

---

# Challenges of Low-Literacy Fieldwork: Lessons from the Field

**Mennat-Allah Saleh**

Hamm-Lippstadt University of  
Applied Science  
Marker Allee 76-78, 59063 Hamm  
mennat-allah.saleh@hshl.de

**Christian Sturm**

Hamm-Lippstadt University of  
Applied Science  
Marker Allee 76-78, 59063 Hamm  
christian.sturm@hshl.de

ACM copyright: ACM holds the copyright on the work. This is the  
historical approach.

**Abstract**

Providing technological solutions to assist individuals across the literacy spectrum requires diversified approaches. Most of the technology researchers are literates and often they seek to provide solutions to low-literacy individuals. This paper discusses lessons learned from two years of field work with low-literacy participants in Egypt. These include observed and reported challenges from researchers such as: cultural sensitivity, contextualization and cognitive style gap. Challenges encountered by participants included: low structure familiarity, fear and reward expectation. This paper reports these challenges from both perceptions.

**Author Keywords**

Low-literacy; field study; cultural differences;  
adaptation; research.

**ACM Classification Keywords**

K.3.2 Literacy

**Introduction**

ICTD field work can involve many interactions with individuals from different literacy backgrounds. Developing countries rely heavily on the literacy diversity of their populations to achieve growth. In addition, these countries usually have a very diverse literacy spectrum that researchers cannot ignore. So, ICTD researchers must develop different technological

and non-technological solutions to involve individuals from all backgrounds in their design and solution-development process. Hence, it is important for researchers to be prepared for the interactions during field work with participants from different backgrounds in order to manage their expectations as well as extract the best output from the work.

This work discusses the outcome of two years of field work in Egypt with low-literacy participants. The paper discusses some general lessons learned during the encounters as well as some innate observations. It also shows literature from different contexts of research with low-literacy individuals. The low-literacy population with whom research was conducted was diverse. It was divided between both genders and an age range of 18-60. Participants were mainly centered between two of Egypt's largest cities Cairo and Alexandria.

### **Related Work**

Several researchers have published the challenges they faced during their field research. Brewer et al reported that their challenges were categorized into technical, environmental and cultural challenges [1]. Technical challenges involved equipment failure, power cuts and software infection with pre-existing viruses on the computers, as well as issues managing remote support. Environmental issues included difficulty in transportation, customs and shipping, finding quality local manufacturers, security issues in urban environments and natural disasters. Cultural challenges included having to find the right staff and provide the right training, theft and corruption issues as well as interaction with illiterates. Pascoe et al discussed some issues that field workers may face themselves when

using technology aids in their studies [2]. Challenges arising from high-level mobility were reported as well as on-site problems such as the need for dynamic user configuration, limited attention capacity, context dependency and high speed interaction requirement.

### **Observed Challenges**

This section summarizes the challenges encountered during two years of field research with low-literacy participants in Egypt. The challenges observed were sometimes encountered by the researcher to be able to accommodate to the setting and were sometimes observed or reported to be encountered by the participants. Challenges encountered by the researcher were adapting to cultural sensitivity, contextualization and cognitive style gap. Challenges observed or reported to be encountered by participants included low structure familiarity, fear and reward expectation. Both parties faced the challenge of managing proper expectations. The challenges are discussed below.

### **Cultural Sensitivity**

Researchers coming from different countries usually investigate cultural gaps with their study participants to accommodate their expectations and not perform any offensive activities. However, it is not always the case for national researchers when participating with low literacy individuals. It is important to remember that cultural gaps also exist across the literacy spectrum. Some of the issues that were faced during my studies were punctuality, personal distance differences, using different terminology in the language. Participants also took offence when asked about their education level, occupation or socioeconomic status directly, so

information had to be obtained through indirect questions or through organizations in some cases.

### **Contextualization**

Contextualization brings the desired information and message to suit the surrounding environment of the participants. Researchers are often inspired by their academic settings and develop studies that have academic inspirations in them. Low-literacy participants may find difficulties in approaching these studies to which they may otherwise be familiar with if contextualized. One example of that was a study we conducted to investigate problem solving abilities. We asked participants to solve the Towers of Hanoi puzzle. When low-literacy participants were given a physical version of the puzzle with the three towers and pegs, they seemed very confused and stated that they didn't know how to approach it. The other group of participants with similar profile were given three water pots and were asked to move them along three tiles on the floor with the same rules. These participants were able to successfully finish the task in very little time.

### **Cognitive style gap**

Literacy has proved to have a high correlation with cognitive style. Participants with similar literacy background tend to have similar cognitive styles. One cognitive style is not superior to another, but some styles are more formal and are directly traced back to formal education. While researchers are approaching individuals with different cognitive styles, they must manage the study points and monitor how participants reached a certain conclusion. It is also essential not to highlight to participants these differences in thinking

methodology that may make them feel shy or sensitive but rather embrace the understanding of these differences and how it can help to reach to the research point.

### **Structure Familiarity**

One of the issues observed during conducting the studies was the lack of structure familiarity for low-literacy individuals. Participants would often leave in the middle of the interviews or answer their phones. They were usually late to scheduled sessions and sometimes didn't feel comfortable discussing their opinions in the experiment setting. Participants who were already enrolled in literacy campaign classes proved to adapt more to the structured settings.

### **Fear**

One of the most reported emotion amongst low-literacy participants was fear. They feared the experiment and getting results "incorrect" even when assured repeatedly that there is no right or wrong answer. They also feared the unfamiliar setting of the experiment, for most this was their first study. Some attributed their fear to not wanting to appear less cognitively developed, others attributed it to their own living situations as some were physically abused when they made mistakes. Either way, it took a big amount of reassurance that these results cannot be traced back to them and that they would not be judged. When possible, it was very helpful to spend time with participants before the experiment to talk about their background and share some experiences to make the experiment more comfortable and pleasant.

### **Reward Expectation**

Many participants asked what reward will they be getting out of the study participation? Studies were on a volunteer basis and participants were informed beforehand. Participants would frequently ask what would they get if they answered the questions correctly. Some would ask what the participant with the best answer would get. No participant directly mentioned the kind of gain they expected.

### **Conclusion**

Researchers with a literacy background different from their participants need to be prepared before conducting field studies. This work sums some lessons learned over two years of field studies in Egypt with low-literacy participants. It is recommended to always attempt to spend some time with participants before the actual study begins to identify important issues such as cultural and cognitive barrier, also to establish trust and set the right expectations for both parties. If this is not applicable, researchers can substitute this by talking and explaining the study to individuals who live with or surround the participants such as village inhabitants or literacy-campaign teachers. This would help form a guideline of the sensitive areas not to discuss as well as the right way to approach the study.

It is always important to remember what similarities and differences exist between participants and researchers. In addition, understanding the power dynamics enforced by the researcher-participant relationship may help keeping researchers alert to counteract this relationship. The cultural outlook to low-

literacy in the area must also be taken into account during the study preparation.

### **References**

1. Brewer, E., Demmer, M., Ho, M., Honicky, R.J., Pal, J., Plauche, M. and Surana, S., 2006. The challenges of technology research for developing regions. *IEEE Pervasive Computing* 5,2: 15-23.
2. Pascoe, J., Ryan, N. and Morse, D., 2000. Using while moving: HCI issues in fieldwork environments. *ACM Transactions on Computer-Human Interaction (TOCHI)* 7, 3: 417-437.