

PHOTOVOICE AS A TOOL FOR INCREASING AWARENESS AND PARTICIPATION IN LOCAL-BASED ENVIRONMENTAL EDUCATION

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Abstract: *Photovoice is a participatory technique used in sociology for presenting research results in form of visual stories. It can be a valuable tool to increase awareness and participation of citizens in local-based processes related to environmental education. This paper highlights some advantages of using photovoice as a visual participatory technique in improving environmental education, exploring some evidences from recent literature and presenting a case study conducted in Brasov, Romania. The case study is an example of how photovoice can be successfully used in working with social science students, in order to improve their professional skills for promoting local-based environmental education initiatives.*

Key words: *photovoice, environmental education, sustainable development, project-based learning, local community.*

1. Introduction

Environmental education represents one of the most important efforts that contemporary states and communities make to ensure sustainable development. It is largely acknowledged that environmental conditions across the globe continue to deteriorate at an alarming pace (Ardoin and Bowers, 2020). Environmental education is „an organized effort to empower people and communities to work together towards a more sustainable future through education about how the natural environment functions, and how humans can manage their behavior to live sustainably” (Arizona Association for Environmental Education, 2021).

According to Flint (2013), sustainable development could be achieved by three fundamental factors: economic security, social equity and ecologic integrity. Focusing on these three integrated elements, individuals and communities could both become more aware of their common problems and be able to support sustainable development. From such a perspective, the main goal of environmental education is to raise

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awareness toward both environment protection and sustainable management of natural resources, which represents a challenge for many communities around the world, especially for the disadvantaged and marginalized ones.

UNESCO (1978) defined environmental education as „a lifelong process with the objective of imparting to its target groups in the formal and nonformal education sectors environmental awareness, ecological knowledge, attitudes, values, commitments for actions, and ethical responsibilities for the rational use of resources and for sound and sustainable development”. In other words, environmental education is an approach with an important participatory component, which foregrounds local knowledge, experience, values, and practices, often in place-based settings (Ardoin, Bowers and Gaillard, 2020).

This article highlights some advantages of using photovoice in improving the environmental education of citizens in relation to their local communities, exploring some evidence from recent literature and presenting a case study conducted in Brasov City, Romania, during a seminar of Community Development.

2. Photovoice as a Visual Participatory Technique

Photographs can show significant information about a place (Rose, 2008). Many authors highlight the power of communication through images (e.g. photographs, photovoice, videos, visual essay and exhibition in community) in relation to different types of audience, ranging from ordinary community members to policy makers (Hinds, 2017; Sanchez, 2015; Scârnci-Domnişoru, 2016). This is possible because visual data present information in an accessible, easy-to-understand manner and have a greater impact on the reader. Beyond their scientific value, the images presented in research reports have an artistic function too (Scârnci-Domnişoru, 2020), being thus more expressive and contributing to the popularization of scientific knowledge.

Photovoice is „the way to make the photos speak and present themselves” (Scârnci-Domnişoru, 2016, p.43). Practically, through this technique people are invited to produce visual data within action research projects (id.). In a community setting, photovoice is „a process by which people can identify, represent, and enhance their community through a specific photographic technique” (Wang & Burris, 1997, p. 369). Photovoice is by definition a participatory technique because people are the ones who produce the photos (or the basic visual data), and the role of the researcher or the project's coordinator is to assemble them, to put together this data in a coherent and interesting form. By taking pictures, photovoice engages community members to tell their stories and informs policy makers about issues of concern at the grassroots level (Wang, Cash and Powers, 2000).

In participatory visual research based on photovoice, participants use camera to shoot different aspects of their social life, according to the research objectives. There is not any orthodoxy to photovoice (Mitchell, De Lange and Moletsane, 2017) and participants can use any type of available camera. Most commonly, digital or cell phone cameras are used. Often, after the shooting stage, a new stage follows, which consists of facilitating photo discussions and creating the context for participants to share, discuss and

contextualize the photos they produced (Mahmood et al, 2012). Photovoice becomes an even more valuable participatory technique when it is used in working with marginalized groups. Putting cameras in the hands of disadvantaged people creates the occasion to „hear” their voices or to access „meanings that they attach to situations of injustice and to explore whether and how these social conditions could be change” (Mitchell, De Lange and Moletsane, 2017, p. 26).

