

**Mobile Voices: A Mobile, Open Source, Popular Communication
Platform for First-Generation Immigrants in Los Angeles**

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Introduction

Mobile Voices ("VozMob" <http://vozmob.net>) is an academic-community partnership between the Annenberg School for Communication at the University of Southern California (<http://annenberg.usc.edu/>) and the Institute of Popular Education of Southern California (IDEPSCA - <http://idepsca.org>). The collaboration consists of the research and design of a web-based platform that allows low-wage immigrants in Los Angeles to publish stories online about their lives and their communities directly from their mobile phones. This low-cost, open source, customizable, and easy to deploy multimedia mobile storytelling platform is being designed in collaboration with its users (primarily day laborers) to help them achieve greater participation in the digital public sphere. In parallel, our research team is studying and documenting participatory approaches to building and deploying low-cost new media; exploring how storytelling helps community building and organizing; and investigating how emerging media tools can best be leveraged to promote digital inclusion and assist marginalized groups.

Mobile Voices is grounded in a Communication for Social Change approach, including popular communication and participatory learning methodologies shaped by Paolo Freire's (2003) concept of education as "conscientization," which emphasizes reflection, action, and dialogue in order to produce shared understanding as well as individual and collective transformation. Mobile Voices brings together day laborers, popular communication practitioners, university researchers, and open source software developers to achieve these ends. Research team members have experience with technology-based and open source media projects (including Indymedia, FilmAid International, and the Chiapas Media Project). Most core team members are bilingual, and several have experience with open source and other community media projects. Together, our team draws on an extensive international network of coders, designers, researchers, and community organizers for support. The following is a list of project participants: Steve Anderson, Raúl Añorve, François Bar, Melissa Brough, Mark Burdett, Adolfo Cisneros, Sasha Costanza-Chock, Pedro Espinosa, Amanda Garces, Maria De Lourdes Gonzalez, Carmen Gonzalez, Chris Guitarte, Josh Haglund, Philip Javellana, Crispin Jimenez, Charlotte Lapsansky, Manuel Mancia, Gabriela Rodriguez, Marcos Rodriguez, Yazmin Trujillo-Arevalo, Cara Wallis, and Holly Willis.

To date in this action research project we have developed a prototype of the mobile storytelling platform through an iterative process of participatory design involving IDEPSCA's Popular Communication Team (PCT). The PCT is a group of volunteer day laborers and domestic workers devoted to using citizen journalism and other forms of communication for social change. The PCT has been piloting the Mobile Voices platform and will soon be teaching others in their communities how to use it. The Mobile Voices "sandbox" site is now operational (see <http://prueba.vozmob.net>), Drupal software modules for mobiles are being developed, and the PCT is producing a continuous stream of

multimedia content. As we begin to transition from the prototyping phase to deployment at each of IDEPSCA's six worker centers (and shortly thereafter, to other community organizations), plans are underway for the roll-out of the Mobile Voices platform through popular communication workshops using a mobile "toolkit." This toolkit contains software and methodological tools to enable other organizations to launch similar multimedia storytelling platforms.

In this paper we first discuss the theoretical framework underlying the Mobile Voices project as well as its design process and goals. We then summarize reflections on the project thus far gleaned from a small number of interviews with key participants. We conclude by discussing the future direction and deployment of Mobile Voices. Here we should emphasize that Mobile Voices is still in its development stage and this paper should be considered a work in progress.

Theoretical Framework

Wireless communication has emerged as one of the defining technologies of our time. Along with the Internet, wireless technologies and mobile communications have affected the ways in which people communicate and organize their daily activities (Ito, Okabe, & Matsuda, 2005; Ling, 2004). In the past decade, scholars have written about uses and implications of mobile phones in both the developed and developing worlds (Castells, Fernández-Ardévol, Qiu, & Sey, 2007; Katz, 2007). In particular, research has focused on mobile phones and social networking, civic engagement, and economic development. However, much less attention has been given to researching participatory approaches that are designed to facilitate and study all of these dimensions of mobile phone use.

