opens ways to design tools that can preserve the cultural values of the population.

Author Keywords

Virtual Identity; Social Media; Avatars; Topic Modeling; Cultural Values; Color; AI-Driven

ACM Classification Keywords

H.5.m [Information interfaces and presentation (e.g., HCI)]: Group and Organization Interfaces; J.4 [Computer Applications]: Social and Behavioral Sciences; K.4.0 [Computing Milieux]: Computers and Society

Introduction

Digital media such as social media, videogames, and e-commerce sites are places where both tradition and mod-



Figure 1: A semantic visualization of color topics using Kobayashi's color semantics.

ernization are negotiated in Arab communities. Virtual identities (e.g., online profiles, avatars, and accounts) in these sites offer insight into users' cultural values, and we have built upon the *AIRvatar* system to analyze these identities. *AIRvatar* is an integrated set of tools for collecting, transforming, analyzing, and visualizing virtual identity data. For example, it has been used to identify culturally-specific trends in social media profiles in the MENA region (with cross-cultural comparison against profiles from the U.S., Brazil, France, Korea, and Sweden) [4]. *AIRvatar* has also previously been used to identify and characterize player values based on telemetry from avatar creation [13].

Here, we focus on new analyses of the social media data cited above [4]. We briefly outline our analysis techniques, before showing why they are useful for virtual identity research. Finally, we summarize how we interpreted the results using interviews with participants from the MENA region, and share how local insights were insightful.

Topic Modeling and Color Semantics

To understand color distributions and combinations used in virtual identities, *AIRvatar* uses LDA (Latent Dirichlet Allocation) topic modeling for colors in addition to semantic labeling. LDA topic modeling is an unsupervised approach to discover linguistic topics from textual data [1], and is effectively applied to colors [8]. *AIRvatar* provides a graphical user interface for choosing parameters for LDA and visualizing the discovered color topics (using the implementation from [8]). Figure 2 illustrates $k=10$ color topics for 42k+ MENA social media profile images.

We incorporated Kobayashi's Color semantics [12, 11] (using the implementation from [9]) into the platform (see Fig. 1). Kobayashi defined a space called *Color Image Scale* for colors with "warm-cool" and "hard-soft" axes, and

AIRviz (Instagram; QCRI)

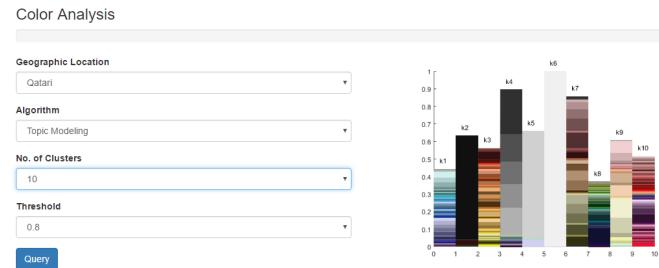


Figure 2: Color analysis interface using topic modeling.

positioned palettes of 3-color combinations in this space based on experiments.

Colors in Virtual Identities

The colors of social media images or avatars are a powerful factor in social interactions [10, 14]. For example, a study of the Olympic Games in 2005 found that red-wearing competitors won more than blue-wearing competitors in four sports [5]. Later work showed this to be consistent in an online videogame [7], and, it was recently found that even without the presence of competitors, players had varying degrees of competence, immersion, and flow when using avatars of different colors [10].

Color selection is also important in representing users' identities with images on the web and social media. Research shows that color selection in websites and social media profiles affects and reveals political participation [2], social patterns [6], and community interactions [3].

Cross-Cultural Color Semantics

In our color analysis, different regions yielded different color preferences. Translating these using Kobayashi's color semantics provided us with general snapshots into the aes-

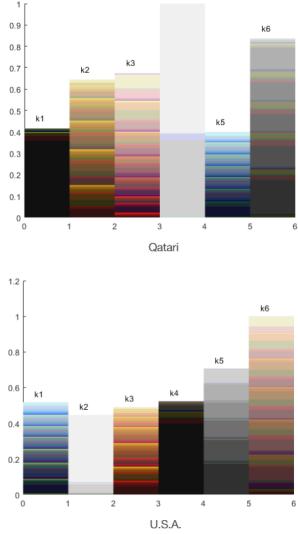


Figure 3: Color analysis of Qatari (top) and the U.S. (bottom) profile images using topic modeling ($k=6$).

thetics and visual preferences of these regions. For brevity here, we focus on social media profile images of Qatari users and U.S. users as in [4] (see Fig. 3).

While interpreting these results through Kobayashi semantic analysis gives us a linguistic representation for the color usage, incorporating cultural considerations provides another useful high-level representation. For example, the dominance of white/gray tones (clusters 4 and 6) in Qatari profiles might be surprising to those unfamiliar with regional clothing preferences. Also, the dominance of warm pastels (clusters 3 and 6) in the U.S. profiles could be interpreted as contrasting with the well-separated clusters of brown (2) and rose/pink/red (3) in the Qatari data.

Understanding these results requires a mixed-methods approach grounded by insights from people in the culture at hand. In our case, two (non-Khaleeji) researchers in Qatar: (1) interviewed 18 participants from the MENA region about their use of social media and games, and (2) performed manual analysis of some profiles. Through these qualitative analyses it was possible to better explain the color topic differences, including via the following insights:

- Male Qatari users expressed their commitment to using profile images with *thobes* and *ghutras*; this led to the dominance of white/gray clusters. Users felt that this commitment reinforced their *Khaleeji* identity and was important for formal social interactions.
- Female Qatari users typically avoided showing their faces in their profile photos to project modesty. Instead they often chose thematic photos (such as flowers, natural scenes, close-up of lips and eyes with colorful make-up, etc.) or illustrative avatars. This preference might be the reason for the distinct rose/pink/red cluster (which is more dispersed towards other pastel colors in the U.S. example).

- Qatari users often mobilized thematic images of deserts, falconry, and horses—which might explain the dominant sand/brown cluster in Qatar that does not appear distinct in other datasets. Additionally, they frequently mobilized silhouette photos instead of direct illumination (also supporting the modest approach of female users). This aesthetics might contribute to the dominant cluster of dark grays.

Conclusions and Future Work

Our qualitative analysis allowed us to decipher how regional values influenced MENA region users' use of color in their profiles, as revealed by our quantitative analysis. Accordingly, it is our position that quantitative analysis of data concerning cultural or regional trends needs to incorporate qualitative analysis to augment our understanding of values and needs of specific populations and open the way for cross-cultural design.

Beyond our specific results for MENA users, we hope to discover representations that allow the expression of cultural and social nuances for diverse users. Interesting avenues of future work could address devising mechanisms for learning region-specific values using multi-modal data, such as those used in image captioning or question answering in computer vision. Furthermore, creating crowdsourcing platforms for collecting culture-specific data can harness the power of AI to support users of each culture in negotiating their values and needs.

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Intercultural experience with forcibly displaced population

Ana María Bustamante Duarte

Institute for Geoinformatics,
University of Münster
Heisenbergstrasse 2, 48149,
Münster, Germany
bustamante@uni-muenster.de

Abstract

The present position paper presents some my initial insights as a Colombian researcher approaching participatory projects with forcibly displaced population groups from Arab and Latin American communities. It briefly will recount some experiences, drawbacks, and challenges faced in both contexts.

Author Keywords

Vulnerable communities, forced displacement, participatory research

ACM Classification Keywords

H.5.m [Information interfaces and presentation (e.g., HCI)]:
Miscellaneous; See [<http://acm.org/about/class/1998/>]: for full list of ACM classifiers. This section is required.

Introduction

The current global situation regarding social, environmental, economic, political, and cultural aspects, have generated continuous large forced movements of population. Such phenomenon has been cyclical through the history of humanity and has impacted communities all around the world disregarding their background. Nowadays, it has gained broad attention since these influxes of forced displaced population are arriving at mainstream places such as Europe, North America, and Australia. Nonetheless, countries

in the Middle East, South Asia, Latin America, and Sub-Saharan Africa are originating but also receiving several people affected by forced displacement [24].

The arrival of the forcibly displaced population (i.e., internally displaced population (IDPs), refugees, and asylum seekers) to urban centers is a matter which brings massive societal and spatial transformations. Based on an extensive variety of factors, from the availability of services and infrastructures to receive them, to policy-making and welcome activities from the local communities, such changes are to be considered positive or negative for the forcibly displaced population as well as for the city. It is in such stage where the provision of information becomes crucial for this population group [7, 15, 17].

Participatory processes with these communities become one of the ways to generate projects together from which in-depth knowledge is gained about the population in forced displacement situation and their current context while they envisioned resources and strategies they need (e.g., [21, 1, 27]). In such participatory processes internal displaced population, refugees and asylum seekers, might express and engage freely in the search for strategies to support them upon arrival and looking towards their (re)settlement. These conditions are promoted in such type of processes by implementing an open and transparent communication, along with a flexible and extensive understanding of the context and culture of people affected by forced displacement. Such aspects are needed to generate 'safe spaces' for forcibly displaced population's expression which actively represent them.

Nevertheless, the conditions mentioned above are not easy to achieve. Even if the actors (e.g., volunteers, community, researchers) involved share some similar migration experiences, the difference in cultural backgrounds (e.g., lan-

guage, traditions, regions of origins) is a matter to consider and address step-by-step. The present personal position paper focuses on some reflections based on opportunities and drawbacks present from not sharing similar cultural background when conducting a research project with Arab refugees and asylum seekers arriving in Germany. The research project aimed to understand their (re)settlement context, their challenges and needs to design digital services with them which could support them. Such approach was influenced by my background as a researcher coming from a country highly-impacted by conflict-induced displacement and who has worked with communities impacted by forced displacement. Colombia, my country of origin, in 2017 ranked as the country with the largest number of internally displaced population (IDPs) in the world. The Forced Migration Organization [12] defines IDPs as communities forced to leave their homes due to violence, famine, hazards, among others, but who remained in the territory of their own country.

Participatory Design and HCI

Participatory design in HCI has extensive explorations with vulnerable and marginalized communities such as children, elderly, people with disabilities, among others. Explorations on the field of HCI and forced migrations have been more limited [3], but are growing year by year (e.g., [21, 23, 11, 3, 1, 10]). Examples of participatory methods which have been used to engage with forced migrants include computer clubs [25, 27, 1], to digital storytelling [20], probes [23, 9], and workshops[10]. Explorations in HCI in this context can be found in topics such as navigation [5], translation [6], health services [21, 22], community building [26] and social capital [4].

Methods Used: Drawbacks and Opportunities

In total, more than ten informative meetings, nine participatory workshops, some extra hands-on activities, and several individual and group interviews have been done with Arab refugees and asylum seekers in Münster, Germany (some of it can be seen in [8]).