3. The Use of Photovoice to Address Diverse Environmental Issues

Photovoice has recently been used in numerous projects focused on various aspects of people's relationship with their environment. I selected three examples from recent scientific articles published on ScienceDirect Freedom Collection, Elsevier.

In a very interesting and complex project, Mahmood et al. (2012) used photovoice to identify neighbourhood physical environmental features and social aspects that influence physical activity in older adults. Visual data were collected in eight neighborhoods across two metropolitan areas in the Pacific Northwest of North America. A total number of sixty-six seniors participated in the project. In the first phase, they were asked to photograph “physical and social aspects of their respective neighbourhoods that they perceived as facilitators or barriers to their physical activity behavior” (p. 1182) and to write comments or impressions about their pictures. In the second phase, the participants attended a group discussion session aimed at fostering critical discussion and reflection regarding both issues identified in the photographs and emerging issues; afterwards, participants were invited to formulate recommendations on how local environment could be transformed in order to become more appropriate for physical activity. The visual data and the corresponding descriptions of each photograph were analyzed by the researchers and seven major themes emerged: “being safe and feeling secure”, “getting there”, “comfort in movement”, “diversity of destinations”, “community-based programs”, “peer support” and “intergenerational/volunteer activities”. According to the authors of this study, photovoice has many advantages in this area of inquiry, such as: i) it allows participants to capture significant aspects of their environments through their own “lens”; ii) the process of taking photographs, writing and discussing their content provides opportunities to reflect on the significance of neighbourhood environment in relation to the needs for physical activity; iii) collected visual data elicit a wealth of information and foster the engagement in discussions; iv) details that might be overlooked by other method can be captured by photovoice; v) photovoice increases the participants' awareness of the role of physical environmental features in their neighbourhoods; vi) participants find the photovoice process “enjoyable and meaningful” (p. 1190).

Petteway (2019) used photovoice methodology in a public housing community from a Midwestern city of North America to examine perceptions about place and differences of place-based health experiences in adults and youth. The participants (8 adults and 10 youth) were asked to document their “daily or routine places that they perceived affected their health in positive or negative ways” (p. 3). Participants took photographs using their smartphones; they were also involved in the process of data analysis,

creating codes, building emergent themes and reviewing photo narratives. From the adult photovoice data, four prominent themes were generated : “Put Them to Good Use or Tear Them Down!”, “Too Many Empty Lots and Undone Roads”, “Room to Grow” and “Housing”; from the youth data, six main themes emerged: “Vacants”, “Positive Buildings”, “Broken Roads”, “Other”, “Empty Space” and „School”. The research results showed that “place” was not a static element and the place-based experiences were spatially- and generationally-specific.

Gravina et al. (2020) conducted a photovoice project in which 23 residents of Bilbao (Spain) interpreted the influence of their local food environment on eating behaviours. As in the previous example, participants were fully involved in the project. After taking the photographs, they participated in the process of interpreting visual data, thus they critically discussed their photos, built emerging categories and identified the main themes characterizing their local food environment. The main themes generated by photovoice data were: “unhealthy eating behavior”, “cultural diversity”, „retail transformation”, “social relationships”, “precariousness” and „healthy eating”. In the authors' opinion, this project revealed how residents from socio-economically diverse neighbourhoods perceived their local food environment in relation to residents' eating behaviour. The participatory technique of photovoice is indeed “a valuable resource for translating research results into local policy actions and interventions” (p. 8).

4. A Brief Reflection on the Advantages of Using Photovoice for Environmental Education in Disadvantaged and Marginalized Communities

In the field of sustainable community development, methodologies based on visual data, in general, and photovoice, in particular, could be important tools for stimulating critical thinking, motivating people to become more responsible and producing positive change.