The Mobile Voices project engages with three established research areas and explores the linkages among them: Information and Communication Technology for Development (ICT4D), Communication for Social Change (CFSC), and Participatory Design and Research. ICT4D research has traditionally focused on information transmission and its effects (Heeks, 2007), technology adoption (Donner, 2003), and more recently, user-driven innovation and appropriation (Bar et al., 2007; Heeks, 2008). The latest work has increasingly acknowledged the *unpredictability* of ICT impact due to the uncontrollable variety of factors that influence human interaction with technology and the resulting social change. Critics of traditional ICT4D evaluation approaches also argue that the "C" in ICT4D is often underemphasized or undervalued and that the communication process, as well as other kinds of capacity building, cannot be fully measured or appreciated using solely quantitative, expert-driven methods (Gumucio-Dagron & Tufte, 2006; Ramírez, 2007). Furthermore, research on mobile phone use among low-income populations in the developing world has found that users often place a higher value on the social benefits of mobile telephony than on the economic benefits (Donner, 2005; Horst & Miller, 2006).

Studies in a variety of contexts have noted connections between mobile phone use and enhanced social capital (Ling, 2004; Sugiyama & Katz, 2003).

At the other end of the spectrum, communication for social change, community organizing, and adult education projects have favored a more community-driven, horizontal, and cyclical learning approach to program design and evaluation. The increasingly popular and varied range of participatory research and evaluation methods try to rectify the inherent power imbalance of top-down, expert-driven initiatives. Such approaches view community participation as enhancing project relevance and sustainability while also building the capacity of the community to identify and solve problems.

Community-based participatory research can take a “hybrid” approach to design and evaluative research, incorporating elements of both ICT4D and CFSC, combining “expert” and “local” knowledge, quantitative and qualitative methods, and varying degrees of participation. Building on the strengths of ICT4D and participatory, Freirian-inspired methodologies, Ricardo Ramírez (2007) has proposed taking a systems thinking approach, “based on sociotechnical systems, stakeholder engagement, an acknowledgement of the multiple dimensions at play, and the growing evidence of unpredictability of ICTs” (p. 85). He suggests several possibilities, including outcome mapping (Earl, Carden, & Smutylo, 2001) and the “most significant change” methodology (Dart & Davies, 2003), which aim to identify indicators through a dialogue among all direct stakeholders.

The Mobile Voices project stands to make a valuable contribution to participatory research and practice with a systematic, self-critical approach that is sensitive to unexpected outcomes, whether positive or negative. In these ways the collaboration will not only lead to the production of innovative technology for community organizing and individual empowerment, but also will produce cutting-edge research on participatory technology design, implementation, and evaluation.

Project Design, Goals, and Outputs

Technology Needs Assessment

In the spring of 2008, we conducted a survey of communication practices among 58 workers at five of IDEPSCA’s day laborer centers. The survey included questions on participants’ access to mobile phones and computers, actual and desired uses of these technologies, and monthly expenditure on services. The survey findings on communication practices aided the initial development of the project by describing day laborers’ existing usage patterns and their ideas on how mobile phones can be effective tools.

We found that most workers (78%) owned mobile phones and used them on a regular basis. A majority of the respondents reported using their phones primarily for work purposes and also to contact friends and family in other countries. We discovered that phone models and plans varied greatly, as did

usage of specific phone features such as text, video, and photos. Interestingly, many workers knew how to take photos using their mobile phones but did not know how to send these to others or upload this content to a computer. When asked about computer use, an overwhelming 98% of the respondents said they would like to learn how to use a computer. Some of the most useful findings from the survey were the anecdotal accounts of how workers have used their phones in different ways, such as to document completed jobs or to visually explain a plumbing problem through photos. Overall we found an expressed interest in learning more about mobile phones and their features in order to fully take advantage of this accessible and affordable communication tool. These findings reinforced our goal of developing a mobile storytelling platform that would foster usability and participatory learning.

Participatory Design Process

Weekly workshops with the PCT, IDEPSCA staff, and USC researchers have been a key site for Mobile Voices participants to work together on designing, researching, and implementing the project. Workshops follow a popular communication methodology and have included discussions about technology, privacy issues, and evaluation as well as hands-on design and training on the use of mobile phones for digital storytelling.