Initial contact with young forcibly displaced population
An initial research challenge related to *reaching existent social networks* which allow me to be introduced to a forcibly displaced community which I was not familiar with, in a country which was new to me (Germany), and to initiate to build relationships and bonds with them. *Finding a common language* in which we all could communicate was the next goal. I was neither proficient in German, a language they were learning thanks to the volunteer organizations, nor in Arabic. It resulted in a limitation of the research at the beginning since we could only gather information from those who spoke English or who were willing to also translate for others willing to participate. In this initial set-up, visual resources and gestures became essential for encouraging a more productive communication. Future iterations of the workshops and additional activities were done combining the English and German languages, as well as we conducted some only in German after consultation with the group of young refugees and asylum seekers participating. Our research team took such decisions aiming also to integrate non-Arab participants. This combination constituted an initial necessary approach towards promoting 'safe spaces' for expression, sharing, and creation. Moreover, a combination of methods from participatory research, didactic and participatory design was done to favor the communication process and the construction of 'safe spaces.' 'Safe spaces' were brought by conducting a broad literature review in educational and participatory research, where it is mentioned as one of the core principles to encourage

participation.

'Being safe' when expressing your opinion is an aspect highly valued also in Colombia when conducting projects with IDPs. In many cases, violent actors part of the country's civil conflict continues being present in the cities' informal settlements still impacting IDPs lives even after their (re)settlement. Such presence sometimes hinders IDPs willingness to freely share experiences and opinions, since they can put themselves in vulnerable situations only by doing so. It is there where trust among participants and with facilitators, and to ensure 'safe spaces' becomes essential for the forcibly displaced population in the Colombian context as it seems to be necessary for those arriving to Germany in their (re)settlement.

Adaptation of the "dynamic consent" approach

'Safe spaces' aimed to ensure not only during the activities but also in their planning and informative stages. There, *promoting effective informed ethics process* which went "beyond do not harm" [18] approach is also highly relevant. For these informed, iterative and continuous sessions with the young forcibly displaced people, we aimed to use various visual resources which simplify but still covered a detailed explanation of what data was going to be collected and how it was going to be treated. Furthermore, we aimed for initial explorations into the adaptation of the "dynamic consent" (DC) [14] concept in opposition to the widely spread idea of 'universal consent' for all data collected through the activities. "Dynamic consent" constitutes a concept which provides a new look towards consent. Until the extent of our knowledge, Kayes et al. (2015) introduced the "dynamic consent" for biomedical research. The authors implemented it through the development of a "personalized, digital communication interface that connects researchers and participants" by putting the latter in the center of all

decision-making process regarding collected data management during the research. The authors consider such type of consent as "dynamic" since participants can choose how much what they want to be involved on altering their consent choices on real time and for a long period, and they can be sure that such decisions will be effectively applied. We attempted to do a first exploration and adaptation of the "dynamic consent" approach used for the development of the interface by adapting some of its characteristics to our context of research. The result ended allowing us to deconstruct the original IT-based approach for the "dynamic consent" and transform it into a non-IT-mediated approach, at least for the initial explorations. The goal of this was to enable more flexible and iterative consents which answer to the diverse backgrounds of the Arab participants for whom their previous experience with digital services and devices differed from one to another.

The adaptation of the "dynamic consent" proposed here from a non-IT-mediated perspective could guide and also enhanced the process of research project communication when engaging with IDPs in Colombia as well as their consent management. The context of IDPs in Colombia might not only require the adaptation of Kayes et al.'s "dynamic consent" strategy to a widely diverse variety of backgrounds regarding technology experience in (young) forced displaced population. Perhaps, it might be largely influenced as well by the high numbers of IDP population in Colombia with middle and low levels of functional literacy [13].

Other considerations

The group dynamics showed during the activities, and the insights given directly by Arab participants showed a clear and strong reliance on other Arab refugees and asylum seekers as the source of information. Such condition we also wanted to promote and to be a decisive factor for the

way to tailor the participatory activities to their particular context and to encourage collaborative collaboration.

Additionally, to go in line with the narratives from the Arab participants concerning their high use and trust over the digital services they use when fleeing from their countries until the arrival to the host country, we aim to search for ways to understand their current awareness of personal data, location, data privacy, and management. The significant use of digital services for communication or information retrieval seemed to have been a constant characteristic for several Arab asylum seekers arriving in Europe and US. [19, 2, 16, 5] In the case of Colombia, insufficient studies have been done on the topic of personal data privacy of IDPs in general, and even lesser haven been done regarding the management issue of this type of data when using digital services mainly aimed for them. Nonetheless, news on the increasing rise of political-driven killings of land, environmental, and social activists and community leaders (many of them from communities affected by the conflict) rise alertness on the high state of vulnerability from these groups and IDPs, where personal data protection can play a core role.

Overall, some questions raised such as, how the variables described above determine differences in the use of technology? What are the differences or similarities between the experiences, needs, and challenges of forcibly displaced people who have a rural origin from the ones coming from cities? How to approach the design of technologies with and for Arab communities in a condition of forced displacement? And how different would be each of these processes for Colombian IDPs?

Conclusion

Overall, the exercise done has allowed me to comprehend some aspects of the differences and similarities existing in both cases of forced displaced population for (re)settlement. Extensive research projects in understanding the background, conditions and dynamics of forcibly displaced population in diverse context regarding their use, understanding and envisioning of digital services could enrich processes of design and development of these type of services to different groups of this population. For example, the case of Arab refugees and asylum seekers arriving in Germany continues giving us highly valuable lessons at diverse levels. Participatory processes have the potential to enrich, despite the distinctions between both groups, with the insights gathered on the research with Arab communities and their specific context to pinpoint aspects which need to be considered, modified, and tailored regarding the design of technologies with IDPs in Colombia. Positive experiences during our project regarding the importance of ethics and adapted strategies for the "dynamic consent" approach, a common ground for communication, collaboration strategies among all actors, as well as combining participatory research, didactic and participatory design approaches to promote the creation of 'safe spaces' can continue to be explored. In general, the personal experience through this research had generated more questions than answers to keep exploring in the field of HCI and Arab refugees and asylum seekers.

Researcher Background

From 2015 until now, I have been working as a researcher at the Institute for Geoinformatics at the University of Münster. I am currently exploring ways in which participatory design and participatory research combined with methods from didactic can, perhaps, support the adaptation of digital (geospatial) services to support refugees and asylum seek-

ers upon arrival and during their (re)settlement in unfamiliar host cities in Germany.

Prior this position I had worked as a social architect and urban planner on processes related to participatory design and research for urban development with communities, i.e., in Colombia and Spain. My research and professional experience have been mainly focused on projects done with vulnerable communities (i.e., refugees and asylum seekers, internally displaced population, and groups in conditions of -economic- poverty) with diverse academic, multilateral, non-governmental, civic, and governmental institutions in Colombia, Germany, and Spain.

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Notes on Cultural Issues for Healthy Interface Design and UX Evaluation Processes

Galal H. Galal-Edeen

Professor
Faculty of Computers and Information
Cairo University
Giza 12613 – Egypt
Galal@fci-cu.edu.eg

Hala M. Hassan

Teaching & Research Assistant
Faculty of Computers and Information
Cairo University
Giza 12613 – Egypt
Hala.Magdy@fci-cu.edu.eg

Abstract

This position paper outlines a number of cultural issues that challenge effective usability and UX design and evaluation processes. Cultures that resist open feedback and dialogue, where design criticism is viewed negatively, and where significant effort to understand problem contexts are usually ignored, need to be approached with extra care, and with a suitable mindset and appropriate tools and techniques.

Author Keywords

UX; UX process, participative design; Egyptian culture.

ACM Classification Keywords

H.5.2: User Centered Design; H.5.3. Theory and Methods; Evaluation/ methodology.

Introduction

Participative design requires openness and willingness of individuals (designers, users and other stakeholders) to participate in the design dialogue. Collaborative/participative technology design behaviors are couched in cultural habits and characteristics that can enable or challenge the basics of participative design. Such openness is necessary to achieve the goals of the iterative design processes. However, the extent to which various cultures respond to the requirements of open dialogue varies. In this paper, we make some comments, based our experience of designing and

evaluating user interfaces and elements of user experience, on what aspects need to be taken into consideration when operating within the Egyptian, and perhaps also other Mediterranean cultures.

Culture

There is a myriad definitions of culture. Culture can be regarded as a description of a group of individuals who think, behave or feel in similar way [1], cited by [2]. El Shenawi [3] summarized culture as the effect of the surrounding people on person personality which affect the way they interact with the society.

Hofstede defines culture as "the collective programming of the mind which distinguishes the members of one group of people from another" [7]. Kroeber and Parsons [4] define culture as a "transmitter and created content and patterns of values, ideas, and other symbolic meaningful systems as factors in the shaping of human behaviour and the artefacts produced through behaviour" cited by [5].

Hall described culture as an iceberg, which contains two parts: an external part and an internal part. The external part is the small part that is seen above the water surface that represents the culture members' behaviour which is related to one's conscious mind. While the internal part is the bigger part under the water that is hidden underwater which represents culture member believes and values which is related to the unconscious mind [6]. What we aim to do in this paper is to shed some light on cultural specificities that warrant some focused attention whilst following some of the widely agreed UX processes and methodology tools.

Culture dimensions in the literature

One of the most influential studies into culture is due to Hofstede, which is referred to as Hofstede's culture dimensions; in Hofstede's work [7] "Culture's Consequences", he presented the effect of cultural differences on the members of a culture, and their ways of thinking and behaviors. He argued that each country's members have a "mental program" which is formed by his/her family, school, and work organization over years which results in general and shared culture characteristics between country members.

Hofstede introduced number of studies for 20 years of work with the aim to investigate culture differences between countries. He conducted his studies with IBM employee over 72 different countries. He introduced five main dimensions of culture, which are Uncertainty avoidance, Individualism – collectivism, Masculinity – Femininity, Power Distance, and long- short orientation [7].

- Uncertainty avoidance is "the extent to which a culture programs its members to feel either uncomfortable or comfortable in unstructured situations" which is related to "the level of stress in a society in the face of an unknown future". It refers to the degree to which culture members feels uncertain and uncomfortable with unknown and unfamiliar situations. High uncertainty avoidance refers to the tendency to avoid unfamiliar situations and feeling threatened and uncomfortable which results in avoiding new functions and features in artefacts, and members usually tend to ask others' help. Low uncertainty avoidance refers to the tendency to like to explore new functions and take risks with no or little hesitation, and facing new and

- unfamiliar situations doesn't make culture members feel threatened or uncomfortable.
- Individualism versus collectivism is "the degree to which individuals are supposed to look after themselves or remain integrated into groups, usually around the family". It refers to the culture members' preference either to act in individual or group patterns.
 - Individualistic culture members are more self-oriented, prefer to act, be recognized, and rewarded as individuals and they focus on self-goals and achievements.
 - Collectivist culture members are more group-oriented, prefer to act, be recognized, and rewarded as a group.
- Masculinity versus femininity refers to "the distribution of emotional roles between the genders". In some cultures, the show of sympathy for example, is more appropriate to feminine roles than masculine ones.
- Power distance is "the extent to which the less powerful members of organizations and institutions accept and expect that power is distributed unequally".
- Long-term versus short-term orientation refers to "the extent to which a culture programs its members to accept delayed gratification of their material, social, and emotional needs" which is related to "the choice of focus for people's efforts: the future or the present".

Salient cultural characteristics and differences have also been explored by other authors like by Hall, Kluckhohn and Strodtbeck [8] and El-Qirem and Cockton [9]. However, we shall not go into such characterizations here since we find that Hofstede's exposition to be

probably more relevant in explaining what have been observing in practice.

