

# TakingITMobile: Youth, Mobile Phones & Social Change

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## **ABSTRACT**

### **BACKGROUND:**

The fastest spreading communications technology the world has seen yet, mobile phones are rapidly changing the face of youth activism globally. TakingITMobile is a community-based research study conducted in partnership with the social network TakingITGlobal that examines how youth leaders across the globe use mobile communications to create social change within their local communities and internationally. Survey participants (n = 565) paint a picture of the diversity of mobile youth activism around the world.

### **METHODS:**

Using Electronic Participatory Action Research (e-PAR), youth participants were encouraged to take the reins as researchers through the online TakingITMobile Working Group, which comprised of 39 youth representing 20 different countries. A mixed-methods survey on mobile youth activism was collaboratively developed and deployed online in 10 languages. Cross-tab analysis examined if youth used their mobile phones for activism according to gender, age and smart phone status. ANOVAs were conducted examining if GDP per capita had an effect on monthly average mobile phone cost, number of minutes used, number of text messages and data used. Qualitative comments were analyzed according to mobile phone features.

### **RESULTS:**

- Qualitative data showed that youth reported using their mobile phones to generate Citizen Media to share their message globally, mobilize protests, fundraise, educate their peers and spread solidarity.
- Top issues reported were: Environment (39%); Human Rights (36%); Poverty (28%); Health (24%); Peace (23.8%); HIV/AIDS (22.4%) & Violence (11.6%).
- The most popular features used daily were: Voice Calls (75%); Text Messages (46%); Web Browsing (38%); Social Media (27%); News (26%) and Photography (22%).
- Youth who own smart phones are more likely to use their phones for activism (81%) than youth who don't (71%) ( $F(1) = 5.43, p = .02$ )
- Females are much less likely (70%) to use their phones for activism than males (84%) ( $F(1) = 11.52, p < .01$ ).
- Youth ages 25-29 show higher levels of activism (84%) than youth in their teens (67%), early 20s (75%) and 30s (75%) ( $F(3) = 6.47, p = .058$ ).
- GDP per capita was an influencing factor on both monthly costs ( $F(3) = 10.0005, p < .01$ ), monthly average number of minutes used ( $F(3) = 7.16, p < .01$ ), number of SMS used ( $F(3) = 15.16, p < .01$ ) and internet data used ( $F(3) = 4.89, p < .01$ ).
- TakingITGlobal members reported that cost of services (32%) cost of mobile phones (10%) as well as network coverage (9%) were the biggest barriers to accessing mobile phones.

### **CONCLUSION:**

Mobile technology has become a medium for youth empowerment, activism and a catalyst for social change. Despite barriers to accessing mobile phones, levels of mobile activism were highly reported across the globe. Opportunities exist to minimize barriers to access and maximize positive impact. It is imperative that government and policy makers recognize the potential of mobile technology to empower youth to create social change in their communities and work to further bridge the digital divide.

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# 1. Introduction

## 1.1 Research Description

Globally 1.5 billion people have access to televisions, and 1 billion to the Internet; yet overall the most actively used communications technology is the mobile phone. Reaching the 4 billion mark in 2008, there was approximately one mobile phone for every two human beings on the planet (ITU, 2008). Despite the major economic crisis, mobile penetration continued to expand globally. In 2010, mobile penetration hit the two-thirds mark signifying a massive shift in the global digital commons (ITU, 2010). The mobile phone may reach near-universal penetration levels by 2020, accounting for the majority of internet connections (Banjanovic, 2009). The countries with the highest mobile phone growth rates and penetration are now in developing nations. According to the International Telecommunications Union (Corbett, 2008:1), “80 percent of the world population lives in cellular network range, which is double the level in 2000; and 68 percent of the world’s mobile subscriptions by the end of 2006 were in developing countries.” Many who live in remote regions do not have access to regular home phone services, however access to mobile phones is an option requiring minimal infrastructure. The technological trend of increasing use of mobile phones is not reserved for those with higher economic resources. Prices are dropping on handsets, and the availability of second-hand mobile phones at minimal cost means even cheaper options. Mobile phones are not just used for voice calling and text messaging, software developers are finding ways to extend their capacities and create cross platform solutions that provide meaningful services for everyday users. Director of IBM India Research laboratory Dr. Daniel Dias reinforces the socio-economic potential of this new technology:

*“The world is entering the ‘Era of the Mobile Web.’ In many countries, the mobile phone has become an electronic wallet, the window to the World Wide Web, an education device, and more, and globally, mobile devices outnumber PCs, credit cards, and TVs.” (IBM, 2008)*

Economists around the world are hailing mobile phones as a low-tech solution for bridging the digital divide (Lane et al., 2006). At the London Business School, it was found that “for every additional 10 mobile phones per 100 people, a country’s gross domestic product (GDP) rises 0.5 percent” (Waverman et al., 2005). Technologies such as 3G broadband mobile internet are sweeping the globe, providing citizens with increasing access to information. As feature-rich smart phones have hit the market, users also have increasing ability to create and broadcast media. While the majority of phones globally are not “smart,” the capabilities of text messaging (SMS) and the mobile web create high potential for the spread of information that is essential in social change and media democracy. Soon there will be more mobile phone users than literate people on the planet (Chipchase, 2005). This signifies a shift into a new age of digital literacy, where avatars, emoticons, pictures, sounds and videos can hold more power than the bygone era of telephones where only names and numbers mattered. Furthermore growth in electronic communication through the internet and mobile phones is outpacing communication through newspapers, radio or television.

When looking at new media communication, it is clear that across class, race, and gender, there are inequalities in terms of access, influence and control. However, youth are working to bridge these gaps through the creation of innovative alternative networks for social change. Mobile phones are used by youth around the world as a tool for political mobilization - from getting youth out to vote, to organizing protests through social networks, micro-blogging and text messaging. Much like the internet, mobile phones have the potential to remove barriers to both

learning and communication, making it possible for young people to access critically important information and distribute information globally about themselves and the work they are doing locally. This is especially true in developing countries, where mobile phones are now the primary form of telecommunication. The potential that mobile phones have in supporting young people to create better lives for themselves, and the societies they live in, is enormous.

## **1.2 Research Questions**

Increasingly mobile phones are being used as tools for activism by youth across the world. In the news, we see images of protesters with mobile phones in hand, documenting human rights violations. Flash mob protests are occurring globally centred around a number of important issues, from democratic elections to reclaiming public space. While mobile phones are making the news daily, there is little data reporting on mobile youth activism beyond anecdotal evidence. Thus, it is essential to examine the underlying principles of mobile youth activism, as well as undertake evidence-based research to document key trends and practices in youth activism globally.

TakingITGlobal (TIG) is a youth-led social network for social good founded by entrepreneurs Michael Furdyk and Jennifer Corriero when they were teenagers. The TakingITGlobal website was launched in 2000 as part of their effort to address the digital divide and is one of the world's first multi-lingual social networks. Youth volunteer translators from across the globe allow the site to be offered in 12 languages. TakingITGlobal has become a central node for youth leaders around the world to plug into a variety of networks, tools and opportunities, with a number of member web-based features including: projects, groups, resources, forums, blogs, and a global gallery. TIG features the voices of youth activists from

around the world and is dedicated to bridging the digital divide by empowering youth through technology. In 2010, TakingITGlobal joined forces with the Global Youth Action Network and has over 300,000 members. This network unites the voices of youth activists globally to spark action in their communities through technology.

While TakingITGlobal's social network provides tools, information and resources for global youth leaders, youth without computer access may not be able to use the website. However, new platforms like mobile phones can provide solutions to this problem of unequal access. It is essential that TakingITGlobal expand its mobile features, but before undertaking this task it was important to conduct an environmental scan documenting current mobile practices. The TakingITMobile study was formed out of this need, aiming to examine the diverse ways that TakingITGlobal members use their phones for social change and mobile activism in their local communities. In addition, I wanted to explore another potential rate limiting factor in mobile access by looking at the relationships between GDP per capita, average monthly mobile cost and features used. This research study seeks to understand *how* TakingITGlobal users are using their phones in their activism by answering the following questions:

- **How are youth using mobile phones for social change?**
- **How do gender, age and smart phone status influence if youth leaders use their mobile phones?**
- **How does GDP per capita influence average mobile phone monthly costs, frequency of text messaging, voice calling and data used?**

In order to examine the various ways that youth are using their phones for activism, quantitative and qualitative data were gathered to

explore what mobile features are most used and how youth were executing their activist campaigns. The results of this study will be used to inform the creation of new mobile features including community development tools, allowing TakingITGlobal to broaden and diversify their reach and relevance through a medium that young people are extremely comfortable with and have access to. It will further enhance TakingITGlobal's relevance as the world's largest online community for young people interested in creating positive social change. In developing mobile services TakingITGlobal will strengthen their position as one of the leading innovators in the use of Information Communication Technology for Community Development (ICT4D). An executive report of the results will be published as the [TakingITMobile Guide to Action](#), with practical suggestions and case studies on how TakingITGlobal members can take action in their communities through mobile phones.

## **2. Literature Review**

### **2.1 Generation Digital**

While youth are often portrayed in the media as apathetic and disengaged, the reality is that youth across the world are taking action in their communities to make positive change. Youth activism ranges from grassroots collectives, to school clubs, to registered youth-led non-profit organizations. As youth are jumping to action, society at large is searching for new language to label this new generation. Popular terms have popped up across the map including: the Net Generation (Tapscott, 2009); Generation We (Greenberg & Webber, 2008); Generation Digital (Montgomery, 2007); Generation Next (Pew Research Centre, 2007); Generation Y (Huntley, 2006); and Millennials (Strauss & Howe, 2000).

*"Born between 1978 and 2000, they are 95 million strong, compared to 78 million Baby Boomers. They are independent—politically, socially,*

*and philosophically—and they are spearheading a period of sweeping change in America and around the world (Gen-We.com)."*

According to recent studies, this new generation has the highest volunteering rates of all demographics (Tapscott, 2009). According to the Pew Research Centre Report on Generation Next (2007), this generation, "are the most tolerant of any generation on social issues such as immigration, race and homosexuality." Whether it's raising money to build schools in Africa, or lobbying municipal government, youth are working hard to foster social change locally and globally. Youth all over the world are bannng together to be the change they want to see in the world around a wide variety of issues. The internet is a key part of this movement, as globally youth are able to communicate instantly, increasing cross-cultural understanding. The Net Generation is a term developed by Tapscott (1998) to describe this new digitally savvy generation, the first to grow up immersed in digital media: Tapscott found that youth from the Net Generation were more likely to be socially conscious than previous generations.

*"A new youth culture is emerging, one which involves much more than just the pop culture of music, MTV, and the movies. This is a new culture in the broadest sense, defined as a the socially transmitted shared patterns of behavior, customs, attitudes and tacit codes, beliefs and values, arts, knowledge, and social forms. This new culture is rooted in the experience of being young and also in being part of the biggest generation ever. But most importantly, it is a culture that is stemming from the N-Gen use of interactive digital media. We should pay attention because the culture which flows from their experiences in cyberspace foreshadows the culture they will create as the leaders of tomorrow in the workplace and society."*

According to Tapscott (1998: 69), "N-Geners are moving toward greater social inclusion with technology, not exclusion. Their art and the international populations of their virtual communities show a global orientation in their search for information, activity and communication." A follow up on his original work, "Grown Up Digital" (2009) reflects Tapscott's original predictions ten years later. Much of his initial research

was conducted on the TakingITGlobal platform through a combination of surveys and contests to ask youth to reflect on how technology intersected with their lives.

Youth are at the forefront of a new media revolution, as the first adapters of technology (Corriero, 2004). Tapscott argues that the internet is the perfect forum for governments to engage this so-called apathetic generation. TakingITGlobal is a perfect example of engaging youth around global politics through technology. TakingITGlobal brings youth from around the world together to tackle global issues and create change. Jennifer Corriero conducted an impact study of TakingITGlobal (2004) that found:

- **82%** of members made friendships through TIG
- **69%** agreed that TIG improved the ability of young people to effect change
- **65%** formed cross-cultural collaborations or partnerships through TIG
- **57%** agreed that their awareness of local and global issues increased
- Members from Africa, Asia, Middle East, South America, and the Caribbean were most strongly impacted by TIG's activities and efforts

These findings indicate that TakingITGlobal provides members with a virtual community of support with a cross-cultural network of change agents and youth activists. Instead of learning and communicating about local and world issues through newspapers, youth are reading and writing blogs, actively contributing to and shaping the participatory media that they use. While youth may be marginalized in society, the internet and mobile phones act as a private domain for youth to communicate and organize, often free of supervision. This signifies a shift in media hegemony as increasingly the divide between media consumer and producer dissipates. Through new media like social

networks and mobile phones, youth are now connected more than ever as a part of the global village.

## 2.2 Citizen Media: Then and Now

First coined by Clemencia Rodríguez (2001), “Citizen Media” is a term that refers to community media from grassroots radio stations, to *zines* (electronic magazines) and community theatre. Citizen Media is deeply rooted in popular communications traditions (Leis, 1990; Rodríguez et al, 2010). Popular communications is a term that emerged out of the Latin American context of Popular Education, a radical literacy movement based on the teachings of Paulo Freire (1970). Popular Education aims to break down inequities in education, seeing teachers and students as equals. Much like popular education, popular communication is a form of breaking down the barriers between media producer and consumer. Through engaging citizens in media production, popular communication projects range from community radio stations and newspapers, to popular theatre productions. These types of works have also been referred to as grassroots communication (Riaño, 1994). Through these traditions, the concept of Citizen Media has evolved to include a diversity of participatory media, including newer forms of media production, such as blogs, vlogs, podcasts, SMS messaging, participatory video, digital storytelling and social networks. Through the internet, handycams and mobile phones, it is now easier than ever for citizens to broadcast their concerns and produce media that represents their interests. New media is being used to promote citizen movements from the Zapatistas in Mexico to Buddhist monks in Burma. It has served as a tool for social change in a variety of contexts, with increased focus on mobile phones as their functionality evolves from talking and texting to multi-media wired capturing devices that can broadcast across the world.

Websites such as Global Voices, Now Public and TakingITGlobal provide forums where citizen journalists can publish and share their stories. One can posit that these new media tools help to further stretch our definitions of what it means to be a citizen, as they cut across borders and amplify transnational discourse. While citizen media is a widely accepted umbrella term in the NGO world, social media is more popular across sectors (Lenhart et al, 2007), as it more generally captures the nature of new media as tools for social interaction. Multilingual online content is increasing exponentially as cultures from all over the world are tapping into these new forms of cultural discourse. Media access is arguably stronger than ever before, with cellular coverage reaching 90% of the planet. New media communications technology melts borders, and as anthropologist Jan Chipchase says, “bends space and time.” This creates a Pangaea effect, uniting world cultures and embodying global citizenship through a global knowledge commons. While new media invokes McLuhan’s “global village,” it can also be used as a means of exerting international media hegemony and eroding local media. Cultural trends of consumerism increase their global reach and online sales exude international regulations. As well, pornography exploitation and hate speech all have a home online, as free speech is one of the central tenants of the internet itself. This being said, countries around the world continue to censor what their citizens can access online, many times with international telecommunications companies supporting the censorship software.

In order to frame the discourse of citizen/social media, it is helpful to explore its theoretical underpinnings. Information Communication Technologies (ICTs) such as the internet and mobile phones are transforming media hegemony, as the power of who can speak is altered and multiplied. With rapid advances of new media technology, global youth leaders have a myriad of options for publishing and distributing

independent work (Langlois & Dubois, 2005; Shirky, 2008). Media is flooded by an ocean of pluralisms; new stories being added every day reshaping our conceptions of truth (Halleck, 2002; Langlois & Dubois, 2005). As the internet has become a central node for global youth culture, transnational movements emerge out of online discourse. Uzelman (2005) describes this as a rhizomatic process, with roots crisscrossing horizontally underground and emerging, “eventually bursting forth in unpredictable ways.” Communication technologies are being used in new ways which companies never dreamt possible, and in many cases it is youth activists who are experimenting and creating new ways of collective organizing through technology. New media tools have enabled the rhizomatic growth of media activism, allowing people to communicate across borders right from their very living rooms. These new developments have created a paradigm shift; the power of traditional media networks is dissipating. Record labels are dropping profits, newspapers are closing circulation, and people are turning on to YouTube and turning off their TV. In the foreground of this media activist revolution, the amount of user-generated media content has increased dramatically diminishing the traditional separation between media consumer and producer.

