Abstract
College students with disabilities face various barriers to academic and social engagement. The present project was conducted based on principles of participatory action research (PAR) using Photovoice method with six students, gathering images representing such barriers, and developing narratives to describe the problems as well as possible ways to address them. With follow-up actions, the project prompted a number of attitudinal and architectural changes on campus. In addition, the participating students reported empowering effects of the project on themselves, consistent with the premise of PAR, indicating a potential of PAR with Photovoice methodology in both empowering students with disabilities and transforming university campuses to more inclusive environment. Photovoice can be employed by disability service providers to encourage students to be their own advocates to tell their stories about campus accessibility. Students’ perspectives can inform public policy to address barriers to be more inclusive to higher education that they experience.

Keywords: Photovoice, student with disability, inclusion, attitudinal changes, postsecondary education

Today an estimated 11% of undergraduate students in the U.S.—more than two million—report having some type of disability (U.S. Government Accountability Office, 2009). However, students with disabilities continue to face challenges such as negative attitudes from others, physical barriers on campus, lack of appropriate services, and programs that result in low attendance and graduation rates when compared to students without disabilities (Dowrick, Anderson, Heyer, & Acosta, 2005). Statistics suggest that only 12.4% of individuals with disabilities possess college degree or higher while 31.7% of those without disabilities possess a college degree or higher (American Community Survey, 2012).

There may be many reasons for this disparity. Some students face structural barriers, such as lack of ramps or elevators in multi-level school buildings, heavy doors, lack of automatic doors, inaccessible washrooms, and inaccessible transportation to and from school (Agarwal, 2011). While, some are affected by the lack of awareness on the part of faculty, administration, and staff about the availability of accommodations (Eckes & Ochoa, 2005). Some students experience feelings of isolation on campus (Agarwal, 2011). Stodden and Jones (2002) noted, however, that the most influential barrier to students with disabilities was the stereotypically negative attitudes about people with disabilities and their ability to be successful in higher education. This sort of campus climate that postsecondary students with disabilities experience coincides with the societal environment that disability community has experienced generally, which has led to a long history of segregation and exclusion.

Statement of the Problem
Despite the equal access opportunity and all the protections and accommodations provided to students with disabilities in postsecondary education, there still exist social and physical barriers on the campus environment which prevent students with disabilities to achieve positive outcomes in higher education.
Description of the Project

The present project was initiated by the university office of disability services taking advantage of the potency of participatory action research (PAR) in light of the mission of disability services in the university setting. Consistent with the framework of PAR, which we will delineate below, our goal was twofold: (1) to empower participating students with disabilities through their participation in the project; and (2) to instigate changes for the university to become more inclusive. We will also describe Photovoice as a PAR method in the following section.

PAR seeks to gain a greater understanding of the issues that people or communities face by actively involving community members in all phases of research process, aiming at social change (e.g., Minkler & Wallerstein, 2003). PAR presents opportunities for participants to gain empowerment through their involvement in the research process (Israel, Schultz, Parker, & Becker, 1998, cited in Minkler & Wallerstein 2003). PAR approaches have been increasingly used by researchers often with marginalized groups.

The specific participatory approach that we drew upon was a visual methodology called Photovoice (Wang & Burris, 1997). It is a participatory evaluation method in which participants, who are often silenced in the political sphere, are given cameras to capture images that convey their feelings, beliefs, and experiences, and narrate their everyday experiences using their own words (Foster-Fishman, Nowell, Deacon, Nievar, & McCann, 2005), allowing data that are rooted in the needs and interests of the people who are users of the research. Grounded in principles of empowerment, the benefit of Photovoice method is that it empowers individuals to communicate about issues that impact their lives and concerns facing their community through photos and associated narratives, and can share their own perspectives as people affected by it.

As with the case with PAR, Photovoice has been employed in a wide range of projects involving marginalized populations across the U.S. and the world. Photovoice has been utilized in projects involving individuals with various disabilities and chronic conditions, such as intellectual (e.g., Jurkowski & Paul-Ward, 2007), psychiatric (e.g., Cabassa, Nicasio, & Whitley, 2013), physical (e.g., Balcazar, Keys, & Suarez-Balcazar, 2001), tuberculosis (e.g., de Heer, Moya & Lacson, 2008), and HIV/AIDS (e.g., Hergenrather, Rhodes, & Clark, 2006). The Photovoice approach can identify pertinent issues, raise awareness, and suggest programs or policy changes. In addition, participants can be empowered to trigger system changes as it empowers them to advocate for change in their own lives and in the lives of others.

