

**PARTICIPATORY INTERACTIVE CAMPAIGN DEVELOPED TO RAISE
AWARENESS ABOUT POVERTY IN OUR COMMUNITY**

An Undergraduate Research Scholars Thesis

by

COURTNEY MICHALSKY, STEPHANIE SYKORA, and LAUREN TOLER

Submitted to the Undergraduate Research Scholars program at
Texas A&M University
in partial fulfillment of the requirements for the designation as an

UNDERGRADUATE RESEARCH SCHOLAR

Approved by Research Advisor:

Dr. Jinsil Hwaryoung Seo

May 2018

Major: Visualization

TABLE OF CONTENTS

	Page
ABSTRACT.....	1
SECTIONS	
I. INTRODUCTION AND MOTIVATION	2
II. BACKGROUND AND PRIOR WORK.....	5
III. ONE STEP: INTERACTIVE POSTERS	7
IV. USER STUDY AND RESULTS	10
V. REFLECTION	14
WORKS CITED	16
APPENDIX A: TIMELINE.....	17

ABSTRACT

Participatory Interactive Campaign Developed to Raise Awareness About Poverty in Our Community

Courtney Michalsky, Stephanie Sykora, and Lauren Toler
Department of Visualization
Texas A&M University

Research Advisor: Dr. Jinsil Hwaryoung Seo
Department of Visualization
Texas A&M University

Our goal with this research is to use our creative talents to spark change in the way society views and reacts to those living in poverty within our community. A recent study done by the Bush School of Government and Public Services found “slightly more than 28 percent of the population lives at or below the federal poverty line. This includes 26.3 percent of those less than the age of 18, 10.6 percent of those more than age 65, and 15.9 percent of families in Brazos County.” This is an issue that is very close to home, yet so easily overlooked. We began by researching organizations in the area that are currently working to resolve this issue. Our plan is to share what we have learned with the public through interactive posters aimed to open eyes and encourage others to get involved. We also plan on creating a complimentary print and social media campaign to have our message reach a broader audience, especially students at Texas A&M University. Through both the interactive posters and the social media campaign we hope to share the genuine truth about poverty in a way that will leave an impact on our community. Our end goal is to inform people on the reality of poverty in our community, encourage them to take steps to get involved and help solve this issue, and see those living in poverty as people who are not so different than ourselves: people with purpose and dignity.

SECTION I

INTRODUCTION AND MOTIVATION

As visualization students, we are interested in interactive design and passionate about using the power of design to promote positive social changes in our community. For this specific research project, we chose to address the issue of poverty because it is a problem that is often overlooked and misconstrued, even locally here in the Bryan-College Station community. After searching for organizations on campus that tackle this issue, we were surprised to find only 4 existed, most of which were just recently created. This finding furthered our desire to bring to light the issue of poverty within our campus.

Our first goal was to research local shelters and resource centers and become more involved with these organizations in our community. After learning about their commitment to building lasting communities, we chose to connect with Habitat for Humanity in Bryan/College Station. Meeting with Habitat's outreach director, David Hatteburg, we learned about the different stages of poverty. These stages are- Crisis, which is homelessness, Development, which is the working poor, and finally Reform, which involves the lack of trust that is needed between the different class systems. David voiced that development stage was the most difficult to change. This stage requires commitment, personal relationships, and meeting needs. One of the main problems in this stage is the lack of community. In *Voices of the Poor*, a study done by World Bank, over 60,000 participants living in poverty were interviewed and the majority of the findings pointed to people's lack and need of well-being over the need of material items (Narayan). Furthermore in *A Framework for Understanding Poverty*, author Ruby K. Payne argues that out of the 8 resources of well-being, emotional resources are the most important.

Looking at the depravity of the working poor and desperate need for a support system, we decided to focus our project on the importance of community within poverty and how through authentic community we can overcome all aspects of poverty together. Habitat for Humanity lives out this community by providing a one year program to future homeowners. They've found that the personal relationships formed through this program are just as beneficial as the home itself. We hope to convey this within our campaign and interactive installations.