A Characterization of Egyptian Culture

Feghali [10] in his study investigating Arab countries culture characteristics classified Egypt among other Arabic speakers as collectivist. That is because Arab countries tend to use indirect communication style, they may "respond in agreeable or pleasant ways" while they may feel the opposite but feel embarrassed to express their true opinions directly or they care about others' opinions of them (face-saving). They love their families consider the family as the most significant unit. He also characterized Arab countries with values such as hospitality, face-saving, and loyalty.

Abdelghaffar and Magdy in their study to investigate how mobile government services (m-government) can be accepted by Egyptian users determined factors that may affect Egyptian users' behavior. Two of those related to Egyptian culture which are: personal connections (preferring to look for others' help), and face to face interaction [11].

Culture in participative development

Participative development relies on effective dialogue with users and other stakeholders. Stakeholders (which includes direct users for the purposes of this discussion) need to provide their comment and feedback honestly and freely in whatever forum for evaluation and feedback is chosen by the designers. Through practical experience, we have identified a number of relevant cultural factors that must be taken into account:

- A tendency to agree with the group: This might be an artefact of a collectivist culture that values high

integration with the group. Since holding a different view is seen in a negative light, difference is seen as threatening and members of this culture tend to avoid it (although a number of factors such as power structures and perception of status affect this attitude). This needs to be challenged and overcome by the designers using techniques such as oblique questioning, asking stakeholders' comments individually as well as in groups, repeating the same question in different formulations, etc. (see for example Lahiri et al.[12].

- Blending ideas from multiple sources or different perspectives is wrong. This "puritanical" approach might be a result of a large power distance. In the ideation stages, designers here need to encourage participations that may be at odds with each other, for example by sticking to the well known brain storming rules of recording all ideas, and not criticizing any.
- Criticism is negative and is taken to mean failure, incompetence or animosity. This might be an artefact of a masculine, somewhat paternalistic culture where to err is considered a sign of weakness, and therefore mistakes are dismissed and criticism viewed negatively. This means that design criticism may be ameliorated or altogether suppressed to avoid socially awkward situations.
- Spending time on problem understanding and carrying out thorough ethnographic research may indicate low competence or lack of knowledge. This feature may again be a symptom of a masculine culture where taking time to understand is not the "masculine" way of doing things. This may lead to some requirements (explicit or implicit) may be poorly understood or missed altogether.

- Experimentation is a waste of time or a negative indication. This may lead to the designer's commitment to a design that's too early, premature or inadequately validated.
- Conformance to the group is a positive thing, a feature of a collectivist culture. If most people seem to agree, a view that is not conformant to the group's apparent consensus might be suppressed, thus leading to valuable opportunities for design improvement being lost.

Conclusions

The criticality of human communications and responses to participative development of computer interfaces, and their susceptibility to cultural characteristics mean that machine-human interface and UX designers need to pay particular attention to the peculiarities of culture when configuring effective methods and processes.

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Saudi Females in Human-Computer Interaction Studies: Challenges in Data Collection

Elham Alghamdi

GEM Lab, Dalhousie University
1459 Lemarchant St, Halifax, NS
B3H 3P8
elham@cs.dal.ca

Eman Alyami

Big Data Institute, Dalhousie
University
6050 University Ave, Halifax, NS
B3H 1W5
alyami@cs.dal.ca

Derek Reilly

GEM Lab, Dalhousie University
1459 Lemarchant St, Halifax, NS
B3H 3P8
reilly@cs.dal.ca

Sandra Toze

School of Information
Management, Dalhousie University
Rowe Management Building, 4010 -
6100 University Avenue
PO Box 15000
Halifax, NS B3H 4R2
stoze@dal.ca

Abstract

Social media use in Saudi Arabia has a great impact on the Saudi society, especially females. In particular, Saudi females are using Twitter and Instagram to empower themselves and open the doors wide for opportunities, knowledge sharing, and awareness of rights and responsibilities. Two Saudi researchers from Canada share their experiences conducting studies with Saudi females as participants. We describe the social, ethical and theoretical considerations involved in collecting data using three methods (interviews, online survey and contextual inquiry), and highlight challenges and best practices. We conclude with suggestions and future improvements.

Author Keywords

Social media and Society; Saudi women entrepreneurs;
Saudi women identity; Instagram Businesses.

ACM Classification Keywords

Human-centered computing~Social media • Applied computing~Online shopping • Social and professional topics~Women • Applied computing~Marketing

Introduction

As two Saudi female researchers, we thought that conducting research on and with fellow Saudi females

would be relatively easy. We learned the hard way and first hand that was not the case.

Saudi Arabia is a young country with young and ambitious leadership. The 2030 Vision is to transform the country from an oil-based to an innovative, industrial and developed one. In the past three years, there were fundamental changes in the Saudi social and economic structure, with more focus on women's issues, such as physical education and driving. Combine this with the boom of social media use in the country by females; it was imperative to study the role Saudi females are playing in this transformation.

We are two Interdisciplinary P.hD. students who do similar research with a different focus. Elham combines HCI with Business to study social media based businesses in Saudi Arabia. She is studying how Saudi females who practice Instagram entrepreneurship have emerged and changed their lives and how visual presentation on Instagram is impacting the business landscape in Saudi Arabia and elsewhere. She used semi-structured interviews and contextual inquiry. Her next step is to analyze Instagram images and conduct discourse analysis. Meanwhile, Eman's research combines HCI with Women & Gender Studies and Information Management to study Middle Eastern Women's Identity Development in Online Social Networks. Her research has two parts. The first is textual analysis from Twitter data, where she analyzed the Twitter feeds from Saudi online communities and discussions on issues related to Saudi women. The details of this phase are out of the scope of this paper. The second part is to conduct an online survey and semi-structured interviews with Saudi females who use social media in general (i.e., Twitter) to understand

how it is affecting them. This phase is currently underway.

The following sections will tell you our story. We will describe the methods we used to conduct our research including the ethical, social, and academic considerations. We will also explain the challenges, barriers, and concerns that we continue to manage. Finally, we will share our insights and suggestions.

Ethical Process

We submitted separate applications to the Research Ethics Board (REB) in Dalhousie Research Services at Dalhousie University. The board reviewed our applications. The review and decision took approximately 2 months during which we reviewed the feedback and responded to the REB with the revised applications. The revised submissions went through another review. We were then granted approval letters.

Our participants are Saudi women over the age of 18. We include more details on our participants under each study because they slightly differ depending on the study objectives.

Semi-Structured Interviews

Social media based businesses are a relatively new phenomenon in Saudi Arabia with females taking the lead from the privacy of their home. The aim of the interviews is to better understand this phenomenon. The study criteria included: the business has to be owned and run by a female on Instagram and is not a brick and mortar business.

To recruit potential participants, we browsed famous social media influencers accounts (Fashionistas) to find

referrals (tags) to social media business accounts. Once the account met the criteria we use the information in the bio to contact the account owner for the study. If they agreed, we proceed with the study protocol.

Initially, we contacted potential participants who have more than 20,000 followers to better capture experienced businesses who can tell us how did they do it. However, we heard back from only few of them. Our guess that they were either too busy, did not believe in the importance of the research, or expected to get paid for their services, which usually costs a minimum of CAD 1000.

We asked 64 participants on WhatsApp and 17 on Instagram. Twenty females agreed to be interviewed, but 7 of them cancelled minutes before the interview or they would not show up without notice. We ended up with 13 completed interviews.

We did not think snowball sampling is an appropriate method. Some potential participants were hiding their true identity and have their businesses under a fake owner name. The reason is to keep their privacy and social status, as some families would be ashamed of a family member who is working from home, especially in food services.

One of the challenges was that some participants would just assume that we could run the interview at any time, so they called unexpectedly. When asked for ~30 minutes to find a proper and quite place to record the interview, they would get upset, hang up, and some did not reply to further messages for arrangement. Therefore, establishing connection, trust, and willingness to participate was more important than

offering rewards in this context. The participants are business owners and monetary reward was not motivational enough. We tried to contact Fashionistas ($n=4$) and ask them to help us by mentioning those who participate in our study as a reward, but we received no answer.

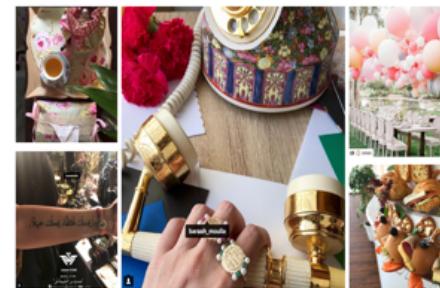


Figure 1 Examples of Saudi Female Instagram Business Accounts. (@balloon_warehouse), (@billa_sweet_), (@danteel_1), (@virgin_stones), (@haneensaberjewellery)

Moreover, at least 3 potential participants asked to conduct the interviews through texting because their male guardian did not give them the permission to call a stranger. Note that the researcher is a Saudi female who grew up in Saudi and aware of the Saudi culture. Another participant asked to write a review (e.g., ad) about her product. Another one stopped the interview to Snap-Chat it to her followers to advertise for her account. These challenges hindered the research process considerably in terms of time and efforts.

Contextual Inquiries

To further our understanding of how our participants perform their businesses and what determine which technologies aid them, we asked 5 participants to act as if they are working on a normal business day and

take a video while performing a business deal or dealing with a customer.

On an ethical level, our participants are mostly iPhone users. Due to the privacy of Apple devices, there was no way to screen-record the phone. So, we asked them to take a video by themselves or by someone else while performing the business. There was an ethical concern of privacy high exposure, but we avoided that by asking the participants to approve of the video before sending it to us.

We received 9 videos in total. The problem with those videos was that they were missing the critical information we need. For instance, the sessions were not completed, were too short or focused on one action (e.g., editing a picture), and it was not clear what other apps or devices were used during the session.

We tried to solve this problem, by travelling to Saudi Arabia and asking them to meet in person. The participants run businesses from home. It was nearly impossible to observe them in their workplace since we were considered strangers. Unfortunately, those challenges led us to abandon this method and continue with the interviews.

Online Survey

The survey acted as 1) a picture of overall understanding of the demographics under investigation, and 2) a medium to get potential interviewees contact information in order to limit the interviews to those who only provided an experience that will contribute to the research model.

The survey consists a consent form and a questionnaire with multiple parts. The first part asks general demographic and social media use questions in which only popular platforms in Saudi Arabia were included (e.g., Facebook, and SnapChat). Any non-females, non-Saudis, and non-Twitter users were excluded from the survey with a final window for suggestions.

The second part asks different questions on the participant's opinion on Twitter use, female presence in Twitter, female reactions and awareness to global news, governmental and industrial opportunities and support for women, and finally an open space to write their experience, suggestions, and concerns.

The online survey was designed in Opinio in Arabic and English. Piloting the survey with Saudi female friends helped tweak and change some questions to be more understandable and appropriate in the Saudi context. For example, when asking about one's gender, it is ethically required here in Canada to reference all genders (male, female, LGBTQIA, or Prefer not to say). Since these definitions are not in use in Saudi Arabia, and for the sake of limiting the responses to Saudi females only, the question changed to: Do you identify yourself as: Male or Female.

