Voices on the World Stage: Processing the Power of Individual Experience in Recommendations for Action

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ABSTRACT

"Women Weave the Web" was the 2014 digital action campaign sponsored by World Pulse, "… the leading network using the power of digital media to connect women worldwide and bring them a global voice" (World Pulse 2014). In three ten-week phases, women were encouraged to submit entries using on-line journals about their experiences with digital access, digital literacy and digital empowerment. During the seven-month campaign, 590 journal entries from women in 71 countries were analyzed to make recommendations not only concerning digital inclusion, but also library development, internet affordability, internet rights, and technology related violence against women. Because women were responding to campaign prompts, they contributed to solutions within the on-line community, as well as informed the larger goals of the organization and its advocacy partners.

A knowledge management framework was used alongside a social constructionist approach to analyze the entries. This approach emphasizes the construction of knowledge from the collective commentary by the community. Data visualization was used to address issues related to this large qualitative data set in a timely manner consistent with organizational goals.

Recommendations produced through the data analysis highlight real solutions to global problems, while maintaining the integrity of individual experiences. Included in campaign advocacy packages, graphic summaries of recommendations, representative quotes and links to original entries present the information in layers that increase the utility of this powerful and unique knowledge collection.

As qualitative material becomes more accessible online, organizations need trustworthy, timely methods that will allow them to utilize these rich data sets for knowledge creation that can inform organizational goals. Illustrations of the type of analysis used in the "Women Weave the Web" campaign can be important resources for building an analysis framework that meets the demands of big qualitative data.

KEYWORDS

Women, feminist research, knowledge management, big qualitative data, data visualization

INTRODUCTION

"What I'm learning about this process of "digital empowerment" is something...simple. I am the person who is best able to write about my own life, my own experiences, and how I see the world. I am the first person that has to believe that my own point of view is valid and the message that I want to pass along is important" DiarioIgualdad – Mexico (Igualdad 2014).

The concept of collecting narratives and answering individual women is a feminist research strategy designed for "…responding to women's voices with encouragement and other positive feedback, speaking directly to women by mentioning them by name, asking thoughtful questions about their experiences, and amplifying their voices to stakeholders" (Linabary, 2013). This type of personal approach has been shown to be important in research work with marginalized populations because it validates the authority of those providing the information. Empowering individuals with a network of support and the facility to act, ensures a "reciprocal" relationship that is valuable to collecting this kind of compelling qualitative data (Bartolomei, Hugman & Pittaway, 2010).

While the use of qualitative data is common in the type of global ICT research which may be facilitated through the Women Weave the Web campaign, the academic community has noted a disparity in the use of data which varies in scope to inform larger conclusions. "The statistics and tangible indicators for economic growth, the lessons learned from pilot studies or scattered anecdotes of success, and the detailed documentation of outputs and outcomes do not add up to an understanding of larger social or economic impacts, which are essential to inform better policy decisions and program implementation" (Gomez, 2012). A question regarding the "…quick jump from the description

or analysis of a field experience, project or organization to conclusions or recommendations that are aimed at the national, country level" (Gomez, 2013) is important to note, since it validates a conservative approach to creating recommendations for action that remain within the scope of the Women Weave the Web campaign data set.

The challenge of finding common threads in the diverse individual testimonies of women in the World Pulse community, places importance on communicating how the analysis is conducted. The collection of journal entries is gathered from women in different countries, written in different languages, from women of various levels of education, socio-economic backgrounds and levels of technical ability. While initial close reading is important for understanding each entry, iterative reading of these original journals is important as a measure of validity in both the analysis and outcomes. Transparency in the methods used to bring together common experiences also increases the trustworthiness of final recommendations for action.

APPROACH

"Whether women in these currently underserved communities use their new Internet access to learn new job skills, to reach for advanced degrees or simply to become a better citizen of her community, we know that increasing Internet access for our global sisters must be a concept we all work to promote, for the benefit of all." Nilanjana – India (Sanyal 2014).

