A Proposal for Evaluating the Use of Community-Based Participatory Research (CBPR) in Digital Divide Studies

Eric Franzen

Department of Communication Studies, University of North Carolina, Charlotte

Dr. Bibi Reisdorf

September 19, 2021

Introduction

Community leaders, organizational representatives, program participants, and researchers

Many organizations and scholars recognize the paramountcy of *digital inclusion* in today's society. "Digital inclusion refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of information and communication technologies (ICTs)" (National Digital Inclusion Alliance, definitions, n.d.). Marginalized populations (the most disadvantaged) are the households with incomes below $30,000, but also include vulnerable members of society – some older individuals, non-native language speakers, or persons with disabilities. Academic researchers examining this phenomenon of low ICT usage among marginalized populations have the best intentions in mind with regard to studying program participants. The goal of research is to study digital access initiatives, capture successes and challenges, and link certain commonalities to theoretical explanations. While many non-profit associations and community organizations share inclusion goals for marginalized populations, sometimes multiple organizational layers can obfuscate interpretations of what is in the best interest for individuals and cause accidental omittance of principled considerations.

A research study focusing on the efforts of community leaders, organizational representatives, and the participants in various programs for digital literacy would benefit further research efforts in the Digital Divide phenomenon by highlighting various stakeholders' roles in multilevel social improvement efforts, their motivations for change, and common misperceptions by each group of the other. Community leaders are those who lead, but also belong to a specific population that is marginalized due to demographic, economic, or other factors. Organizations that seek to aid these communities either by financial or training support include non-profit and community coalition groups. Program participants are individuals who are part of a marginalized community that are seeking help with ICT or digital literacy training. There is a research opportunity to study the coordination of these groups along with the role of the researcher.

Community-based Participatory Research (CBPR) is often used in health research to analyze relationships between community leaders and academic researchers and a similar approach can be used to address relationships between those attempting to address digital disparity. There is little research in applying this theory in a Digital Divide context, however review of analysis in health contexts is a meaningful starting point for application in other scenarios where community leaders, organizational representatives and researchers come together. The results of the research here will be critical in interpretation and offer new knowledge in the areas of trust, lend to more equitable relationships among stakeholders, and assist in setting and maintaining ethical expectations in digital inclusion efforts. I will discuss each of these areas in the following sections.

Literature Review

Introduction

This section reviews the available relevant literature regarding the roles and relationships of community leaders, organizational representatives, program participants, and researchers and the integration of digital inclusion efforts among them. The volume of work in this area was underwhelming while analysis in health divide issues uncovered slightly more research using unique tools such as Community-based Participatory Research (CBPR). There was one article uncovered that recommended CBPR as an intervention in reducing health and digital divides.

Importance of Community Institutions and Non-Profit Organizations

Digital Divide research intermittently focuses on the importance of interaction of various community institutions and non-profit groups in advancing training and connecting marginalized users with ICT. Roles and relationships among the different stakeholders are pointed out and their importance acknowledged. In studying “broadband adoption programs at community-based and public institutions (“digital inclusion providers”),” Gangadharan acknowledges community institution importance as a *premise* when stating “community anchor institutions play an integral role in shaping marginal users’ expectations of broadband technologies” (2017, p. 598). Community institutions can help with issues that community members have with research. Historical research efforts, not to mention that technology itself has implications of surveillance, have generated distrust by participants in research motivations. Community-based institutions are more trusted to alleviate the concerns that end-users experience. A local organization with familiar membership reduces anxiety and offers opportunities for participation.

Similarly, non-profit organizations, often partnerships of corporations, governments, and academicians play a role in reassuring community members about research. These organizations have credibility among marginalized populations due to the help they often provide with essential services, including education and employment. Community members see these groups as businesses that serve the community and they can serve as a “source of economic, political, social and sometimes technological empowerment” (Fryer & Granger, 2008, p. 2). Researchers cannot underestimate the importance of non-profit participation in studying the Digital Divide or promoting digital inclusion efforts.

Community-based Participatory Research (CBPR).