Our second goal was to create an accompanying print, installation, and social media campaign to further spread awareness about poverty. Through posters, social media posts, and interactive installations on campus, we began to start the conversation about poverty within the student body by challenging stereotypes that surround poverty. We created three posters that focused on the lack of campus organizations centered on poverty and the abundance of organizations focused on other issues. Through illustrations, each poster depicted the spotlight on certain subjects and how poverty was left in the dark. The three posters were displayed around campus on various bulletin boards as well as multiple social media platforms. We also created two interactive posters that were displayed on campus in order to provide a more engaging way to learn about poverty within our community. We decided to use Facebook, Instagram, and Twitter to help our campaign reach our younger target audience. It is a way for us to post about the campaign, as well as a way for students to interact with the campaign by giving input and sharing their screen captures from the interactive poster experience.

Our last goal is to create interactive posters based on poverty statistics to help share this information with college students. We believe that presenting information to our target audience with an interactive experience will help change the audience's opinions of poverty, and evoke empathy. We want this digital experience to be so much more than a typical print poster or a

generic poverty simulation, but rather a way for users to understand the reality of poverty, and realize that those living in poverty truly aren't that different from us. Our plan is to use interactions to create an experience that puts the user "in the shoes" of someone living in poverty. We hope that these interactions will personalize the issue and make the reality of poverty easy to understand and hard to forget. We want these experiences to open eyes and inspire change.

SECTION II

BACKGROUND AND PRIOR WORK

The inspiration for this project started with a project that we as a team completed the Spring 2017 semester called One Step. *One Step* was an interactive experience created to teach the users that in order to help make a difference and solve social issues, one must first take a step closer to the issues at hand. The three issues we chose to highlight were human trafficking, the refugee crisis, and homelessness. These three social issues were presented to the viewer in the form of a black and white photograph projected onto a screen at the end of a long hallway. The common thread being that the people present in each of these photographs are desperately in need of a better shelter, and this is where our help is needed. As the viewer takes a step closer to the photograph, a motion graphic is triggered and a drawing begins to form over the image of the presented issue. Slowly, the shelter around the people in the photographs is transformed, reiterating the note that it only takes one step to make a difference. After the motion graphic stops, the viewer is invited to take another step to positively alter the surroundings of another person. After all three issues have been visited, the user is invited to take the next step in real life by visiting websites listed on a flyer for more information on the presented issues.

Our main goal in creating One Step was to convey to people that it's easy to make a difference. It only takes a step to make a difference in someone's life. We wanted to spread awareness of these issues to others but also encourage them to help make a change. It can be overwhelming trying to make a change with big social issues such as the ones presented in One Step. It can make you feel like you are just one person and too small to have any impact on the situation, but that is not true. Showing the simplicity of making a change helps take away this

overwhelming feeling. From what we saw and read from our participants, we think it is safe to say that we met our main goal. Although not everyone left with a flyer with additional information for the presented issues, everyone did leave affected, with more knowledge on the issues, and with the sense that even a single person can make a great difference in another's life. We hope to evoke a similar strong emotional impact with our current interactive posters, and print and social media campaigns.

A different interactive project that has inspired our current project is called "Paper Planes." The concept is simple: make a paper airplane, stamp it with your location, and let it fly around the world. However, it is the actions it requires of its users that makes it interactive in such a unique way. In order to send a paper plane, you have to open the mobile version of the website on your phone, swipe the corners of the paper in order to fold it, and finally move your phone in a throwing motion to let the plane fly. This unique interaction fits the concept of this website perfectly, and it really helps engage the user's attention. In our project, we hope to use clever interactive elements like this to fully immerse our users in the experience and highlight the weight of the topic in order to encourage further engagement in the interactive website.

Another website we found inspirational is called "In My World." It is a story-based website that discusses the challenges that people with mental illnesses in countries in crisis face every day. The whole approach is very personal: full of photographs and testimonies both written and recorded. This approach makes it easy for the user to relate to the storyteller and understand how real these issues are. We also found it intriguing that they had a call to action for users to share their own personal stories about the issue, so that the user's perspective could also be shared with others. We thought this could be another way to encourage interactivity and community in our own project.

SECTION III

ONE STEP: INTERACTIVE POSTERS

We believe that an interactive installation is a great way to evoke an immersive and embodied experience about a certain story. As a part of the One Step campaign, we created two interactive posters to help immerse users into our story. The concept of the first poster was to put the user “into the shoes” of someone living in poverty. We achieved this through a motion graphic accompanied with sound design displayed on a screen with a webcam showing the user’s face within a silhouette. The webcam allowed the user to see his or her face as the face of the person in the motion graphic, making the experience more personal and showing that poverty can affect anyone, even you and I. Whenever a user stood in front of the screen and fit his or her face into the frame, the webcam would use face recognition to trigger the animation. This was done through Arduino, Processing, and Madmapper.