Referring to photographs, Wang and Burris (1997) argued that they are a very powerful means of assessing needs in a community context. Hinds (2017) sustained that photos can be used in assessing needs and different assets of a community, as well as in investigating how people understand and experience their relationship with local communities. Purcell (2007) considered that techniques such as photo-elicitation, photo-novella and photovoice could be very useful tools for the „development of individuals and communities”; photography, as a „community-based practice”, becomes in this context “a developmental tool” (p. 114). In such a context, photographs acquire a reflexive function, and the very process of taking or interpreting photos develops critical thinking and produces empowerment in community members. In R. Purcell's words, photographic approaches could “facilitate local people reflecting on their life situation, developing their vision of a better life that leads to action for change, then photographic approaches have much to offer for effective community development practice” (p. 120). I consider visual methodologies as being an interesting and useful approach, easily applicable to social research and community intervention projects that address environmental issues.

According to Wang (1999), photovoice has three main goals: to enable people (1) to

record and reflect their community's strengths and concerns, (2) to promote critical dialogue and knowledge about community issues through group discussion, and (3) to reach policymakers. Photovoice has the potential to empower and mobilize people to take actions on environmental issues (Mahmood et al, 2012).

In disadvantaged and marginalized communities, people are less vulnerable and have less knowledge of issues related to environmental constraints and environmental protection. In such communities, using photovoice could really raise awareness and empower people to act for the benefit of common environmental goals. Wang and Burris (1997) described a series of advantages of using photovoice for participatory community needs assessment. I listed below some of these advantages that, in my opinion, best match the social realities of disadvantaged and marginalized communities. First, photovoice enables researchers and practitioners to perceive social and physical environments from the point of view of the people who live there and thus to discover perspectives which could be quite different from the official ones. Second, photovoice can facilitate the sampling of different social settings which may not be available to researchers otherwise (for examples, remote or private places). Third, taking photos for a project can be a source of pride for participants, increasing self-esteem and motivation for further projects. Fourth, photovoice enables participants to share their ideas, explanations and stories with researchers and other members of their communities, contributing to the strengthening of their social network. Fifth, photovoice is accessible to anyone who can use a camera or a smartphone and this is an important advantage for communities where people do not have the ability to read or write.

5. Environmental Issues of The City in Social Science Students' Perception. A Case Study in Brasov, Romania

During a seminar of Community Development that I coordinated in 2018, 15 students voluntarily participated in a micro-research whose main purpose was for them to learn how to use photovoice in the fields of environmental education and sustainable community development. The participants were students in the bachelor's degree programmes of Sociology and Social Work of Transilvania University of Brasov. The learning method that I used during this activity was *project-based learning*. This method consists of creating contexts for learning and for training professional skills by carrying out projects (Guo et al., 2020); it involves asking questions, using technology, collaborating between students and creating „tangible artifacts" (id.). Compared to traditional methods in which the teacher is the central actor of the educational process, project-based learning places the interests and needs of students at the centre of the learning process and promotes student autonomy (Choi, Lee and Kim, 2019).

In the first phase of the seminar I presented to the participants a series of theoretical and methodological elements regarding the use of photovoice in various sociological fields. Then we decided together what their research task would be. Thus, participants were asked to take photos in Brasov City according to the following prompt: „Take photographs of both positive and negative aspects of our local community. For each photo, please write a short comment or give it a title". Students had two weeks to

complete this task. In the second phase, I collected the visual data produced by the participants, I analysed them thematically, I composed a visual story and I presented it during a group discussion session, in which the participants had the occasion to reflect on both their work and the city's environmental issues and assets.

I will further present some excerpts from this visual story, in which the comments written by the students are in italics, along with the photos taken by them. The photographs are organized on eight themes that emerged in the process of thematic coding. I will also present below some of the conclusions derived from the group discussion session.

