

Welcome New Americans!

Investigating the role of hyper-local online communities in integration of immigrants

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Abstract

The United States has a continuously growing immigrant population. A problem many of these New Americans may face is adapting to the new culture. Researchers have been investigating ways technology can play a role in supporting acculturation of the immigrant population. In this work, we studied the role of a particular class of technological support, hyper-local online communities, designed to support individuals living in the same geographical boundaries. Through a survey of a 50 immigrants from two distinct areas in the US, we investigated whether utilization of hyper-local online communities can be associated with better integration with the local community demonstrated as increase sense of belonging and satisfaction. We also investigated potential factors contributing to utilization of such platforms. We report the results of our study; highlight potential implications for design of technology for immigrants and discuss future direction of research in this area.

Keywords: immigrants; hyper-local online communities; social networking sites; adaptation; sense of belonging

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1 Introduction

The United States has a continuously growing immigrant population (Gibson & Yung, 2006; Grieco et al., 2012). A challenge faced by many immigrants as well as the host country is integration of the immigrant population into the new community (Scott & Scott, 2013; Su'arez-Orozco, Suárez-Orozco, & Qin-Hilliard, 2014). There have been attempts in studying the role of technology in tackling this challenge (Tsai, 2006). For example, immigrants have a substantial information need in adapting to the new society and it has been shown that technology can benefit immigrants by supporting their information and practical needs in adjusting to living in a new country (Shoham & Strauss, 2008; Fisher, Durrance, & Hinton, 2004).

With growing popularity of online communities and online social networking sites, there has been a growing interest in understanding whether such online platforms can play a role in strengthening local communities and supporting individuals living in the same geographical areas. As a result, over the last decade, there has been an emergence of a new category of online communities, known as hyper-local online communities, that are focused on supporting the local communities and which rely heavily on offline connections of their members. Nextdoor¹, a for-profit example of such platforms, has been very successful in attracting attention from residents and local governments (Masden, Grevet, Grinter, Gilbert, & Edwards, 2014). Nextdoor is a social networking site dedicated to neighborhoods and is designed to encourage its members to connect with people who live in the same or close-by neighborhood. As of July 2016, more than 50% of neighborhoods in the US are represented on Nextdoor. There are various other examples of such systems supporting particular cities or neighborhoods. For example, E-Democracy, has been serving local

¹<https://nextdoor.com/>

communities in the city of Minneapolis and St. Paul in the US state of Minnesota to encourage community development (López & Farzan, 2015)

While there has been studies of the general impact of hyper-local online communities in community development, there has not been any special attention to immigrants as potential benefactors of such online systems. In this work, we have investigated the role of hyper-local online communities in the integration of immigrants within their local communities. We argue that hyper-local online communities can provide immigrants with a platform to learn more about their local communities, connect with their neighbors, and, as a result, develop a sense of belonging to the local community which can lead into the broader integration in the new country.

2 Hyperlocal online communities, sense of community, and immigrants

Hyper-local online communities are online platforms that are designed to support people in a bounded geographic region, such as a neighborhood or a town. They aim at enriching residents' and visitors' experiences with their local surrounding through a variety of services such as providing hyper-local maps to offer optimal walking, hiking or biking paths, creating a marketplace for residents to exchange goods and services, aggregating and sharing hyper-local news, encouraging local activism and civic participation, and social networking among residents.

Over the last decade, there has been a great deal of attention devoted to studying the impact of such systems on local communities. In particular, researchers have been considering the impact of hyper-local online communities with respect to social capital in the community, sense of community, individual empowerment, strong democracy, and economic development (Lopez & Farzan, 2015). For example, in a study of Netville, an online network to connect local residents, a group of residents were randomly assigned to receive access to high-speed Internet and a neighborhood mailing list. The results of the study suggest that online connections improved neighbors' familiarity with each other and improved their communication (Ellison, Steinfield, & Lampe, 2007). Being "wired" especially supported increased contact with "weak-ties" in the neighborhood (Hampton & Wellman, 2003), and connections to weak ties are particularly important for accessing information and strengthening social cohesion and a sense of community within existing groups (Granovetter, 1973). McMillan & Chavis defined a sense of community as the "feeling that members have of belonging, a feeling that members matter to one another and to the group, and shares faith that members' needs will be met through their commitment together." (Navarrete & Huerta, 2006) Individuals who experience a sense of community are more satisfied with and more committed to their communities. (Navarrete & Huerta, 2006).