Gramsci (2002) defines hegemony as the way in which power is played out in society, which consists of both coercion and consent, allowing the dominant society to control the masses through cultural persuasion. Through the media industry, hegemony has been historically maintained, thus justifying the acts of those in power and concretizing the consent of the masses. dian marino (1998) defines hegemony as a “rainforest of shifting relations,” a power structure which can change with every day and every new action. While the Frankfurt School perceives the media as having an unequivocal effect on the masses (Adorno & Bernstein, 2001), Hall (1980) believes, “there exists a pattern of ‘preferred

readings', and these both have the institutional/political/ideological order imprinted in them and have themselves become institutionalized." However, this does not exclude the prerogative of the audience to interpret them in a critical manner (Abercrombie, 1996). Hall (1980) elaborates these critical interpretations as "oppositional" and "negotiated" readings, in contrast to the dominant social understanding. Negotiated readings take into account the participants social position, and oppositional readings occur when ones social position is in contrast with the dominant interpretation. Manji (2008) argues that in capitalist societies all technologies have the potential to magnify social differentiation, and cautions readers not to focus on the tools, but instead the people who are behind them as the central resource to development and social change.

## **2.3 TakingITMobile**

Under 30-years in existence, mobile phones are one of the most rapidly developing technologies the world has ever known. According to Touré, Secretary General of the ITU (2008), "The fact that 4 billion subscribers have been registered worldwide indicates that it is technically feasible to connect the world to the benefits of Information Communications Technology (ICT and that it is a viable business opportunity." With the power of decentralized networked communication, fishermen are able to monitor market prices in the next village over, and new applications are being brainstormed from the grassroots up. Mobile phones are the first telecommunications technology to be more popular in developing nations, than their developed counterparts, far outnumbering internet coverage (Zuckerman, 2007). More and more people are using their phones to access the internet instead of computers. Once again on the front lines of this new revolutionary technology are youth. According to the MSN/MTV Circuits of Cool report (2007:1), "The mobile phone is

ingrained into young people's everyday lives, with 42% claiming it's the first thing they look at in the morning and they last thing they do at night."

The mobile phone is now approaching the functionality of a computer; yet unlike a computer, users keep their mobile devices by their sides powered up 24/7. A mobile phone is no longer just a phone, it is a multimedia tool used for social communication. The most rapidly developing communications technology the world has seen yet, mobile phones are revolutionary in that they are not just a one-way channel of communication (Castells et al., 2007). Mobile technology provides youth leaders from mainstream to marginalized communities across the world with the tools to both produce and consume media right from the palm of their hands. Traditionally media was captured on devices like handycams, transferred to a computer for editing, and then uploaded to the internet to be shared. Now mobile phones have the capability to bypass the computer and to do everything with one device. Networked, this mobile media can draw on the power of social networks by aggregating data, allowing users to utilize the power of collective knowledge production (Shirky, 2008). Zuckerman (2007) refers to the power of cell phones as leveraging capabilities that are, "pervasive, personal, and capable of authoring content." These are just a few of the reasons that attract global youth into the mobile world, offering privacy, autonomy, and allowing access to a multimedia world of social networks. In terms of relating to activism, ideas can spread rapidly. Campaigns by youth critiquing political candidates, or lobbying for electoral candidates spread like wildfire as people rapidly exchange and share information, passing along videos, pictures, and other campaigns.

Mobile phones are vehicles that youth use to interact, discover their sense of identity, and express cultural resistance. Youth around the world use mobile phones as both a private domain, as well as an

expanded network that gives them autonomy over their communication networks as independent broadcasters. The MSN/MTV Circuits of Cool (2008) report found that mobile phones provide a, “private form of connection and communication as it helps youth feel safe and is seen as a sign of being allowed more freedom from home.” According to a Stanford Seminar on People, Computers, and Design (Jung & Persson, 2005):

*“Telecommunication products and applications have great influences on the ways people behave, perceive and construct their social identity and relationships.”*

This creates opportunities for youth to communicate with one another, and for others to reach and communicate with youth. NGOs and grassroots activists can interact in meaningful ways with their supporters. Mobile phones also provide unheard of access for marketers to target users with commercial messages. Users can interact through many formats including music, pictures, videos, games, Internet, email, and text messaging (SMS). According to the MTV Circuits of Cool report (2008) 82% of youth use their cell phones to take pictures, and 66% of youth send pictures and videos to their friends. As well, 20% of youth globally are interested in viewing “Clips From Other People on Sites Like YouTube” on their phones. Mobile phones are now multimedia mini-printing presses, capable of authoring and sharing content. Engineers and programmers are quickly developing new applications, such as solar powered smog indicators, as well as social network tools for providing sexual health peer-education, or reminders for HIV+ patients to take their anti-retroviral drugs. Grassroots activists are combining SMS technology with internet applications, creating mashups that can map election violence, as well as distribute text messages to multiple users at a time. They have been used to monitor elections from the ground up, as mobile phones have turned into the next handycam for human rights monitoring.

Governments are aware of the power of this new technology, and a new anti-protester tactic has been to cut off cell phone signal during protests.

## **2.4 Environmental Concerns**

While mobile phones have swept the globe, there is increasing evidence that despite this new flood of media democracy, there are risks involved with increased exposure of technology. The digital media technology that provides the infrastructure for citizen media also relies on the further exploitation and degradation of our planet, creating e-waste that is increasingly becoming the most popular import in the developing world, as it is ten times cheaper to export than to dispose of domestically (Kielburger & Kielburger, 2008). As well, digital media can isolate us: as we all type away on our individual machines building virtual networks, we can sometimes neglect building real physical community and relationships. There are a series of environmental health concerns related to mobile phones, and public health agencies have put out warnings around teen mobile phone use. There is much controversy around potential carcinogenic effects to exposure to radiofrequencies. Currently Health Canada states that, “there is no firm evidence to date that RF emissions from cell phones cause ill health,” but there are concerns around potential harms of long term exposure. According to Toronto Public Health (2008), hypothetically children are more at risk of potential harmful exposure. According to the World Health Organization (WHO), youth should limit the length of phone calls, or use hands-free devices such as headsets, speakerphones, or texting in order to keep mobile phones away from the head area. Studies on bees exposed to intermediate radiofrequencies found that populations were in sharp decline, with correlations between exposure and decrease in honey and egg production.

On top of potential carcinogenic effects, there are several physical concerns such as sore thumbs and wrists that have been attributed to mobile phone use. It is vital when examining the impact of mobile phones to be cognisant of the health risks involved and avoid evangelizing new tools. In drawing awareness to the pitfalls around mobile phones we can work towards building better systems that reduce associated harms and maximize benefits. Mobile phones don't have to be toxic, and examples of green models are popping up every day with recycled materials and built in solar chargers. As well, it is important to acknowledge labour concerns, as sweatshops proliferate, with Apple factory workers in China have high rates of suicide (Branigan, 2010). In order to create appropriate technologies it is important that both people and the environment are respected, and studies reporting health risks should be not be ignored. Despite the risks involved with mobile phone use, it has become a global trend and it is important to examine both the pros and the cons.

### **3. Methodology**

In order to examine how TakingITGlobal users are using their mobile phones for social change, the methodology of e-PAR was chosen. Standing for (electronic) Participatory Action Research, e-PAR is a methodology that combines the principles of Participatory Action Research techniques with the use of new media tools like the internet and mobile phones (Flicker et al, 2008). e-PAR methodology involves research participants as digital peer researchers, creating resources, shaping research questions and helping with data analysis and dissemination. Action is always a vital aspect of e-PAR methodology, often using digital media focusing on a social issue that effects participants involved. Through the use of e-PAR, participants' voices help craft community-based research that is meant to empower communities

and create new tools for knowledge production and sharing. Data was gathered from a variety of sources including stories from frontline activists, articles, blog posts to shape the TakingITMobile survey which collected both qualitative and quantitative data through Survey Monkey.

A literature review was conducted through a series of blog posts on MobileRevolutions.org, focusing on Youth, Mobile Phones and Social Change that received over 8,000 visits over the course of the study and was reposted on several influential websites including Experientia.com and MobileActive.org<sup>1</sup>. A Terms of Reference was crafted (Appendix B) initially including three groups, MobileActive.org, the Advanced Research Technology (ART) Mobile Lab from the Banff Centre of the Arts and TakingITGlobal. As the study progressed, the prior parties resigned their duties as Community Advisory Board members. The York University strike meant that my graduate studies were delayed, and for the months that I was forced to halt thesis work the Community Advisory Board dissolved into one key stakeholder, TakingITGlobal. TakingITGlobal staff and members of the TakingITMobile Working Group took on the role of advisors; the Terms of Reference changed to reflect this shift.

As an e-PAR project, the participation of members from TakingITGlobal's online social network was an absolute priority throughout the study. TakingITGlobal's online social network provided the perfect platform for participatory data collection. Along with the collaboration of TakingITGlobal (TIG) staff and volunteers, a TakingITMobile Working Group was formed in order to engage TIG members around mobile activism. The role of the TakingITMobile Working Group was to provide feedback in the generation of the survey questions, recruitment, data interpretation and dissemination. Through

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<sup>1</sup> *Initial literature review was presented at the Mobile Tech 4 Social Change barcamp in San Francisco on November 2008 organized by MobileActive.org.*

the online group youth were able to easily participate in shaping the research through a variety of digital tools, such as message boards, document sharing and blogs. All data was posted to the group, monthly updates were provided and I interacted with group members through TIG Messenger, an online chat service.

In order to recruit members to the group, TakingITGlobal created a theme for their online social network ([www.tigweb.org](http://www.tigweb.org)) on Mobile Communications in February 2009 (Appendix A). That month Panorama Magazine, TakingITGlobal's online youth publication, featured the voices of global youth leaders and how they viewed the future of mobile communications, with a front-page feature highlighting the issue. Through recruitment via the online theme, the TakingITMobile Working Group grew to include 39 TakingITGlobal members from: Algeria, Argentina, Bangladesh, Australia, Canada, Germany, Ghana, India, Ivory Coast, Kenya, Liberia, Nepal, Nigeria, Pakistan, Saudi Arabia, Somalia, United Kingdom, United States and Venezuela. TakingITMobile Working Group members received regular updates via email, and were consulted at every stage of the research process. Members were asked why they choose to participate in the group and why the topic was of interest:

*"Being a journalist, [I] feel the power [of] mobile in terms of communication, today mobile connected the world, you can communicate masterly where, who ever you need urgently. Therefore, I have [looking forward] to participate this group... I hope I can contribute much creativities and even technical support."*

*"I become more interested in the TakingITMobile project because, am more concerned with the situation of the African farmer. The use of mobile phone by the African farmer is critical even at the farm. Most farming in Ghana is small and medium-sized and are most cultivated by people who are less fortunate to attend or complete school. The use of mobile phones enhance communication on the farm in situations like transportation of farm produce, contacting the next farmer on the next farm in case of emergency, check for time, listen to radio on the farm during resting, to relive tension by playing and dancing to the latest music etc."*

Survey questions were brainstormed and the TakingITMobile Working Group was given opportunity to give feedback, along with academic advisors and TakingITGlobal staff. A beta version of the survey was launched in Survey Monkey and 20 respondents gave feedback. Once approved, the survey was distributed to the TakingITGlobal multi-lingual volunteer translation team. TakingITGlobal volunteers translated the survey into 10 languages: Arabic, English, Spanish, French, Portuguese, Italian, Romanian, Turkish, Dutch and Russian. Unfortunately Survey Monkey was not compatible with Arabic, as well as several of the other languages available for translation. The multi-lingual surveys were posted on Survey Monkey and were advertised on TakingITGlobal, MobileRevolutions.org and Twitter via @TakingITMobile and @TakingITGlobal. While response was initially slow, an incentive was introduced to help encourage participation in the multilingual categories with the chance to win an iPod Touch and one of nine iPod Shuffles.

The survey results were collected from Fall 2009-Winter 2010 from 565 participants from over 100 countries. Qualitative data was collected from four sources that included: (i) the TakingITMobile issue of Panorama Online Magazine; (ii) discussions with youth on message boards; (iii) through TIG Messenger; and (iv) through the survey itself. Youth were asked, what were the top world issues they were concerned about and were asked to give an example of a time when they used their phone in their activism. Quantitative data that was gathered included: GDP per capita of youth participant's countries of origin; average monthly cost; number of minutes used; number of text messages and MBS used per month. As well, the frequency of use of mobile features was gathered to examine key trends.

Analysis was conducted in consultation with the TakingITMobile Working group, TakingITGlobal staff and university advisors. Datasets were merged into one SPSS file, including an open-ended question about mobile phone brand and carrier<sup>2</sup>. Open-ended questions were copied into a single document and all multi-lingual responses were roughly translated with Google Translate. I did an initial code of the results, which was shared with the working group for feedback. Qualitative data was presented via webinar to Latin American youth activists as a part of the Sinergia #ciberactivismo<sup>3</sup> series, and initial data from the Latin American cohort was disseminated via Twitter which generated further comments and feedback:



*@sandraparaguay: móviles jugaron rol importante en elecciones. Casos como Kenia, Irán, Togo, y Sri Lanka son ejemplos.*

*@diegocasaes: 55% de los jóvenes usa celulares para alertar sobre situaciones peligrosas en América Latina.*

*@loremelendez: Jóvenes utilizan redes sociales para comunicar y denunciar situación de violencia y violaciones de DD HH*

*@edobejar: En el 2010, tres cuartas partes de la población global tendrá acceso a la telefonía móvil.*

*@sandraparaguay: mobile phones play an important role in elections. Cases like Kenya, Iran, Togo, and Sri Lanka are examples.*

*@diegocasaes: 55% of youth in Latin America use mobile phones to send alerts about dangerous situations.*

*@loremelendez: Youth use social networks to communicate and denounce violent situations and violations of human rights*

*@edobejar: In 2010, ¾ of the global population will have access to mobile phones.*

Twitter was used throughout the study as a knowledge exchange tool that was an iterative process for emerging results, as it facilitated interaction with international youth activists. With the feedback that included the Sinergia #ciberactivismo series, the qualitative data was then divided according to mobile feature to identify key trends. This qualitative

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<sup>2</sup> Some qualitative variables were omitted due to formatting errors between Survey Monkey and SPSS.

<sup>3</sup> #ciberactivismo was the hashtag used to track the conversation on Twitter. A search for the hashtag brings up all recent results.

data was contrasted with the quantitative statistics in order to define the diverse ways that youth activists are using mobile phones.

In order to test for associations with independent variables of interest, cross-tab analyses were conducted examining if the gender, age, and smart phone status effect how youth used their mobile phones in their activism. Chi-squares were conducted in order to examine degree of significance. One-Way ANOVAs were conducted, comparing GDP per capita with average monthly cost of mobile phone, minutes, text messages and megabytes used per month according to quartiles of low (\$9-\$2662.50), medium (\$2662.51-\$10,456), high (10,456.01-\$35,165), and very high (\$35,165.01-\$49,433). Levene's Test of Equality of Error Variances was used, with a Dunnett T3 post hoc-test in order to determine significance.