I consider this case study is a good example of how photovoice can be successfully used in working with social science students, in order to improve their professional skills for promoting local-based environmental education initiatives.

5.1. Negative aspects of the urban environment



Fig. 1 (a,b). *The theme of garbage. 1a) In some areas of Brasov waste is thrown away without taking into account the fact that it affects the nature and especially the air we breathe. 1b) I have lived twenty years of my life surrounded by bottles, garbage, plastic and I think we should all be more aware of the seriousness of this problem and also of our indifference to the public property.*



Fig. 2 (a,b). *The theme of the central railway station of the city. 2a) Brasov Railway Station - Renovation or devastation? 2b) Unfortunately, this is how people know „to preserve” public property.*



Fig. 3 (a,b,c). *The theme of neglected buildings in the historic center of the city. 3a) There are scribbling on the walls, and buildings are left to deteriorate. This place is located in the central area of the city, left to be seen by tourists coming to Brasov. 3b) and 3c) In many historical areas of Brasov we find both announcements of upcoming events and vandalism (Tag, Graffiti).*



Fig. 4 (a,b). *The theme of damaged tourist attractions. 4a) This is how the facade of the Art Museum in Brasov looks like. 4b) The warning „Attention, the plaster falls!” can be seen very often in Romania. The picture was taken at the Brasov Fortress. It is outrageous!*



Fig. 5 (a, b). *The theme of poorly maintained roads and sidewalks. 5a) Asphalt pits versus budget pits. 5b) Total indifference!*

5.2. Positive aspects of the urban environment

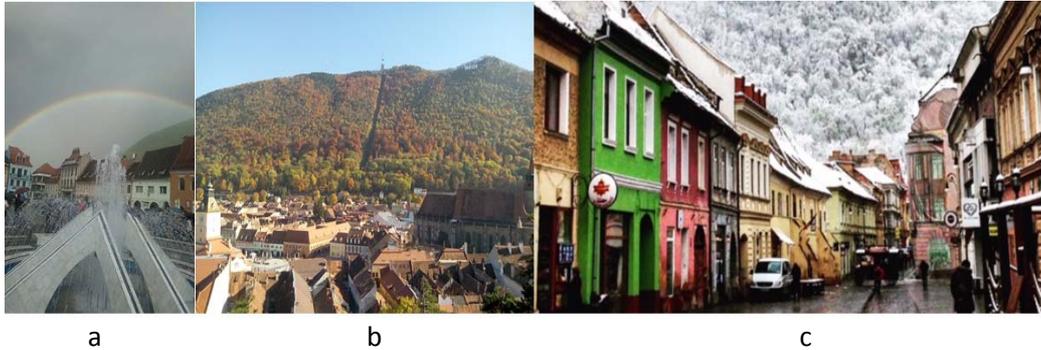


Fig. 6. *The theme of the beautiful historic centre.*

- a) A rainbow over the Council Square has made the city even more beautiful.
b) This panorama is great! 6c) I really like the quiet streets of the historic centre.*