It is useful to approach the rich data created by the World Pulse community as qualitative evidence of an organization working toward the goal of empowering women through collective communication. Rather than being regarded as independent objects of a research endeavor, the women involved in the network are sharing ideas, communicating strategies, and responding to organizational needs as well as the issues their World Pulse "sisters" voice on-line. While research attempts to inform theory, analyzing data from the Women Weave the Web campaign is really a knowledge creating process that works toward meeting specific organizational goals. Knowledge creation encompasses processes within an organization that build innovative activities, ideas or organizational capabilities. (Desouza 2011). Knowledge management, "… involves leveraging knowledge toward attainment of goals and objectives" (Desouza, 2011, p. 6). Entries for the Women Weave the Web campaign are submitted based on journal prompts and are produced in an effort to enhance personal objectives as well as the advocacy goals of World Pulse. Viewing women's journal entries as contributions to the organization's mission means consideration of each piece of submitted data as a knowledge artifact, validating the human sources of knowledge which produced them, and understanding how knowledge can be generated by analyzing the collection as a whole – all aspects of knowledge management practice (Desouza, 2011).

PROCESS

"...the new source of power today is not so much money in the hands of a few, but information in the hands of many" A Common Future – Cameroon (Colbert, 2014).

The early stage of organizing data in order to produce information is part of the knowledge creation process. Data becomes structured and retrievable during information processing, but it must then be evaluated for meaning, context and relevance in order to be successful for use as knowledge. For organizations that rely on warehouses of individual narrative to inform the achievement of their goals, appropriate data processing is an important part of knowledge generation. Large qualitative data sets from narrative collections, consumer comments and open surveys, are becoming more prevalent especially in on-line environments, which facilitate the data collection process. Discussion within on-line narratives and interpretation across qualitative data sets allow organizations to access the rich resource of individual experience as a source of knowledge (Sincovics 2014).

Original entries from the World Pulse community may be considered both "data" and "information" under the cycle of artifact development in knowledge management. Data may be quantitative facts or numbers, or may be qualitative communications of experience such as written material, photographs, interviews or art forms. These artifacts may be considered data or information depending on the individual who is using them. Data become information when they are used to create meaning in a particular context. "Knowledge…is what people believe based on the meaningful and organized accumulation of information" (Desouza, 2011, p. 36). Beyond knowledge is "intelligence" or the ability to analyze and synthesize knowledge for particular purposes. And finally "wisdom" relies on a combination of knowledge and experience to make decisions that are best for achieving a particular end (Desouza 2011). This data-information-knowledge-wisdom development cycle is important for understanding the way in which knowledge artifacts may be used to meet the goals and objectives of an organization.

Processing the data collected from the Women Weave the Web campaign submissions follows the knowledge cycle, but must borrow details of methodology from the world of qualitative research in order to reliably articulate each stage. The variety and quantity of World Pulse journal entries provided both possibilities for compelling analysis, and problems not often encountered by qualitative researchers. In the thirty weeks of the Women Weave the Web campaign, 590 journal entries from 71 countries in 5 languages were submitted to World Pulse. Not only personal narratives, but essays, news commentaries and even poetry were submitted through the on-line network. Over the seven-month period of the information campaign, several hundred submitted entries were continuously evaluated for timely use by the

organization and its advocacy partners. In order to enhance validity, the data demanded analysis based on sound methodologies, in a transparent fashion, which would produce information that could be interpreted in meaningful ways. (Elo 2014).

Thematic Coding
Background reading, web site research and similarly themed reports from other global organizations were utilized to inform the selection of thematic categories for coding campaign journal entries. Six barriers to issues of digital inclusion were selected in a deductive approach to content analysis of the articles. Location, affordability, safety, infrastructure, culture and literacy were all chosen as barriers to internet access that affect women around the world. Education, employment, training, literacy, awareness and cultural attitudes were identified as resources that facilitated the development of digital literacy. Finally digital empowerment was defined in terms of educational, economic, health related, cultural, personal and political contexts (see Figure 1). The constant addition of new entries over the 30 week period invited an iterative process of thematic evaluation that reflected a progressive analysis and made time for the construction of additional emergent themes (Sinkovics 2012).