Photovoice has been applied in various projects taking place on campuses across the U.S., including the University of South Carolina, Eastern Michigan University, University of Arkansas at Little Rock, and Syracuse University, disseminating mostly through exhibitions, experiences, and viewpoints of postsecondary students living with disabilities through photographs, poems, and works of art (Taishoff Center for Inclusive Higher Education, 2011). The present project was conducted at a university where nearly 80% of the student population is Hispanic, who are underrepresented in higher education generally, and thus, could be considered to benefit from enhanced self-advocacy.

Participants

Six students (two female, four male; age range: 20s-50s; three Hispanic, three non-Hispanic White; four undergraduate, two graduate) with a variety of disabilities (vision, hearing, mobility, seizure, and developmental) volunteered to participate in the project responding to recruitment which targeted students with disabilities by the office of disability services through an organization of students with disabilities at a southwestern university.

Procedure

Once recruited, training was conducted by the faculty advisor (co-author), introducing the participants to Photovoice method, including how to select photographs and develop narratives concerning the photograph, and going over ethical issues that might arise, such as confidentiality (see Table 2). The group was brought together three times to discuss a variety of obstacles found on campus. They included stereotypical signage at the library, lack of inclusion at the university football games, hazardous conditions when traversing the campus on foot with low vision, and obstacles to accessing restrooms on campus using motorized mobility devices. After sharing and discussing the photographs, works from each participant were selected for further discussion in the next session. When the participants took another round of photographs and reconvened, they identified common themes emerging in the second round. During the discussion, four photos were selected per participant. Participants who had photographs with similar themes teamed up and developed a story that represented perspectives of the multiple participants. For each photograph selected, participants developed a story as well as a description as to how the issue could be effectively addressed using the SHOWeD method (de Heer et al., 2008), applying the following questions: What do you see happening here? What is really happening here? How does this
relate to our lives? Why does this situation, concern, or strength exist? What can we do about it? Participants then presented their photographs and narratives to the group to spark critical dialogue.

These photographs as well as the narratives were compiled as a multimedia presentation and delivered at the university’s 6th annual Ability Awareness Week, which was an event aimed to raise awareness about issues concerning students with disabilities. The presentation was featured in a campus online newsletter (Perez, 2013), and in an evaluation survey about the entire event, 75% of the respondents rated the presentation at the highest rank on a 5-point Likert scale ranging from 5 (excellent) to 1 (poor).

Outcomes

The Photovoice project has brought about several important outcomes that can be grouped into two interrelated categories: participant-related outcomes and campus-related outcomes (Table 1).

Participant-Related Outcomes

Overall, participating students reported feeling empowered as a result of participating in the project. Some experienced empowerment, such as gaining validation on their perspectives and needs from general campus stakeholders: “It was...the first time I truly felt that people...were taking us and our situations seriously” (Norma1), “Frankly, I was surprised” (Maria). Others related empowerment in terms of achieving personal growth in the process: “I did grow throughout the Photovoice process from the initial connection with other participants” (Dolores); “It helped raise awareness by giving me a voice that everyone can see” (Norma). Participants also reported the resulting recognition that they are effective agents that have the potential to affect the physical and social environment that they live in: “[I experienced] empowering feeling of making a difference on campus as various issues were addressed and dealt with by [the university] administration” (Dolores). Feedback from participants also variously pointed out the potency of the Photovoice method as a multimedia advocacy tool: “A picture is worth a thousand words” (Dolores), “I think Photovoice has opened up an avenue to people that normally wouldn’t be as apt to speak about what it is they need to discuss because they feel like they won’t be heard” (Maria).

1 All names of the six participating students are pseudonyms.

Campus-related outcomes

Participants reported that the Photovoice project had brought important changes to the campus environment as well. According to their feedback, their peers were more aware of how to assist them because of the increased knowledge about the challenges that they tended to face. Some noted changes in ways instructors interacted with students with disabilities.

In addition, six changes to the physical environment have been implemented or have planned implementation, prompted by the project. For example, a participant who is blind captured how a shrub had overgrown some stairs and could not only be an obstacle but also a danger (Figure 1). When the director of the university disability services office presented the photograph to the facilities departments at the university, the shrub was removed immediately. Another example that is shown in Figure 2 is a stereotyping signage at the university library that did not reflect the people first language and principle of universal design. Use of the word “handicap” has been associated with stereotypical negative perceptions. Signage is changing to show universal design qualities and helping overcome stereotypical signage and language used on campus. The photograph was presented by the director of the disability service office to the building manager of the library. It was replaced with the signage shown in Figure 3 immediately. The remaining problems and actions taken involved service animals not allowed in an area within campus, an end of sidewalk not detectable universally, a dangerous building structure, and a university service vehicle blocking ADA access point (see Table 1 for detail).