At first, the snowballing technique was used to populate the survey via WhatsApp in late December 2017. The initial response was ~70 responses in a week with over 200 uncompleted answers. Early January 2018, a blanket invitation was initiated, meaning that the survey was distributed on Twitter and Facebook. We posted into trending hashtags, and the Saudi Societies pages around the world using name handlers (e.g., @Saudi_in_Canada). Also, we compiled a list of Saudi

female influencers on Twitter who were mentioned in the responses. We reached out to those influencers and asked for help distributing the survey.

It was surprising in a negative way to see that, until now, the response rate did not change. When we did an online survey in English on Saudi E-commerce Experience in 2013, the response was over 1400 in a matter of days [1]. This survey is a short one (~10-12m), but upon revisiting the questions, the potential problem was that we asked them to indicate the number of followers on each social media platform. To give accurate information, they might have left the survey to check on a platform and forgot to come back. So, we changed the question asking for an approximate number adding the phrase "please don't leave the page!"). Another unforeseen problem was the survey time aligned with all the uprisings of women's rights movements and the demands to ban male guardianship in Saudi Arabia. The survey might be perceived, by some, as an investigative inquiry.

Conclusion

We describe our experiences with Saudi female participants. Even though interviews and surveys have their pros and cons across general research, we experience extra and different challenges in the Saudi context.

There seems to be a high resistance in terms of participation due to many known and unknown factors. Trust in the researcher and the purpose of the study is a great challenge. Saudi traditions, and social norms created another problem in terms of granting permission to participate in the study. Time management was also a concern, especially in different

time zones. Therefore, we advise future researchers to allocate enough time to run their study and be physically present in one of the locations where there will be a high rate of female presence such as Universities or Schools in Saudi Arabia. In addition, sending the interview questions in advance could help in building trust and make the participant more comfortable.

We also advice avoid asking directly about the participant's age or financial standings. In addition, political questions (e.g., government support) or about Saudi tradition (e.g., male guardianship or permission) resulted in uncomfortable answers.

On a bright note, the participants who completed their interviews/ online surveys were thorough and offered extensive answers. They were eager to help and do their best despite family and business commitments. Also, they were open to be contacted later when needed, such was the case with the contextual inquiry.

Overall, our research aim and the results obtained so far were well worth the time and efforts we put into those studies. We hope that our experiences will contribute to the awareness of conducting research in Saudi Arabia and add exciting details to the body of knowledge in contextual research.

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The Perception of Humanoid Robots for Domestic Use in Saudi Arabia

Ohoud Alharbi

Simon Fraser University
Vancouver, BC, Canada
oalharbi@sfu.ca

Ahmed Sabbir Arif

University of California, Merced
Merced, CA, USA
asarif@ucmerced.edu

Abstract

We propose a research to investigate Saudi peoples' perception of humanoid domestic robots and attitude towards the possibility of having one in their house. Through a series of questionnaires, semi-structured interviews, focus groups, and participatory design sessions, this research will explore Saudi peoples' level of acceptance towards domestic robots, the tasks and responsibilities they would feel comfortable assigning to these robots, their preferred appearance of domestic robots, and the cultural stereotypes they feel a domestic robot must mimic.

Author Keywords

Arab; Middle East; Gulf region; humanoid robots; assistive robots; household help; user perception; acceptance; culture.

ACM Classification Keywords

I.2.9. Robotics: Commercial robots and applications;
H.1.2. User/Machine Systems: Human factors.

Introduction

In 2017, Saudi Arabia became the first country in the world to give a humanoid robot named Sophia citizenship [20]. Sophia is created by a Hong Kong based robotics company, Hanson Robotics. She speaks only English and does not look like a person from the

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Workshop on Exploring Participatory Design Methods to Engage with Arab Communities



Figure 1. Humanoid robot Sophia spoke at the AI for Good Global Summit 2017 in Geneva, Switzerland. From ITU Pictures <https://flic.kr/p/UivkB3>.



Figure 2. Robot dog AIBO. From [Sven Volkens](#).

Arab region (Figure 1). Since Saudi Arabia has a strict citizenship policy and is a deeply religious, conservative, traditional, and family-oriented society, granting Sophia citizenship raises many interesting sociotechnical questions. However, this paper focuses *only* on an upcoming research that will investigate Saudi peoples' perception about humanoid domestic robots. We find this topic particularly interesting in light of the facts that: domestic workers are more common in the Middle East [7] than the other parts of the world; employing domestic workers has and has become a symbol of social status in the Middle East [7]; and but also about 99.6% of domestic workers in Saudi Arabia are non-native [18].

Related Word

Some researchers have investigated the sociocultural aspects of different types of robots. This section discusses the most relevant works in the area.

Attitude Towards Robots

In the past, many have studied peoples' attitude towards robots. Friedman et al. [5] and Kahn et al. [8] evaluated AIBO, a robot designed to mimic dogs' behavior and appearance (Figure 2) [13]. Their research involved unstructured playing sessions with children and online discussion forums with adults. Results showed that both adults and children found AIBO engaging.

Khan [10] investigated adults' attitude towards robots using a questionnaire that addressed peoples' thoughts about domestic robots' appearance and behaviors. The results revealed that most participants were positive about the idea of having a robot at home. Scopelliti et al. [17], in contrast, studied peoples' perception of

domestic robots. In their study, they recruited participants from three different generations: young adults (18-25 years), middle aged (40-50 years), and elderly (65-75 years). They found out that young adults have a more positive attitude towards domestic robots than the older age groups.

Robots Replacing Humans

Although humanoid robots have the potential to become useful assistants for society following the tradition of automobiles and personal computers [9], important issues involving human-robot interaction, starting from physical touch to gestures and spoken languages, need to be addressed. Humanoid robots must make their users and other humans feel comfortable around them and fit in with daily life [9]. Pransky [14] discussed the weaknesses of replacing humans with robot in jobs that need social interaction. For instance, he argued that robots replacing nannies could prevent children from having a normal human interaction and could create perception that robot interaction is the norm.

Effects of Cultural Norms

Robots are rooted in our cultural expectations as "*servant, enemy, friend, pet, slave, toy, companion, and other roles presented in popular mythology*" [11]. These roles frame user stereotypes [2]. Thomas [19] and Rogers [16] emphasized on the importance of understanding the social and cultural norms of a country to facilitate technology acceptance by its people. Riek et al. [15] conducted a study to understand Arab peoples' views of owning humanoid robots. The results indicated that their attitude toward humanoid robots is mostly positive. Interestingly, participants from the Gulf region (Saudi Arabia, Iran, Iraq, Oman, Qatar,

United Arab Emirates, and Yemen) had significantly more favorable views toward humanoid robots than the ones from the African region (Egypt, Morocco, Tunisia, Libya, and Sudan). This indicates towards the possibility that cultural attitudes affect the acceptance of humanoid robots. In our research, we will attempt to understand the variety of cultural attitudes in Saudi households and their effects on the acceptance of humanoid robots.

Robot Appearance

A robot's appearance can shape the social expectations and can impact peoples' perceptions in terms of likeability, believability, and engagement with the robot [4]. A robot with animal appearance is likely to be interpreted differently than a robot with human-like appearance [6]. In a prior study [12], participants frequently comment on a robot's perceived gender, race or nationality, and social standing within the household. This suggests that our natural tendency to categorize others persist even with humanoid robots.

Research Questions

This exploratory research will investigate Saudi peoples' perception of humanoid robots and their attitude towards the possibility of having one in their house. More specifically, it will attempt to answer the following questions through various questionnaires, semi-structured interviews, focus groups, and participatory design sessions.

- 1) *Do Saudi people accept the idea of having a domestic robot in their house?*
- 2) *What are Saudi peoples' perceptions about domestic robots?*

- 3) *What tasks and responsibilities do Saudi people want domestic robots to perform?*
- 4) *What are Saudi peoples' preferred appearance of domestic robots?*
- 5) *Which cultural norms and stereotypes they think domestic robots must mimic?*

Participants

For this research, we will recruit Saudi middle-high (income above 22,900 SAR [1]) to upper-class (income above 38,200 SAR [1]) families who employ domestic workers. The families must have a minimum household size of two. All household members, regardless of their age and gender, will be recruited.

With the help of local collaborators, we will distribute invitations to participate in our research at various online mailing lists, forums, newspapers, and magazines. We will also set up recruitment booths at public places, such as shopping malls. All participants will be compensated for their time with gift cards or complementary meals at a popular restaurant.

Design

This research will use a mixed method since it is beneficial in investigating new perspectives. This will enable us to obtain divergent information by modifying the questions of the follow-up methods based on the results of the previous method(s).

Interviews and Focus Groups

This research will start with several semi-structured interviews and focus groups with each participating family. During the interviews, families will be asked about their opinions of domestic robots. During the

focus groups, multiple videos of humanoid robot will be displayed to encourage discussions about different aspects of humanoid robots. All responses will be recorded through observation and interview notes.

Participatory Design

There will be a participatory design session focusing on robot appearance following the interviews and focus groups. This session will enable us to elaborate, illustrate, and clarify the accepted appearance of humanoid robots. Furthermore, the findings of this session can help us prepare a set of more fine-tuned questions for the follow-up sessions. For example, the designs/sketches of robot appearance collected from this session can help us lead a better discussion by providing more references on robot appearance.

Questionnaires

This research will collect two questionnaires, one before and another after the interviews and focus groups.

The pre-interview/focus group questionnaire will be an adaption of the Cogniron introductory questionnaire [3] that will ask participants about their personal details, including gender, age, occupation, as well as their level of familiarity with robots, prior experience with robots, and their level of technical knowledge of robots. The post--interview/focus group questionnaire will be an adaption of the Cogniron final questionnaire [3] that will ask participants about their perceptions about robot appearance, robot roles, robot behavior, and robot communication.

This research will conduct both interviews and focus groups and questionnaires in an attempt to collect a comprehensive dataset. Questionnaires will provide us

with an insight into how users perceive humanoid domestic robots. Interviews and focus groups, on the other hand, will help us in identifying the source and implications of these perceptions by detecting factors that might be otherwise missed. In addition, the results from different methods could validate each other, providing stronger evidence for a conclusion.

Ethics

This research will follow the rules governing the ethics of scientific research issued by King Saud University's council. Before conducting the studies, we will get an approval from King Saud University (KSU) in Riyadh, Saudi Arabia in collaboration with the Human-Computer Interaction (HCI) Lab at KSU.

All Participants will be treated equitably and fairly. Participants will be provided with information about the research and its validity for the larger community. They will be informed about the potential risks, which for this study are minimal, and that they can withdraw from the study at any time before, during, and after the study. Participants will sign a consent form, which will also provide them with information on how their personal information will be handled and safeguarded and how the results of this research will be disseminated.

Conclusion

This research will explore Saudi peoples' level of acceptance towards humanoid domestic robots, the types of tasks and responsibilities they would assign to these robots, their preferred appearance of domestic robots, and the cultural stereotypes they feel domestic robots must imitate. To investigate this, this research will use a mixed method composed of questionnaires,

semi-structured interviews, focus groups, and participatory design sessions.

We hope the findings of this research will provide an insight into Saudi peoples' needs, desires, and expectations of humanoid domestic robots, enabling the design of more effective, useful, and socially acceptable robots. We also hope that this will inspire further research in this area.