In transmitting the quantitative data from Survey Monkey to SPSS, certain parts of the survey had to be scanned over multiple times to minimize errors in the order of the data. Currency conversions, along with minor revisions to classification definitions of plan type and data use were required. Monthly mobile phone cost data was crosschecked with MobileActive.org price basket statistics and foreign currencies were converted to USD rates via Google. The type of phone plan variable was re-categorized, as many of the youth who chose the category of "other," were actually pre paid mobile phone users. While the pre paid option was described as "pay as you go" many participants were not familiar with the terminology. As well, many of the youth had a hard time quantifying their monthly mobile usage, as monthly phone plans offered free weeknights, weekends and many carriers offered unlimited services for specific functions like calling, texting, emailing and/or internet browsing. One survey respondent from the Philippines illustrated the complexity of calculating average monthly services:

*“Depends on the available load. Minimum of USD 0.2 to make a call that may last for a minute, or you can subscribe for unlimited call features of the SIM provider. Or the higher load you purchase it may entail free calls.*

*It depends also since in the Philippines, we have features for different unlimited or immortal texts depending on how much you registered. Ex: IMMORTAL10=50 Globe text messages and 20 other network text messages / UNLITXT20 = unlimited text messages for 1 day. Immortal10 = USD 0.2 Unlitxt20 = USD 0.5. It depends on your mobile and load... usually Php 0.19 / kbs = USD 0.004”*

In order to tackle this problem of classifying complex plans, unlimited minutes were calculated by taking the mean of all minutes (720), and unlimited text messaging was coded as 1000, and unlimited data as 6 GB (6,144 MB), according to Rogers Communications Inc’s definition:

**Unlimited Minutes = 720 minutes**

**Unlimited SMS = 1000 messages**

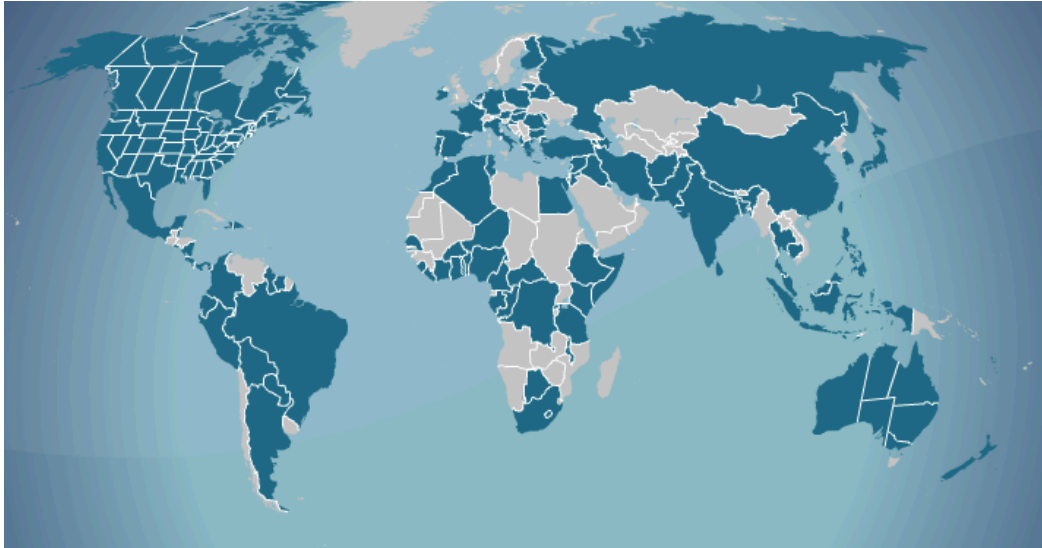
**Unlimited data = 6,144 MB**

As well, text messages over 5000 were eliminated as an outlier, as it was deemed nearly impossible to reach such rates. As per Rogers definition, going over 1000 messages and 6 GB requires rigorous usage. Of course it is possible to go over the said amounts, but the above numbers were used in order to plot quantitative data and estimate on average how TakingITGlobal members are accessing mobile services.

## 4. Research Results

### 4.1 Demographics

**Figure 1: Map of TakingITMobile Participant Countries**



The TakingITMobile cohort (n = 565) was comprised of 52% males, 47% females and 2% transgendered or other. The majority of the participants were between the ages 25-29 (35%), with 26% of participants aged 21-24, and 22.7% 30+. A small cohort of younger youth aged 16-20 (15%) also participated. Survey participants were active around a number of social issues, including the Environment (39%), Human Rights (36%), Poverty (28%), Health (24%), Peace (23.8%), HIV/AIDS (22.4%) and Violence (11.6%). The majority of the youth were urban (67%), with a small rural (12.3%) and suburban population (17.1%), and 3.5% identifying as “other”. The TakingITGlobal member sample was diverse consisting of 110 countries (Figure 1). The sample’s largest cohort was Canada (14.7%), which was the only country represented that accounted for more than 10% of the sample. Country frequencies ranged from 1-76, and the average country had less than 24 respondents. Second to Canada, the largest samples were from Kenya (5%), Nigeria (5%) and

the United States (4%). TakingITMobile participants come from low (30%), medium (25%), high (22%) and very high (23%) income nations. The average GDP per capita of respondents' countries of origin was \$16,996.85, which is relatively high. This number was augmented by the large amount of Canadian respondents represented in the mode of \$38,290. A better representative of the diversity of results can be seen in the median at \$10,456.

Of the youth surveyed, overall 77% identified that they used their mobile phones in their work as youth leaders. 99% of youth respondents reported having access to mobile phones, with 97% having their own personal mobile phone and 20% either sharing or borrowing their mobile phone. Of the youth surveyed, 74% had their own SIM card, with 22% having more than one SIM card and 7% using 3 or more SIM cards. 54% of participants had pre-paid mobile phones, while 42% had monthly plans with a set mobile carrier. Many of the youth reported having more than one phone and network provider. Participants were asked to provide their mobile phone brand and were asked to self-identify whether or not they considered their phone a smart phone. 55% of participants considered their phone a smart phone, with the most popular overall brands being Nokia (39%), Samsung (10%), Sony Ericsson (9%), and Apple (8%).

Qualitative data collected confirmed trends seen in mobile use:

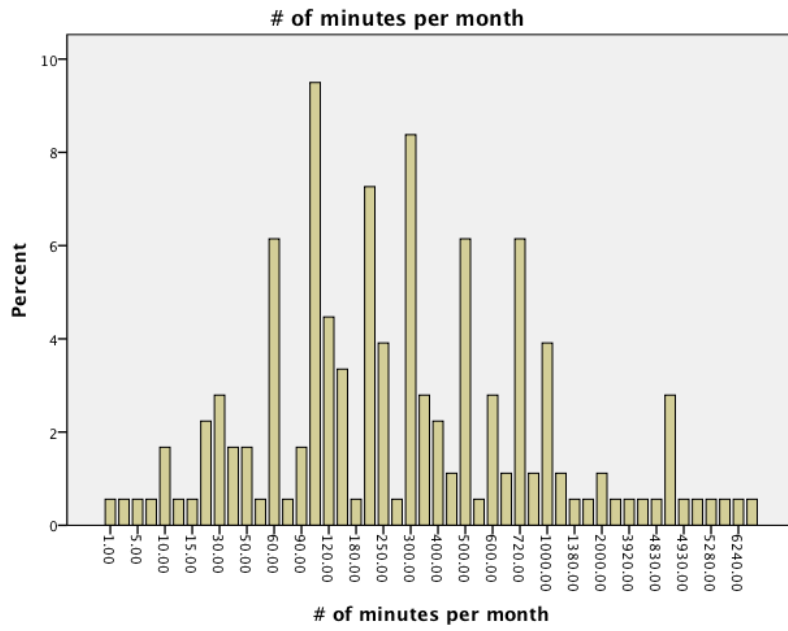
*“Most people in my locality, North Somalia are very much interested Nokia Mobile phones, they believe this company has the best quality in mobiles. I am feeling the mobile industry is booming after 2004. Nokia, Motorola, I also saw here Sony-Ericsson, Samsung brands...”*

Other brands of mobile phone brands listed were Blackberry (7%), Motorola (7%), LG (4%), HTC (1%), and Alcatel (1%). The most common TakingITMobile phone age was around 1 year, with 54% claiming that their phone was less than a year old. 18% of respondents had phones up to 2 years old, 14% up to 3 years and only 5% had phones over 3 years old. The majority of TakingITGlobal members had pre-paid mobile phone

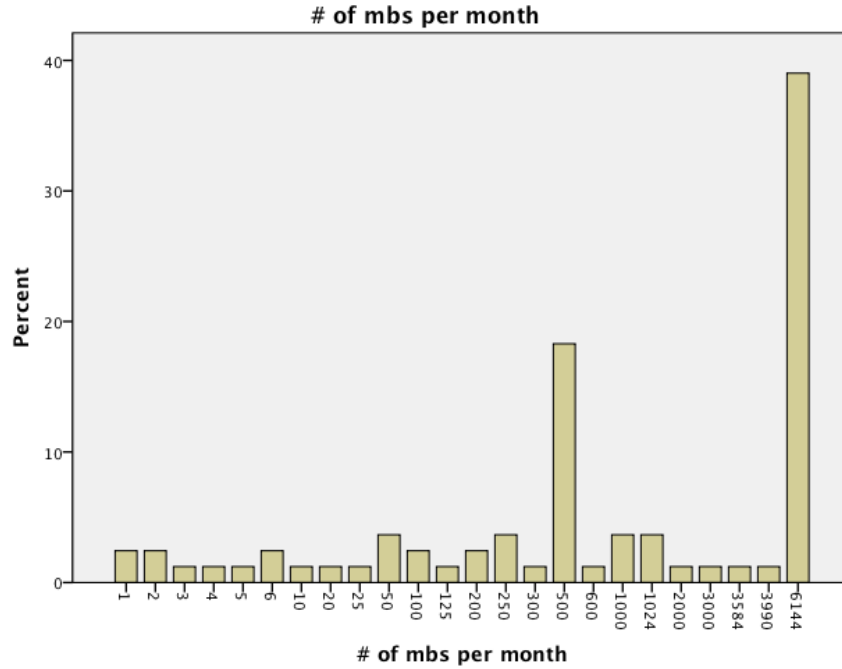
plans, and many members used multiple carriers. Mobile carriers were diverse, considering the global monopoly that many telecommunications firms have. The top mobile brands globally are China Mobile, Vodafone, Telefónica, América Mobile and Orange (ITU, 2010). Many of the brands reported were not these top 5 multinational corporations, with 130 unique mobile carriers reported. The top 5 mobile carriers of TakingITMobile users are MTN (5%), Orange (5%), Vodafone (4%), Rogers (4%) and Zain (4%). Also reported were Safaricom (2%), Claro (2%), Telus (2%), Telcel (2%), T-Mobile (2%), Digicel (2%), Telefónica Movistar (1%), TIM (1%), Fido (1%), Tigo (1%), AT&T (1%) and O2 (1%). As the results were so diverse, it was important for TakingITGlobal to narrow down which mobile carriers are most popular by grouping subsidiaries into larger multinational corporations to see which companies were most popular. For example, in the case of O2 (1%) and Telefónica Movistar (1%) they are subsidiaries of even larger multinational corporations like Telefónica and make up 2% when combined. Even with telecommunications companies combined into larger multinationals, the amount of global diversity is astounding.

The average TakingITGlobal member spent \$30 a month on mobile services and used 250 minutes per month, 400 text messages and 1000 megabytes. As you can see from the charts below, many TakingITMobile participants had unlimited text and data plans, with the majority only using data minimally. Because many youth used unlimited plans, the mean was augmented and the median was used as a more accurate representation. Variance between respondents was high in all categories, and many youth reported using prepaid services, which meant that their usage fluctuated month to month and was difficult to calculate.

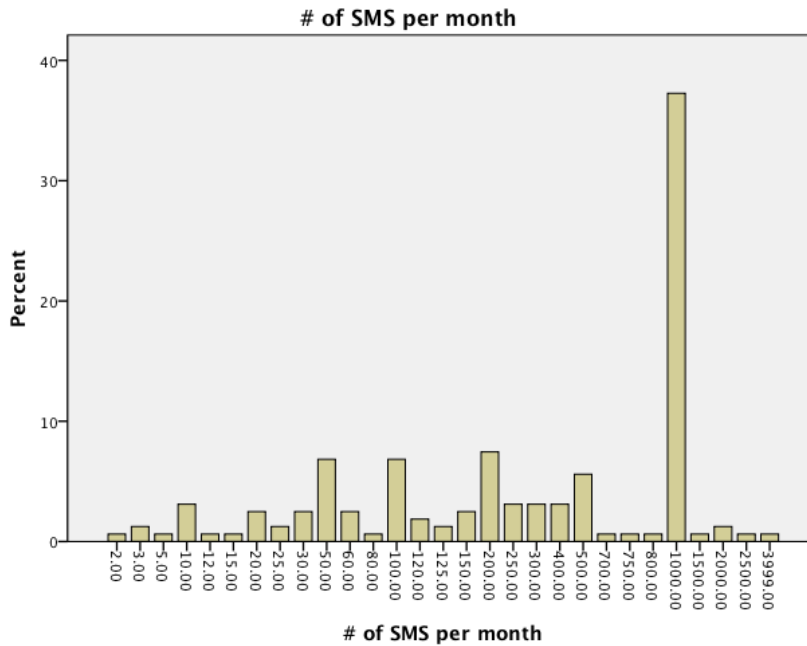
**Figure 2: Average # of Minutes per Month**



**Figure 3: Average # of MBS used per Month**



**Figure 4: Average # of SMS per Month**

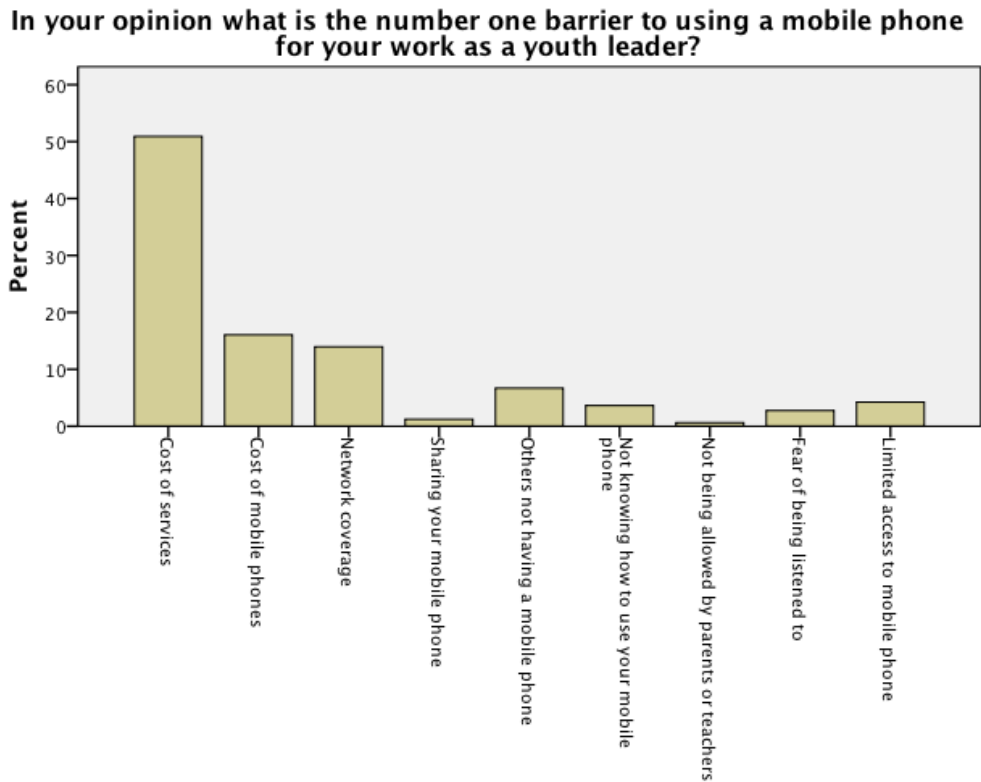


Costs of services were identified as the number one barrier for youth using mobile phones in their work as leaders (51%), with cost of mobile phones as the second (16%). 4% of participants did not know how to use a mobile phone or had limited access. While many participants had mobile phones, many stated that they had a “lack of money for a more technology savvy mobile phone.” Another participant expressed the barrier of, “not having a mobile phone with enough features to aid me.” Many expressed, “others not having mobile phone with same tools, functions” was also a barrier (7%). As well, “limited menu options” was cited as a barrier to mobile activism.