One of our goals with Mobile Voices has been to develop an effective process for the PCT to be able to participate in the design of the Content Management System (CMS). We determined early on that we would be customizing Drupal (<http://drupal.org>), the popular free CMS, for our needs. We have since been developing a workflow whereby the developers working on the customization respond to the needs expressed by the PCT, rather than simply to the researchers' preconceptions about what might work best.

As a result of these processes, Mobile Voices participants are producing a toolkit and workshop curriculum for use by community-based organizations that want to participate in Mobile Voices or set up their own innovative mobile-based system. The toolkit will be available under a Creative Commons license. In the coming months, we will be using this toolkit in trainings that Mobile Voices will offer (co-led by day laborers and domestic workers from the PCT) to a number of additional community-based organizations in Los Angeles.

Participatory Learning Goals

Mobile Voices hopes to facilitate participatory learning within and among participants in three main areas:

- **Media literacy:** Although immigrants are frequently represented in the media (usually negatively), they are almost never the architects of their own stories. Mobile Voices empowers workers to voice their own narratives about themselves and their community. As participants use cell phones to share stories, perspectives, ideas and information, and comment on each other's work, they learn to be citizen journalists creating media for their communities and extending their voices to the public. For

example, a multimedia story produced by a domestic worker depicts the daily lives of immigrant families and captures the learning that results from sharing everyday stories. This digital media can also be remixed into other forms, such as a print newsletter, fostering further opportunities for self-representation and exchange.

- **Technology literacy:** Through participation in Mobile Voices, day laborers learn to choose phones and plans that fit their budget and needs; they master the phone's features, including SMS, MMS, voice recorder and camera; and they use an online platform to post, share, and comment on digital content created by their own community. Workers and researchers join together in both formal and informal sessions, gaining hands-on knowledge of phone functionalities, computer keyboards, basic Internet skills, and social software. Researchers and immigrants learn together through participatory design of system features. They engage with open source software and explore best practices for digital privacy.
- **New forms of public participation:** Day laborers often face discrimination and are excluded from full participation in civil society. Mobile Voices can foster civic engagement and collective action. One such example occurred in mid-October 2008 during a hunger strike in downtown Los Angeles, organized to reignite a movement against “broken immigration laws”. Using Mobile Voices tools, supporters used their cell phones to take photos and record messages during the hunger strike and uploaded them to the Mobile Voices website. These testimonies became the basis for comment, critique, and reflection, seeding a community of exchange that spans various divides.

Studying Change: Findings on Communication Practices and Perceptions

In early 2009, once the project was underway and participants were publishing stories from their mobile phones, qualitative interviews were conducted with PCT members, IDEPSCA staff, and local activists who have used the Mobile Voices tools. The purpose of the interviews was to evaluate both the successes and challenges that the project faced four months in. We were also interested in learning about how participation in mobile storytelling may have changed participants’ relationship to and use of technology and if the process contributed to empowerment in the form of increased self- and collective efficacy.

Although only a small number of interviews have been conducted thus far, our analyses reveal that involvement in the project has changed the way that participants feel about mobile phones and about technology in general. Overall, day laborers currently using the system and creating multimedia stories feel very empowered by the ability to produce content and have their voices heard. A key takeaway from interviews with IDEPSCA staff and community organizers is that they see Mobile Voices as an alternative media channel that “empowers workers to tell their stories.” All interviewees expressed

distrust in the mainstream media's desire (and ability) to represent the lives and struggles of low-wage immigrant workers. Their stories are either left out altogether, or, even worse, completely misrepresented. Participants see Mobile Voices, especially the use of multi-media messages to tell stories, as something that "gives voice" to this community and augments their already ongoing popular education efforts. As one interviewee said, "The storytelling is incredibly powerful. It humanizes people in this global economy where individuals are not worth a cent." The following interview excerpts and summaries reveal various members' understanding of the Mobile Voices project, their personal motivations for being involved, and their hopes for the future of the project.