Simply highlighting community institutions and non-profit organizations as important stakeholders in advancing digital inclusion efforts fails to analyze the relationships among them and other groups such as researchers. What is needed are tools for improving relationships among all of the interested digital inclusion partners. One type of research aimed at “promoting productive scholarly relationships between researchers and community leaders” (Tucker et al., 2016, p. 775) is CBPR.

CBPR has been used in health-related research as a means of promoting collaboration and partnership between community institutions, non-profit organizations, and researchers. Many studies have shown increases in trust and reduction in negative feelings of marginalized groups towards research when using CBPR. Trust is an important aspect in studying the impacts of initiatives on digital disparities and CBPR approaches. If practiced according to published recommendations, CBPR approaches are more likely to develop trust than traditional research approaches according to one article (Christopher et al., 2008, p. 1398).

Other literature on CBPR focuses on studying what sustains collaborations among community leaders, organizational representatives, program participants, and researchers in the service of decreasing health inequities. This material concentrates on inter-organizational viewpoints and addresses issues such as skepticism about sustainability and meaningful community-engaged research. The methods of these studies usually utilize perspectives from members of all concerned parties - community leaders, organizational representatives, program participants, and researchers – or some combination thereof. These *co-researchers* in health disparity issues “focus on increasing capacity of academia and community organizations to build and sustain meaningful research relationships” (Wang, 2017, p. 185) that ultimately improve the lives of marginalized communities.

Only one article was found supporting CBPR as a method for studying the reduction of both health and digital divides. The focus of this study was not devoted solely to ICT disparities, but rather focuses on a health aspect of the Internet and the diffusion of health information (Ginossar & Nelson, 2010). Limited use of CBPR approaches in studying ICT equity issues presents an opportunity for new research whereby CBPR methods are followed in studying collaboration between all promoters of digital inclusion initiatives. All stakeholders seek similar positive outcomes for marginalized populations. Seeking ways to maintain equitable partnerships is in the best interest of all parties.

Methodology

Research Questions

This study is designed to answer the following research questions:

1. How effective is Community-based Participatory Research (CBPR) for fostering collaborations between community leaders, organizational representatives, program participants, and researchers focused on digital inclusion?
2. Are the benefits gained from CBPR collaboration advantageous to marginalized populations?

Design of the Study

This is a study of a *study method* or an examination of an analysis approach. To determine if collaboration is improved by using the CBPR study method, a study of the method itself has to be undertaken and this could be a potentially-biased qualitative review. As a researcher, researcher interests will be elevated in any analysis due to the researcher's ultimate goal of improved understanding. Participation in CBPR from multiple groups with well-intentioned objectives is easily seen as a windfall to research interests so CBPR is inherently favored. Groups advocating for digital inclusion can provide access and legitimization for the researcher. To counter this, analysis by group dynamic should be done and, in as many forms, as possible – intergroup, intragroup, between multiple actors at multiple levels. Conscious bias-filtering should take place at all levels of interviews and analysis.

To further account for researcher bias, a multimethod study should be done. In addition to interviews (one input method), content analysis of other communications should be performed to validate interview meanings. As much as these two methods of approach attempt to gain a sense of objectivity, this study will rely largely on subjective knowledge and also researcher familiarity with the environment. An interpretive approach to how these systems operate is needed to validate assumptions. A researcher familiar with digital inclusion organizations, efforts, and various community interests will have to draw on this data to make sense of whether CBPR methods improve collaborative efforts and whether this is ultimately good for the marginalized populations that all support.

Population

The population of this study is not a simple study pool. Community leaders, organizational representatives, program participants, and researchers all have to be interviewed. All of these representatives should be involved with improving digital literacy, digital inclusion, or reducing the Digital Divide. Community-based members and leaders should be selected on the basis of their familiarity with digital connectivity issues and not just other social causes. Examples here include community center or church groups with programs in building new life skills. Non-profit organization representatives should be associated with organized groups that promote digital causes like purchasing affordable technology or learning new digital skills. These groups will include the National Digital Inclusion Alliance (NDIA) and everyoneon.org.