Network coverage was an issue for many youth (14%) who claimed they didn’t feel “as connected” in their area. One participant stated, “When I am traveling between two cities by car, I almost lose the network the time of travel, this is a moment I feel sorry for disconnection to the mobile community.” Participants expressed that there was a, “lack of technical infrastructure from the service providers, to support most of

the functions which may be on the phone.” Many participants cited the telecommunications company policy of locking phones into a contract with a specific carrier a barrier; “iPhone is not available in any other network than AT&T and I don’t want to switch.” As well, many participants cited “security and safety” as a barrier to mobile phone use, as well as the “fear of it being stolen.” A small minority of TakingITMobile participants (3%) stated that they feared being listened to.

**Figure 5: Barriers to Mobile Activism**

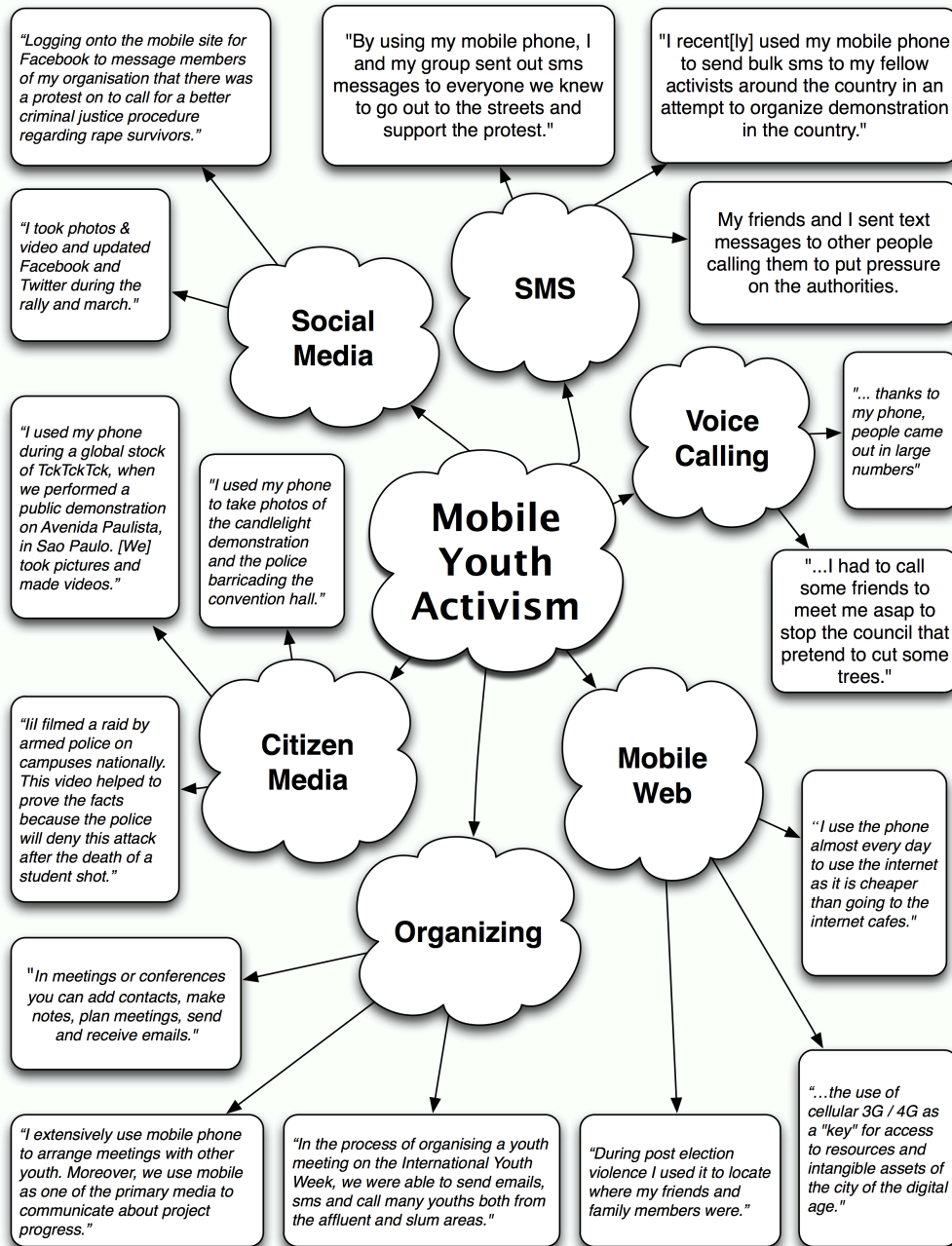


Almost half (49%) of respondents had never accessed the TakingITGlobal website on their mobile phones, with only 13% reporting having accessed it. That being said, 14% of respondents reported finding the TakingITGlobal site easy to access on a mobile phone, with 11% saying that they could not access it. One participant expressed that, “laptops are more accessible and easier to use.” Another participant

stated they didn't, "think it's most effective tool for what I do." For many youth, the easiest way to produce and consume media is still through the personal computer. Another participant stated that they are, "used to work[ing] on a 20" screen and I dislike to use mobile... [the] amount of information [is] too massive to get out via mobile phone others not knowing how to properly use their phones and the technology that comes with them." Despite the barriers to accessing mobile technology, many survey respondents had stories to share of times that they had used their mobile phones as a tool in their activist work.

## 4.2 Features Used

Figure 6: Mobile Youth Activism



## 4.21 Voice Calling

Voice calls are a powerful feature for getting the word out in emergency situations. Voice calls were cited as frequently used with 75% of respondents saying that they used this feature every day, 15% at least once a day, and 6% once a month. A small minority (3%) of TakingITGlobal users used voice calling less than once a month. Many youth reported calling for help or using voice calls to diffuse dangerous situations:

*"I was walking home through the forest down in False Creek and I hear a woman yelling "Help I am being raped." I called the police, then used my phone for a light in the dark forest. Came to the scene, gathered her information through my cell phone at the time and what time it was at."  
– 28-year-old female, Canada*

*"Whenever there's a situation you cannot pull it off without a phone. There was one time when some ppl attacked us, so we had to call a police."  
– 23-year-old female, Slovakia*

*"Calling youths for a meeting to discuss a situation which might have blown out of hand." – 30-year-old female, Canada*

Youth activists have used the phone for decades as a tool to mobilize communities. The voice call feature of mobile phones was seen as an effective tool for rallying a population to take action on an issue, from tree planting, to protecting forests and fundraising for HIV/AIDS:

*"During tree planting day in Kenya. Politics were about to mar the noble project but thanks to my phone, people came out in large numbers and the activity went on as scheduled..." – 28-year-old male, Kenya*

*"Once I had to call some friends to meet me asap to stop the council that pretend to cut some trees. They arrived just in time, we made a big group of people so the gardener had to stop cutting the trees and they just cut some leaves to prevent them falling." – 30-year-old female, Peru*

*"We I was employed as an Events Organizer to organize and fundraise for a Sugar Belt free HIV/AIDS walk. I used my phone to contact various funders/donors for the function. I provided my number on the posters so that those who wish to participate would get more information from my phone. Whenever I was busy I put an automatic response for the same." – 30-year-old female, Kenya*

## 4.22 Text Messaging (SMS)

Text messaging (SMS) was very popular with 62.9% claiming that they used it on a daily basis, 19.6% using it once a week and 11% at least once a month. SMS is by far the cheapest option for youth activists, as it costs service providers virtually nothing to provide. According to one TakingITMobile participant, “My operator is providing 15000 sms for just INR 25, which is approximately 0.5 USD. I prefer this as the first option in sharing info among people.” As well, SMS is an important tool when it comes to urgent communication, such as arranging meetings or protests. SMS campaigns were described as a way of drawing out massive mobilizations, and “sending mass sms regarding details for a protest” was a popular use. In particular, the case of the ousting of former President Joseph Estrada in the Philippines was cited as an example of SMS for social change:

*“The event turned out to be a historical one for my country; it was later called “EDSA Dos” or the 2nd People Power revolution. At the time when Filipinos could no longer take the blatant corruption of the Estrada administration, people were told to gather at the EDSA Shrine as a sign of protest against the said administration. By using my mobile phone, I and my group sent out sms messages to everyone we knew to go out to the streets and support the protest. In the end, the then president Joseph Estrada was ousted.” – 30-year-old female, Philippines*

*“When my friend was killed there was an investigation and there was no justice. My friends and I sent text messages to other people calling them to put pressure on the authorities.”  
–19-year-old female, Philippines*

*“During EDSA2, I found about the rally through text messages.”  
– 21-year-old female, Philippines*

Over the course of this study (2008-2010), there were numerous examples of youth activists using SMS as a strategy to promote fair elections and as a tool to quell election violence. One survey respondent stated that they used their mobile phone in “Iran's 2009 presidential election aftermath protests,” and there were other cases reported from Sri Lanka, Gabon, Togo and Kenya. One TakingITMobile participant from

Kenya stated that they used their phone during post election violence to locate their friends and family members. Another respondent stated that, “During the 2007 legislative elections in Togo, I made use of my cellular phone to promote pacifism to my neighbors and friends.” As well, mobile phones were seen as ways of challenging ousting corrupt politicians:

*“Using my phone to text everyone about a cause we did for an anti-corruption advocacy and made them forward it to every person they know - also to help other people or just to get the message across.”  
– 19-year-old female, Philippines*

*“In 2007, former Peruvian President Alberto Fujimori was extradited from Chile to Peru... The day he confirmed his extradition, a group of his followers broke into the Memorial “The Eye That Cries”, built and dedicated to the memory of the victims of internal armed conflict lived in Peru during the years 1980-2000... I coordinated by phone to mobilize a group of students from the Catholic University of Lima also would join the massive protest. I advanced to the point of arrival of the march and there was commenting on the incident, broadcast live for a few moments, the cries of protest songs and speeches that were launched by the participants. My colleagues at the University were to receive data while they were organizing and conducting the march.”  
– 30-year-old male, Peru*

TakingITMobile participants from Niger reported using SMS as a tool for defending democracy and advocating for prisoners rights. One TakingITMobile participant described, “sending sms/calling during the youth protests in Moldova in April 2009, to keep contact with friends in Moldova and abroad.” Another TakingITMobile participant stated that they, “sent text messages to raise awareness about certain global issues around the world.” SMS is used not only locally, but also internationally as a form of building transnational solidarity movements. SMS was cited as being instrumental in terms of distributing information rapidly, and “text brigades” was a term used to describe massive SMS campaigns:

*“That’s what we always do every time we need to inform others of our activities or what’s in and what’s out with our organizations or the latest events. It’s sending an announcement in the form of a text message to almost everybody in our phonebook or to those concerned.”  
– 24-year-old female, Philippines*

*“I am part of the International Students Movement, emancipating education for all worldwide. I recent[ly] used my mobile phone to send bulk sms to my fellow activists around the country in an attempt to organize demonstration in the country. This tool has been very effective because it was cheap and it also helped me to achieve my set goal. After a period of a weeks mobilization through mobile phone, we were able to realize hundreds of supporters gathered at Kakindu Stadium in Jinja.” – 22-year-old male, Uganda*

TakingITMobile participants also used SMS as a tool for peer education and health promotion. Mobile phones were used in mental health and addictions as a means for youth to support their peers by providing advice over the phone or through SMS. One youth reported, “using Short Message Service (SMS) to send tips on relationships and teenage sexuality to friends and acquaintances.” Another respondent reported that they used their mobile phone, “to help a friend with depression and to help another overcome internet addiction.” Youth expressed that mobile phones were helpful for those living in remote areas in order to call for emergency help or access health advice over the phone. SMS is a popular method of health promotion by youth activists and is even used in health clinics:

*“Once a poor people living in rural area need medical assistance in emergency and call me to help if possible then I frequently reply and give the address details of a community based telemedicine service provider.” – 26-year-old male, Bangladesh*

*“There's an urgent need of rare blood group for a person. Circulated the msg to gather it.” – 26-year-old female, India*

*“I am a medical student who participates in mini-health clinics and health workshops... I use the text messaging system on my mobile phone to make sure that all who are involved in any of the programs (including health professionals and patients) [are] reminded of their appointment times, what they are supposed to bring along and any other information they are supposed to know about. I sent text messages to all mothers who are supposed to be involved in a maternal health education and assessment mini-clinic/workshop to inform them of what they are required to bring along during their participation and the times at which the programs take place).” – 24-year-old male, Ghana*

Text messages were also a way for youth activists to show solidarity and advocate for political action. TakingITMobile participants used SMS to directly support their peers living with HIV/AIDS, and they used the same tactic to put pressure on pharmaceutical companies to advocate for universal access to anti-retroviral drugs:

*“On World AIDS Day I sent solidarity text messages to my friends to care for PLWHIV/Aids and also help the world in meeting the MDG 6.”  
– 25-year-old male, Ghana*

*“It was in March 2008 when the price for HIV/AIDS treatment was increased by the director of the national AIDS control committee of Cameroon. I made phone calls to group members and friends where I and them called the radio when the director was having a press conference to say no. After which three days after, we organised a protest march and it all worked. The price was reduced from 21000 fcfa to 3000 fcfa.” – 30-year-old, male, Cameroon*

As well, many TakingITMobile participants reported using SMS as a means of mobilizing flash mobs, which entail drawing a massive group of people together rapidly and spontaneously:

*“Flash mob for climate change in London Trafalgar square on the run up to Copenhagen Climate Change Summit.” – 19-year-old female, UK*

*“During PowerShift used it to find the group for the flash mob at the RBC.” – 21-year-old female, Canada*

*“Organizing a flash mob on the ground floor of a very popular building in downtown university campus.” – 23-year-old female, Canada*

Finally, SMS can also be a vital tool in international crisis response. One TakingITMobile participant said that they started using their phone as a tool in their work, “starting now, with torrential rains, floods and natural disasters.” Global warming means that increased natural disasters are affecting youth globally. SMS played a huge role in the 2010 Haiti earthquake fundraising effort, as mobile giving was used in an effort to get supplies to those in need:

*“Coordinating the collection of “supplies” for the victims of earthquakes in Haiti. Logistics functions in the communication of tactics to achieve the objectives of the activities of our organization.”  
– 30-year-old male, Mexico*

*"I sent an SMS to all contacts of our association at the time of the Tsunami in Sri Lanka to organize a rally the next day through a short and simple message. Result: nearly two hundred people attended the meeting (and some had forwarded the SMS to their contacts). "*  
– 29-year-old male, France

## 4.23 Social Media

Social Media was a popular online activity for TakingITGlobal users, with 27% of members using it daily on their phones, 13% weekly, and 7% once a month. That being said, almost half of all TakingITGlobal members did not use Social Media on their phones, with a quarter of all users whose phones did not support these services. Many of the youth leaders were employed with NGOs, and stated that they often updated social networks like Twitter and Facebook while on the go at events and meetings. A variety of Web 2.0 tools were cited, including wikis, and social networks such as YouTube, Facebook, Ning, etc. Social Media was seen as a good venue for engaging other youth around critical issues and promoting events:

*"I was an organizer in Alexandria International Festival and we were always in need to take photos for each event and share them, I used my mobile to take these photos and share it on the festival's Facebook group. I always use it to phone people in case of emergencies like delays or any updates."* – 20-year-old female, Egypt

*"Logging onto the mobile site for Facebook to message members of my organisation that there was a protest on to call for a better criminal justice procedure regarding rape survivors."*  
– 23-year-old female, South Africa

Updating and receiving information through social networks like Facebook and Twitter via SMS was mentioned as methods for spreading awareness around election violence. One youth stated that they, "kept updating my Facebook with news links and regular inside information I go about election violence." Another key case study of SMS for social change is in Moldova in April 2009, when youth activist Natalia Morar organized an anti-government flash mob. Through a variety of social networks, including Facebook and Twitter Morar drew crowds of

thousands, and was officially charged with "calls for organizing and staging mass disturbances." Dubbed by the media as the "Twitter Revolution," mobile phones were an essential part of this movement.