Data Visualization
Data visualization was used to enhance analysis of coded entries by importing the data into an open source software tool called "nineteen". Because the data was organized by field headings, it was easy to see color coded affinity grouping, use text filters and make use of what is recognized as important qualitative management from a software tool; "Outcomes include information (relationships), knowledge (patterns), and wisdom (principles) explained through visualizations and drill-down capabilities" (Romand 2003). In particular, questions regarding cross-cultural analysis were quickly answered by viewing color coded themes sorted by country. For example, issues regarding the use technology to combat violence against women are mentioned in entries from
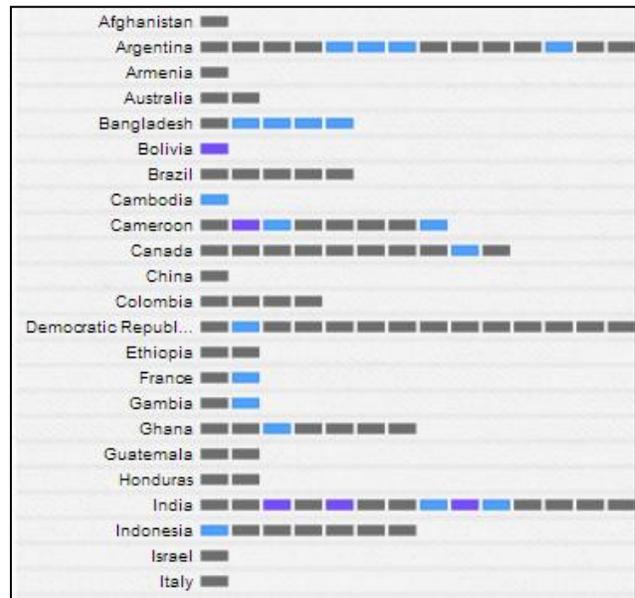

Figure 1. Data visualization with codes related to violence against women highlighted.

every continent. Additional text filters showed that many of these technology related solutions are suggested through the use of mobile technology (see Figure 2).

The ability to quickly switch views of data relationships through data visualization software facilitated iterative analysis in the early stages of knowledge production. A term coined by Erwin and Pollari called *data poking* "... encourages researchers to see and touch all their data in an informal manner multiple times before engaging in deep analysis"(2014).

Additional inductive coding following visual analysis augmented the thematic codes as entries were evaluated for common threads of experience. Compelling quotes, meaningful anecdotes and innovative ideas contributed to emergent streams of knowledge stemming from campaign themes. These categories would inform recommendations for action representing collective solutions to digital inclusion presented by women throughout the globe.

CONCLUSION
"We all have our stories, and it's not so much that we want to tell them, but we want it all to have meant something." Neema – Democratic Republic of the Congo. (Namadamu 2014).

While the challenges of constructing knowledge from a large, qualitative data set can be effectively managed through qualitative analysis processes, outcomes must also be presented in a way that highlights information and knowledge needed to provide relevance for intended stakeholders.

	Phase I - Digital Access						Phase II - Digital						Phase III - Digital Empowerment					
User Country	Geographic	Cultural	Safety	Technology	Affordability	Literacy	Education	Employment	Training	Literacy	Fear/Awareness	Cultural Attitude	Educational	Economic	Health Related	Cultural	Personal	Political
Kenya		x	x	x	x	x	x	x			x	x				x	x	
United Kingdom		x		x		x	x				x					x	x	
Spain																	x	
Italy		x		x	x			x			x	x				x	x	
Nigeria				x														
DRC	x	x		x		x		x	x	x	x					x	x	
Malawi	x	x			x	x	x			x		x	x			x	x	

Figure 2. Thematic coding of journal entries.

Recommendations regarding digital literacy.	Resources Needed to Develop Digital Literacy					
	Education	Access	Training	Language	Awareness	Culture
Assist women leaders in establishing an on-line presence through e-mail, registering on web sites and social media. *"Digitally Training the Maman Shujaa Voice"* Neema – Democratic Republic of the Congo			X		X	
"Female Digital Literacy in Europe- How different is it from other parts of the world?" Iffat Gill - Pakistan			X		X	
Build a foundation for digital literacy through training on mobile phone use. *"Digital Talk and Walk- Grassroots Women's Voices, A Priority"* GreenGirl – Nigeria		X	X		X	
"A click away to World Pulse community" Otahelp - Nigeria			X		X	X
Support women who may come to higher education with limited background in internet use. *"Transitioning through the internet"* Antego2010 – Nigeria	X		X		X	X
"A Workshop for Single Mums and Girls on Sexual Reproductive Health Rights and Computer Knowledge in Communities Bamen" Adahmbah - Cameroon	X	X	X		X	X

Figure 3. Final recommendations matrix with links to representative original entries.

In order to validate the analysis in terms of community input, and to place generalized recommendations back in their original context, links to representative journal submissions with the original article title, woman's name, and country of origin accompany all action statements (see Figure 3). A color-coded thematic checklist anchors the recommendations to the original intent of the campaign and brings together the collection of unique contributions as one advocacy package.

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