Participate, Collaborate, and Decide: Defining Design Problems in a Syrian Community

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ABSTRACT

This paper discusses an exploratory approach for identifying potential ICT design problems in a local community through collaboration with its members. We are currently participating in the activities of a volunteer community in Syria, where members appropriate Facebook and other online tools to collaborate and organize. In such context, conducting participatory design is not straightforward and needs to be problematized. For instance, what is the desired outcome of participation? Who participates in what? And what are the suitable tools? Here we focus on the value of participation in defining relevant design problems in collaboration with the community. We present our research process where we adopt an ethnographic approach guided by the works of sociologists Howard Becker, Juliet Corbin, and Anselm Strauss. We finally describe how this approach also allows us to move from participant observation towards participatory design.

Categories and Subject Descriptors

H.5.m. Information interfaces and presentation: Miscellaneous.

General Terms

Design; Human Factors

Keywords

HCI4D; ICT4D; Participatory Design; Community Development; Participant Observation; Grounded Theory

1. INTRODUCTION

In this PhD project, we are studying the potential of online tools in promoting local development in Syria. We are observing a community mainly formed by undergraduate student volunteers based in Damascus. Community members use social media and various online tools to learn and collaborate. By participating with the community and observing how they interact, we expect to learn how these tools are appropriated to support community building, and whether there are local needs that these tools don't meet (to review our reasoning for choosing "local community" as a unit of analysis and its connection to community development in Syria, please refer to [7]).

Participatory methods have inspired various tools and processes in

"main-stream" ICT design [4, 12]. Participatory approaches are also valued in ICT design projects seeking contribution to international development. This comes from realizing that the involvement of local communities in defining and conducting international development helps increase sustainability and improves the impact on the quality of life [4]. "Participation" is therefore generally promoted as a main tenet in conducting the design of ICT for development [8, 4].

However, due to increased distance between researchers/designers and target communities, the application of Participatory Design (PD) methods is particularly challenging in ICT4D projects. Professionals employing PD are usually educated in western institutions, added to the fact that the PD tradition was rooted in Scandinavia and motivated by aspirations to democratize the work place by involving workers in the design of their work environments [13, 4]. In other words, the now-conventional PD practices are often not readily-applicable in ICT4D projects, while the choice and appropriation of these practices can still come after sufficient acquaintance with the studied context. This has motivated several researchers in the fields of ICT4D and HCI4D to problematize "participation" and to suggest creative appropriation of participatory methods to suit their goals and realities [13]. Researchers have further deconstructed "participation" in ICT design and development across several dimensions, including the activities involved in participation, and the potential roles of practitioners and community members in the process [4]. This paves the way for others to tailor participatory methods for local circumstances.

In this paper, we focus on one specific issue in the participatory process: finding the design problem through participation with the community. We thus express commitment to an inductive process of research, where the emergence of design problems comes through grounded and participatory inquiry. We would like to move beyond problematizing "participation" when it comes to defining design problems, and to explore *how* this issue can be resolved [13]; especially by building on concrete cases and project stories [8]. Therefore, we view our contribution in showing how we empirically translate the above commitment into concrete research activities. We hence describe our research context, how we are conducting the observations, and how we are using Becker, Corbin and Strauss' works to guide the inquiry. We finally reflect on how this approach allows us to bridge between observation and design by inspiring PD methods tailored to the local context.

2. EMERGENCE OF DESIGN PROBLEMS

Instead of adopting specific design problems early on, we committed to identifying potential problems through participating with the community, while maintaining a general question about the role of online media in supporting community development.

This principle has been discussed in the tradition of Participatory Action Research (PAR) [11]. PAR seeks to achieve a balance between participation (involvement of those concerned with the topics of research), and action (steering research towards solving immediate community problems) [11, 14]. In ICT4D projects adopting PAR, this has been translated into research methods to involve communities with decisions regarding both the nature of problems and how to solve them [14]. Similarly, in the field of HCI and HCI4D, under the titles of "Feminist HCI" and "Postcolonial Computing", recent calls have been made to revise hegemonic practices that HCI researchers might risk to adopt by following conventional design practices with underprivileged communities. Authors suggest more benevolent approaches towards involving communities with the definition of what is to be solved in the first place [1, 9]. Although recommended, this practice is not systematic in HCI4D, where projects often come with time and research constraints that limit the ability for design concepts to emerge from collaboration with the community [4, 8].

