Technology usage by Mexican migrants in the United States of America

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Abstract

Migration between Mexico and the USA has been one of the most interesting and dynamic human movements, ever since the Texas Independence movement and well into the current century. This phenomenon has

permeated every single instance of life on each side of the border with implications that range from everyday occurrences, like new culinary adoptions to long term government policies. In this paper, we focus in researching how a wider availability of communication technologies have affected life on both sides of the border and how can we develop new computer-based solutions to increase the quality of life of the migrant population. We hope that with this data we can build computer-based solutions pertinent to the different needs of all the actors in the migration phenomenon between Mexico and the USA, which can be of help for understanding the complex social dynamics along the border between both countries.

Author Keywords

Technology adoption; migration; usability; human factors.

ACM Classification Keywords

H.5.2. User-centered design

Introduction

Human migration is an intrinsic phenomenon in mankind. Ever since there has been a need for improving living conditions, humans have been moving

from one location to another. The motivation can be triggered by many different issues, ranging from religious (British pilgrimage in North America), political (Spanish migration during Spain's Civil War), climate-induced (Ganges Delta population being displaced by an increase and severity of typhoons), and by economic causes, as is the case of contemporary Mexican migration to the United States of America.

Mexican Migration to the USA

As mentioned before, the Mexican migration to the USA is motivated, vastly, by economic causes. This type of migration is due to the imbalance between geographical zones –due to a supply and demand of workers-, which translates into differential levels of wages [7]. The influx of Mexican workers into the USA began to increase dramatically during the Second World War when the "Programa Bracero" was instituted by the US government to complement the native workforce for the agricultural industry. This program ended in 1962, but the demand for workers kept on growing, and illegal migrant workers (most from rural regions in Mexico) helped to close this gap. Also, the destination of Mexican migrants, which originally was almost exclusively oriented to agricultural areas began to become more diverse and progressively settled in major US cities. From the 60's until the first decade of this century, Mexico became the largest migrant provider to the USA (Since 2013, China and India have become the country with the largest number of immigrants) [15]. As of 2014, more than 11.7 million Mexican immigrants live in the United States [11].

Even though Mexican migration has stabilized in recent years, and has begun to show a steady decrease [8], it has become a hot topic of contingence in US politics.

The current administration of President Donald Trump has implemented a very harsh rhetoric toward immigration, and to those of Mexican descent [6] [12]. This new policy has created an increase in tension in every migrant community in the USA and those connected to them. In the case of Mexico, this has become a top priority issue in the federal government and is, as expected, the focus for every organization that provides support to Mexican communities in the USA.

Communication between migrants and their communities.

Traditionally, migrants and their communities of origin has been in constant communication. Perhaps due to the geographical closeness and the fact that Hispanic families are mostly very tight-knit [10], there has been a permanent contact between both groups. It is noticeable how during Christmas celebrations Mexican towns receive vast numbers of migrants, and during the rest of the year communication has been determined by the mediums available at hand. For many years, this exchange was through mail or by telephone, which although constant was not immediate in any way: mail service in Mexico is particularly slow and high long distance charges for many years were the norm in this country [3] [9], which tended to generate an asynchronous communication. This all began to change with the availability of internet access and mobile communication on both sides of the border. Since the beginning of this century there has been a widespread access to both technologies, reaching an internet coverage of 57.4% in Mexico and 74.5% in the USA [13]. Mobile cellular subscriptions were 85% in Mexico and 118% in the USA, both in 2015 [14]. Social technologies – mobile phones, the wide availability of

international phone calls, and the mainstreaming of Internet connectivity and social media- are becoming a cornerstone of the immigrant family experience [2].

Our research objective deals with discovering how this ample disposal of cheap and widely available communication mediums have changed the life dynamics amongst all the parties involved in the migration phenomenon, and how user-centered design can better provide tools for empowering this group of people.

We focused our study in two migrant groups, one located in Mexico and the other in the USA. The Mexican group belongs to migrant communities from the state of Michoacán (one of the top Mexican states with migrant population [4]) and Chicago, IL (as such, a city which has been a destination for many Michoacán migrants in the US).

Methodology

This study has the main purpose of contributing with pertinent data regarding technology usage and the adoption process to have context-aware design for Mexican migrants and their communities. Therefore, we decided to employ a User-Centered Design (UCD) approach. UCD is a broad term to describe design processes which end-users influence how a design takes shape [1]. As the first stage of our research process we established two fronts for gathering user information from both migrants and their communities. We embarked in doing interviews and developing an online survey. The interviews took place between the months of October 2016 and February 2017, and were done both in Mexico and the USA. Mexican interviews were held mostly in the capital of the state of

Figure 1.: Mexican migrants attending a computer course at Casa Michoacán in Chicago, IL (February 2017)

Michoacán, during the celebration of the 2016 Michoacán Migrant Week which gave us the opportunity of interviewing persons that represented many characters of the migration phenomenon: migrants, ex-migrants and Mexican-based families with relatives in the USA. In the USA, the interviews were conducted in Casa Michoacán (http://www.fedecmiusa.com/) in Chicago, IL. in February 2017; interview participants were all long-established migrants in Chicago (Figure 1). In total seven interviews were made (four in the USA and three in Mexico), and of these individuals three were men and three were women; all adults. Interviews took an average of 30 minutes each.