While there have been a number of studies on the impact of hyper-local online communities on the local communities, most of those studies have focused on general population of the neighborhoods and cities. There has not been any work investigating at what level hyper-local online communities can help immigrants integrate in the host community. Computer technology can assist immigrant families in overcoming barriers posed by loss of social networks, social disconnection, and limited language proficiency (Tsai, 2006). There is some concern that immigrants' use of internet technologies can increase their isolation in their new community. Computer-mediated forms of interpersonal communication have become the technologies of choice for immigrants to maintain ties to friends and family in their country of origin, and those who are more active in social engagement with co-ethnics tend to be less active with respect to interactions with native-born Americans. At the same time, those immigrants who are more engaged in interpersonal communication with native-born Americans have higher levels of psychological well-being surrounding American society and culture (Kim & McKay-Semmler, 2013). Immigrants who communicate more via Internet with local people have higher levels of sociocultural adaptation, including social, psychological and physical adaptation (Chen, 2010).

While knowledge and use of computer systems can be associated with higher levels of adaptation, specific sites such as hyper-local online communities have yet to be studied independently to see if their use leads to similar levels of adaptation. Dual forms of community, online and physical, in virtual transnational communities of immigrants facilitate the creation of identity and the production of trust processes (Navarrete & Huerta, 2006). Similarities between virtual transnational communities of immigrants and hyper-local networks in their physical and virtual forms may suggest that the online-offline nature of community networks can also contribute to an increased sense of community among their users.

3 Research Hypotheses

This study aims to answer how immigrants benefit from the use of hyper-local online communities and what barriers might prohibit their use of such platforms.

Supported by prior research on the impact of hyper-local online communities on strengthening individuals' weak ties, we expect immigrants to benefit from such communities by (1) building new connections to local residents, (2) having more access to locally-oriented information, and (3) being able to share information with the local residents. While there has not been specific research on impact of hyper-local online communities on sociocultural adaptation of immigrants, some existing research suggest there can be positive effect. For example, a study of Chinese immigrant to Singapore shows those who used more Singaporean websites had better sociocultural adaptation (Chen, 2010). Therefore, our first and second hypothesis are targeted at investigating the relationship between utilizing hyper-local online communities and sociocultural adaptation of immigrants in terms of satisfaction with their local community and difficulties they face within the community. We posit our hypotheses as:

H1: Immigrants who use hyper-local online communities will exhibit higher level of satisfaction and sense of community with their local community.

H2: Immigrants who use hyper-local online communities exhibit lower levels of difficulties within their local community.

In addition to trying to investigate the relationship between utilizing hyper-local online communities and sociocultural adaptation, we were interested to study how immigrants generally feel about hyper-local online communities and how their perception of these sites influences the extent they make use of them. Therefore, our third and fourth hypotheses focus on assessing the relationship between participants' perception of hyper-local online communities and whether they use them or not as stated below:

H3: Immigrants who perceive hyper-local online communities to be important are more likely to utilize them.

H4: Immigrants who perceive hyper-local online communities to contribute to their community life are more likely to utilize them.

We anticipate that several demographic characteristics of participants can influence both the utilization of hyper-local online communities and their impact. For example, longer residency in the U.S. may indicate more stable social relationships, work history, and English proficiency that in return can lead into or be correlated with more satisfaction, stronger sense of community, and higher level of sociocultural adaptation. Research has consistently shown that limited English proficiency is a barrier to adoption of any type of computer or Internet use, even when controlling for economic status. (Mirchandani, Ng, Sangha, Rawlings, & Coloma-Moya, 2005) In addition to years of residency, and English proficiency, we included other demographic related questions such as age, race, education, and income.