Members of marginalized communities should also be part of this study of a study. Members of this group are disconnected by the Digital Divide and often include lower income households and vulnerable populations (older individuals, non-native language speakers, or persons with disabilities). Hearing the voices of the community describe the problems with current methods of study (e.g., surveys, phone calls, online skills assessments) will offer insight into collaboration problems between community participants and academic researchers. Issues of trust and worthwhileness will be factors in gaining their interest in contributing. The benefits to these community participants of using a CBPR method should be explained to them – they will act as contributors versus research subjects – but the benefits should not be oversold, doing so would obfuscate the true opinions of the population that need to be heard in interviews.

Researchers should also include other researchers in interviews about CBPR methods. As this is a new approach, and mostly used in health care, researchers in Digital Divide issues can be substituted. Their experiences in communities conducting other types of previous research will be invaluable as voices of participation research, in general. Careful consideration should be made not to overemphasize researcher's beliefs in relation to other stakeholders.

Procedures

A multimethod research method shall be used where interviews are done, group dynamic analysis is performed, and additional data is collected through content analysis. Qualitative methods of study allow for interpretation of theory and provide a basis for further actionable changes. If CBPR is beneficial in studies with marginalized populations then it should be used in future digital inclusion research. Data analysis will confirm that CBPR helps to build and maintain trust through all entities involved in a research project, empowers individuals by making them agents of the study, allows input from the community on future research, and demonstrates tangible benefits to all of the partners involved.

The first step in collecting data to prove alliances among community groups, non-profit organizations, and academic researchers would be to conduct guided interviews among stakeholders asking them about their favorability for multiple-partner, multiple-organization study design and analysis. As with other studies of CBPR in healthcare, interview questions should be as non-biased as possible to each background and as equitable as possible. Community group leaders should not get different questions than academic researchers. The next step would be to use organizational diagnosis to categorize responses by interpersonal, intragroup, or intergroup relationship. Although relative to this study, general themes can be validated against other CBPR studies in health-related fields. These themes are expected to include skepticism over intentions, the importance of historical impacts (e.g., race, power, and privilege) on research relationships, and the need for change in organizational culture. Interactions among more distant groups, or outside of one's own group presumes stronger intensity in these themes. If interview questions and interviewers present research alternatives that account for all groups' interests, relative themes should show less intensity.

The remaining data would be collected through content analysis of the messaging from community groups, non-profit organizations, and academic researchers. The intentions of their communications should be evaluated, documented, and classified according to the transparency in providing end users with the most beneficial of outcomes. Written correspondence from non-profits, requests from researchers to conduct studies, and various other communications would be analyzed and classified according to their objectives. A template would be developed to promote reliability and a limited number of reviewers would be assigned to minimize bias. A numerical assessment will be used to gauge intent – whether the aim is to benefit the asker (organizational group, academic researcher), or the marginalized population.

Ethical Concerns

Researching whether a study method is ideal for future studies of marginalized populations has to not only identify ethical questions about the initial analysis, but also about how using

CBPR going forward will affect study participants. Many of the same themes carry forward and concern trust, stigma, and vulnerability. Researching issues in digital exclusion and how to increase inclusion of certain members of society can be sensitive and requires compassion and understanding of scholars, as well as community members and non-profit representatives. The initiatives are often ambiguous and disorganized and voices from the population that need to be heard can be lost in the chaos.

Studying the elements of CBPR research among stakeholders to analyze this study method will face concerns with creditability simply because it is a study about a study method. Those participating may feel it is manipulative or just another way to influence future studies or get better data. It also implies a favorable setup for future researchers who may gain new access to vulnerable populations, and many may see this as just a ploy to grow data pools. Where community members and non-profit representatives often have passionate connections to improving social conditions and build relationships, they may feel an obligation to safeguard susceptible individuals. This may further limit the information that marginalized populations share and if that information made it to studies, academic scrutinization could provide significant benefits.