The experience begins by showing the user in a secure home. But then, items around them slowly start to fade away to represent the beginning effects of poverty. Suddenly, the environment changes to a loud and busy street corner to show how fast someone can lose their home and fall into extreme poverty. At the end of the experience, the users could choose to participate in our social media campaign by sharing their screen capture to twitter [Figure 1].



Figure 1: One Step Interactive Poster One: Installation setup, technical diagram, and social media connection (twitter)

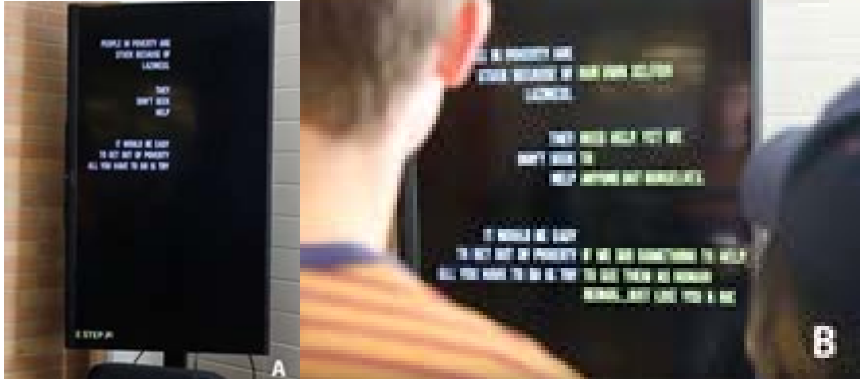


Figure 2: One Step Interactive Poster Two: Installation Setup (A), With Participants (B)

The concept for the second installation is that working together as a community is the only way to overcome poverty. On the left side of a large monitor, we displayed general stereotypes of poverty. When a user moved in front of the screen, words appear on the right side of the monitor that alter the original phrase on the left. The new phrase is now more positive and shows how we need to help our neighbors in poverty instead of erroneously judging them [Figure 2]. The more the users move, the longer the positive messages stays on the screen. If the users stop moving, the positive messages disappear showing that not paying attention to poverty won't make it go away, we have to work to end it. This was done using a motion tracking function.

We exhibited our two interactive posters at the end of semester show hosted at school. Since we had the projects close to a main entrance of the building, we were able to have many participants, mainly university students. They approached our projects without any knowledge of the One Step campaign. During the experience, many participants expressed that they didn't know the poverty rate in the city and felt sad about it. One couple was astonished and kept asking: "Is that true?"

The immersive experience of the interactive poster sparked the minds of the participants. Many continued to ask us questions about the project to learn more about the campaign and the

purpose behind the project. Before the participants left, we offered them flyers with a brief description of what One Step is, how to get involved around Bryan/College Station, and our social media handles.

Because of this positive user feedback, we plan to create two different interactive posters each of which will highlight a different aspect of the poverty issue. The first one will be similar to the first poster in that it will also contain a narrative, but this time it will be covering the topic of hunger in poverty and how this is an issue that 1 in 5 families in Brazos Valley deal with every day [Figure 3A]. The second poster we plan to create will be more interactive than informative. The visual will be a black and white photograph of a substandard house in Bryan, Texas. As a user moves in front of the screen, a larger house will start to build itself over the substandard house [Figure 3B]. However, if the user stops moving, the larger house will start to fade away communicating that action is key.

We plan to share our interactive installations with users through a link shared on social media, as well as emailed to students at Texas A&M University.



Figure 3: One Step Interactive Posters: Facial Recognition Hunger Poster (A), Motion Recognition Community Poster (B)

SECTION IV

USER STUDY AND RESULTS

In order to test the effectiveness of the interactive posters, we conducted a user study with twenty-four volunteer student participants. We started the study by asking each user pre-survey questions. When asked how often they read print posters on campus, 9 users said every day, 5 said fairly often, 6 said somewhat often, and 4 said not very often. When asked which print posters they remember seeing recently, most of the users mentioned posters that somehow related to their major. One user commented that people tend to only pay attention to posters from organizations they are already familiar with and would be less likely to take the time to stop and read something new. We also asked the users how they usually learn about social issues. When asked, 14 users said social media, 6 said word of mouth, and 3 said the news either on tv, the internet, or their phone.

