PhotoVoice for Empowering Students and Evaluating Learning

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We used PhotoVoice as a qualitative evaluation of student learning to understand student cognition around food they grew in the school garden, and how that related to nutrition. Beyond a valuable research method, we found this method to be important as pedagogy. PhotoVoice was an empowering way for students to reflect on learning, and to connect concrete, hands-on learning with abstract ideas.

What is PhotoVoice?

PhotoVoice is a participatory community research method, first introduced by Wang and Burris in the public health field. It is a research methodology that empowers marginalized groups to voice their experience, and create change in their communities through photography.
(Wang and Burris, 1997)

PhotoVoice Process

PhotoVoice Projects generally follow a similar process that includes:
DOCUMENTING experiences through photography
CONTEXTUALIZING conditions with group discussions, and narrative writing
CODIFYING themes through group coding of photographs as well as researcher coding
SHARING results through photography exhibits and academic presentations

PhotoVoice Applications

- Needs assessment
- Asset Mapping
- Program Evaluation
- Research
(Wang and Burris, 1997)
- Pedagogy
(Cook et. Al, 2010)

School Garden PhotoVoice Project

METHODS AND ANALYSIS

Classrooms at three elementary schools participated in the study, with a 97% student participation rate, and a total of 64 students participating. After training students on basics in photography and the PhotoVoice process, students were asked to photograph "doing" and "learning " in the garden. Each classroom had several weeks with a set of Nikon Coolpix L29 cameras. Photos were downloaded and printed. Each student received copies of all their photos, and were asked to choose one to share in a group discussion and to write a narrative about. Each student participated in a small group discussion, and shared the picture and described the content of the photo, as well the context of the photo, specifically how it displayed "learning" or "doing". After each student shared, students grouped photos with similar themes, while the researcher facilitated the process. Students also wrote narratives for the photo they shared, and were given a set of open ended statements as scaffolding for the narrative. Each narrative was coded, and emergent themes were identified.

RESULTS

Four major themes developed across analysis student narratives about the photos they took. These were science learning, garden skills and tasks, the garden as food, and personal growth. While these themes were evident at all four schools, each theme presented itself differently at each school. For example, at one school student's saw food only in terms of alleviating hunger for those less fortunate, at another school student's focused on eating healthy food, and the students in the class from the third school with the least established garden focused on the anticipation of eating the garden produce they were growing. Partially this was due to different content, which was noticeable in the science learning theme, but through other methods including student and teacher interviews and direct observation, we were able to connect non-academic goals and beliefs from teachers to the themes that fell outside of general content standards. The culture teachers and schools created around each garden played a large part in how students were thinking about the garden experience, and what they choose to talk and write about.
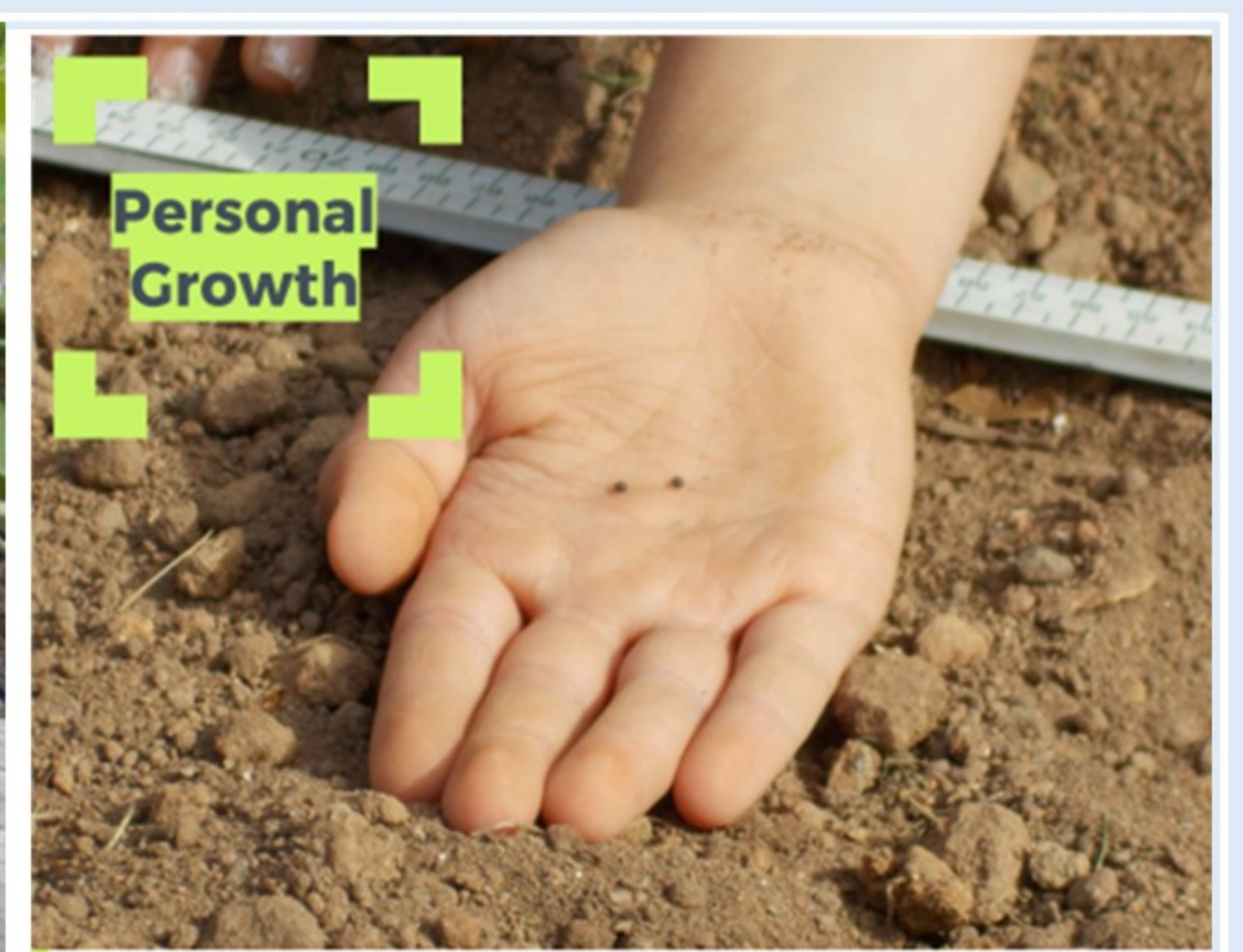
Above are student photos from the project that exemplify the major themes surrounding student learning experiences in the garden.