Implications

Consistent with the principles of PAR our Photovoice project resulted in various outcomes related to empowerment in the participants and changes towards inclusive campus environment for students with disabilities with regard to both soft (attitudinal) and hard (architectural/physical environmental) aspects. Participants articulated with their photographs and associated narratives what constituted barriers to their full participation in the campus community. By way of the disability service office, the participants successfully brought about changes that were warranted. Considering these positive outcomes in participants and the campus environment, another round of Photovoice project is being planned with approximately 15 participants at the present university.

The medium of photograph was shown to have a unique potency to change than the more traditional method of using verbal requests, as pointed out in
Table 1

Outcomes of Photovoice Project

**Participant-related outcomes**

1. Being heard and validated
   “I think we had a wakeup call for all of the people, and when they see the issues we deal with that it had a much bigger impact on them”
   “I felt [for the] first time we had a voice”
   “It was probably the first time I truly felt that people on [the university] campus were taking us and our situations seriously”

2. Personal growth
   “I did grow throughout the Photovoice process from the initial connection with other participants through the empowering feeling of making a difference on campus as various issues were addressed and dealt with by [the university] administration”
   “It helped raise awareness by giving me a voice that everyone can see”

3. Potency of Photovoice
   “A picture is worth a thousand words”
   “With Photovoice…we got a quick response and [issues] were addressed. Frankly, I was surprised”
   “I think Photovoice has opened up an avenue to people that normally wouldn’t be as apt to speak about what it is they need to discuss”
   “It makes a big difference when we can show what we are dealing with not just talking about it”

**Campus-related outcomes**

**Problem 1:** Shrub overgrown over outside stairs, presenting danger to individuals with vision impairment
   Action: Photo was presented to university facilities department by disability service director; shrub was removed immediately

**Problem 2:** Building door signage does not reflect universal design principle
   Action: Photo was presented to building manager by disability service director; signage was replaced immediately

**Problem 3:** Service animal not allowed in university football stadium; seating reserved for persons with disabilities isolated from other seats
   Action: Disability service office working with university special events department for improvement

**Problem 4:** End of sidewalk not detectable to individuals with vision impairment
   Action: Disability service director alerted university planning and construction department and suggested the use of tactile surfaces that are detectable to cane; adding color contrasting to surroundings

**Problem 5:** Stairway with underneath space not detectable to cane, presenting danger to individuals with visual impairment
   Action: Photo was presented to facilities department by disability service director; alteration pending, awaiting funds

**Problem 6:** Delivery vehicle to student union blocking ADA access point for persons with mobility devices
   Action: Union staff was provided with ADA etiquette training by disability service director

**Other changes reported by participants**

“I saw a difference in how professors treated persons with disabilities”
“I feel that the campus is much more disability friendly and person first language sensitive”
“My peers became more aware of how to help us that have mobility issues and how to help us maneuver in a more safe environment”
Table 2

*Photovoice Steps*

1. **Form an Advisory Committee**
   Here you form an Advisory Committee, an ad-hoc group of decision makers and community leaders who work jointly with the project to provide access to those institutions the group wants to present their final stories and photos. The committee serves as gatekeepers to decision makers who can act on the ideas and recommendations of participants.

2. **Recruit Photovoice participants**
   Recruit participants who broadly reflect the community you want to portray. We recommend that the group include eight to 10 participants. This provides enough people to generate good dynamics and discussions within the group yet is small enough to hold group meetings and is not time-consuming for participants.

3. **Conduct a participant orientation**
   Summarize the basics of the Photovoice method. Discuss ethics, the power of the photographs, participant safety, and obtain consent.

4. **Have participants take photographs**
   Present “framing questions” to serve as a guideline for participants to take photos that are meaningful to them. Framing questions will guide the first round of photos to be taken by the group. New framing questions will be identified each time the group meets to share and discuss their photos and those new questions will guide the next round of picture taking.

5. **Convene participant meetings for photograph discussion**
   Participants meet as a group and receive their photos, select two to three photos, complete SHOWeD worksheets and discuss selected photos with the group.