Next we asked the users about their current awareness of the poverty issue in Brazos County and if they could guess the percentage of people in Brazos County living in poverty. When asked, 13 users said they had not heard about the poverty issue, 6 said they had, and 5 said they were somewhat, but not extensively aware of the issue. When asked to guess the percentage, only 4 people guessed correctly, while 5 guessed a percentage that was over the actual percentage, and 14 guessed a percentage that was under the actual percentage which is 30%. One user did not even give a number because they did not know where to begin to guess. This question confirmed our hypothesis that the majority of students are not aware of the severity of the poverty issue in our community. We followed this question up by asking them if they would

be more likely to get involved if they knew more about the issue, to which 21 people said yes, 1 said no, and 2 said maybe.

After completing the pre-survey, we asked the users to view two print posters on a bulletin board surrounded by other unrelated posters. After users finished viewing the posters, we asked them about their experience and what they learned from the posters. The majority of the users thought that the pantry poster was more effective than the community poster because of the brevity of its message, simplicity of its design, as well as the larger size of the poster. When asked what they remembered from the posters, the majority of the users remembered the 1 in 5 statistic. Many also mentioned that the other poster had something to do with the importance of community and building a new house over a run-down one, but that this poster was not as effective as the first. When asked if they thought the print posters were an effective way to present the poverty issue, 15 users said yes, 6 said no, and 3 said maybe. Some reasons users listed as to why they were not effective included they did not show a lot of information, and their dark colors made them blend in with the other posters. When asked if they would pay attention to these posters on a normal day, 8 users said yes, 13 said no, and 3 said maybe. Many users mentioned that they would not be likely to pay attention to the posters because the colors did not stand out and they normally would not stop and take that much time to look at one poster. When asked if they would share what they learned from their experience with the print posters with their friends, 9 users said yes, 6 said no, and 8 said maybe if it was relevant to their current conversation.

Next, we had the users experience our two interactive posters. When asked if this was an effective way to present the poverty issue, 19 said yes, 2 said no, and 4 said that one of the interactive posters was effective while the other one was not. The users who did not think they

were effective mentioned that the posters required more time and commitment to get the information. When asked if they would pay attention to these posters on a normal day, however, 22 users said yes, while only 2 said no. When asked if they would share this experience with their friends, 23 people said yes and 1 said maybe because the interactive posters were different and more interesting due to the required interaction.

After viewing both types of posters, we asked users to compare their experiences and share which type they thought was more effective. When asked, 75 percent of people said that they thought the interactive posters were more effective, less than 21 percent thought that one interactive poster and one print poster of each subject type was more effective, and 4 percent thought that both of the print posters were more effective. Reasons users thought the interactive posters were more effective include the fact that they provided more information, evoked more of an emotional response, required active involvement, created a more focused experience, and were more memorable because of the engagement. One user commented on this experience by saying, “having a person make an impact on the poster will let the poster leave an impact on them.” The user who preferred the print posters noted that print was what he was used to and it was a quicker and easier way to get the information.

When asked if they were more aware of the poverty issue after this experience, every single user answered yes. When asked if the experience impacted or changed their views on poverty, 15 answered yes, while 9 answered no. Many users who answered no commented that they already knew that poverty was bad, so this experience did not change their view on that, but it did make them more aware of the severity of the poverty issue in our community. We concluded the survey by asking the users if they would be more likely to get involved or learn more about the issue after experiencing our posters, to which 19 answered yes, 2 answered no,

and 3 answered maybe. The users who did not answer yes mentioned that they were either about to graduate or did not think they had enough free time to get involved.

During the user tests, we noticed that most participants had trouble figuring out the type of movement needed to trigger the animation for the community poster that portrayed a house being built. We realized that people who are more used to interactive media (i.e. Visualization majors) had very little difficulty understanding how to interact with this poster and really enjoyed the concept. However, some of students who had little to no experience with immersive technology were more confused and stated that they would be weary of interacting with this type of poster in public spaces. Most of the participants would take small steps or make small arm movements that the Kinect camera could not recognize resulting in the animation not playing and leaving the participants confused. It also appeared that the majority of the participants did not seem comfortable moving around in front of the poster in a public setting and could have been the reason for their small movements. people responded to the motion sensor poster in different ways. Although they had trouble at the start, once the participants figured out the type of movement they needed to create they were able to pass through the animation without any problems. The message for this poster seemed to become clear through the interactive version rather than the print versions which many participants had relayed that they had difficulty understanding its topic. In the poster that discussed the hunger crisis in poverty, we saw an emotional response from participants. However, some did not like the screenshot aspect of the poster. Overall, the interactive posters were more engaging and educating- we saw that 75 percent of the users preferred the interactive posters over the print.