Also, an online survey was developed and shared amongst various groups of organizations that provide support and do research on migration issues. (The survey can be accessed at http://bit.do/migracion). The survey was available beginning on early December 2016, and has been answered by 27 persons until the first week of March 2017.

With the information gathered in both research exercises we were able to obtain very valuable information which help us better define our target users. All of the participants had been born in Mexico, and half of them migrated in the 90's to the US (only a very small number of them are recent migrants). They do tend to live in communities with large numbers of Hispanics, and their main language of communication there is Spanish; their English proficiency is limited, since they mostly interact with other members of the migrant communities in their cities. Their highest education level for most of them is High School, and on average they have an annual income of less than 25,000 dollars. Regardless of their income, all the

participants in the interviews said that they supported some family members in Mexico by sending money on a regular basis.

All the participants had access to a mobile phone (practically all of them smartphones; the preferred method of usage is under contract with a cell phone provider. It is their main tool for communication, by far, in the USA and with their communities of origin in Mexico. At least 75% of the participants in the study have also a computer and internet at home, and they are very constant users of social networks like Facebook and WhatsApp; video conferencing is dependent with the communication infrastructure in Mexico (especially in rural areas), but when available it is regularly used.

Future work.

When we began our research project, back in mid 2016, the geopolitical policies were quite different from what is happening these days. Obama policies were basically an extension of what previous administrations had implemented on immigration. But with the arrival of a presidency that has promised to rewrite most immigration protocols within the USA and its relationships with the world (and quite specifically those related to Mexico) we have had to rethink our project aim. Originally, we envisioned a general-purpose communication platform for Migrants and their communities. It had a focus of providing a smoother way of communicating between each other considering their very own technology literacy which, as we found out, is limited regardless of the hardware that they can have access to.

As we stand now in front of a very different political scenario, the need for a specific kind of platform has arisen. In all the interviews that we had there was a very distinct need of having access to a software solution that can provide immediate support for migrant communities in distress. Ranging from legal support regardless of their legal status, location-aware apps to direct migrants to their nearest consulate or NGO office for migrants, getting notification on immigration matters, and even the possibility of letting their support network know if they need urgent help and how to locate them. Also, a new type of migrant is becoming more and more frequent: the Mexican workers that went to the USA, stayed for several years there and are recently returning (voluntarily or deported) to live back in their homeland. Their needs are very particular and add up to our initial research scope.

In our current research process, we are creating low-profile prototypes which will be tested both in Mexico and the USA. After this, we expect to have an operational application by the end of 2017.

Acknowledgements

References

1. Chadia Abras, Diane Maloney-Krichmar, Jenny Preece. 2004. User-Centered Design. Retrieved on February 27th, 2017 from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.94.381&rep=rep1&type=pdf

2. Gonzalo Bacigalupe and María Cámara. 2012. Transnational Families and Social Technologies: Reassesing Immigration Psychology. *Journal of Ethnic and Migration Studies*, 38, 9:1425-1438

3. Pascual García. 2006. La evolución de las telecomunicaciones en México. Working paper. Tecnológico de Monterrey, EGAP. Mexico City.

4. INEGI. 2010. Migración Internacional. Retrieved on February 6, 2017 from http://www3.inegi.org.mx/sistemas/sisept/Default.aspx?t=mdemo142&s=est&c=27507

5. New York Times, 2017. Mexican deportees, once ignored back home, now find 'open arms'. Retrieved on April 16th, 2017 from https://nyti.ms/2oKIWC6

6. New York Times. 2017. Trump orders Mexican border wall to be built and plans to block Syrian refugees. Retrieved on January 25th, 2017 from https://www.nytimes.com/2017/01/25/us/politics/refugees-immigrants-wall-trump.html

7. Adela Pellegrino. 1995. La migración internacional en América Latina. In *Notas de Población No. 62.* CEPAL, Santiago, Chile. 177-211

8. Pew Research Center. 2016. Unauthorized immigrant population trends for states, birth countries and regions. Retrieved on March 2nd, 2017 from http://www.pewhispanic.org/interactives/unauthorized-trends/

9. Reforma. 2003. Pierde Velocidad correo mexiquense. (November 12, 2003). ISSN:1563-7697

10. Linda Skogrand and Daniel Hatch. 2005. Understanding Latino Families. Utah State University. http://extension.usu.edu/files/publications/publication/FR_Family_2005-02.pdf

11. US Census Bureau. 2014. Population and Housing Estimates. Retrieved February 6, 2017 from https://www.census.gov/population/intmigration/

12. Washington Post. 2016. Full text: Donald Trump announces a presidential bid. Retrieved on March 3rd, 2017 from https://www.washingtonpost.com/news/post-politics/wp/2015/06/16/full-text-donald-trump-announces-a-presidential-bid/?utm_term=.4958e7f9d06c

13. The World Bank. 2015. Internet users (per 100 people). Retrieved on January 25, 2017 from http://data.worldbank.org/indicator/IT.NET.USER.P2?name_desc=false

14. The World Bank. 2015. Mobile cellular subscriptions (per 100 people). Retrieved on January 25, 2017 from http://data.worldbank.org/indicator/IT.CEL.SETS.P2?name_desc=false

15. Jie Zong and Jeanne Batalova. 2016. Mexican immigrants in the United States. Retrieved February 15, 2017 from http://www.migrationpolicy.org/article/mexican-immigrants-united-states