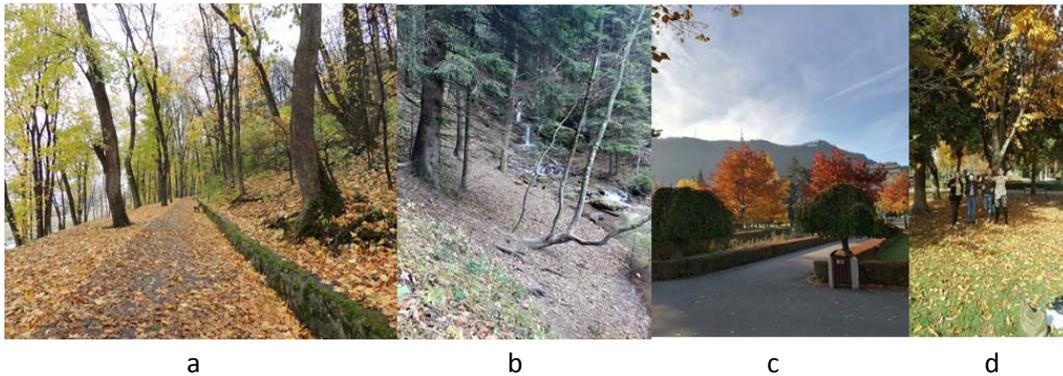


Fig. 7. *The theme of the nature in the city*

- a) A walk on the alley near Mount Tâmpa can take you on a spiritual journey; it is a good place to reflect on your thoughts and decisions.
b) The silence charges you with good energy.
c) Green space offers a note of relaxation, and a lot of fresh air.
d) Me and my colleagues playing in nature, with autumn leaves.*



Fig. 8 (a, b). *The theme of a vivid city*

8a) Involvement and responsibility: young people sustain green policy! 8b) Outdoor cultural events, such as this show of the Brasov Opera in the Council Square, are successful and make people more cultured.

During the group discussion, I asked the participants to express their opinion about photovoice in general, and about its potential for addressing environmental issues, in particular. I wrote below in italics the participants' opinion and comments. Their general opinion on photovoice methodology was strongly positive. They claimed that the task of taking photos and writing short descriptions about them was *very interesting, promising and challenging*. The participants considered photovoice a very useful technique in increasing awareness and commitment to environmental protection in Romanian communities, especially in the disadvantaged ones. Some of them agreed that photovoice could be one of the most effective ways to produce change in such communities. They also gave examples of how this technique could be used in working with specific communities that they were familiarized with: it would be very effective in disadvantaged communities where the education level is very low; in working with youth and children who can increase the awareness of their parents and relatives; in summer schools and camps; in extracurricular activities of students from communities that face many environmental problems.

Several of the participants stated that seeing the images photographed by their colleagues had a great impact on them: it gives me the feeling that the problems are numerous, serious and that we have to deal with them; it's a method that can't leave you indifferent to the negative things you can see in the pictures. Some of them instead commented on the positive impact of the city's beauty, as it is reflected in the pictures; it could strengthen both their pride to be students in this place and the feeling of belonging to this local community.

The participants considered that the visual story had a great impact on them, because it gave them the feeling that their ideas, opinions and contributions are important and that their points of view could be taken into account by authorities if necessary. They also declared that their involvement in this project brought them satisfaction, because they were taken seriously; they also found it very funny to collect data.

6. Conclusion

Photovoice can be a valuable tool for increasing awareness and participation of citizens in local-based processes related to environmental education. This technique, which consists of collecting and interpreting visual data produced by the participants themselves, enables community members to observe, reflect, prioritize and discuss environmental concerns, problems and solutions. As Mitchell, De Lange and Moletsane (2017) claim, there are three fundamental elements that enhance opportunities for social change: audience engagement, political listening and reflexivity. Photovoice can activate all three elements within local communities, thus being an important instrument for community development.

The process of returning the research results to the community is, moreover, an important one in raising awareness regarding the resources and problems of local communities (Pascaru and Buşiu, 2007). This process is also called „speaking back” (Mitchell, De Lange and Moletsane, 2017) and consists of a series of practices by which participants could revise their own productions (id.) or could get a new perspective of their social situations. Photovoice is a good way to do that. It is a participatory technique able to stimulate reflection, critical thinking and motivation for change. In our case, photovoice worked as a means of stimulating community participation for addressing environmental issues in students.

The case study presented in this paper suggests that the use of photovoice in community projects can be an efficient means of producing change, as the participants who collect themselves visual data and make known their own perceptions are motivated to become more active and have both cognitive and emotional satisfaction. The participants' remarks are in line with the ones presented above, about the positive feedback of the participants towards the use of this visual technique (Gravina et al., 2020; Mahmood et al., 2012).

In the field of environmental education, photovoice can be used by researchers and facilitators in order to increase awareness, knowledge, and capability for consolidating common values and for achieving goals related to environmental protection in local communities.

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