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Towards a Participatory Design Addressing the Stigma of Epilepsy in Saudi Arabia

Shiroq Al-Megren

King Saudi University
Riyadh 11451
Saudi Arabia
salmegren@ksu.edu.sa

Abstract

People with epilepsy in Saudi Arabia confront prejudice against their disease, which results in secrecy, misunderstandings, and social exclusion. While there is significant merit in adopting current technologies for individuals with epilepsy and their caregivers to monitor seizure patterns and notify caregivers of epileptic episodes, little effort has been made to address the user requirements of such technologies in relation to stigma-related concerns. This position paper describes the preliminary stage of a participatory design study that seeks to design a seizure-monitoring and notification device that will oversee patterns and alert caregivers. This stage of the exploratory study addressed several concerns relating to the stigma of epilepsy in the community, particularly the visibility of the device and social power. The paper also presents several considerations to be taken into account for the participatory design session planned for the future.

Author Keywords

Epilepsy; seizure; stigma; medical device; Saudi Arabia.

ACM Classification Keywords

H.5.2 [Information interfaces and presentation (e.g., HCI)]:
User Interfaces

Introduction

Epilepsy is a neurological condition that affects more than 50 million people worldwide, with higher incidence of occurrence reported in developing countries [6]. The disorder is common in Saudi Arabia with a prevalence of 6.54 per 1000 [1]. The public perception of epilepsy is influenced by several factors in the community, such as awareness, education, and cultural background [3]. In Saudi Arabia, efforts have been made to increase epilepsy awareness through seminars, publications, and public media [4]. Consequently, several surveys have been formulated to gauge the communities' perception of epilepsy [2, 5]. These surveys have revealed rooted misconceptions that not only stigmatizes a person with epilepsy, but can also adversely impact medical treatment. Hence, the overall consensus calls for improvement towards awareness via mass societal education.

There are several support tools that can be used to monitor seizures. These tools are often smart phone applications that are shared between a patient with epilepsy and his/her caregiver. Epilepsy Foundation's MySeizureDiary¹ and SeizureSync² are two applications on the iOS App Store that are utilized as self-monitoring tools to track seizures and manage medications. Smart phone applications can also be used to alert caregivers (e.g. SeizAlarm³) when a seizure occurs by manually sending a help request. The applications also utilize the sensors in the iPhone or Apple Watch to detect seizures. Another technological innovation that has come handy in the treatment and care of epilepsy is Empatica's Embrace watch⁴, a wearable device that is similarly used to detect seizures, alert caregivers, and monitor episodes.

¹<https://diary.epilepsy.com/>

²<https://seizuresync.com/>

³<http://seizalarm.com/>

⁴<https://www.empatica.com/en-eu/>

The first aim of the study was to investigate the potential use of a participatory study to address the design implication perpetrated by social stigma of epilepsy. The second aim was to assess the design of a wearable device to be worn by epileptics and their caregivers. The device would be used to manually track and alert caregivers of seizures. This position paper explores the former aims and addresses concerns to be taken into account.

Methodology

This position paper discusses a preliminary participatory design session to explore the development of a wearable device (worn by the person with epilepsy and his/her caregiver) that can be used to accomplish the following: manually track seizures by caregivers and epileptics, as well as to actively alert caregivers of current episodes.

Two participants with epilepsy were recruited for the session with their preferred caregiver. In a community such as Saudi Arabia, caregivers are often family members, as was the case with the two care givers recruited for this study. Both participants (P1 and P2; male) were diagnosed with epilepsy in adulthood. P1 was 26 years old and both his parents were listed as his caregivers, although for the purpose of the preliminary session, only his mother was recruited. P2 was 38 years old with his brother as the primary caregiver.

Both participants' conditions were stabilized with medications that managed and reduced the quantity of tonic-clonic seizures experienced. Other than epilepsy, the participants did not have any other neurological disorders. P1 commonly experienced seizures once a month, while P2's seizures were more frequent. A month prior to the beginning of the session, all participants reported that no technological aids were used to track seizure or alert caregiver.

For instance, P2 owned an Embrace watch but his use of the device was short-lived. Further, P1 wore a medical ID bracelet. In addition, both caregivers did not utilize any type of technology to monitor seizures and there were no means for them to be notified of a seizure occurring unless they were in the same room.

Procedure

A focus group with both types of participants involving individuals with epilepsy and their caregivers, was conducted to combine their unique experiences with the stigma of epilepsy and how that could be addressed via the participatory study. The focus of this session was to prompt discussion and to address any concerns or questions relating to the upcoming participatory design session. Further, considering Saudi Arabia's cultural environment, we hoped to address the gender dynamics that may impact the recruitment of designers for the participatory design workshop.

What follows is a brief summary of the relevant findings from data generated in the focus group interviews:

- **Stigma:** Both participants (P1 and P2) stated that they encountered issues with the stigma of epilepsy. P2 described how he struggled to find a job because he had to disclose that he had epilepsy. During the discussion, he advised P1 not to disclose the disease and that it was within his right not to do so. Caregivers reported on situations where they were advised to consider spiritual rituals and religious healing.
- **Discretion:** Epilepsy is often kept a secret among the family and only shared when necessary. For instance, P1 had informed about his epilepsy to only one close friend to manage him in case a seizure is triggered when spending time with their friends. Even when

aware of the diagnosis, little information is shared about the condition (e.g. type of seizure). After mentioning his struggles, P2 advised P1 not to disclose his epilepsy to potential job recruiters.

- **Change:** Despite the issues reported under stigma and discretion, all participants reported a rapid pace of change in the community regarding epilepsy.
- **Independence:** One of the first issues raised by P1 and P2 is related to the loss of independence and their reliance on caregivers. As an example, P1 equated his inability to drive to losing a limb.
- **Monitoring:** Both participants and their caregivers monitored seizures by utilizing pen and paper. One of the participants (P2) marked his calendar every time an episode occurred, while the other participant maintained notebooks with dates, frequency, and severity of the seizure.
- **Technology:** Participant P2 reported using the embrace watch to detect and monitor seizures. In some instances, he reported that the watch sent false positives to his caregiver who was alerted via a phone call and a text message. However, this was negated by the caregiver saying that after the notification P2 indeed exhibited post-seizure symptoms.

Participatory Design Considerations

Several recommendations can be inferred from the focus group experience as follows:

- **Gender consideration:** Epilepsy is not specific to a gender; therefore, recruitments of participants and caregivers should be equally representative across

gender. Given Saudi Arabia's gender segregation cultural norm or policy, it might also be beneficial to recruit an equal number of male and female designers for the participatory session to overcome any gender biases.

- Timing: People with epilepsy react differently post-seizure. This reaction is often monitored by the caregiver and was recalled during the focus group discussion. It is considered quite crucial to time the participatory design sessions at various intervals to accommodate the various seizure recovery periods of the participants.
- Incentive: Due to the negative social stigma of epilepsy in the culture and subsequent secrecy, stronger incentives should be provided to entice transparent participation. The focus group helped understand the motivation of the participants, which can be used to recruit more participants.
- Sensitivity training: Misconceptions about epilepsy are based on insufficient or inaccurate information that can perpetuate inappropriate interaction. Thus, it is vital that recruited designers are given the necessary sensitivity training.

Conclusion

The position paper summarized the thematic results of a focus group discussion with two individuals with epilepsy and their designated caregivers (four people in total). During the discussion, the stigma of epilepsy was addressed and issues relating to independence and discretion were also discussed. The focus group findings highlighted several considerations that need to be undertaken to garner maximum benefit from participatory design sessions for the

purpose of designing a wearable device for seizure monitoring and caregiver alert notifications.

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Understanding Fitness Tracker Usage in Arab communities

**Passant El.Agroudy¹, Yomna Abdelrahman¹, Jasmin Niess²,
Yasmeen Abdrabou³, Sarah Diefenbach², Paweł W. Woźniak¹**

¹University of Stuttgart, Stuttgart, Germany,
firstname.lastname@vis.uni-stuttgart.de

²Ludwig Maximilian University of Munich, Munich, Germany,
firstname.lastname@psy.lmu.de

³German University in Cairo, Cairo, Egypt,
yasmeen.abdrabou@guc.edu.eg

Abstract

Our current understanding of how users interact with fitness trackers is based primarily on participants from Europe and the US. Investigating personal informatics in other cultures can yield additional insight. In this paper, we present an ongoing study of user experiences with fitness trackers in North Africa. We use semi-structured interviews and surveys to understand the motivations for tracking and validate the state-of-the-art western models of personal informatics. We discuss initial insights such as the scarcity of fitness trackers in Egypt and how dedicated devices are often replaced by smartphones. We also highlight opportunities for using social movements to investigate technology. The study is a step forward to encourage reflecting cross-cultural design needs, particularly the Arabic agenda, on HCI theories and technologies.

Author Keywords

Fitness tracker; Wellbeing; well-being; Personal informatics;
Reflection; Lifelogging

ACM Classification Keywords

H.5.m [Information interfaces and presentation (e.g., HCI)]:
Miscellaneous



Figure 1: Our study uses interviews conducted on site by North African colleagues to investigate the role of fitness trackers in Arab communities.

Introduction

Most studies about fitness tracking conducted so far have used mainly Western user samples (E.g.: [3, 2, 4]). The derived models are possibly only valid for users in the Western cultural sphere. Since fitness tracker usage is not limited to Western societies, we think it is important to explore usage patterns and experiences in other cultures. As seminal work in HCI has shown that looking at artefact ecologies in different cultures can yield a better understanding of technology and interaction per se [1], we explore facets of fitness tracking across cultures. Furthermore, various cultural contexts could change perspective on complex mechanisms and behavioural patterns, supporting us to figure out similarities and differences in usage between cultures. This, in return, could shift the focus to other aspects of the tracker experiences and inspiring better design decisions.

To that end, we are now conducting a study of user experiences with fitness tracking in North Africa. Our methodological approach is twofold: we are conducting language-tailored semi-structured interviews and an online survey with fitness tracker users from the Arabic world and with users in the West. Our study explores the values the design of fitness trackers is expected to embody and the motivations behind starting tracking. We will compare the results of the two samples and explore culture-specific differences and similarities to design for personal well-being. This will also enable us to verify if current models of personal informatics, based primarily on participants from Europe and the US, are still valid in different cultural settings.

Existing Models for Personal Informatics

A considerable research effort has been undertaken to understand personal informatics in a Western context. Li et al. [3] defined the term *personal informatics* as “*informatics systems that help people collect personally relevant information for the purpose of self reflection and gaining self knowledge*”. They proposed five stages to identify such systems: 1) preparation (defining motivation for tracking), 2) collection (collecting relevant data), 3) integration (preparing and combining the data into information), 4) reflection (exploring the synthesized information), and 5) action (choosing what to do based on the given information). They identified barriers such as lack of motivation, self criticism and misinterpretation of the data are potentially culture-dependent. Epstein et al. [2] extended the model, calling it *lived informatics*, to cover for tracking practices not motivated by behavioural change. Similarly, they proposed five stages: 1) deciding to track, 2) selecting a tool for tracking , 3) tracking and acting (combines collection, integration and reflection from Li’s model), 4) lapsing (new stage describing temporary or permanent breaks from tracking), and 5) resuming the tracking. Niess & Woźniak [4] extended stage 3 from Epstein’s model (goals), specifically for fitness trackers, proposing the *tracker goal evaluation model*. They proposed three simultaneous levels to describe fitness goals with increasing level of abstraction: basic needs, qualitative goals and quantitative goals. While these model offer a comprehensive understanding of personal informatics, they are based solely on work that studied European and US participants.