Other barriers with asking stakeholders about CBPR and their openness to it may include opinions that a new way of studying digital connectivity challenges is just a trendy new way for researchers to produce their opinions and gain credit for them. Community members and non-profit organizers value commitment to community improvement and the questioning of researcher’s commitment further puts them in a place where they may wish to obscure evidence from the field. In order to gain confidence of research and research methods, stakeholders need to feel that researchers are active participants first and that involvement is as important as the accumulation of knowledge and the development of theories.

The goals of CBPR research are to actively engage all voices of all stakeholders and if future CBPR studies are conducted they must consider a number of ethical issues to be productive. Increasing the dialogue about marginalized populations and increasing the representation of these populations makes them part of the study and not just research *subjects*. Engaging in multiple stakeholder evaluation and being part of the study allows researchers not to be *helicopter scientists* and reduces plain exploitation.

CBPR is a way to offer more protection and respect for participants and as these types of studies are conducted, they should be mindful of the legitimization and representation of the members of the marginalized population. Past studies have always put the members in subordinate positions, carrying with that a sort of stigmatization. Even participatory action research that places a researcher in the environment still carries an implied position of inferiority. In CBPR there is an opportunity to make the member participants on the same level as other community members and non-profit representatives. The community participants act as contributors. The downside to this is that it may pose questions when credit or recognition is passed by. But the increased importance of community participants as part of a set of community stakeholders provides elevation in status.

The final word on ethical considerations with CBPR is that sustainability may deflate expectations. Evaluating research questions with multiple groups and immersion in a cultural system takes time and resources. The types of research questions need to match this level of effort. More philosophical and big questions dealing with equity, in general, in society are relevant here as they are intimately tied with questions of digital connectivity achievement. As CBPR types of study are used in marginalized communities to analyze these large questions, they will have to adapt to fit questions of technology disbursement much like they did for health-related issues. Failure to adapt could end more involved and connected analysis and only add to future doubts of academic research methods by community leaders, non-profit organizational members, and community participants.

References

Christopher, S., Watts, V., McCormick, A., & Young, S. (2008). Building and maintaining trust in a community-based participatory research partnership. *American Journal of Public Health, 98*(8), 1398-1406. https://doi.org/10.2105/AJPH.2007.125757

Flicker, S., Travers, R., Guta, A., McDonald, S., & Meagher, A. (2007). Ethical dilemmas in community-based participatory research: Recommendations for institutional review boards. *Journal of Urban Health, 84*(4), 478-493. https://doi.org/10.1007/s11524-007-9165-7

Fryer, D., & Granger, M. (2008). Closing the digital divide: The role of community based non-profit organizations. *Journal of Global Information Technology Management, 11*(1), 1-5. https://doi.org/10.1080/1097198X.2008.10856458

Gangadharan, S. (2017). The downside of digital inclusion: Expectations and experiences of privacy and surveillance among marginal Internet users. *New Media & Society, 19*(4), 597-615. https://doi.org/10.1177/1461444815614053

Ginossar, T., & Nelson, S. (2010). Reducing the health and digital divides: A model for using community-based participatory research approach to e-health interventions in low-income Hispanic communities. *Journal of Computer-Mediated Communication, 15*(4), 530-551. https://doi.org/10.1111/j.1083-6101.2009.01513.x

National Digital Inclusion Alliance. (n.d.). https://www.digitalinclusion.org/definitions

Tucker, M., Lewis, D., Payne Foster, P., Lucky, F., Yerby, L., Hites, L., & Higginbotham, J. (2016). Community-based participatory research-speed dating: An innovative model for fostering collaborations between community leaders and academic researchers. *Health Promotion Practice, 17*(6), 775-780. https://doi.org/10.1177/1524839916673612

Wang, K., Ray, N., Berg, D., Greene, A., Lucas, G., Harris, K., Carroll-Scott, A., Tinney, B., & Rosenthal, M. (2017). Using community-based participatory research and organizational diagnosis to characterize relationships between community leaders and academic researchers. *Preventive Medicine Reports*, *7*(C), 180-186. https://doi.org/10.1016/j.pmedr.2017.06.007