6. **Repeat steps 4 and 5 several times**
   Audiotape the discussion to use as potential data analysis and research information purposes (and also as a substitute for written worksheets when literacy is a concern). Facilitation of group discussion yields reflection, approaches, and issues identification. After several rounds, participants meet as a group to further discuss the selected photos and worksheets (e.g., with six participants and four iterations this would yield a total of 72 photos and worksheets, of which 24 are the focus for further discussion during this session). One photo and attached worksheet from each person is selected by the group and saved for further group discussion at a later date.

7. **Analyze data**
   Codify topics through reflection to facilitate discussion about the selected set of photos and worksheets (if necessary, more may be chosen from the larger set of photos). Participants revise worksheets for photos to be shared publicly, which reflect the approaches reached during the project.

8. **Prepare presentations to address policy and decision makers**
   Participants select the photos and stories to be shared publicly, which reflect the approaches reached during the project. A photo gallery of their work is finalized for public presentations. The advisory committee assists with identifying presentation venues.

9. **Disseminate findings through exhibitions and other outreach events**
   The Photovoice exhibit gallery is presented by the project participants to target audiences of policy and decision-makers. The project documents outreach efforts and outcomes and disseminates findings through publications, “Calls to Action,” social media, and educational resources.
Pablo stated: “Obstacles come in all shapes and forms when one does not have the vision to see the obstacle before it hits them in the face. One is upon this bush before one knows that the bush exists which can cause a hazard including falling or risking eye injury. To the non-disabled person, the obstacle is not readily apparent.”

Dolores stated: “[This] picture was the replacement of the first on the Library door which is much more inclusive to all by incorporating universal design.”

Dolores stated: “The question is: Is this door automatic or handicapped? Can it be both? Also, it stereotypes who should use the door by not incorporating universal design. At this point, it is neither automatic nor handicapped because it is broken.”

Carlos stated: “Even with people all around…sometimes…one feels that they are totally alone in a crowd, and that can be a very lonely feeling even when going to watch a football game with lots of spectators. Having a dog as a service animal sometimes cuts one off from the rest of the participants because sometimes the dog is not a welcome addition to the mix of spectators and causes the owner to become the spectacle of a very trying situation at the least.”

Bush exists which can cause a hazard including falling or risking eye injury. To the non-disabled person, the obstacle is not readily apparent.”
participant feedback. On the one hand, photography has the ability to lend itself more readily to phenomena that are observable than to the intangible which could present a limitation to the types of barriers included in the scope of the project. Interestingly, one participant, Carlos, found a way to creatively represent the sense of isolation with a photograph in a football game (Figure 4). Relating to the photograph, Carlos wrote a narrative as follows: “...having a dog as a service animal sometimes cuts one off from the rest of the participants because sometimes the dog is not a welcome addition to the mix of spectators.” Although each photograph and narrative produced in our project was as unique and creative as our participants’ experiences, in future projects using Photovoice method, it may help participants to exercise their utmost creativity to capture the most salient barriers to inclusion that they experience, whether observable or not, if there is an opportunity for in-depth exposure to the variety of photographs and narratives that have been generated with this method. Photovoice production of intangible barriers will very likely draw our attention to different types of obstacles, such as the feeling of isolation, as this has been reported as the most influential barrier to students with disabilities relates to campus climate (Stodden & Jones, 2002).

In the future, Photovoice projects can include a greater number of students with more diverse backgrounds in terms of disability type, ethnicity, and field of study. This should enable a more thorough scrutiny of a university’s environment and inclusion of a wider range of barriers to an inclusive campus; compile findings to show consistency in experiences of students with disabilities for a greater power in effectuating change; adopt a quantitative measure of empowerment to further document its effectiveness; and include partners on campus that the Photovoice teams work with to implement changes as well as with broader campus constituents who experience the images and narratives as a means to expand the teams’ efforts.

Another direction for future Photovoice projects is further training in advocacy skills. In the present implementation, while participants delivered a presentation of their productions at the campus event, the photographs evidencing the barriers were then brought to the university administration with the assistance of the disability service office. Future Photovoice projects can be planned in a large scheme of capacity building, with additional advocacy skills training provided in the process following the production of photographs and narratives. A potent approach that applies photographs and narratives in combination with a team setting generates more potential than individual application of a single medium or technology. Photovoice can be employed by disability service providers to encourage students to be their own advocates to tell their stories about campus accessibility. Students’ perspectives can inform university policy to address barriers to an inclusive higher education.

References


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**Authors' Note**

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