Study Design

In our study, we focus on exploring the applicability of the existing models of personal informatics in the context of Arab countries. We aim to compare the findings in our prior work (E.g.: [4]) to our findings in a North African context to answer the following research questions:

1. What are the (culture-specific) design constraints when designing for personal well-being to encourage reflection?

2. What are the (culture-specific) design constraints for *selecting well-being artefacts*?
3. What are the (culture-specific) design constraints for *protecting data privacy*?
4. Are there (culture-specific) motivations behind adopting and/or relapsing during well-being tracking experiences?

Methodology

Our design is two-fold. First, we use **semi structured interviews**. We aim to interview 20 participants. An interview focuses on aspects such as: how the participants select their trackers, what they track, how they reflect and understand their data and how it impacts the quality of their lives, their privacy concerns and the reasons for their logging relapses. We conduct live and online (voice and/or video) interviews lasting for ca. 45 minutes. The interview language is either English or Arabic (local dialect) or a mixture of both (code switching). All interviews are translated to English then coded to identify themes. Next, we use **digital surveys** to: 1) validate the trends from the interviews and 2) validate the previously discussed personal informatics models. We aim to have at least 60 participants covering North Africa. The survey will be available in Arabic and English.

Participants

We recruit participants using external fitness trackers for a minimum of three months and/or has lapsed for less than 2 months. Participants vary from professional athletes to regular technology enthusiasts. We compensate participants by coffee or candy.

Insights and Challenges

We conducted fifteen interviews so far ¹, all of which were in Egypt. Figure 2 shows an overview of their demographics. We discuss below practical challenges we faced and some preliminary results from phase 1 (the interviews).

Recruitment of participants

Initially, we planned to recruit the participants via word-of-mouth within our social circle and their extended circle. However, finding participants fitting our set profile was challenging. Thus, we also reached out to social movements for fitness such as 'Cairo Runners' ². Additionally, we published the call over social media groups on Facebook related to health, well being and cooking. As expected, a challenge now is balancing the sample as it is mostly from the cultural-fitness move 'Cairo Runners'. Another challenge is finding female participants to gender-balance our sample. However, this might indicate a cultural trend in using trackers.

Scarcity of standalone fitness trackers

We received Facebook comments asking where potentially interested participants can find fitness trackers in Cairo. We noticed that brands available in the stores are limited and excessively expensive (compared to European prices). The reason might be the currency difference as the trackers are usually imported. Thus, online platforms³ are the main source of buying a tracker , which are not commonly used in Egypt.

This problem impacted the recruitment. Initially, we were looking for middle-class users. However, we noticed from social media comments that the price range of a dedicated

¹until 11.02.2018

²An initiative in Cairo that encourages people to run for an hour on Friday (weekend day) in a new place in Egypt. <http://www.cairorunners.com/>

³E.g.: <https://egypt.souq.com/eg-en/>

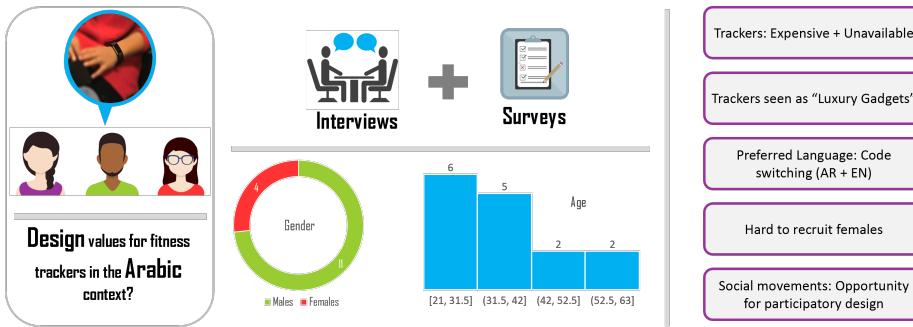


Figure 2: Overview on the study design and the main insights / challenges. The current sample is nine participants from Egypt.

fitness tracker placed them in the “luxurious gadgets used for bragging” (*sic*) category. We received numerous comments inquiring about the “extra value worth the money spent” of a fitness tracker in comparison to a mobile phone. For example, a participant commented that her colleagues think she bought an Apple watch only to look cool. Thus, the cultural factor impacts the range of users interested in fitness tracking. We also noticed that 100% of our participants bought the trackers outside Egypt.

Language of interviews

We gave the participants a choice to choose the interview language from: Arabic, English, Both (code switching). 100% chose code-switching. We noticed during the interviews that the technical/product terms such as “Fitness tracker” do not have an easy well-known translation by the laymen in Arabic.

Next steps

To balance our samples, we will widen the recruitment circle for the study using *two* strategies. First, we will publish in Facebook groups with high visibility regardless their content. Second, we will include participants using mobile

phones explicitly and regularly for tracking as this appears to be the most common fitness tracking form in Egypt. The study is a step forward towards bridging the gap between custom design needs for Arab communities and western standards by studying user needs in an Arab context.

Conclusion

In this work, we are investigating the impact of culture on the values and goals ascribed to fitness trackers. We posit that current models of personal informatics may not apply in an Arab context. We presented our study design that uses semi-structured interviews and a survey. So far, we found that adjustments to our recruitment strategy are needed to accommodate the Arab population. In the future, we will use a diverse sample of users to build a holistic understanding of the fitness tracker experience in North Africa.

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Using a Blended Learning Model in Mental Health Awareness for Syrian Refugees

Khaled Al-Qazzaz

QED, ED
Oakville, ON L6H5R7, Canada
khaled@q-ed.org

Nermeen Abdelbary

QED, Program Manager
Oakville, ON L6H5R7, Canada
nermeen@q-ed.org

Noheir Elgendi

QED, Research Coordinator
Oakville, ON L6H5R7, Canada
noheir@q-ed.org

and cultural differences, war trauma, displacement and family separation, mental health stigma and limited resources.

This paper discusses QED's "Women Wellness Project" as an example of the use of the blended learning model in mental health awareness programs directed to Syrian refugees. This paper shows how this model helps in overcoming the challenges facing mental health awareness programs and achieving the program's desired goals. The program is made up of three components, each one includes a series of e-learning videos that are delivered through a blended model of e-learning coupled with in-person workshops.

Abstract

Mental Health Awareness programs help with the understanding of mental health needs, overcoming stigma and identifying new cases in time for early treatment. Some of the challenges to disseminating mental health awareness to Syrian refugees in Canada are language

This report discusses the pilot runs for this program to test this approach to program delivery in two cities.

Keywords

Refugees, mental health, blended learning, awareness programs

Introduction

The Canadian not for-profit sector is the second largest in the world – in 2012 it contributed \$176 billion to the national economy accounting for 8% of GDP, employing two million

Canadians and benefiting from over 13 million volunteers. Despite the significance of these figures, the not- for profit sector is increasingly faced with challenges that impede growth and sustainability, leaving marginalized populations without access to life saving and life changing services. Among the most prominent challenges facing the not for profits is the access to long-term or unrestricted funding, the limited resources, Access to and retention of volunteers in addition to changes in demand and the growing need for

service, technology limitations and limited resource sharing and partnership opportunities.

Al-Qazzaz Foundation for Education and Development (QED) is a Canadian not for profit organization. QED mission is to build, connect and empower individual and communities to foster equity of access and outcome. This is done through innovative education and development projects, rooted in the values of human rights, democracy and social justice.

Blended Model for Education:

Blended learning combines in-class, face-to-face instruction with learning via electronic media in a purposeful and complementary way to enhance student engagement. (Garrison and Vaughn 2008).The term blended learning has a broad range of meanings in the current educational research literature, and institutions tend to use the term in a way that is useful in their own context (Graham, 2013).University of Central Florida describes mixed-mode or blended learning as a modality that “*combines the effectiveness and socialization opportunities of the classroom with the self-directed and active learning opportunities that the online environment offers*” (Dziuban, et al, 2004). Blended courses do not follow a single formula. Some use the online environment for content or lecture delivery and the classroom for active learning opportunities (sometimes known as the flipped classroom), whereas others use the face-to-face time for lectures and the online environment for discussions, assessments, or other learning activities. Some use a combination of these two approaches. Blended learning, also referred to as hybrid learning is a combination of learning modalities involving face-to-face instruction and Web-based learning delivery, and is carefully designed using a customized instructional strategy that leverages the strengths of each. When implemented effectively, a

blended learning program can make better use of instructional resources and facilities, and increase class availability thus speeding up the pathway to graduation for students (Dziuban et al, 2004).

Blended learning is a method that has proven to be not only effective in terms of learning outcomes, but ranks high on ratings of satisfaction with students and instructors. (Dziuban, Hartman & Moskal, 2004) Although the delivery method is different, the *learning outcomes* for a blended course are intended to be consistent with those for a fully face-to-face version of the course (or fully online). Similarly, while the nature of the learning hours may be different, the number of *student learning* hours should be the same. There is evidence that students learn more effectively and have a higher satisfaction when courses are blended, as compared to online or traditional, face-to-face courses (Garrison & Kanuka, 2004).

However, as a matter of actual practice, It turned out that not all learners engaged in blended learning have a sufficient level of motivation to study. For this segment of students blended learning is a weak method since motivation is a critical factor here. Managing motivation and creating a personal curriculum for every student sometimes becomes a real problem. So, as all educational methods, the blended learning has its own advantages and disadvantages that can be highlighted here:

The Al-Qazzaz Foundation for Education and Development Approach

Rationale

The boom of the digital revolution and smartphone has triggered huge changes in how we access, consume, discuss, and share content and the advances in the

education technology has also enabled online education to become more manageable and accessible than ever before.

As e-learning becomes an important educational tool in the academic and business worlds, the Al-Qazzaz Foundation for Education and Development (QED) aimed to deliver the benefits of innovative education technology to nonprofits and to become the education technology partner for them.

This approach was adopted by QED based on the analysis of the current gaps and challenges facing the not-for profit world in Canada and the need to increase accessibility and efficiency of educational programs provided by these not-for profits. The challenges included the limited resources, high volunteer turnout, cultural and language barriers, limited accessibility, and high costs. These challenges are accompanied with an increasing demand for the services provided by the not-for profit organizations.

QED chose the blended learning model which combines in-class, face-to-face instruction with learning via electronic media in a purposeful and complementary way to enhance student engagement. (Garrison and Vaughn 2008).

QED used the blended model to overcome the disadvantages of the face to face or the online approach alone. Blended learning is a method that has proven to be not only effective in terms of learning outcomes, but ranks high on ratings of satisfaction with students and instructors. (Dzuiban, Hartman & Moskal, 2004).

In addition to the objective of increasing accessibility with limited resources, QED believed that the use of the blended approach in the programs designed for disadvantaged and marginalized communities (eg. the

Syrian refugees) around topics like the mental wellness or parenting will help overcome the stigma related to these topics and the barriers to expression and engagement in such programs.

Blended learning University of Central Florida describes mixed-mode or blended learning as a modality that "combines the effectiveness and socialization opportunities of the classroom with the self-directed and active learning opportunities that the online environment offers" (Dzuiban, et al, 2004).