Interview with PCT Member (Zamoran)

"Mobile phones are a created necessity, but one that can be useful for other purposes"

Zamoran has been living in Los Angeles for 12 years and has primarily earned her living as a domestic worker. Until recently, she had consistently maintained the belief that mobile phones are created necessities that we, as consumers, have now become addicted to. Throughout the years, her friends, colleagues, and family had repeatedly asked her why she refused to purchase a mobile phone, and she had adamantly insisted that she simply did not need one and never would. After hearing news stories about the different ways that mobile phones were being used across the world, Zamoran began to consider the potential for cell phones to be something more than an unnecessary luxury. While still maintaining a firm belief that everyone does not need a mobile phone, she opened her mind to the possibility that mobile phones could be used in new and useful ways.

"When I really like something I tend to be very expressive and say 'I love it', well that is exactly how I feel about Mobile Voices. I love it!"

When introduced to Mobile Voices Zamoran was intrigued by the possibility of learning how to create stories with the same piece of technology that she had so adamantly resisted. "I just love learning new things and creating things," she says "and this project lets me do that in ways that I had never imagined." Zamoran produces stories about everyday life, taking a consistently humanist tone. To describe Mobile Voices Zamoran points to the often biased and filtered coverage of commercial television and radio as motivation behind the project. "I always say that I work on a project...and that this project is to make the voiceless heard." Zamoran sometimes stops to think about the trajectory that this project has taken. Starting from an idea based on popular communication and growing into a financially supported media project, she believes that Mobile Voices has come a long way.

Interview with PCT Member (Mancia)

"One of the main goals of this project is to keep learning and to keep teaching... we must always ask ourselves what we are and what we are doing for our community."

Mancia is a day laborer organizer who is very passionate about the project. When asked about his vision for Mobile Voices he excitedly describes how he believes that this project has the potential to become a very useful tool. “Before participating in the project I had no idea that I could do so many things with my phone, and that’s the case among 90% of the population—most people carry their phones and don’t know what they are useful for.” Teaching and learning are two things that Mancia considers essential to the project, because one of the most valuable results of this effort is that people will learn more about technology and discover new ways to express themselves. When workers see Mancia taking photos on his phone, they assume that he is simply saving them onto the memory, but Mancia makes it a point to explain what he is doing with the photos and why. “At that moment I use that space to explain to them that the photos go onto a blog on the Internet, and many of them are very curious to learn more,” he says.

“My role in Mobile Voices is more like a responsibility to my community, to the system and to this organization...I’m responsible for communicating to others what I’m learning.”

When asked to describe his best experience thus far, he reminisces on a moment in which three PCT members worked together to draft a narrative for their printed newsletter, which has, since the start of Mobile Voices, been supplemented with content from the online blog. “Three minds joined and we worked together, it was impressive...it looks like one person wrote it.... Based on what we have learned in the project we have also been able to expand our writing abilities,” Mancia states. While using technology can be frustrating, Mancia says he has been fortunate to be working with a phone that is quite cooperative. “I think my colleagues have had problems with their phones but I’m in lucky in that my phone never fails...it’s my own phone and I’ve been working with it from the beginning.”

Interview with Mobile Voices Coordinator

“We want to become visible. From invisible to visible. From voiceless to people that scream.”

In the coordinator’s eyes, Mobile Voices is a pilot program to see how we can use open source tools (and other cheap technologies that anyone can use) to empower workers to tell their own stories. The stories that happen every day at workers centers are not told, and the mainstream media does not have the workers’ humanity in mind. Thus the ability to tell their own digital stories should, the coordinator believes, empower the day laborer community—and the immigrant community as a whole—to counter anti-immigrant voices. This is also part of IDEPSCA’s popular education agenda: to not only empower people, but also to inspire community action and organizing.

The coordinator hopes the project becomes a communication tool between the “alienated” and the rest of the community. “We want to become visible. From invisible to visible. From voiceless to people

that scream.” Mobile Voices should help create a perception of “what people are not seeing”, i.e., the “human side” and daily lives of the day laborers. To the coordinator, technology has a lot of potential for furthering IDEPSCA’s commitment to popular education. It should create more opportunities for popular education work and make IDEPSCA more “tech savvy” although it has been a challenge for the coordinator to figure out how to teach technology use in a popular education framework. She hopes the project will not only serve the community IDEPSCA works with, but the internal organization as well.