As well, youth activists used mobile phones to recruit participants to workshops and other events through social networks. Social media is a great tool for event organizing, and one TakingITMobile participant reported using their phone to organize a "themed heart2heart talk with teenagers & health empowerment conference." Mobile phones proved to be an effective tool for fundraising as well as event organizing and documentation:

*"I took photos & video and updated Facebook and Twitter during the rally and march. I also used text messaging to keep in contact with my fellow activists so we could coordinate without having to make phone calls (it was much too noisy for calls)." – 27-year-old male, Canada*

*"In 2005, at the launch of the Guide on HIV / AIDS in Cotonou, I convened and organized the workshop on mobile phones by creating a group containing the addresses of all the young leaders. It's my phone that allowed me to take photos and interviews after I published on the Internet." – 30-year-old male, Benin*

## **4.24 Citizen Media**

TakingITGlobal members reported using their phones to exchange Citizen Media, from photos, to audio or video and distributing their creations through MSS, Bluetooth, the internet and social networks. 35% of TakingITMobile participants reported used their mobile phones to listen to music on a daily basis. Snapping photos on mobile phones is also a highly popular activity for youth leaders. 22% of TakingITMobile participants reported taking photos on a daily basis, 30% weekly and 20% once a month. 22% TakingITMobile participants reported almost never using this feature, with similar results for photo browsing as well. One youth stated that they used their phone to, "take photos, record videos, and record audio." Another TakingITMobile participant expressed that

they used their phone to, “take photographs during events and communicate with other activists during meetings.” It was clear that across issues mobile photography was a popular activity for youth activists in documenting and sharing their messages:

*“I used my phone during a global stock of TckTckTck, when we performed a public demonstration on Avenida Paulista, in Sao Paulo. [We] took pictures and made videos.” – 24-year-old male, Brazil*

*“A seminar at Abuja where I had to use my mobile as a camera, flash and video. It was just been dynamic when you know what to do. I could have used it for life streaming but the network providers' speed was poor.” – 27-year-old male, Nigeria*

*“When I was in Seoul, activists were barred from the convention center. They wanted to get in but the police were barricading the entrance. It was an OECD Meeting on the future of the Internet Economy. I was in the Civil Society-Labour Forum since we did some collaboration on a CS paper presented to the OECD Ministers. So there were activists in the forum, too. I used my phone to take photos of the candlelight demonstration and the police barricading the convention hall.” – 30-year-old female, United States*

Many survey respondents reported using their phones to record video in order to document protests, record workshops, speeches and other activist activities. Many of the youth who responded used their phones as a method of grassroots journalism, publishing the results of their interviews on the internet or sharing with mainstream media outlets:

*“I was a member of the Mexico YouthForce during the 2008 International AIDS conference in Mexico. While in Mexico, we were able to borrow Nokia phones from TakingITGlobal and were able to interview youth delegates, take pictures and videos of events as well as stay in contact with other YouthForce members. The videos and pictures that were taken were subsequently uploaded to the YouthForce website where youth who were at the event, along with those who were not able to attend the event, could stay up-to-date and participate in the conference. The phone technology helped enriched our website's content.”*

*“I filmed a raid by armed police on campuses nationally. This video helped to prove the facts because the police will deny this attack after the death of a student shot.” – 27-year-old male, Ivory Coast*

*“When I was in protesting illegal dumping of garbage in São Mateus-SP. We arrived at the moment about 11 trucks committed wrongdoing in a particular field in a residential neighborhood. At the time of the*

*incidents I recorded pictures with my phone and sent to the TV station and also called the government body responsible.”*  
– 19-year-old female, Brazil

Issues around discrimination against undocumented workers and homophobia were cited. As well, mobile phones are used for security, as mobile youth activists end up being ‘little brother’ in that they can capture injustice and distribute it to millions through the internet:

*“To send and receive immediate feedback in cases of detention of undocumented people with co-workers who were at the site of arrest while I was at the refugee office asking for registration and coordinating actions with institutions from state protection.”*  
–27-year-old male, Ecuador

*“I used my phone to record a homophobic conversation.”*  
–29-year-old male, Mexico

*“I once used my cellphone to videotape the arrest of a young woman (who was also a visible minority) by police who were clearly being verbally abusive... A police officer came over and confiscated my phone, deleted my video and tried to intimidate me physically (as well as threatening to arrest me)... the other police officers present became visibly nervous that a video had been recorded at all, and released the woman from custody.”* – 21-year-old male, Canada

Blogs were a very popular form of citizen media, and many youth reported blogging through their mobile phones. One youth reported that they blogged, “live from Gaza in the middle of the battle.” TakingITMobile participants also used their phones to source news, with 26% reporting checking the news daily, with 14% checking it weekly, 9% monthly, and 44% not using the feature at all. Blogs and social networks were seen as credible news sources, yet clear limits around accessibility were cited as a major concern:

*“I am part of a movement to increase opportunities for play to youth--both in and out of school. I do this by reading articles and blogs on my phone and reading and updating my Twitter as well as Facebook. I would do more of this if my phone better supported updating and reading blogs and websites.”*

Micro-blogging was also cited as a means for youth activists to spread the word through mobile phones. 20% of survey respondents were daily micro-bloggers, and Twitter was the most commonly cited platform. 14% of respondents posted updates weekly, and common content included photo-blogging, as well as posting links to interesting articles:

*"I normally loads pictures and updates on our organizational activities on Facebook and Twitter constantly. Recently when the world leaders convened in Copenhagen for the Climate Change Conference, my Blackberry was handy in terms of updating the locals about the activities there and the role of the civil society such as KlimaForum and New Life Copenhagen."*

*"I rely on my mobile phone to get my news and to disseminate information on topics that are important to me through micro-blogging and social networks."*

Many youth reported limitations to sharing the media they took with friends. 44% of youth surveyed stated that they never shared media with their friends, 19% stating that their phone did not support this service. 12% stated that they shared media with their friends daily, with 18% stating that they shared media on a weekly basis and 15% on a monthly basis. 40% of youth surveyed stated that they never used MMS, which signifies that multimedia text messaging is not the most popular form of sharing media. 31% of participants used their phones for multimedia messaging frequently, with 5% of participants doing so on a daily basis. Despite technological limitations, many survey respondents shared their passion for sharing media with their peers:

*"...in a squatted house at a squat party, [I] took pics of performers and then posted in a squat association website to encourage the same in other places."— 30 year-old, male, Finland*

*"On one occasion during a neighborhood event which could attract gang members and our activity consisted in rescuing youth from the streets. We wanted a message of life for these youth, and we did not have that. In order to record the message, I used my phone to film and record the message of guidance to my peers."  
— 28 year-old male, Dominican Republic*

*“A villager with an adequate phone recorded the making of a stove which didn't vent out as many fumes as the old earthen stoves in the village would do and showed it in his village by passing that around as an mms and showing it in the "panchayat". This village also adopted the environment friendly stoves which used dried cow dung to wood.”*  
– 23-year-old female, India

*“Regularly I take photos which do help me immensely in the process of imparting artistic skills which are so crucial in reducing unemployment levels in Uganda. I inspire people I educate with aids on the phone. Recently, when I wanted to emphasise the biting problem of climate chan[g]e, I had to use my phone to photograph my work and send to display a poor quality photograph. Why? Climatic conditions are also poor and also to make bold the message iam passing on to the world!”*  
– 30-year-old male, Uganda

Mobile phones are not used just to document negative situations, but also situations of positive transformation. Citizen media created by youth with mobile phones can encourage others to work towards social justice. Through the mobile web, social networks and text messaging youth can share their multimedia creations with a broad audience.

## **4.25 Mobile Web**

Features of using the internet on mobile phones include the capacity for browsing, using email and locative media. Web browsing was used everyday by 38% of survey respondents, but 36% of respondents never used web browsing on their phones. Internet tethering came up in qualitative data as a useful feature for youth activists. One responded stated that they used their phone as a, “modem to connect to internet and spread information about my activism.” Mobile phones were cited as a reliable way to access the internet on a daily basis:

*“I use the phone almost every day to use the internet as it is cheaper than going to the internet cafes and i use it to access facebook, twitter, blog pages and keep people updated in the work im doing but also opportunities that are out there for me and my fellow youth.”*  
– 25-year-old female, Malawi

*“...the use of cellular 3G / 4G as a "key" for access to resources and intangible assets of the city of the digital age (car sharing, bike sharing*

*and any other form of sharing of technological tools)."*  
– 30-year-old male, Italy

Low rates of mobile web browsing can be explained by almost 20% of survey respondents reporting that their phone does not support this feature. That being said mobile browsing, from simple WAP sites, to more complex smart phone browsing is a way to connect the power of the web to mobile phones.

Email was another popular use for internet-enabled mobile phones, with 35% of users stating that they used this feature daily. One respondent stated that they used mobile phones, “to notify of situation and get support. Also, [being] able to email via phone helped too.” Mobile phones are an important venue for public advocacy and gathering grassroots support. Fundraising was another activity reported by youth respondents. From grant writing to throw fundraising events, mobile phones proved to be crucial in helping youth raise funds for their projects:

*“To communicate mainly to friends about charitable events to mobilize them to do same thing happening. Report unforeseen situations and day-to-day, so we can reflect and organize something to change that environment.” – 17-year-old female, Brazil*

*“Once there was an urgent email to be sent to a funding organisation that might help us relaise our projects. That day was the deadline and I hadn't a computer. I called a member of our association who did the job. We were able to get the grant. Unless there was a phone we would have never got the grant!” – 27-year-old male, Morocco*

A small minority of TakingITMobile participants cited using locative media, with the majority of members (62%) saying that they did not use it or that their phones did not support it. There was a small minority of TakingITMobile participants (6.2%) that used locative media daily with 11.6% using it weekly, 11.9% monthly, and 7.7% once a year. However this may be to the lack of common language and understanding of the term “locative media” which is relatively emerging vocabulary. There were a few qualitative examples of how having a mobile phone to locate either people or places was an advantage:

*“When I came to a poor village in the north of Vietnam, I might die of stray on mountain if I didn't have mobile phone to find the right way to come back.” – 20-year-old female, Vietnam*

*“Organising people to turn up to events and then using the phone to locate them in the crowd.” – 28-year-old male, Australia*

*“During post election violence I used it to locate where my friends and family members were.” – 30-year-old male, Kenya*

## 4.26 Organizing

Mobile phones are seen as a way to organize and promote activist events and usually involve multiple methods of mobile phone use. One youth reported that they used their phone to keep, “track of a weeks worth of guest speakers and technical needs that I helped to take care of.” From mainstream global conferences, to more grassroots mobilizations and workshops, mobile phones were seen as important tools:

*“In the process of organising a youth meeting on the International Youth Week, we were able to send emails, sms and call many youths both from the affluent and slum areas. The turnout was magnificent and consequently we were able to question the government representative on the handling of the Youth Enterprise and Development fund” – 24-year-old female, Kenya*

*“As part of my duty as a staff in an NGO that organizes MUN conferences for Junior and senior high school candidates, txt messages containing any form of update on the conference (changes in time, venue, participant requirements, training schedule etc) are sent to clients and other staff members.” – 24-year-old male, Ghana*

*“We always use the phone as a mobilisation tool lets say when we have events functions and even protests. [It's mostly through] text because they are cheap and effective.” – 27-year-old male, Kenya*

Many participants stated that they used their phones to keep personally organized. The majority of TakingITGlobal users use their mobile phones as a calendar with 53.4% saying they used it every day, 22.4% at least once a week, 10% at least once a month and 3% once a year. Despite the popularity of the calendar feature, 11.3% did not use this feature, 4.6% stating that their phone did not support such functions. That being said, many participants voiced that their phone was integral for making and keeping appointments:

*“Mobile phone for me - is, first and foremost, a means of communication. With his help I can inform on the activities of others, and stay abreast of all developments. If necessary, the phone gives me the opportunity to go on the Internet (for information retrieval or manipulation of the e-mail) or use a mobile messenger. Sometimes even a simple assembly turns into unexpected action and the phone as my chief assistant, always come to the rescue and help memorializing important event for me.” – 19-year-old female, Russia*

*“The mobile phone is used in several situations. In meetings or conferences you can add contacts, make notes, plan meetings, send and receive emails. It also lets you do the document events: take pictures, film, audio recording.” – 24-year-old male, Brazil*

Participants reported that their phones were useful in,  
“communicating with other youth on planning youth activities.”

Respondents adamantly expressed how mobile phones played an essential part of their lives as change agents. Whether it was sending out reminders for meetings, getting youth to show up for programming, or making sure events had good attendance, mobile phones were popular tools:

*“I extensively use mobile phone to arrange meetings with other youth. Moreover, we use mobile as one of the primary media to communicate about project progress.” – 26-year-old male, Iran*

*“Whenever we have important meetings the mobile and an essential tool to exchange inside information with members of my team.” – 26 year-old female, Portugal*

*“I use my phone to remind youth to attend meetings and community events or appointments. I can text a thousands of youth in one day by using xtreme sms a service that enable me to send many messages and a cheapest price when I join and USIPIME service. It really help to ensure that people are attending the events on time and it is a good reminder.” – 26-year-old male, Tanzania*

Many respondents stated that their phones were essential for volunteer coordination. Teleconferencing was also a highly reported activity, as the value of communicating with collaborators from afar was essential:

*“To arrange meetings with volunteers about the work that was carried out during the month, basically meetings or to send or receive invitations or to find someone at some event related to what we do.” – 26-year-old female, Mexico*

*“I was leading a group of volunteers in an environmental conference and they were all around the place, I needed to update them with news about staff we have to do before the end of the day, so I simply [sent] messages with my phone.” – 19-year-old male, Egypt*

*“I was a leader of YARN team - part of Global Change Makers... I had to contact the supervisor in Britain and all my teammates in Yemen... [I] used my phone about 15 times only for this matter this day and because we couldn't meet that day so I had to [have] a teleconference.”  
– 21-year-old male, Yemen*

*“To give updates as a local representative of my community on [nabuur.org](http://nabuur.org), a global volunteering online portal.”  
– 26-year-old male, Senegal*

Urgent communication was cited as another benefit to mobile phone use. One respondent stated that they used their mobile phone to send, “mass SMS/TXT for my friends to arrange an urgent meeting.” Many participants stated that their phone helped them to get in touch with colleagues in urgent situations:

*“I didn't have anyone next to me and there was an emergency situation in the community where I worked. So I contacted someone outside of the town because mobile system in the town where I was - was down - security forces limited the capacity but I still could contact my colleagues in another area.” – 28-year-old female, Thailand*

*“When I prepare a meeting with young people using my phone to facilitate my move and passed the information urgently.”  
-- 28-year-old male, Niger*

*“We had a electrical fire occurrence in the office in a morning & I used mobile phone to alert others and take necessary initiatives.”  
– 25-year-old female, Bangladesh*

It is obvious from these diverse scenarios that mobile phones are essential tools for youth activists around the globe. While in some cases TakingITGlobal youth may be early adapters, it is evident from the literature review that mobile phone use is proliferating across the globe.