Responding to these concerns, we started with an exploratory participatory study to learn about the community, the relations of its members, how they work, and the kinds of problems they face. In the following we describe the research context, and then we demonstrate how we are translating this principle in our study into research activities by adapting participant observation methods.

3. A LOCAL COMMUNITY IN SYRIA

As mentioned in the introduction, our ongoing case study is a local volunteer community in Syria that we refer to as "CTVC"[1]. The community is mainly composed of (but not limited to) undergraduate university students. Members of CTVC share an interest in benefiting from open-source culture and modern online collaborative tools to promote their learning and to contribute to Arab and Syrian societies. CTVC is an evolving community, and consists of several groups, each of which applies ideas about sharing and collaboration within the specific domains of interest of its members. For example, for developing Arabic online content in medicine, members in the "CTVC Medicine" group held collaborative sessions to contribute to Wikipedia's medical articles in Arabic (fig. 2). Together, this and other groups in CTVC host several activities, including weekly presentations (fig. 1), technical workshops, and online collaborative sessions. These activities produce various outcomes including Wiki articles (fig. 2), blog posts, and online Facebook discussions (fig. 4). Groups within CTVC make heavy use of online communication and collaboration tools. Prominently, Facebook groups are used for communication and sharing, for announcing events, and for hosting online collaborative activities (fig. 4). Members also use Wiki pages to collaborate on writing articles, while they use blogs to write about ongoing events and projects. Finally, they use email and message groups for personal discussions, as well as for discussing ideas in length and detail.

Being an emerging community experimenting with ways to collaborate and grow, we selected CTVC as it provides a rich case for us to approach questions about the ways online tools are used to support local communities in Syria. Moreover, it also allows us to explore successful practices as well as problems facing community members, which we can address through design.

The research settings derived in part from the configuration of the research team, where geographic, cultural, or knowledge-related factors played out differently depending on our personal

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[1] The acronym stands for "Collaborative Technologies Volunteer Community" – we use aliases for the sake of privacy.

backgrounds. The first author, Halabi, is a PhD student who grew up in Syria and is currently in his late twenties. He has a profile similar to CTVC members, and benefits from this situation by being able to understand the community activities in detail. Most of the data presented in this paper was collected by him. At the beginning of the research project, he was also able to travel to Syria to meet with some CTVC members. The second and third authors, Courant and Zimmermann, are more experienced researchers who have Swiss backgrounds and did not travel to Syria recently. In a traditional social sciences perspective, they benefit from their cultural distance with the data to raise questions about aspects which may appear normal to community members.
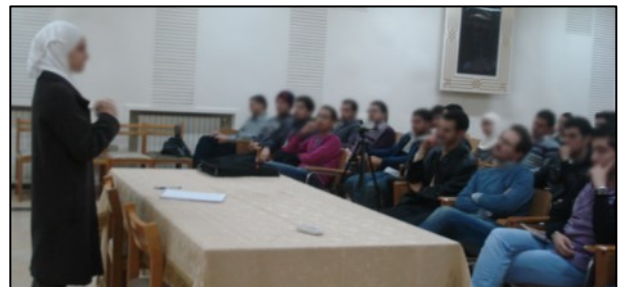

Figure 1. A presentation held by CTVC members among weekly events to introduce ideas about sharing and remixing on the Internet. Courtesy of CTVC, under a permissive CC license.

Figure 2. Excerpt from a wiki article in Arabic titled "Dental Implants", written by the "CTVC Medicine" group.

4. PARTICIPANT OBSERVATION

Having committed to allowing the emergence of design problems through close contact with the community, we adopted a classical ethnographic approach to collect data through participant observation [10]. By seeking an insider's view through participating in community activities, this offered us a valuable window into CTVC while prioritizing the visions of its members.