4 Methods

Fifty-four English speaking participants living in Houston, Texas and greater Burlington, Vermont, between the ages of 18 and 64, who were born outside the United States were recruited for this study. Participants completed an online survey containing questions regarding demographic information, sociocultural and psychological adaptation, and their use of hyper-local online communities. Flyers were posted at community organizations that serve the immigrant population, such as non-profit centers assisting refugees and public libraries. We encouraged participants to share the survey link with other first generation immigrants. Laptops were also made available at community events so participants could access the survey regardless of Internet access at home.

4.1 Instruments

In addition to demographic questions, the survey instrument included questions on sociocultural and psychological adaptation to measure participants' integration within their community, their use of hyper-local online communities, and their perception of the impact and contribution of hyper-local online communities.

4.1.1 Sociocultural adaptation

Chen's scales of sociocultural adaptation (Chen, 2010), based on Ward and Kennedy's SCAS were used to measure social and cultural adaptation of the participants. We adapted the scale further to focus on eight of the twelve items found by Chen to significantly contribute to sociocultural adaptation. Social adaptation includes: making friends, understanding jokes and humor, making yourself understood, and communicating with people from different ethnic groups. Cultural adaptation includes: understanding the U.S. political system, understanding cultural differences between the United States and your country of origin, understanding Americans' morals or value systems, and seeing things from Americans' point of view. Each of the eight items was measured on a 5-point Likert Scale where 1 was no difficulty and 5 was extreme difficulty.

4.1.2 Psychological adaptation

A modification of Gao and Gudykunst's (Gao & Gudykunst, 1990) adaptation scale was used to measure participants' psychological adaptation. The items included: how comfortable do you feel living in America, how satisfied are you with your work or study performance in America, how comfortable are you interacting with Americans, how satisfied are you with your English language ability, how satisfied are you with living in American culture, and how much is life for you in America an enjoyable experience. As in Chen's modification of Gao and Gudykunst's psychological adaptation scale, we simplified the 7-point Likert scale to a 5-point scale where 1 was "not at all," and 5 was "very much."

4.1.3 Use of hyper-local online communities

Participants were asked if they had used at least one of the following hyper-local online communities: NextDoor, Every Block, Front Porch Forum, another online group for their neighborhood, or another online group for their city. NextDoor and Every Block are available in Houston, Texas. Front Porch Forum is available in Burlington, Vermont.

4.1.4 Perception of importance of hyper-local online communities

A set of questions asked the participants to rate the importance and contribution of hyper-local online communities with respect to: getting community news and local event announcements, learning about local businesses, resources and services, discussing or understanding others' views on community issues and happenings, sharing information or ideas, getting involved in local initiatives or causes, meeting neighbors and other community members, and helping neighbors in need. The responses were recorded on a 5-point Likert scale (1-Not at all important, 5- Extremely important).

4.1.5 Perception of contribution of hyper-local online communities

Finally, the survey asked the extent the information or discussions happening on the online tools in the last twelve months had contributed to: I feel that my participation is welcomed; I feel my participation is valued by others; I have been introduced to new ideas or points of view; I have learned more about my neighbors of races, ethnicities, or home languages different from my own; I am more informed about issues that affect my community; I am more committed to my community; I have learned more about how to influence decisions in my community; I am more satisfied with my local community as a place to live or work; and I am more confident I could help from people in my community. The questions were recorded on a 5-point Likert scale (1- not at all, 5- very much).

5 Data consideration

Demographics information in our survey included age, gender, education, race, income, residency in the US, English proficiency, also zipcode of the participants that indicated whether they lived in Houston, Texas or Burlington, Vermont. The majority of the participants were under the age of 35 with most being between 18 to 24. Therefore, we discretized the age variable into the binary variable of below or above 35. Similarly, due to skewness of data, we discretized race into three categories of white, Hispanic, and others; education into

two categories of college degree or below; income into two categories of above or below 50K, US-residency into two categories of above or below 10 years; and English proficiency into two categories of excellent or not. Percentage of data within each category is represent in Table ??.