The blended approach also provide customizable tracking and assessment tools that allow for quantitative and qualitative analysis. QED believe this fosters greater equity of access and outcome, which ties into its vision.

The Mental Wellness Project

QED used the blended learning model to deliver its "Mental Wellness Program" which aimed to strengthen community-based support and foster positive social interaction. The program placed a strong emphasis on building on the strength and resilience of refugee women, and providing them with the education, techniques, tools and activities to promote positive thinking, mental wellness, and better eating and exercise habits for healthier lifestyles. The program also helped refugee women set personal goals and assisted them in discovering the necessary parenting skills in a new Canadian culture.

The standardized e-learning components of the program were made to ensure that essential educational material was streamlined. However, these educational videos were presented in small workshops with trained professionals to ensure effective outreach

and a chance for personal expression and questions and answers. All e-learning material were hosted on an open platform and remained available to participants even after the completion of the program.

Project Description

The Mental Wellness Program was culturally customized and accessible for Arabic-speaking Syrian refugees in Ontario in two cities: Mississauga and Guelph. QED has partnered with The Syrian Canadian Foundation and the Arab Community Center of Toronto for dissemination of the project to the Syrian refugees in the two cities. A total of 24 participants attended the program workshops in the two locations (Mississauga: April, 2017, 17 participants and Guelph: September, 2017, 7 participants). Mississauga program included participants of both sexes while the Guelph sessions included women only participants.

The program was made up of three components, each one included a series of e-learning videos which were disseminated through a blended model of e-learning paired with in person workshops. The videos were presented and then discussed in small workshop settings run by trained facilitators and counsellors.

The first component of the program was the "Mental Wellness First Aid Kit" which included a series of e-learning videos that help overcome mental health stigma, teach self-care concepts and introduce tips on parenting traumatized children. The content of that part was made based on the results of the research done by Dr. Alaa El-Khani and her colleagues at the University of Manchester in the UK. The Mental Wellness First Aid Kit developed at the University of Manchester was based on information from three sources: parenting needs identified by research, evidence based theories

of parenting and feedback from recently resettled refugee families. It encouraged participants to overcome mental health stigma, it introduced self-care concepts, and also provided tips on how to parent traumatized children.

The videos were delivered in Arabic by a female Syrian doctor using the Syrian accent. All the examples used in the content were customized to the Syrian refugee's culture. The workshops were facilitated in the presence of an educator, a psychologist/social worker and a leader from within the Syrian community.

The second component of the program included tips for Healthy Living. The content was delivered in the form of e-learning videos that promoted healthy living choices including nutrition tips. The videos were presented by an Arabic-speaking naturopathic doctor specialized in holistic nutrition. Again, all the examples were customized to the refugee culture. A facilitator and dietician facilitated the discussion to provide tips on healthy meal preparation, answer questions on healthy living.

The third component of the program included e-learning videos on the therapeutic effects of yoga taught in Arabic. The videos highlighted the importance of yoga as a therapeutic method for stress relief and mental wellbeing. Therapeutic yoga sessions took place during all sessions of the program, to help put into practice the concepts of healthy living. The participants continued to have access to these Arabic videos yoga sessions and were encouraged to continue their yoga practice. At the end of each session, an Expression Circle was done to allow for the participants to socialize and share their stories.

To ensure accountability and effectiveness, participants completed program surveys and feedback forms that

were analyzed by the QED team. On-site childcare, and on site access to facilitators, counsellors, psychologists and dieticians was also provided.

QED has produced a manual, outlining suggested best practices for project implementation. This manual is to be used by implementation partners.

Discussion

The "Mental Wellness Project" is an example of the use of the blended education in not-for profits and specially in services directed to the disadvantaged communities.

The project was designed to be a culturally customized, highly accessible, program to support the mental and physical wellbeing of Syrian refugees across Ontario and support their social integration.

The cultural customization done through the production of the videos presented by the Syrian doctor in the Arabic language and the Syrian dialect with the use of references from the participants' culture allowed for more engagement and interaction with the material provided. This was obvious within the active discussions and the feedback from the Arabic e-learning videos presented by a Syrian doctor and using examples related to the Syrian culture. The presence of the online component of the project allowed for sustaining this cultural customization all through the program in the two locations with minimal human resources.

To increase accessibility, the participants were given access to the videos after the workshops. The standardized online component as well as the project manual allow dissemination of the program to a wider geographic area while maintaining the same quality of the content and with no travel expenses. The Mental Wellness Program has been made accessible also by

overcoming language and communication barriers through customization of the content.

One of the challenges facing the not-for profits is the limited partnership opportunities. The use of the blended model in the "Mental Wellness Project" allowed for easier partnership with different organizations in different geographic locations while maintaining the same quality of the deliverables.

The "Mental Wellness Program" aimed to overcome the stigma associated with the mental wellness topic. The online component of the program allowed for the privacy and anonymity needed for some cases, while the face to face part gave a space for more engagement and interaction with the specialists, counselors and other participants.

The "Mental Wellness Project" was designed based on the research done by Dr. Alaa El-Khani's and her colleagues research. The use of the blended education model allowed for the conversion of a highly intellectual materials into customized videos that meets the language and cultural needs of the participants.

The use of the blended model helped overcome the passivity of the online alone model. The face to face workshops balanced the disadvantage caused by the time flexibility and lack of commitment the participant might have with the online model alone. The workshops created a time frame for the program while the online part allowed the participants to have access to the content after the program is done.

Conclusions and Recommendations

A blended program can be the best of both worlds, and though a significant undertaking, once implemented

successfully, such a program has significant benefits for the institution and students. Students embrace flexibility, embrace being in a connected world that the web provides, it's no wonder that blended programs rank high in learning outcomes and satisfaction.

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What Do Users Want? Preliminary Analysis of User Expectations of Hospital Websites in the State of Kuwait

Fatima A. Boujarwah

College of Computing Sciences
and Engineering
Kuwait University
f.boujarwah@ku.edu.kw

Dari Alhuwail

College of Computing Sciences
and Engineering
Kuwait University
dari.alhuwail@ku.edu.kw

Zainab AlMeraj

College of Computing Sciences
and Engineering
Kuwait University
z.almeraj@ku.edu.kw

Abstract

With people increasingly using the Internet to find information about their health, the need to satisfy their expectations has become increasingly important. Enhancing user experiences can be achieved by knowing who the audience is. This study takes a first look at hospital website usage in Kuwait, in an attempt to offer recommendations to improve usability, design, content and interactivity. A total of 174 users completed a survey that explored their expectations and thoughts of hospital websites they visited. The analysis showed that most users visited hospital websites to make an appointment, and ease of use was the most important factor impacting users' experiences using hospital websites. Further, the data implied that that users currently do not see hospital websites as places to find health information, even though this should be one of the most reliable sources for seeking health information for patients.

Author Keywords

Informatics; Hospital; Websites; Consumers; HCI; Arab; ArabHCI; Health Informatics; Usability.

Gender		
Female	152	87.36%
Male	22	12.64%
Education		
Primary or less	0	0
High School	9	5.17%
Diploma	11	6.32%
Bachelors	98	56.32%
Masters	45	25.86%
Doctoral	11	6.32%
Preferred Language		
Arabic	93	53.45%
English	81	46.55%

Table 1: Respondent Demographic Information

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction

The pervasiveness of the Internet in today's society means that the first interaction many patients have with a hospital is via the hospital's website. Patients are increasingly using the Internet to seek health-related information [1–4]. This creates opportunities for hospitals to engage patients via informative and educational online platforms. Hospital websites are often a good reference for general information about the hospital, its services, and its clinicians [5]. These websites could also serve as a good medium to educate and inform patients, their families, and the general public about diseases, procedures, medications, and healthy lifestyles [6–8].

Despite the promise of greater information availability, consumer-focused healthcare websites have not advanced as quickly as compared to other sectors and industries [9]. To begin to evaluate the websites that are currently available, it becomes important to understand the expectations users have of hospital websites. With this in mind, we interacted with 174 visitors of hospitals in the State of Kuwait via an online survey. This study is the second in a series of studies we plan to conduct, with the goal of ultimately developing suggestions and guidelines that may lead to the development of hospital websites that better serve the needs of the local community. The methods used and highlights of the data are presented first. They are followed by a preliminary analysis, and a discussion of the specific challenges faced when doing Human Computer Interaction (HCI) work in the Arab world. Finally, conclusions and future work are presented.

Methods

We developed a short survey to help us better understand user expectations of hospital websites in Kuwait. We chose this method of data collection because, when done properly, it can be an effective and efficient way for us to make inferences by gathering information from a small subset of the larger group. As such it is an ideal first step to inform the design of future phases of the research.

The survey was designed to give us insights into what motivates people to use hospital websites, and which factors users believe influence their experience using websites. The factors included;

- Language: e.g. Arabic, English etc.
- Layout: position of the information on the page
- Design: fonts and other stylistic features
- Colors: color schemes used throughout
- Content: the information presented
- Features: site functionality, such as search
- Usability: ease of using the website

The second part of the survey called for participants' evaluation of websites they have visited. Participants' basic demographic information were also collected. The survey was developed in English using Google forms, and subsequently translated into Arabic. The translation was performed by a professional service and revised by two expert researchers. This allowed participants to choose the language they preferred to respond in.

The survey was written such that basic consent information was presented in the introductory statements. Since a written consent form would have been the only identifying information connecting the

Purpose of Visit

Make an appointment	51	29.31%
Check the availability of a medical specialty	37	21.26%
Search for a doctor	31	17.81%
Prices and Fees	20	11.49%
Obtain Contact Information	17	9.77%
Explore treatment options	13	7.47%
Obtain Health Information	5	2.87%

Table 2: Most important reason respondents visited a hospital**Factor**

Ease of Use	54	31.03%
Content	35	20.12%
Language	31	17.82%
Features	26	14.94%
Layout	20	11.49%
Design	6	3.45%
Colors	1	.57%

Table 3: Factor participants indicated MOST influenced their experience using a hospital website. Note: one Arabic respondent entered "reliability when making an appointment" an option not listed.

respondent to their answer this was the most appropriate manner to obtain consent. Ethical approval was obtained from the Ethical Committee at the Health Sciences Centre at Kuwait University.

The anonymous online survey was distributed simultaneously via social media platforms (e.g. WhatsApp, Snapchat and Facebook) using a convenience sampling snowball approach. Data was collected over a 72-hour period.

Data Collection

A total of 174 responses were collected; 92 Arabic and 82 English. The respondents were predominantly female (over 87%), with an average age of 35, and 89% having a bachelors degree or higher (refer to Table 1).

We began by inquiring as to which features users expected to see on a hospital website. Over 70% indicated that they expected to be able to; find a doctor, check the availability of a medical specialty, find out about prices and fees, obtain contact info, and make an appointment. Notably, the least chosen features were those related to health information (i.e. "obtaining health information" and "explore treatment options").

Participants were then asked the most important reason they visit a hospital website (refer to Table 2). The majority of participants (29.31%) indicated that they visit hospital websites with the intention of making an appointment. Again, here we observe that participants did not feel the need to visit hospital websites to obtain health information (3%).

Table 3 shows the responses for the factor that the participants indicated most influenced their experience using a hospital website. It can be seen that 31% of respondents (54 responses) indicated that ease of use is the main factor influencing their experience.