In the spring of 2011, the first author came in contact with one of CTVC's members on a Syrian forum for computer science students. The member introduced us to the emerging community which had a Facebook group. Over the second half of 2011, the first author communicated with the moderators of the community over email, text chat, telephone, and Facebook. This initial phase helped us learn about the structure of CTVC, its purpose, and its activities. Although activity in CTVC took place on various online media, Facebook groups were and remain a central point for communication and sharing. Therefore, joining these groups was a main entry point to start participating in and observing activities.

Following online activity proved to be a challenging task. In our research team, Zimmermann noted the challenges of tracking the design of social networking sites since the design and content change continuously [15]. In the same sense, online social

interaction is always live and evolving. This makes it necessary to track and record online interactions happening in CTVC, and the online content produced by its members. We are therefore taking screenshots of Facebook pages, Wiki pages and blog posts, and also taking daily notes to summarize ongoing activity. In another work, Zimmermann shows that this focus on the materiality of online objects by collecting screenshots is also productive to study and understand culture and cultural differences [16]. As in our case, collecting material samples on the use of online tools not only helps us learn about these tools, but also about the people using them, opening a window to their intentions and aspirations.

We note that our research has been so far conducted remotely. The first author did visit Damascus once in September 2011 and met with several members, however, afterwards the research team has been residing in Switzerland. To triangulate our data under these conditions, we engage in discussions among CTVC members on social media, and we keep in contact with community members to collect their reflections through non-structured conversations (over text-chat and email).

5. GUIDING ETHNOGRAPHIC INQUIRY

As we are observing the CTVC community, ethnography is helping us to produce a "thick description" [5] of the community and its use of technology. And, since we want to focus on ways of contribution as designers, we need methods suitable for guiding the inquiry while tackling the complexity of the diverse qualitative data. In other words, we need to guide our inquiry to highlight existing problems, needs, and desires. We found this guidance in the works of Corbin, Strauss, and Becker.

Juliet Corbin and *Anselm Strauss* are scholars known for their work on qualitative methodology for data-driven inquiry[2]. They emphasize focus on field data for inducing theoretical understanding from the concrete situation under study [3]. While not systematically relying the whole set of tools provided by the authors –something they themselves advise against–, we use that as a reference toolkit and a general framework to build understanding from data, and to produce a detailed account of activities and use of online tools to inform design.

Howard Becker is a sociologist known for his work in the sociology of art, qualitative methods, and writing for social sciences. His book "Tricks of the Trade" presents a collection of strategies for guiding inquiry and teasing out what data can tell about the studied phenomena [2]. Becker's work is similar and complementary to Corbin and Strauss's, and was useful for completing the details with practical "tricks" illustrated with concrete examples.

In adapting these works, we were inspired by the aforementioned work of Zimmerman [15, 16], and since these frameworks were primarily intended for studying human social activity, it is worth demonstrating how we adapted them to inform promising opportunities for design contribution. We present a small case-study derived from our observations in CTVC.

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[2] Corbin and Strauss's work is often referred to as "grounded theory" after Glaser and Strauss's famous book **[6]**. However, since Glaser and Strauss later disagreed on how to develop the framework, which lead to scholarly debate on what "grounded theory" actually is, we here avoid the abstract term (except for the index keyword) and refer to the authors themselves.

6. FACEBOOK EVENT PAGES

We here take the case of using Facebook event pages in CTVC, and we compare the use of these pages on two different occasions (fig. 3, 4). We note that our brief demonstration does not express the full potential of the works of Becker, Corbin and Strauss, but it rather helps communicating how we employ two specific techniques taken from their approaches to inform design.