Location:	Houston, Texas	56%	Burlington, Vermont	44%	
Age:	Under 35	55%	Over 35	45%	
Race:	White	16%	Hispanic	50%	Other race 30%
Degree:	College	44%	Below college	56%	
Income:	Above \$50k	45%	Income below \$50k	55%	
Residency:	Above 10 years	66%	Below 10 years	34%	
English proficiency:	Excellent	48%	Not excellent	52%	

Table 1: Demographic Characteristics of Respondents

To ensure there is no correlation between independent variables and that there is no collinearity problem, we first conducted a factor analysis using Principal Component Analysis with Varimax rotation. The demographic features loaded into 3 components. The result of the factor analysis is shown in Table ?. For each component, we included the independent variables representing the highest degree of variation for that component. Component 1 consists of zipcode, gender, and education which indicate correlation between gender and education and location of residence in the US; component 2 consists of race and residency which indicates correlation between particular races having lived in these two cities longer than others, and component 3 consists of age and using hyper-local online networks which indicated certain age groups are more likely to use hyper-local online communities.

	Component 1	Component 2	Component 3
Zipcode	.659	-.297	.198
Gender	-.660	.137	.026
Age	-.018	.022	.815
Race	-.113	-.806	-.047
Education	.735	.191	.002
Income	.565	.334	.115
Residency in US	-.220	.827	.161
English	.430	.516	-.454
Use of hyper-local online networks	.216	.144	.685

Table 2: Principle Component Analysis for all demographics factors in the survey

6 Results

To test our hypotheses, we conducted a series of regression analyses as reported below.

6.1 H1: Relationship between using hyperlocal online communities and the feeling of comfort and satisfaction in the local community

All scales of psychological adaptation loaded into one factor, with the sum ranging from 13 to 30 with a mean of 25.35 and a total of 55 responses. A higher score indicates better psychological adaptation and more satisfaction with life in their community. Similar to the previous model, the dependent variable fit Gamma distribution the best. The model is significant ($\chi^2=39.31$, $df=8$, sig. $<.0001$). The results of the regression for the significant factors is presented in Table ?. The results shows that controlling for demographic

information, usage of hyper-local online communities does not influence participants' satisfaction with their community. However, in terms of demographic information, those who have lived in the US longer than 10 years had higher psychological adaptation scores, i.e. they felt more comfortable and satisfied in the local community: $\mu=25.61$ ($\sigma^2=.71$) vs. $\mu=22.36$ ($\sigma^2=.91$). Male participants tend to feel more comfortable and satisfied in the local community: $\mu=25.40$ ($\sigma^2=.9$) vs. $\mu=22.55$ ($\sigma^2=.69$). Respondents in Houston, Texas reported higher levels of satisfaction than respondents in Vermont: $\mu=25.83$ ($\sigma^2=1.11$) vs. $\mu=22.17$ ($\sigma^2=.7$).

Parameter	B	Std. Error	95% Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald χ^2	df	Sig.
Lived over 10 years in US	-.136	.0461	-.226	-.045	8.653	1	.003
Male	.119	.0414	.038	.200	8.247	1	.004
Houston	.152	.0548	.045	.260	7.736	1	.005

Table 3: Regression results predicting relationship between usage of hyper-local online communities and satisfaction with the community

6.2 H2: Relationship between using hyperlocal online communities and the feeling of sense of difficulty in the local community

All questions on sociocultural adaptation scale focusing on feeling of sense of difficulty within the community loaded into one factor. We represented this measure as sum of all values for related questions. The response variable ranges from 8 to 38 with a mean of 18.06 and a total of 50 responses. A higher score indicates more difficulty adapting to the American life and is thus more negative while a lower score indicates less difficulty and is thus more positive. We conducted a generalized linear regression model and modeled the dependent variable of difficulty with Gamma distribution based on the fit of the model. The model is significant ($\chi^2=15.23$, $df=8$, $Sig.=.05$). The results of the regression for the significant factors is presented in Table ???. The results indicate that controlling for all other demographics factors, those who use hyperlocal online networks have better sociocultural adaptation, which is to say, less difficulty in communication and understanding the American culture : $\mu=14.07$ ($\sigma^2=1.5$) vs. $\mu=18.91$ ($\sigma^2=1.22$).