Student Empowerment through the PhotoVoice Process

One theme that was unexpected, but pleasantly surprising was student empowerment through the PhotoVoice process, which was evident at all three schools. Some students expressed a desire for others to know the work that went into taking the photos, and deciding which photos to take. Others expressed pleasure at the beauty in their photos and the outcome of their own artistic vision. Still others wrote about choosing to take a particular photo to share particular garden knowledge or skill with others. Overall this was a very powerful theme within student narratives. Here are a few student quotes that demonstrate the empowering effect of the PhotoVoice project:

"This photo makes me feel amazing because I worked hard to focus it on one thing."
"This photo makes me feel happy because I know I took it."
"This photo makes me feel like a good photo taker and that I am serious when I take my photos"
"This photo makes me feel happy because the shading is so pretty"
"When others see my photo, I want them to feel good about themselves too. Just how I feel about myself."
"This photo is like my favorite out of all the photos because it really looks like ant's life or maybe a spider's life. It is cool how I like my photo so much."

Our Experience with PhotoVoice

- Though it has not been widely used in Agriculture Education to this point, we feel this methodology could be very useful as both research and pedagogy to agricultural educators in middle and high schools, as well as colleges and universities, and in a wide range of academic contexts.
- Our purpose for this study was primarily research, however, we found it empowered students involved, and provided a valuable learning experience.
- Reflection is an essential part of experiential learning (Kolb, 2014), and PhotoVoice provided opportunity for students to reflect on their garden learning experiences. This value could transfer easily to other experiential learning and service learning experiences.
- We had high participation with all classes involved (97%). We feel this is largely because classroom teachers saw this research as enriching the learning experience rather than detracting from learning opportunities.
- PhotoVoice has not been as widely used with elementary students as with other groups. While students needed more support for the group discussion and group coding, they did exceptionally well with the photography and narrative writing. We feel PhotoVoice can successfully be used for older elementary students.
- PhotoVoice was originally created to give voice to marginalized group to empower them to create meaningful change in their communities. This usage of PhotoVoice deviates somewhat from the original intent found in social sciences for this methodology.