Comparison: Making comparisons is a classic tool in humanities and social sciences, and constitutes a central strategy for analyzing data in Corbin and Strauss's works [3]. In our case, by comparing the two uses of event pages, we can depict how interactions varied. The first event page announces a forthcoming presentation (fig. 3). In the comments, CTVC members exchanged information about the place and time, and moderators occasionally asked for practical help in preparing the room and in taking pictures. In the second event page (fig. 4), the activity of the event took place on the event page itself. Members participated in long threads of discussion where mentors posted instructions and participants reported on their progress and asked questions. While in the first case the event took place outside Facebook, and in the second on Facebook, in both cases, event pages were used to announce time, place, and purpose of activities. The case study shall definitely be expanded, but we already see that with these two pieces of data we can start to highlight how event pages are used under different conditions.

Figure 3. An event page by CTVC announcing a presentation in Damascus, Nov.2012 on "Open Manufacturing". Members here exchanged comments on the place and time of the event.

Figure 4: An event page by CTVC for organizing an online workshop on electronics. Mentors and participants communicated on the page to follow instructions and conduct experiments.

Concept generalization: After the brief comparison above, we come to extracting concepts by summarizing and generalizing from our data instances. In Becker's words, useful concepts are "empirical generalizations" that summarize cases used to construct them [2]. He argues that comparisons expose similarities between incidences, which can guide how we can generalize concepts from data. For example, from the case above we find that a common pattern in using the event pages is to specify the place, time, and purpose of organized activities. This is achieved by using

both the form fields for entering event details and the discussion space below. We can then frame the concept around the observation that "activities require specifying time, place and purpose". In fact, after several attempts in organizing activities, CTVC members increasingly emphasized the importance of event pages in "centering" (*tarkiz*) participants' presence and attention on specific goals and within specific timeframes. We believe this level of generalization from data makes concepts generative for design. The concept of "centering", emerging here as a category in the users' discourse, exemplifies a useful practice that we can embrace by exploring how "centering" contributes to collaborative activities as it manifests in various social tools. Becker further points that differences exposed by data comparison bring detail regarding how concepts vary across different contexts. In our case, we can add the detail to our concept that "depending on activity type, interactions among participants vary in length, location, duration and content", which is another design implication.

7. DISCUSSION AND CONCLUSION

As we are moving towards design, we now reflect on what our approach enabled us to learn, and on what it offers for conducting future PD activities.

We attempted to illustrate concretely how conducting ethnography guided by a focus on participation, materiality, comparison, and concept generalization can help access relevant concepts productive for design. For instance, by pursuing the above concept of "centering", we can narrow future efforts to explore different time-goal settings in the design of online event and group pages, and to discover which combinations work well for different purposes. Such concept is not an isolated statement about potential needs, but it is also associated with extended detail surrounding the observed phenomena. For example, discussions for deciding how to use event pages first took place on "meta-groups" used by moderators [7]. Discussions later took place on these meta-groups for organizing the sequence of action (when to post what on the pages), and for designing appropriate page content (event descriptions and graphical banners). Eventually, the event pages were announced on several Facebook groups, and shared by community members on their personal Facebook and Twitter accounts to increase reach. This detail contributes to creating a "rich concept" based on prolonged and first-hand observation in the community. In fact, going back to field data to enrich the concept with detail and variation is another strategy highlighted by Corbin, Strauss, and Becker. This renders our ethnographic process cyclical and iterative: from observation to concepting, then back for more focused observation informed by the concept(s) at hand.

Another benefit delivered by this approach is that we get to learn how to engage in future design. Our engagement with CTVC is allowing us to discover "local protocols" of collaboration and discussion. After joining these channels, we can adapt them to conduct PD activities with community members. Taking the example of the above case, we can suggest an online collaborative design workshop with CTVC members by using a Facebook event page. This approach thus enables us to appropriate PD methods according to the local context by learning to use existing ways adopted by community members to communicate and coordinate. In other words, discovering and appropriating PD methods is an important part of our described research approach.

In the future, we aim to select a core design problem among those we currently observe in CTVC, as well as to start conducting collaborative design using PD methods that are locally-appropriated. Finally, we also aspire to develop a fuller description of our research process to share it with the research community, and to evaluate our process as we engage in design.

8. ACKNOWLEDGEMENT

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