In terms of demographic differences, men tend to feel less difficulty in the local community: $\mu=14.93$ ($\sigma^2=1.29$) vs. $\mu=17.82$ ($\sigma^2=1.38$) and those who were under the age of thirty-five felt less difficulty in the local community: $\mu=14.57$ ($\sigma^2=1.17$) vs. $\mu=18.25$ ($\sigma^2=1.55$).

Parameter	Coef.	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald χ^2	df	Sig.
Use of hyper-local online networks	.296	.1211	.059	.533	5.974	1	.015
Male	-.177	.1037	-.381	.026	2.928	1	.087
Below 35 years	-.225	.1053	-.431	-.019	4.566	1	.033

Table 4: Regression results to assess the relationship between usage of hyper-local online communities and sense of difficulty in the community

6.3 H3 & H4: Relationship between perception and utilization of hyper-local online communities

All scales of how important the ability to perform a variety of actions on a local community site loaded into one factor, with the sum ranging from 11 to 35 with a mean of 24.66 and a total of 50 responses. A higher perception of importance of such platforms. Similarly, all scales regarding the perception of contribution of hyper-local online communities loaded into one factor, with the sum ranging from 9 to 45 with a mean of

28.49 and a total of 51 responses. A higher score indicates higher perception of the impact of such platforms. In both cases, the regression model prediction the relationship was not significant. However, as presented in Figure 1a and 1b, there is a positive pattern suggesting that more positive perception can lead into higher chance of utilizing hyper-local online communities.

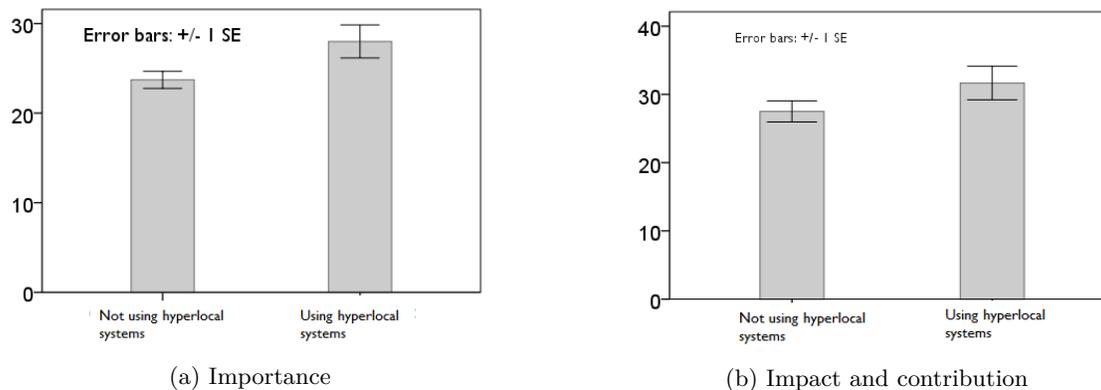


Figure 1: Perception of hyper-local online communities

7 Discussion

In this paper, we studied what factors relate to utilization of hyper-local online communities among immigrants and how the usage of such systems relates to immigrants' integration within their communities. Our results provide preliminary evidence that usage of hyper-local online communities can be related to less sense of difficulty within the local community. We also observed that there are specific demographics that significantly correlate with sociocultural adaptation, such gender, years of residency, and age. We also observed a significant difference among the two locations we studied in terms of sociocultural adaptation. These results suggest that hyper-local online communities can be promoted as an approach to support immigrants population, especially the group of immigrants who have a more difficult time integrating within the new community. We acknowledge that this a very preliminary work and further research is necessary to explore the impact of hyper-local online communities in details across different communities, locations, and with relation to different features of those platforms. Furthermore, further research is required to understand the mechanisms by which hyper-local online communities assist immigrants and how they can be designed more effectively. Nevertheless, we hope to raise awareness among the information scientists on the impact of a specific information technology for increase a sense of belonging among immigrant population that are such an important part of the American society.

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