Looking through the Lens: Adapting and Modifying Photovoice Projects for Active Learning and Engagement in Biology †

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INTRODUCTION

Photovoice is an innovative approach to participatory research. It was initially introduced as a photo novella and incorporates the process of using photographs or pictures to tell a story (3). Through a photovoice, students can represent through visual imagery particular aspects of the community that they live in. Through the lens of photovoice projects, students can tell an empowering story about their community and promote group discussion, critical thinking, and knowledge about important issues (4). Photovoice has been commonly used in the Social Sciences/Health Sciences as a tool for Community-Based Participatory Research (CBPR) because of its accuracy in collecting information. It has also been used in the socioscientific context to help students to perceive the nature of science (1). However, photovoice has rarely been used in the biology classroom to engage students in active learning through participatory projects. Through this assignment students can be engaged in creating informational and educative material in a collaborative fashion while critically analyzing the impact of a disease/addiction on a community (2). In this paper, I will describe how the photovoice may be used as a tool in the biology classroom to engage students and to promote active learning about disease and addiction.

PROCEDURE

I generally use the photovoice assignment in two 100-level classes: Introduction to Biology and Critical Thinking About Disease, both of which have an approximate enrollment of 20 to 24 students. However, the assignment may be used in any biology class with a modification of the topic. The project counts for about 15% of the student’s grade. For the assignment, students are required to create a photovoice project composed of original photographs (using PowerPoint/Prezi) based on a disease or addiction that is related to the community that they live in.

I use one class period (75 minutes) to explain the project and to have students create an outline of their project. I explain the project to the students and post the instructions and grading rubric on the learning management system so that students have easy access to it (see Appendices 1 and 2 for instructions and grading rubric). Briefly, the students are instructed to make a minimum of 15 PowerPoint slides about a particular disease or addiction and include a take-home message at the end. All photographs should be original, taken by the student. The students are instructed to ask permission before taking a photograph of another person or a nonpublic area and are made aware of the ethical implications of their project activities. They are instructed to take at least 80% of the photographs they will need for the project and have these on hand for the next class, where they will put together their slides. The students are told to have as little text on the slides as possible, to add an appropriate soundtrack, and to time the slideshow to play within a five-minute limit. I make sure to emphasize the fact that all the photographs have to be original photographs. The students are then asked to brainstorm with their peers and pick a particular disease or addiction in their community that is of interest to them. Students then individually use the remaining time in class to write an outline of the action plan they intend to use to learn about the disease, the types of photographs they could possibly include in the project, and the take-home message that they want to emphasize. They are required to submit a copy of this plan to the instructor by the end of the class and have the plan approved. The students then go out and take pictures in their community on their own time.

Subsequently, I use two to three class periods to mentor students in class after they have taken their photographs. Mentoring activities usually include tips on how to use PowerPoint/Prezi, how to put together a powerful presentation, and also how to tell an effective story. I usually ask for a computer laboratory to be assigned to the class in order to make sure that students have access to the computer during class time to compile their projects. Many students at our institution do not own a computer, hence the need for a computer laboratory. This is an optional requirement.

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†Supplemental materials available at http://asmscience.org/jmbe
I also allow students to brainstorm and peer-mentor each other during this time. By the second class, students should have at least 80% of the photographs that they intend to use in the project; they should have 100% of the photographs by the third class period. During the second and third class periods, students construct their photographic narrative with a minimum of written words. Students are allowed to artistically manipulate their original photographs if they so wish and add a soundtrack to emphasize their social message. Students are allowed to converse with and interview members of the community and to connect with them through their personal stories outside of class in order to incorporate the voice of the community into their projects.

The final two class periods are used for presentation of the photovoice projects in class, class discussion, and grading. Before presenting their project, students are asked to introduce their project and explain why they chose this particular project to work on. After playing the photovoice projects, students are expected to answer questions from their peers and instructor on their project, leading to a brief class discussion.

CONCLUSION

The photovoice project encourages active learning, allowing students to engage with the subject material to investigate a specific disease or addiction. Students can also explore their community to connect the biology of the disease to its societal outcomes. This project can be executed as a group project in order to promote teamwork in the classroom and can also be coupled to a paper so that students can hone their critical writing skills. I have found that, in my classroom, students are very enthusiastic about creating an engaging project and expressing themselves through a medium that can be shared with other people.

SUPPLEMENTAL MATERIALS

Appendix 1: Instructions for assignment
Appendix 2: Grading rubric
Appendix 3: Titles and link to projects

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REFERENCES