## **4.3 Cross-Tab Analyses**

A series of cross-tab analyses were conducted examining the differences between youth who used their phones in their activism, and those who did not. Independent variables tested were gender, age and

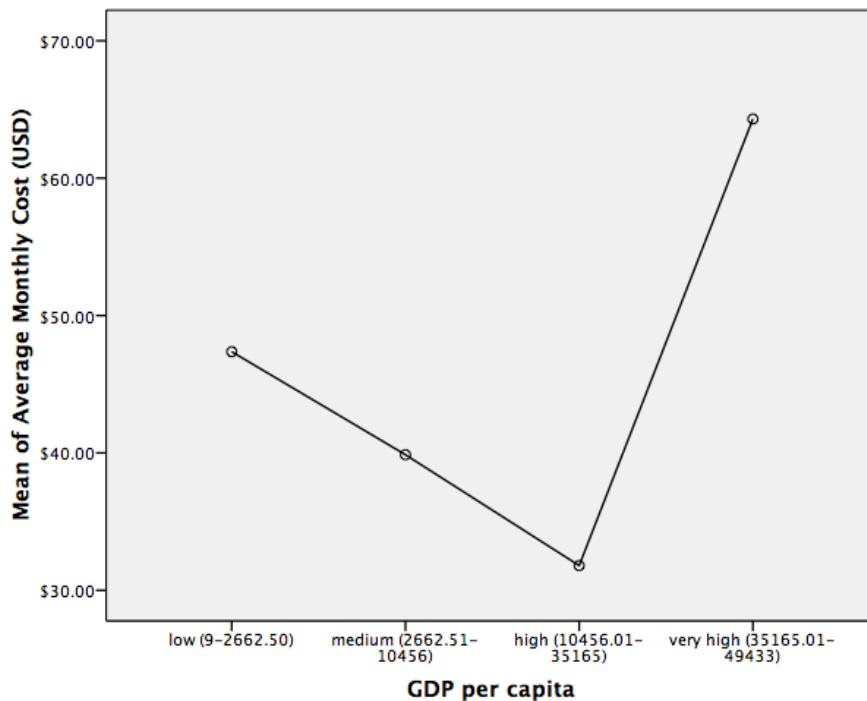
smart phone status. It was found that there were significant results for gender ( $F(1) = 11.52, p < .01$ ) and smart phone status ( $F(1) = 5.43, p = .02$ ) variables. As well, a moderately significant association was discovered between age and mobile activism, with youth in their late 20s showing higher levels of activism ( $F(3) = 6.47, p = .058$ ). Follow up chi-square tests were conducted which found that 69% of females used their phones in their work as youth leaders, compared to 89% of males. When chi-squares were used to examine smart phone status it was found that 81% of youth who had smart phones used their phones in their work, compared to 71% of youth who didn't consider their mobile phones under the smart category. Chi-squares also indicated that youth ages 25-29 show higher levels of activism (84%) than youth in their teens (67%), early 20s (75%) and 30s (75%). Despite the limited functionality of non-smart phone users, the frequencies for mobile activism were still fairly high at 71%, only 10% less than youth who self-identified as smart phone users (81%).

## 4.4 One-Way ANOVAs

One-Way ANOVA analyses were conducted comparing average monthly cost of mobile phone, average minutes, text messages and MBS used per month according to GDP level. GDP per capita was found to be a significant influencing factor on both monthly costs ( $F(3) = 10.00, p < .01$ ), number of minutes per month ( $F(3) = 7.16, p < .01$ ), number of SMS per month ( $F(3) = 15.16, p < .01$ ) and monthly internet data used ( $F(3) = 4.89, p < .01$ ). It was identified that youth from high-income nations had lower costs and more services on average, with an exception of youth from very high-income nations of which Canada represented the largest cohort.

Tukey's HSD post-hoc tests were conducted to tease apart significance. The significant overall result for average monthly cost was driven by comparisons between very high and high ( $p = .002$ ), such that members from countries with high GDP (M = \$31.80) had significantly lower costs than countries with very high GDP per capita (M = \$64.30). As well, there was a significant difference ( $p = .019$ ) between members from countries with very high and medium GDP per capita (M = \$39.87). Interestingly, no significant differences emerged between low GDP and any other GDP brackets on monthly costs ( $p > .20$ ).

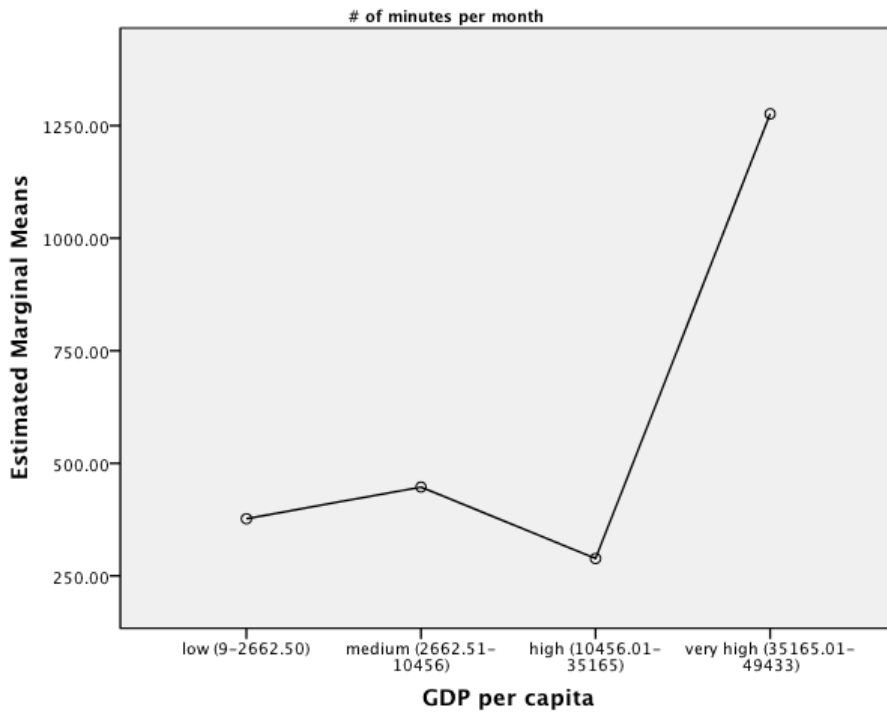
**Figure 7: ANOVA Mean of Average Monthly Cost by GDP per capita**



Differences were found in the number of minutes used per month between respondents who live in countries with very high GDP per capita and all other GDP groups ( $F(3) = 7.16, p < .01$ ). Tukey's HSD post-hoc analysis found that there were no significant differences in minutes used between low, medium and high GDP per capita countries. However, very high-income countries (M = 289) were significantly higher than low (M =

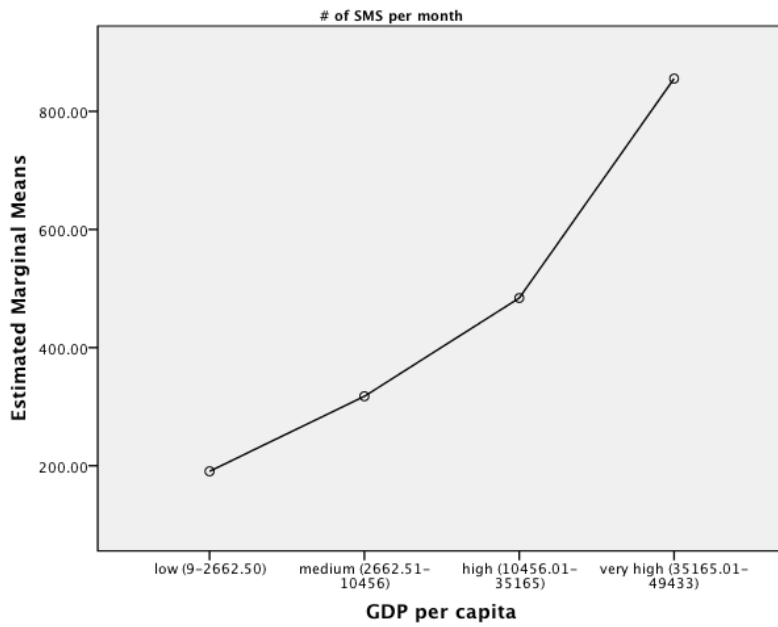
377), medium (M = 377) and high GDP countries (M = 1276) with  $p$ s < .02.

**Figure 8: ANOVA Mean of # of Minutes per Month by GDP per capita**



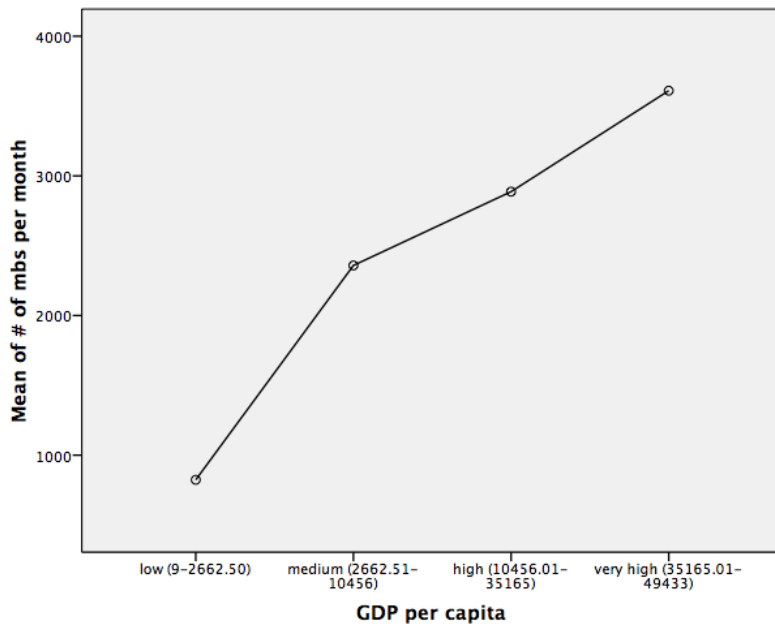
Additionally, differences were also identified between youth from very high GDP per capita countries and those from low, middle and high countries ( $p$ s < .01).

**Figure 9: ANOVA Mean of # of SMS per Month by GDP per capita**



Conversely, the significant overall result for average monthly MBS use was driven by differences ( $p = .01$ ) between low ( $M = 824$ ) and very high GDP countries ( $M = 3610$ ).

**Figure 10: ANOVA Mean # of MBS per Month by GDP per capita**



## 4.5 Strengths and Limitations

The TakingITMobile cohort was extremely diverse, with an evenly spread distribution of youth from across the globe in all regions. While the original goal of the TakingITMobile survey was to look for regional trends in mobile use, such a dispersed sample would call for a much larger response rate to do such an analysis. Yet despite the limitations in identifying region specific trends, it is evident from the data that mobile activism is not just happening in one niche region, but is a truly global phenomenon. The results also show that mobile phones are not just an important tool on the frontlines of political protests, but also a vital tool for community initiatives ranging from peer education to conservation. The results of this study demonstrate that mobile activism is a growing trend that goes beyond anecdotes reported in the mainstream media.

It is important to note that TakingITGlobal members are very active, so the sample may not be generalizable to all youth. Youth who use the TakingITGlobal social network are engaged in global issues and are usually actively using technology to make a difference. TakingITGlobal users are active as youth leaders online, so it is a natural extension that they are active in other realms of information communication technology for social change. By the very nature of being a TakingITGlobal member, it is implicit that the youth in the survey have access to computers, and thus probably leverage other technological tools. While the results may not reflect the general population, there is no doubt that these results reflect a generation of youth activists who are armed with technology engaged in citizen media creation.

In order to include youth who may not have access to computers, future studies should include a mobile SMS survey competent asking key questions in a shorter format to facilitate participation from youth who may

not have access to personal computers or internet. Many of the survey links went to MobileRevolutions.org, and in hindsight it would have been best to link directly to Survey Monkey. Censorship runs rampant globally and many governments block websites. Through conversation with working group members the discovery was made that mobilerevolutions.org was banned in several countries, including Egypt and China.

Finally, while the numbers in the TakingITMobile Working Group were large, encouraging digital participation was a challenge throughout the project. Many members expressed that computer access was infrequent, and for others their mother languages were not supported on computer platforms. The primary language circulated on the group was English, with the exception of a few posts in Spanish. In future studies it would be important to translate all posts and have them accessible in other languages in order to increase participation.

## **5. Discussion**

It is clear from the above findings that the majority of TakingITGlobal youth are using their mobile phones for social change in a variety of ways both globally and locally. Mobile communications is changing the face of youth activism as messages spread like wildfire and masses can be mobilized in seconds. The TakingITMobile respondents bear witness to the diversity of mobile activism taking place in a variety of settings, from protests in the streets, to community projects and health promotion initiatives. Mobile phone use was cited as popular both in formal settings like NGOs and conferences, as well as in grassroots activist settings where it can be a life saving tool in documenting injustices.

According to the results, while voice calling was the most popular feature used, text messaging was a cheap discrete option preferred by

many users and often used as a tool for mass mobilization. The most accessible tool reported was SMS, as like voice calling, it is built into the functionality of the most basic mobile phones on the market. SMS was cited as a cheap solution for communicating to massive numbers of people, getting the word out about emergency situations, showing solidarity, mobilizing protests, scheduling meetings, peer support, fundraising and general youth organizing. Text messaging was reported as an effective mechanism for reminding youth to make healthy choices, promote education and empowerment. As well, many of the youth reported accessing social networks via SMS.

Of those youth who did have feature rich smart phones, Citizen Media through mobile phones was a popular activity as youth could easily swap media and spread their message. Web browsing, listening to mp3s, social media, news and photography were features that many youth used daily on their mobile phones, although many reported having limitations to accessing them. Even youth who had mobile phones with limited functionality still considered them vital tools in their work as youth leaders. It is important to note that there were high levels of activism for both smart phone users and those with phones with regular functionality.

It was found that on average females are less likely to report using their phones than males for activism. It is clear that from the above tests that both gender and smart phone status have a strong effect on mobile phone use. As well, the results revealed a trend towards youth in their late 20s as more likely to use their phones for activism. Yet despite the barriers facing youth mobile activists, the amount of younger women from developing countries who shared stories of using their phones as tools for social change was inspirational. Although younger youth and women may have less access to political power, mobile phones can be a bridge to direct democracy.

As well, poverty is a huge obstacle towards mobile access, and dictates who has access to smart phones. While many TakingITGlobal youth may come from developing nations, they still have high rates of access to technology by the very nature of using the TakingITGlobal website and maintaining contact over the internet. Above all odds, youth from a variety of classes, races, ethnicities, genders, abilities and sexualities are accessing mobile phones in increasing numbers as a means of spreading their activism. It is important that we continue to bridge the existing gaps.

It is clear that GDP per capita has an influence on monthly costs, as well as frequency of text messaging, voice calling and data used. Although not statistically significant, one can see that the trend presents that on average youth from high-income countries have more services, and less costs, yet Canada and United States as very-high income nations present an anomaly. When looking at the plot for GDP per capita and average monthly price (Figure 7) one can see that the slope angles downward, and then skyrockets for very-high-income countries. As the biggest cohort in the TakingITMobile study was Canada, when looking further into national price baskets it seems that it has influenced the results. As a high-income countries Canada and the United States have the highest profit levels for mobile communication in the developed world (CBC, 2010). This may skew the results making it seem like high costs are common for all high-income countries:

*“Canadian carriers also led all 50 nations with the highest average revenue per user (ARPU) per month, at \$54.73 US. The average ARPU among developed nations was \$42.90. In the United States, ARPU was \$49.54 while in the United Kingdom it was \$31.63. Greece had the lowest APRU in the group with \$19.87.”<sup>4</sup>*

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<sup>4</sup> <http://www.cbc.ca/technology/story/2010/07/19/canada-wireless-profit.html?ref=rss#ixzz0uWIYc0hF>

Interestingly while globally TakingITMobile respondents reported over 100 unique mobile carriers, Canada has only three major mobile carriers that control 95% of the market at the time of writing this report. While many economists hail diversity as a central tenant to a healthy mobile market, it is important to note that the Canadian government's current efforts to open up our telecommunications market to multinational corporations could have detrimental effects that could potentially threaten national sovereignty. Canada has always been foreshadowed by the United States media giants and has worked hard to preserve national culture through establishing the Canadian Broadcasting Corporation in the 1920s, or programs like Challenge for Change (1967-1980)<sup>5</sup> that placed filmmakers in local communities documenting social struggles. Public communication is apart of Canadian national identity, yet it is fascinating how communication that is two-way in nature has fallen into the private realm.