The final set of questions elicited users' past experiences using hospital websites. While 61% of English respondents had previously visited a hospital website in Kuwait, only 40.9% of Arabic respondents had done so. Both sets of respondents mentioned searching for a doctor most often as their reason for having visited the site.

Respondents were then asked to provide a detailed evaluation of the site they visited, with respect to the factors discussed earlier. This discussion is beyond the scope of this paper and is reserved for future work.

Discussion

Through this study we were able to gain insight into the factors that drive users to visit hospital websites and the factors that most influence their experiences on the site. It is immediately apparent from the data, that users currently do not see hospital websites as places to find health information, even though this should be one of the most reliable sources for seeking health information for patients. Given the responses, users are using the sites mostly as a directory of clinicians and medical specialties, and to make appointments.

Anecdotal evidence can begin to explain why people may not be visiting hospital websites to obtain health information. Physicians are very highly respected in Arab society; people rarely think to question a physician's assessment of their health or their

recommendations. This makes personal study of one's health status, and "being an informed patient" not something many strive towards. There is a need for increased awareness in this area, to empower the community to take a more proactive role in their health-related matters.

It is worthy to note that effective UX/UI design to enhance patient interaction whilst visiting hospital websites remains a prime issue in web and mobile development [10]. Pertaining the Arab region, a rather cultural challenge involves earning user trust of the hospital websites themselves. It is important to build on various graphical and structural design issues, as well as reviews and recommendations by users to establish this trust [11].

It was also seen that English respondents were more likely to have visited a hospital website in the past. This discrepancy between respondents according to language, is consistent with the fact that many of the hospital websites in Kuwait are available only in English. We observed this fact when we conducted an expert evaluation of hospital websites in Kuwait, as a precursor to this study.

Further, unique challenges arise when doing HCI research in the Arab world. One example is the importance of balancing the needs of the society with those of the individual. Kuwait is quite diverse, with less than 50% of the population being Kuwaiti and numerous languages being spoken. However, Kuwait has a highly communal society in which the community, and communally held beliefs, like those with regards to physicians, often come before the individual. This leads to it being important to not only take into consideration

user experience, to respect the diversity, but also the community experience. All these factors must be taken into consideration when evaluating systems, and more importantly when developing implications for design.

Conclusion and Future Work

There are great opportunities for hospital websites to be channels through which to educate the community and empower patients to be proactive in their healthcare. This study is a first step towards shedding light on how websites are actually being used in Kuwait and developing recommendations for ways in which hospitals can improve their websites to better meet patient's needs.

Taking into consideration these insights, and by tackling the challenges, we will continue this work. Our next steps will be to interact with users and obtain in person, detailed usability evaluations and overall assessments of hospital websites in Kuwait. The ultimate goal is to offer recommendations and guidelines that may help hospital websites better serve the community in Kuwait.

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Who is a refugee? Upon the political implications of PD for integration

Anne Weibert

University of Siegen
Siegen, Germany
anne.weibert@uni-siegen.de

Volker Wulf

University of Siegen
Siegen, Germany
volker.wulf@uni-siegen.de

Max Krüger

University of Siegen
Siegen, Germany
maximilian.krueger@uni-siegen.de

Abstract

Focusing on the development of a digital platform contributing to alleviate the difficulties of integration for refugees, migrants and the host society in a medium-sized city in Germany, we reflect on the political aspects emerging as part of its participatory design process. Considering the power dynamics among researchers, local professionals and volunteers, and not least migrants and refugees, we carve out key elements to sustain an initiative of this kind.

Author Keywords

Integration; Migrants; Participatory Design; Politics; Refugees.

Introduction

Refugees have featured more prominently in HCI and design research over the course of the past two years. An "explosion of social and technical innovation" [2:I] sought to address the European Refugee Crisis, and continues to evolve to aide newcomers in their arrival and integration. Three main areas of innovation have developed, helping newcomers 1) to navigate local services [e.g. 1,17,22], 2) to get into work or training [e.g. 6,9,16], and 3) to get access to community-based housing and services [2], and connect to and integrate with the new surrounding [e.g. 5,12]. An increasing share in this innovation is seeking to include the

newcomers into the design process, designing not only *for* but *with* refugees [e.g. 6,11].

Focusing on the power dynamics immanent to the participatory design process of a digital platform aiding refugees and newcomers in their arrival and integration into a new surrounding, we suggest key elements necessary for the success of such an initiative.

Related Works

Who is a refugee? And why does it matter?

UNHCR defines refugees as persons "owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country...." [19:16]. Migrants are persons who have relocated in a different country for other reasons than the above [8]. This differentiation entails differences in access to help, as well as in public perception.

Participatory Design and Design Things

Ever since its advent in Scandinavia, Participatory Design (PD) was understood to be a process that is inherently political. Its roots are in a movement to increase democracy at work in Scandinavian countries, by working with trade unions to include workers in the design of technologies at their workplace. It specifically took the side of those with less resources to shape this process, and increase their power to influence it [4,10]. Since then, the idea of Participatory Design has moved out of the workplace and into society at large [4].

A crucial element of this approach is the idea of the design "Thing", where Thing is not understood as the

artefact to be designed, but reflects the origins of the word Thing as governing assemblies in pre-Christian Germanic and Nordic societies where disagreements were discussed and political decisions made [14]. Their role is to create space to constructively deal with disagreements [4].

Method

The project setting

Our project is based in a mid-sized city in western Germany. 200-250 refugees per week were arriving in the city in fall 2015, when the city was named one of the country's hubs. There, refugees were first welcomed, registered and then distributed to refugee facilities in the city itself and in other cities across the country [15]. This presented a huge logistical challenge with regard to providing housing, medical and social help. Large numbers of the city's population started to volunteer their time and work together with professionals to tackle this challenge.

We are developing Nett.Werkzeug in order to ease processes of arrival and integration. The digital platform contains a set of tools tackling issues such as finding housing, suitable language classes, planning a visit to the doctor and more. Its responsive design makes it accessible via smartphone, which is the most common device among refugees.

The participants

Members of all relevant stakeholder groups are involved as participants in our design process. This includes refugees and migrants arriving and settling within Germany. The majority of refugees – and the initial group of people we thought would use the platform - is from Syria, Afghanistan and Iraq. Soon

however, we saw that there are many other groups that would equally benefit. These include migrants from Bulgaria, Romania, and Morocco that are now also engaged in our design process. Also involved are volunteers as well as professionals aiding the refugees in the processes of arrival and integration through a variety of activities ranging from accompanying people to visit to the doctor or officials, translations and offering opportunities to learn the German language.

The ages are widely distributed, ranging from 20 to above 65. Most of the participants with a refugee background are 20-30 years old. While most of them have been in Germany for about two years, some came much earlier, and some arrived much more recently. Technological experience and computer literacy [7] also varies widely, across all stakeholder and age groups.

The design process

Fostering participation as digital empowerment [15], our design process is predicated on principles of participatory action research [13,20]. Thus, we are taking digital empowerment to the grounded [21] design stadium of the platform. Our design process took the shape of a participatory process involving all relevant stakeholders. It includes several elements to achieve the above described objective: 1) We meet regularly to discuss current issues and plan further steps. The invitation to participate is open and widely shared. 2) We offer opportunities to improve technical skills and understanding. As we design a specific technological application, technological know-how is crucial to allow full participation in design decisions. 3) We actively manage a shared language: this includes (re-)evaluation of the main language spoken at meetings, the possibility to speak through a translator,

and also entails a jointly created understanding of what it is that we do, our goals and means to reach them.

Findings and their Discussion

Two topics emerged in various forms repeatedly throughout the design process. These are 1) the implications of labelling someone as "refugee" and 2) issues of power that emerged in collaboration between volunteers and participants with a refugee background. These issues are certainly not easy to divide in such a strict manner and overlap in several ways. For clarity's sake, we will however discuss them separately.

The label Refugee

The issue of labelling was first encountered when discussing the question: who is this platform for? Part of the initial design team was in favor for the platform to be exclusively for "refugees" meaning people who have escaped violence in the Middle East and Central Asia. Others who are new in Germany, e.g. people from Eastern Europe were not considered to be the target group. While this issue has very practical implications for the platform, such as the languages in which it will be available, it also affects participation in the design process: being a member of the primary user group legitimizes participation in the design of it.

The use of the word refugee was discussed again with regards to the URL of the platform. It was chosen early on, at a moment where the design team consisted predominantly of volunteers. The chosen URL contains the German word for refugees, "Geflüchtete". At a later stage, it was noted by participants that this choice is problematic: Many of those that this word was meant to describe felt disenfranchised by being labelled refugee. In their understanding, the process of

integration was about shedding the label. Their refugee identity was perceived as the past, true only for a specific period. When this topic was debated in a design team meeting, the main differences were no longer between volunteers and migrants, but between participants from the Middle East: one party refused the label vehemently, expressing the pain and anger felt every time when being referred to as refugee. The other party embraced the label as part of their identity.

The power to help

The question of designing *for* or *with* the people that constitute the prime target group of an artefact has been at the core of Participatory Design: PD represents a clear stance for designing *with*. Implementing this is not always easy: As the design team grew in size and diversity, it became evident that some members of the team had an understanding of themselves as *helping*. Being in a position to help also means to be in a position of power, and distributing this power is essential for the design to be participatory. The issue manifested itself in a few concrete questions:

Where are the meetings held? An early choice for the regular meeting place was the town hall. While this might represent a very democratic place, it is also a place that presents itself unfamiliar or even not welcoming to newcomers. The choice of place can serve thus as invitation or exclusion.

Who has editing rights? The tool used to build the platform allows for various levels of access, from *Admin* to *Editor* and *Author*, which result in different levels of control of the content: an author can suggest texts an editor needs to approve. Admins have full control and can even revoke editing rights.

What organizational form do we give ourselves? An individual as the sole responsible represents a very centralized power structure, whereas an association requires a more distributed structure, with various decision-making organs and -processes.

While the (de-)centralization of power, and its relationship to remaining in a position to "help" was important in the debates, it is also crucial to note that it is easy to perceive a more centralized process as more efficient, and distributed ownership as "messy", harder to manage and leading to unsatisfying results. The concern for the quality of the platform was therefore just as crucial as worries about losing the position of "helper".

These issues are not yet fully resolved, and might never be. Their repeated emergence is testimony to that. It is however also testimony to greater participation and evolving trust among the various stakeholders: in the spirit of Design Things [3], the assembly is perceived as a space where perspectives and disagreements can be discussed and dealt with in concrete and constructive ways. Just like in the participatory design process of our platform, where meetings take place at varying locations, the platform becomes available in as many languages as possible and a transparent process has been set up to grant editing rights. Also, an official association with a prescribed governance structure is being formed to sustain the platform's existence.

Conclusion

With the present account, we presented an example of how a participatory design process can become an arena for the political, where people gather around a

shared matter of concern (in our case, the societal integration of newcomers), voice their disagreements and constructively deal with them. The debate is as much about the concrete artefact to be designed as it is about larger issues at stake: participation and agency in the negotiation about what it means to integrate. This, in our perception, is as much in line with the original vision and tradition of Participatory Design [10] as it is with Latour's idea of a Dingpolitik [14].

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