“Mobile Voices is great in the way that it is not something created for a specific purpose but it encompasses all of our daily life as human beings.”

The coordinator feels there has been a lot of growth in terms of the PCT’s technology usage. They have all learned to blog. While some may have been able to write a letter in MS Word, it is powerful for the coordinator to see them be able to write something online so that the information is readily available to share with their friends. One member didn’t have a phone; now he takes pictures and sends messages. Another member only used the phone to make calls; now he is writing messages through the phone.

Interview with IDEPSCA Director

“Mobile Voices is a natural link to the kind of work we do. It’s already there. It’s just a matter of looking at what would be the best way to reinforce all the work that we’ve been doing with mostly immigrants and impoverished people....”

IDEPSCA’s director believes that the act of storytelling can be powerful because it “humanizes people in this global economy where individuals are not worth a cent.” He believes that people are simply used for their labor and then discarded once they pass a certain age and are deemed no longer necessary. Through an effort to stop the inhumane treatment of individuals, however, stories of personal struggles and experiences can be documented and shared with others. The director hopes that Mobile Voices will be useful to its users in very practical ways. For example, he envisions the workers using the system to document people who exploit them.

“We can document all those people who exploit workers, and have it out there so people know about it.... It’s fascinating – it’s fascinating that we can use the technology in this way to liberate ourselves.”

IDEPSCA already makes an effort to document this type of information within the day laborer program. In the past, they provided booklets where workers could write down the person’s name, date they were hired, license plate number, and description of the job offer. While this practice is useful, it can become impractical, as the director notes that “you need to have a pencil, if you know how to write then you can do it, but if you don’t know how to write then it is more difficult.” With a phone, however, it is possible to take photographs of the license plate and record the details of a job through the many recording options a mobile phone can provide.

The director is satisfied with how the current goals are being met. He has seen visible results with the participants in the pilot program and says they are very excited about the project. He feels it is important to prove to “the corporate media that the people have the wherewithal to change the society to tell the truth. And I think that gets lost sometimes in the corporate media. If we are able to do it through the Mobile Voices and show the values behind it, I think it would generate more passion and more understanding and focus and bringing folks to say, ‘Yeah, we can do it.’ If we can just compare how the corporate media uses the news to program people to think one way. But if we can show how liberating it is to tell your story and be witness to truth, I think we’ll be able to increase the potential of the project.”

Overall the participants interviewed expressed a genuine interest in the project and excitement for the future of Mobile Voices. While the project inevitably produces technological frustration at times, the benefits that such a participatory effort provides for all parties seems to make this project well worth the patience and dedication that it demands. All interviewees expressed a desire to “give voice to the voiceless,” and they hope that this project can be a legitimate stepping stone in the path to digital inclusion among low-wage immigrant workers.

Conclusion

Mobile Voices aims to increase understanding of the potential of low-cost mobile phone technologies for digital inclusion and does this through developing accessible and affordable tools so that low-income immigrants, whose viewpoints are often absent from mainstream media coverage and online discussion forums, have the opportunity to participate in the public sphere. As we continue to develop the platform and prepare for wider use of the system, we seek to understand whether the participatory design process yields a more relevant, less technologically-determined, and scalable communication system for social change. While the project is still in development, we have already seen changes in technology use and perceptions among participants. Further expansion and evaluation of the project will undoubtedly yield more textured observations that will contribute to the literature on participatory media projects focused on digital inclusion and social change.

Once Mobile Voices is implemented beyond the original Popular Communication Team and expands to other day laborer centers and low-wage, immigrant communities, indicators of success will be based on whether the goals of digital inclusion have been met and the extent to which participants experience increased self and collective efficacy, defined in their own terms through a participatory evaluation process. In addition, a rich body of personal and community narratives uploaded to the content management system will be one indicator of Mobile Voices' success. Another form of inclusion – greater visibility of immigrants' personal stories in the mainstream media – will also be a measure of success. On

the technology side, if the mobile storytelling interface is easy for individuals with low levels of technological literacy to use, we will know that this project can be utilized by a wider community.

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