Now with Citizen Media, everyone is a media maker and the tools and networks to create media largely rest within the hands of private telecommunications companies whose bottom line is profit. While the tools to create and share media are arguably more accessible than ever before, accessing networks requires paying high monthly fees which are often over-regulated with limits around usage. In some countries these limits are put in place by governments, looking to censor and control what information their citizens access and whose voices are heard. Oftentimes it is the multinational telecommunications companies that comply with repressive governments and build them systems of censorship and

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<sup>5</sup> <http://www.nfb.ca/playlists/michael-brendan-thomas-waugh-ezra-winton/challenge-for-change/>

control, as is the case with Nokia and Iran<sup>6</sup>. It is evident that if access is a problem, countries that offer unlimited options offer affordable ways for youth activists to use their mobile phones for social change. As well, cheap pre-paid options are another essential element for youth with less financial resources. Oftentimes pre-paid plans can be more expensive than monthly, and this further impedes global youth leaders from making full use of mobile technology.

According to TakingITMobile participants, the top barriers to accessing mobile technology is cost of services and equipment, as well as network access. Increasingly, governments across the world are legislating communication as a human right. Now more than ever before, it is important to posit what role government may have in bridging the digital divide. In Canada, millions of dollars have been poured into securing services for people living in remote areas, yet still many gaps remain and service fees remain high nationally. Canadian telecommunications companies are benefitting from these subsidies while consumers see minimal results. Despite Canada's high mobile price basket, globally Canada is a leader in bridging the digital divide through several initiatives including Netcorps / Cyberjeunes (1996-2008), an international internship program originally funded by the Canadian International Development Agency that bridged young digital Canadians with non-profit organizations in developing countries, and the International Telecentre Movement, which provides remote areas access to telecommunications hubs, and is currently housed by the International Development Research Centre.

In order to bridge the digital divide locally, Canadian telecommunications companies continue to call for billions more in

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[http://www.rferl.org/content/Nokia\\_Faces\\_Wrath\\_Of\\_Irans\\_Protesters/1777717.html](http://www.rferl.org/content/Nokia_Faces_Wrath_Of_Irans_Protesters/1777717.html)

subsidies resulting in little savings for citizens. While the government is paying for Canada's national telecommunications infrastructure, due to the current monopoly market, Canadians are not seeing accessible services. Instead of opening up telecommunications to foreign markets, Canada could take a different approach by subsidizing the cost to citizens directly. As well, if Canada were to buy out a piece of the mobile spectrum for public use it might help to create an affordable alternative to citizens. Private/public partnerships offer one glimmer of hope, as our existing structure of private ownership shows little results in providing accessible services. One example in the UK offers free phone service to youth, in exchange for exposure to advertising (Wray, 2007). Even more hopeful, the Million Campaign in NYC offers free mobile services to inner-city students in exchange for school attendance and good grades. Youth are encouraged to excel via incentive services and phones are provided free of charge. Imagine a world where instead of one laptop per child, every child has access to a smart phone and receives free services based on performance. The potential empowerment of having the internet 24/7 in one's palm can be an incredible tool for accessing and disseminating knowledge.

In order for TakingITGlobal to meet its mandate of empowering youth through technology, it must further work towards bridging the digital divide through mobile communications through a combination of accessible tools, innovative programming and international advocacy. It is vital for TakingITGlobal to continue to innovate its current online social network with appropriate technology in order to facilitate access to resources for youth leaders who are without the internet or personal computers. It is integral that TakingITGlobal's digital tools be accessible to people with both older phones and smart phones so they can access information they need. While TakingITMobile participants are using what they consider smart phones, the extreme diversity in operating systems

makes it financially challenging to create customized applications. Instead of building a TakingITGlobal application for each individual smart phone platform, it is advised that a web-based mobile application be developed to target as many mobile platforms as viable. Consumers are increasingly seeking mobile phones that have advanced rendering engines for web browsers. This in turn drives mobile innovation, putting extremely capable devices in the hands of consumers, while at the same time driving prices down on so called smart phones. Still, for platforms that do not provide a real web solution (commonly seen on low end, entry point devices targeting voice and SMS) it is recommended to take advantage of the limited functionality that is available by serving a truly mobile Wireless Application Protocol (WAP) site compatible with most basic phones sold in the past decade in order to reach users on those platforms with mobile phones limited in capabilities.

Vendor specific innovation comes with restrictions on what you can do in such walled gardens; while the tools become more robust, so do the rules for what is accepted or not into markets. As more consumers become interested in emerging mobile platforms, the market share of any particular device dwindles as other devices compete and make comparative steps with consumers. It is recommended to ignore platform specific development in lieu of the more relevant standards-based innovation happening in mobile browsers supported by all makers. If individual mobile application development were to take place, it is recommended that native mobile applications be created to run on Maemo, Symbian, iPhone OS, Android, Windows Phone 7 & Windows Mobile Classic, but it is important not to leave the many other platforms in the dark, as the mobile eco-system is so diverse.

As well, SMS integration is essential in order to reach youth who don't have personal computer or internet access. Both SMS gateway services and VoiceXML are two feasible options for providing

opportunities to distribute information to youth who currently do not have access. Through the Mobile Giving Foundation, both SMS fundraising and alert services are being developed for non-profits in order to reach a broad globally compatible audience. Mobile gateway services often have to strike deals with each telecommunications company, and as such their services are costly and restrictive. It is recommended that TakingITGlobal aim to develop a similar gateway service, which could be used as a tool for similar youth groups in order to send messages to their networks. The service could be provided free of cost to members, and customized advanced versions could be marketed as a part of TakingITGlobal's Technology Solutions. While the cost of developing such services is in the thousands, the potential for providing services to youth activists for free is a major step towards bridging the digital divide. Different short codes could be provided for groups, i.e. "Text GROUPS to 222TIG in order to receive updates from the groups you're subscribed to." In order to develop a SMS gateway service a considerable amount of capital is required, but as this is a niche market the opportunities to make a profit externally are high. It is important that SMS gateway services be available not just in North America, but also internationally to all member countries. The human resources required to undertake deals with all major carriers seems daunting considering the number of mobile carriers reported by users, but when arranged by media conglomerate this task seems less challenging.

On top of receiving SMS updates, it is important to take advantage of the two-way channel of communication that mobile phones provide. TakingITMobile users should be able to update their TIG blog through micro-blogging services, as well as text photos and other media from the field. While this technology was not common with TakingITGlobal members currently, it is important to note that platforms like Twitter are gaining popularity, and the potential is there for developing similar

platforms. As mobile phones are multimedia tools, developing opportunities for users to submit multimedia content is crucial. Oftentimes youth activists will record media, but often lack the tools to distribute it. Youth should be able to photo-blog and send other multimedia data from their mobile phones. In turn, a web-based application becomes that much more valuable as a tool that can be of extreme value to users.

In order to bridge the digital divide, innovative programming that addresses social determinants such as gender is imperative. Often, young women are shut out from technology and it is important for TakingITGlobal to be at the forefront for encouraging further programming, innovation and leadership. As a youth-led organization that engages in international policy forums, it is imperative that TakingITGlobal bring attention to this new movement of youth mobile activism and foster leadership opportunities to young women.

Increasingly, Citizen Media has become the norm with mobile phones, and increasingly protesters are changing their placards for smart phones. The recent G-20 Summit in Toronto in July 2010 bears testament to the power of mobile phones and citizen media. Videos, photographs, Facebook and Twitter updates prevailed non-stop over the summit documenting human rights abuses and bringing the stories of activists to the attention of all. While the mainstream media played videos of anarchists breaking glass windows in the downtown core, Citizen Media showed stories of peaceful activists and extreme police brutality. Now more than ever Citizen Media has become a tool for contesting mainstream media hegemony, and mobile phones are one key tool to broadcast from the frontlines.

Further studies must be done to examine how mobile phones are being used globally by youth as tools for resistance so we can better understand the socio-political effects of this emerging communication technology. It is clear that mobile phones are revolutionizing the ways that

society lives, works, and communicates, removing barriers to access to networked communication and information transfer. If access to information is slowly becoming a human right, it is imperative that mobile communications is studied as a potential for bridging the digital divide. Real barriers still exist, as the two-tiered system of smart phones and older generation mobile phones block some youth from exchanging information to ignite change. As well, while diversity of mobile carriers is one way to drive prices down, private/public partnerships that provide affordable services in remote areas can help to spread connectivity. Governments and policy makers must keep telecommunications companies accountable to consumers, and invest in new mobile tools that can help empower citizens and build democracy.

# Bibliography

Abercrombie, N. (1996). *Television and Society*. Cambridge: Polity Press.

Adorno, T. W. & Berstein, J. M. (2001). *The Culture Industry: Selected essays on mass culture*. Oxford: Routledge.

Barndt, D. (2004). *By Whom and for Whom? Intersections of Participatory Research and Community Arts*. In A. Cole et al (Eds). *Provoked by Art: Theorizing Arts-Informed Inquiry*. Toronto: Backalong Books and Centre for Arts-Informed Research. 221-234.

Baron, N. S. (2008) *Always On: Language in an Online and Mobile World*. New York: Oxford University Press.

Banjanovic, A. (2009, December 8). Special report: towards universal global mobile phone coverage. *Euro Monitor*, Retrieved from [http://www.euromonitor.com/Articles.aspx?folder=Special\\_Report\\_Towards\\_universal\\_global\\_mobile\\_phone\\_coverage&print=true](http://www.euromonitor.com/Articles.aspx?folder=Special_Report_Towards_universal_global_mobile_phone_coverage&print=true)

Branigan, T. (2010, May 27). Tenth apparent suicide at Foxconn iPhone Factory in China. *The Guardian UK*, Retrieved from <http://www.guardian.co.uk/world/2010/may/27/foxconn-suicide-tenth-iphone-china>

Burd, L. (2007) *Technological Initiatives for Social Empowerment: Design Experiments in Technology-Supported Youth Participation and Local Civic Engagement*. PhD. Diss., MIT.

Castells, M, Fernandez-Ardevol, M, Linchuan Qiu, J, and Sey, A. (2007). *Mobile Communication and Society: A Global Perspective*. Cambridge, Massachusetts Institute of Technology Press.

Chipchase, J. (2008). *Our cell phones, ourselves*. TED: Ideas worth spreading, Retrieved November 3, 2008, from [http://www.ted.com/index.php/talks/jan\\_chipchase\\_on\\_our\\_mobile\\_phones.html](http://www.ted.com/index.php/talks/jan_chipchase_on_our_mobile_phones.html)

Chipchase, J. (2005). *Non-Literate Mobile Phone Communication*. Retrieved November 3, 2008, from future perfect Web site: [http://www.janchipchase.com/blog/archives/2005/11/nonliterate\\_mob.html](http://www.janchipchase.com/blog/archives/2005/11/nonliterate_mob.html)

Corbett, S. (2008). *Can the Cellphone Help End Global Poverty?* New York Times.

- Buckingham, David (2003). *Media Education: Literacy, Learning and Contemporary Culture*. London: Polity Press.
- Campbell, L. (2007). *Documenting Transformations: Community Arts and Media Pedagogy*. (Undergraduate Thesis) Waterloo: University of Waterloo.
- Corriero, J. (2004). *Role of Youth Survey*. Toronto: TakingITGlobal.
- Castells, M. (2006) *Mobile Communication and Society*. Cambridge: MIT Press.
- Dubois & Langlois (2005). *Autonomous Media: Activating Resistance & Dissent*. Montreal: Cumulus Press.
- Fiore, Q., McLuhan M. (1967). *The Medium is the Massage*. Toronto: Bantam Books
- Flicker, S., Maley, O., Ridgley, A., Biscope, S., Lombardo, C., & Skinner, H. (2008). e-PAR: Using technology and participatory action research to engage youth in health promotion. *Action Research*, Vol. 6, No. 3, 285-303.
- Freire, Paulo. *Pedagogy of the Oppressed*. Trans. Myra Bergman Ramos. New York: Seabury, 1970.
- Gramsci, A. (2002). "(i) History of the subaltern classes: (ii) The Concept of Ideology: (iii) Cultural Themes: Ideological Material" in Durham & Kellner (Eds.), *Media and Cultural Studies: KeyWorks*. Malden: Blackwell publishers.
- Greenberg, E. & Webber, K. (2008). *Generation We: How Millennial Youth Are Taking Over America and Changing Our World Forever*.
- Heaven & Tubridy (2003). *Global Youth Culture and Youth Identity*. In J. Arvanitakis (Ed.), *Highly affected, rarely considered: the International Youth Parliament Commission's report on the impacts of globalization on young people*. Oxfam: International Youth Parliament.
- Hall, S ([1973] 1980). 'Encoding/decoding'. In Centre for Contemporary Cultural Studies (Ed.): *Culture, Media, Language: Working Papers in Cultural Studies, 1972-79* London: Hutchinson, pp. 128-38.
- Halleck, Dee Dee (2002). *Hand Held Visions: The Impossible Possibilities of Community Media*. New York: Fordham University Press.
- Howe, N. & Strauss, W. (2000). *Millennials rising: The next great generation*. New York: Vintage Books.

Huntley, R. (2006). *The World According to Gen Y*. Crows Nest, Australia: Allen & Uwin.

International Telecommunication Union. (2008). Retrieved November 3, 2008, from *International Telecommunications Union* Web site: [http://www.itu.int/newsroom/press\\_releases/2008/29.html](http://www.itu.int/newsroom/press_releases/2008/29.html)

International Telecommunication Union (2010). *World Telecommunication/ICT Development Report 2010: Monitoring the WSIS targets*. Geneva: ITU. Retrieved May 27, 2010 from [http://www.itu.int/dms\\_pub/itu-d/opb/ind/D-IND-WTDR-2010-PDF-E.pdf](http://www.itu.int/dms_pub/itu-d/opb/ind/D-IND-WTDR-2010-PDF-E.pdf)

Jung, Y, & Persson, P. (Producer). (2005). *Mobile social computing: from research to product*. [Web]. Retrieved from <http://hci.stanford.edu/courses/cs547/abstracts/04-05/050408-jung.html>

Kielburger, C., & Kielburger, M. (2008, April 21). *Toxic e-waste pouring into Third World*. Toronto Star, Retrieved from <http://www.thestar.com/News/GlobalVoices/article/416548>

Lane, D., Isenberg, D., & Knoop, C-I (2007). *Iqbal Quadir, Gonofone, and the Creation of Grameenphone (Bangladesh)*. Boston: Harvard Business School Publishing.

Langlois, A., Dubois, Frederic, D. eds. (2005) *Autonomous Media Activating Resistance & Dissent*. Montreal, Canada: Cumulus Press.

Leis, Raul. (1989). *De superman a superbarrios*. Panama: CEAAL - CEASPA.

Lenhart, A., Madden, M., Macgill, A. R., & Smith, A. (2007). *Teens and Social Media*. Pew Internet and American Life Project. <http://www.pewinternet.org/Reports/2007/Teens-and-Social-Media.aspx/> Accessed 19.03.09.

Manji, F. (2008). New Media, Technology and Activism. *Gender and Media Diversity Journal*. Issue 4.

marino, d. (1998). *Wild Garden: Art, Education and the Culture of Resistance*. Toronto: Between the Lines.

McLuhan, M. (1967). *The Medium is the Massage with Marshall McLuhan*. New York: CBS Records.

McLuhan, M. (1964). *Understanding Media: The Extensions of Man*. 5th ed. NYC : McGraw-Hill Book Company.

Montgomery, K.C. (2007). *Generation Digital: Politics, commerce, and childhood in the age of the internet*. Cambridge: MIT Press.

MTV/MSN. (2007, July 07). *Circuits of Cool – Mobile Phones*. Retrieved from [http://advertising.microsoft.com/europe/Research/research-library?Adv\\_ResearchReportID=598](http://advertising.microsoft.com/europe/Research/research-library?Adv_ResearchReportID=598)

Open Handset Alliance. (2009). Overview. Retrieved November 3, 2008, from *Open Handset Alliance* Web site: [http://www.openhandsetalliance.com/oha\\_overview.html](http://www.openhandsetalliance.com/oha_overview.html)

Ospian, M. (2007). Electronic Resistance. Creative Resistance. *Youth Action Forum Magazine*. Toronto: Youth Action Network.