SECTION IV

REFLECTION

Throughout our research, we've gained a greater understanding of poverty and how it affects our community as well as a knowledge of how interactive media can inspire and promote change. The poverty issue is not something that can be illustrated easily, and the more we learned, the more our design plan evolved as we tried to create experiences that were both informative and inspiring. While our interactive posters received positive user feedback, we challenged ourselves to envision future applications of One Step even after the completion of this research project.

As our research progressed, we began to see our own perspective and knowledge of poverty change. We chose to focus on helping the development stage of poverty because we saw a great need there. Hunger, debt, unemployment, eviction- this only scrapes the surface of issues found in this stage of poverty. It was difficult to choose what issue to talk about, but by choosing hunger, a problem we believe that students can help solve, and community involvement- our overall goal for this project, we hoped to challenge our campus with a goal that we believe to be achievable. Unfortunately, by limiting poverty to these issues we limited the amount of impact we could of created. If we had unlimited resources and time, we would have expanded on poverty to inform more people. However, with a newfound understanding of poverty we hope to spread awareness with our words and actions throughout our daily lives.

Overall, 75 percent of our users preferred the interactive posters over the print posters. We saw that users remembered more knowledge about poverty through the interactive pieces which was due to both the audio and physical engagement elements. In addition to providing a lasting

impact, these elements provoked an emotional response from the users. Out of our studies, 75 percent of users said they would be willing to learn more and get involved after participating with the interactive posters. Through this, we saw how interactive media can be a powerful tool in a world in need of social change.

Looking forward, this project could be expanded in various ways to reach a larger audience. Exploring different technologies, such as virtual reality, could be a more impactful way to place a user in the shoes of someone living in poverty. Virtual reality would open more doors to an immersive environment, where the user could rebuild the community directly instead of just by movement. Furthermore, we hope that One Step could one day turn into an organization that aims to spread poverty awareness and promote involvement at Texas A&M. This organization could continue to use interactive media to spread awareness throughout campus.

In conclusion, creating this project required us to take a step of action and envision new and creative ways to present the issue to our community and encourage them to become aware and involved in our community. Through interactive media we were able engage users to look more closely at the issue. We hope that these actions inspire others to take a step and make a change.

WORKS CITED

Dell, Brian, et al. *Understanding Poverty in Brazos County*. Capstone. College Station: The Bush School of Government and Public Service, 2016. Document.

In My World. n.d. <http://www.onedayinmyworld.com/>. 10 September 2017. Web.

Narayan, Deepa; Chambers, Robert; Shah, Meera K.; Petesch, Patti. 2000. *Voices of the Poor : Crying Out for Change*. New York: Oxford University Press for the World Bank. © World Bank. <https://openknowledge.worldbank.org/handle/10986/13848> License: CC BY 3.0 IGO.

Paper Planes. n.d. <https://paperplanes.world/>. 20 August 2017.

Payne, Ruby K. *A Framework for Understanding and Working with Students and Adults from Poverty*. Baytown: RFT Publishing, 1995. Book.

APPENDIX A: TIMELINE

September: Background Research, Inspirational Design Research

October: Background Research, Inspirational Design Research, Field Study (Habitat Visit)

October 30: First Installment and Progress Report

November: Interaction Study, Design Prototype, Field Study (Habitat Visit), Begin Print and Social Media Campaign, Prepare content for first Social Media Posts

November 27: Set up Print Campaign across campus, Installation Development, Launch Social Media Campaign

December: Hang print posters, Interactive poster exhibit, social media posts

January: Design Implementation, Test Installations

January 29: Second Installment and Progress Report, Installation Re-design

February: Installation Design Prototypes

February 28: Present at the Undergraduate Research Symposium

March 5: Third Installment and Progress Report (1000-1500 words) *Self-reflection and planning*

March: Finalize Interactive Posters

March: User Study, Data Analysis, Finalize Reports

April 2: Presentation Report Due

April 9: Final Thesis Deadline

May: Viz-a-GoGo Exhibition