Pew Research Center for the People & the Press (2007). *A Portrait of "Generation Next" How young people view their lives, futures and politics*. Retrieved from <http://pewresearch.org/pubs/278/a-portrait-of-generation-next>

Shirky, Clay. 2008. *Here comes Everybody: The power of organizing without organizations*. New York: Penguin Press.

Sinner, A., Leggo, C., Irwin, R. L., Gouzouasis, P., & Grauer, K. (2006). *Arts-based educational research dissertations: Reviewing the practices of new scholars*. *Canadian Journal of Education*. 29, 1223-1270.

Tapscott, D. (1998). *Growing up Digital: the rise of the Net Generation*. New York: McGraw-Hill.

Tapscott, Don. 2009. *Grown up Digital : How the Net Generation is changing your world*. New York: McGraw-Hill.

Toronto Public Health (July 2008). *Fact Sheet: Children and Safe Cell Phone Use*. City of Toronto.

Rodríguez, Clemencia (2001) *Fissures in the Mediascape. An International Study of Citizens' Media*. Cresskill, NJ: Hampton Press.

Rodriguez, C, Kidd, D, & Stein, L. (Ed.). (2010). *Making our Media: Global initiatives toward a democratic public sphere Vol. One*. Creesskill, NJ: Hampton Press.

Uzelman, S. (2005). Hard at Work in the Bamboo Garden: Media Activists and Social Movements. In A. Langlois and F. Dubois (Eds.) *Autonomous Media: Activating Resistance and Dissent*. (pp 16-29). Montréal: Cumulus Press.

Waverman, L., M. Meschi and M. Fuss (2005). *The Impact of Telecoms on Economic Growth in Developing Countries*. Vodafone Policy Paper Series, 2, London, United Kingdom.

Zuckerman, E. (2007). draft paper on mobile phones and activism. My Heart's in Accra, Retrieved from <http://www.ethanzuckerman.com/blog/2007/04/09/draft-paper-on-mobile-phones-and-activism/>

## Appendices

### Appendix A



a TakingITGlobal online publication



February 2009

### TakingITMobile:

#### How mobile phones are transforming the world

The prevalence of mobile technologies is having many effects upon our world. Our mobile phones go with most of us wherever we go. They can be our connections to our family, friends and jobs, our calendars, our to-do lists and, increasingly, they are our computers. The influence of mobile communications works both ways: mobile phones are changing the ways

people communicate and people are continually coming up with new ways to use mobile phones. If you are interested in brainstorming mobile solutions for the TIG platform, join fellow TIG members on the TakingITMobile Working Group.

## featured writing:



Mobile Warriors: Costa Rican Youth, Mobile Phones and Social Change by Lisa Campbell Salazar, Canada

*Lisa Campbell is participating in the TakingITMobile Working Group, a project involving TIG members who are interested in mobile communications. Read more about the project and join it [here](#).*

Photo...

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Phones against AIDS by Kate Jongbloed, Canada

You and I might use text messaging to remind our roommate to pick up toilet paper on the way home from work, but around sub-Saharan Africa, mobile phones are taking on a new role as tools against the AIDS pandemic that is ravaging the continent.



Mobile phone by Simonette Brebenariu, Romania  
M-odern technology outrages the sensitivities of all mankind, adheres the good news to all who have a unique power of mind.

O-bsession on ringing and sending messages with photos in grand, money is wasted through communication, an updated cell as brand!...

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Unplugged and connected by Stu, Canada

Greater connections to the world are at the root of our ability to act. Facebook can organize your relationships to a degree, but when it comes to acting on something, speed and ease of access to information are key. This is the true value of the mobile movement.

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**other articles in this issue:**

**Dear friends**

Olowu Adebawale Lawrence, Nigeria

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**Mobile technology: very positive  
impact and still moving forward**

Mahamed Osman, Somalia

---

**Mobile phones in the wrong hands**

manuel ryan ricohermoso, Philippines

---

**The mobile phone:  
transforming the world**

Chantelle Ennis-Charoo, Canada

---

**My everywhere companion**

Ssendagire Paul, Uganda

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# Appendix B

## **TakingITMobile: Youth, Mobile Phones and Social Change**

### **Terms of Reference**

These Terms of Reference are intended to guide the work of the research partners throughout this project. This is a living document that can be revised at any time during the project. This document will be reviewed, revised if necessary, and approved by the project partners for the duration of the project.

#### **1. Purpose of the Project**

##### **Project Description:**

The TakingITMobile Survey is an e-PAR project which seeks to understand how youth leaders are using mobile communications in their work to create social change in communities around the world. e-PAR is a research technique which involves engaging youth as research partners through technology such as social networks and blogs. Recruited youth leaders from TakingITGlobal will form a working group, which along with the key research partners guide the study and ground it in community experience and networks. By collaborating with global youth leaders and activists through the TakingITGlobal social network we can discover key trends of how youth are using mobile phones to create positive changes in their communities and around the world.

##### **Project Goals:**

The research will lead to increased understanding of how youth are using mobile communications for social change which will in turn act as a blueprint for TakingITGlobal's mobile engagement strategy creating:

- Improved access to resources for youth leaders who do not have computer access

- Mobile integration of TakingITGlobal’s existing website and services
- A resource for other youth leaders and organizations who are looking to integrate mobile technology into their work for social change.

### **Project Methodology:**

The project will achieve this goal through the creation of an online survey that will be distributed over the TakingITGlobal website. Youth leaders have been recruited through the TakingITGlobal monthly theme on Mobile Communications. Through the TakingITMobile Working Group, youth will help to give feedback the survey questions through qualitative peer research and online interaction through discussion forums. The final report will be distributed in pdf form through the TakingITGlobal website and a TakingITGlobal guide to action will be created from the paper and will serve as an executive report and action guide for members.

## **2. Guiding Principles for the ePAR Project:**

- a. Operate as a collaborative and equitable research partnership.
- b. Engage a set of principles that will foster community ownership and empowerment among team members, including power-sharing, capacity-building, group participation in phases of the research project, and community ownership of the project.
- c. Engage in an open and transparent process in which the roles and expectations of team members are clearly outlined.
- d. Provide opportunities for capacity building through dialogue
- e. Use research processes that honour and respects the lived experiences, knowledge, and/or diversity of research participants.
- f. Employ dissemination strategies that foster education, advocacy, community benefit, and social change.

## **3. Roles and Responsibilities of Research Team Members**

Roles and responsibilities will differ among team members based on principles of equity, empowerment, capacity-building, and collective ownership of the project.

### **Principal Investigators Responsibilities:**

The Principal Investigator (Lisa Campbell Salazar) will provide leadership to the project with support from research partner TakingITGlobal and the TakingITMobile Working Group. This includes overseeing the entire project, coordinating research partners activities, and ensuring the dissemination of research findings. Responsibilities will include providing support to the project team, coordinating project administrative activities, contributing to discussions about the overall scope and focus of the research and coordinating activities related to the TakingITMobile Working Group. The Principle Investigator will also be responsible for carrying-out the methodological and analysis-related steps of the project in accordance with the overall project direction as set out by the research team, and in accordance with agreed upon timelines. The Principle Investigator is also responsible for ensuring that clear communication mechanisms are in place between the project partner TakingITGlobal, the TakingITMobile Working Group and other community advisors.

### **Project Partner's Responsibilities:**

TakingITGlobal will participate in all aspects of the research project, taking into account individual and organizational capacities, (skills, and available human and other resources). The partners will participate in meetings and support and/or participate in the successful unfolding of the next phases of the research. Meetings will be once every two months at the TakingITGlobal Toronto office. Project Partner's responsibilities also include promotion of the survey, feedback on analysis and dissemination of results.

### **TakingITMobile Working Group:**

The role of the TakingITMobile Working Group is to refine the survey questions, promote the survey, and also participate in data analysis and dissemination of findings. Members of the group will not regularly attend meetings but will communicate through their TakingITGlobal Project Page which will continue after the project is over as a hub for members interested in mobile phones for social change. The Principle Investigator will keep working group members up-to-date on the project. The Principle Investigator will also communicate feedback from the working group on certain components of the project to TakingITGlobal. In addition, at different stages throughout the project, community stakeholders will be asked to provide advice, input and recommendations to inform project direction.

## **4. Decision-Making Process for the Project**

**Our decision-making process in this project aims to:**

- encourage the participation and empowerment of all team members;
- be transparent, open and clear; and
- provide opportunities for exchanges of learning that draw on the various skills and areas of knowledge of different team members;

**Differing Responsibilities:**

- Team decisions will include those related to the project's overall goals and strategies;
- The Principal Investigator is responsible for decisions related to the management of the research and administration of the project.

**Process for Team Decisions:**

- Decision-making at team meetings will strive first for consensus. If this method is not satisfactory, the Principal Investigator in conjunction with TakingITGlobal will have the final say.
- Key decisions will be distributed through email by the Principle Investigator to both TakingITGlobal and the TakingITMobile Working Group.

## **5. Access to/Dissemination of Data**

Based upon the project's guiding principles, the Principal Investigator, TakingITGlobal and the TakingITMobile Working group will have access to the research data. York University will be the legal steward of the research data. Usage of the data will be in accordance with the advancement of the project goals and will adhere to all requirements of the Research Ethics Boards at York University.

**Data will be used for:**

- advancement of knowledge;

- identification of future research questions;
- making recommendations for policy development and service provision; and
- supporting knowledge transfer;

**The data will not be used for:**

- individual interests that are not related to the goals of the research without authorization from the majority of team members;

All Research Team members will participate in the dissemination of research findings taking into account their varying needs, responsibilities and capacities. Research findings may be disseminated in various ways including community forums, conference presentations, international policy forums, workshops, newsletters, educational programmes, and journal articles. TakingITMobile Working Group members are welcome to help out with the creation of the TakingITMobile Guide to Action. The data will also be used by volunteer mobile developers to create new mobile features for the TakingITGlobal website.

In the final research report, Lisa Campbell Salazar will be named as lead author with all contributors being named according to their roles on the project.

## **6. Confidentiality**

Information received or observed about a subject during the course of work or while handling files or documents, must be held in strict confidence and disclosed only if authorized in writing or obligated legally or professionally to do so. Any confidential information being received or observed by someone not authorized to do so must also be protected.

No confidential information must be published or otherwise made public in which the person or persons involved will be identifiable.

Failure to abide by this agreement whether by omission or commission, is a serious breach of these terms of reference and could have consequences for the subject, his or her family, friends and associates. It could also involve TakingITGlobal, the funders, the affiliated universities and/or this research project in public controversy and possible financial liability.

## 7. Acknowledgements

- In all publications, media strategies and other public activities related to the project, all investigators will be acknowledged as investigators or authors, as appropriate. The members of the research team understand that ‘authors’ are those who participate in writing/publishing activities. The names of investigators’/authors’ respective organizations will appear with acknowledgement.

## 8. List of Principal Members

### Principal Investigator:

Lisa Campbell Salazar

### Project Partners:

#### TakingITGlobal

Jennifer Corriero, Executive Director

Michael Furdyk, Director of Technology

Chiara Camponeschi, Multilingual Programs Manager

### TakingITMobile Working Group:

Pekun Fowler

Nigeria

Anil Saxena

New Delhi, Delhi, India

Atta ur Rehman Qureashi

Rawalpindi, Punjab, Pakistan

Caringdevice

Nepal

Christian Kreuz

Frankfurt, Hessen, Germany

Damian Profeta L. de Zamora

Buenos Aires, Argentina

Danish Khan

Al-Jubail, Saudi Arabia

Dipak Shrestha	Nepal / UK
Edward Harran	Queensland, Australia
Gregory M	United States
Danish Khan	Al-Jubail, Saudi Arabia
Ilyes El Ouarzadi	Montréal, Quebec, Canada
Jennifer Corriero	Toronto, Ontario, Canada
Josemir Maldonado	Caracas, Distrito Federal, Venezuela
Josue Salazar	Toronto, Ontario, Canada
Kate Jongbloed	Toronto, Ontario, Canada
Lazarex	Edmonton, Alberta, Canada
lazro81	Algeria
Leonardo Zuniga	Toronto, Ontario, Canada
Liam O'Doherty	Toronto, Ontario, Canada
Mclato	Nigeria
Melissa Snowden	Orlando, Florida, United States
Michael Awiti	Mandera, North-Eastern, Kenya
Mohamed Eid	Somalia
Ndzulo Tueche (Joe)	Côte D'Ivoire
Nick Yeo	Toronto, Ontario, Canada
Oli Jude Okechukwu	Nigeria
Paul Baah Amoaka	Ghana
Rebecca Lohman	Tucson, Arizona, United States
Reiner Mora Martínez	Costa Rica
Shamese Shular	United States
Shreejana K.C	Kathmandu, Bagmati, Nepal
Teeman.LIB	Monrovia, Liberia

# Appendix C

## TakingITMobile Descriptives

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<b>Male</b>	268	47.4	51.6	51.6
	<b>Female</b>	243	43	46.8	98.5
	<b>Other</b>	8	1.4	1.5	100
	<b>Total</b>	519	91.9	100	
Missing		46	8.1		
Total		565	100		

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<b>16-20</b>	79	14	15.6	15.6
	<b>21-24</b>	134	23.7	26.4	42
	<b>25-29</b>	179	31.7	35.3	77.3
	<b>30+</b>	115	20.4	22.7	100
	<b>Total</b>	507	89.7	100	
Missing		58	10.3		
Total		565	100		

		<b>Would you consider your phone a smart phone?</b>			
		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	<b>Yes</b>	287	50.8	55.3	55.3
	<b>No</b>	232	41.1	44.7	100
	<b>Total</b>	519	91.9	100	
Missing		46	8.1		
Total		565	100		

		<b>Do you use your mobile phone in your work as a youth leader?</b>			
		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	<b>Yes</b>	311	55	77	77
	<b>No</b>	93	16.5	23	100
	<b>Total</b>	404	71.5	100	
Missing		161	28.5		
Total		565	100		

		<b>GDP per capita</b>			
		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	<b>low (\$9-\$2,662.50)</b>	171	30.3	30.3	30.3
	<b>medium (\$2,662.51-\$10,456)</b>	143	25.3	25.3	55.6
	<b>high (10456.01-35165)</b>	123	21.8	21.8	77.3
	<b>very high (35165.01-49433)</b>	128	22.7	22.7	100
	<b>Total</b>	565	100	100	

		<b>Average Monthly Cost (USD)</b>			
		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	<b>.31-\$15</b>	115	20.4	29.1	29.1
	<b>\$15.01-\$30</b>	106	18.8	26.8	55.9
	<b>\$30.01-\$50</b>	77	13.6	19.5	75.4
	<b>\$50+</b>	97	17.2	24.6	100
	<b>Total</b>	395	69.9	100	
Missing		170	30.1		
<b>Total</b>		565	100		

		<b># of mbs per month</b>			
		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	<b>0-237</b>	20	3.5	24.4	24.4
	<b>238-1000</b>	23	4.1	28	52.4
	<b>1001-6144</b>	39	6.9	47.6	100
	Total	82	14.5	100	
Missing		483	85.5		
Total		565	100		

		<b>#of SMS per month</b>			
		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	<b>0-100</b>	48	8.5	29.8	29.8
	<b>101-400</b>	36	6.4	22.4	52.2
	<b>401-1000</b>	72	12.7	44.7	96.9
	<b>1000-3999</b>	5	0.9	3.1	100
	Total	161	28.5	100	
Missing		399	70.6		
	System	5	0.9		
	Total	404	71.5		
Total		565	100		

		<b># of minutes per month</b>			
		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	<b>0-100</b>	57	10.1	31.8	31.8
	<b>101-250</b>	35	6.2	19.6	51.4
	<b>251-600</b>	44	7.8	24.6	76
	<b>601-6280</b>	43	7.6	24	100
	Total	179	31.7	100	
Missing		386	68.3		
Total		565	100		