Research Article

Can We Picture Equity? Critically Examining Cross-Cultural Short-Term Project Collaborations

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Abstract

This paper explores equity challenges common to short-term cross-cultural research partnerships. We focus on a project-based activity in which U.S. undergraduate students and college faculty taught middle-school students in Goa, India how to make podcasts about complex environmental problems. Project team members conducted a collaborative auto-ethnography focused on questions of power, leadership, collaboration, and equity, and examined exit-interview photo elicitation data to identify the core challenges of ethical and equitable short-term cross-cultural research and programming. Our use of photographs as conversation prompts helped to highlight contradictions and asymmetries along axes of power, cultural imperialism, knower-knowledge, age, race/ethnicity, social class, and gender. We reflect on possibilities for educational research that rejects a "voluntourism" model and moves, if imperfectly, toward more equitable international collaborations.

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Introduction

To challenge the widespread pattern of social science research focusing on the study of White, college-educated, and Western individuals (e.g., Henrich et al., 2010; Medin & Bang, 2014) educational researchers must pursue projects outside of the communities that are close to home (Hendriks et al., 2019). Even when inquiry travels, breaking long-standing patterns of coloniality in research on/with the cross-cultural "Other" requires that researchers build their work from equity-based partnerships. Yet, many challenges to inclusivity and equity in social- and educational-justice work come down to time – short-term programs seem rife with problems and the resources required to spend significant time in distant field settings are often constrained (Fine & Hancock, 2017). Also, one of the most significant challenges observed is that researchers from economically rich places (e.g., Europe and US) often have more opportunities to engage in projects outside of their own communities (Zemach-Bersin, 2007). Finding a way forward amid these compounding tensions is crucial; although we and others advocate for long-term partnerships where possible (Gutiérrez & Jurow, 2016), short-term projects are ubiquitous and need to be guided by equity-focused recommendations (Hartman et al., 2014).

The overarching purpose of this study was to develop insights into working equitably in cross-cultural partnership scopes of limited duration. We focus on a short-term environmental podcast design collaboration among undergraduates and researchers from U.S. institutions, our Indian colleagues in an ecology non-profit, and two primary schools in Goa, India. We approached the project understanding the potential problems of "empowerment" frameworks for articulating the meaning of the project work from our partners' perspectives (Briggs, 1986; Grain et al., 2019). Rather than study "their" experiences as a lens into equity, we chose to "study up" – critically repatriating the conventional anthropological gaze inward to examine our own efforts to work equitably and collaboratively across partners and project team members (Gusterson, 1997; Nader, 1972). We position our work in conversation with critical scholarly research on participatory design in the learning sciences, and with discussions of voluntourism and study/work abroad in visitor and tourism

studies. Throughout the project, and in this paper, we ask: Can even short-term research and educational projects be built on and work toward equity?

We begin this paper by introducing the project, its members, and its goals. We then summarize research on participatory design and voluntourism, highlighting tensions common to projects which blend the aims of equitable international research and short-term travel abroad experiences. Then, a description of the project's research methodology. Finally, we share six photos that project participants used in exit interviews to explore themes of intra-group equity and collaborative storytelling. Our paper concludes with a reflection on both how photo elicitation can provide insight into building equity-based collaborative processes and the challenges of an equity orientation in short-term collaborative research.

Our Project: Weaving Strands of Knowledge

This paper is based on data collected as a part of the Weaving Strands of Knowledge (WSK) project. The project involved U.S. undergraduates teaching middle-school students in Goa, India to make podcasts based on the latter students' elicitation of stories from family and community members about complex and locally relevant socio-scientific environmental issues. The possibilities for equitable and culturally sensitive partnership permitted by the flexibility of podcasting were an explicit project aim (Bang & Vossoughi, 2016).

The Weaving Strands of Knowledge project was developed over two years, adapting and transforming a podcasting design for climate change science education first in rural Bhutan and rural Vermont, and most recently in Goa, India. The first iteration of the WSK project was a collaboration between two universities, two science museums, and a non-governmental organization in Bhutan and the United States (for extended summary see Honwad et al, 2020). This project entailed reciprocal exchanges (e.g., partners in the US traveling abroad, and vice versa) and school- and community-based partnerships whose focus was recording stories from local community members about environmental change that they had observed. University students from the US and Bhutan collected and edited the stories and then worked with museums to display multimedia exhibits. The equity focus of this first iteration primarily related to the reciprocal structure of the international program (i.e., a two-way exchange) and to providing a multicultural, narrative perspective on climate science in the museums. Although students conducted interviews and

developed podcasts with considerable agency, their roles in the first iteration were largely as participants in a program that had already been designed.

This paper focuses on the second iteration of Weaving Strands of Knowledge which took place in collaboration between several U.S. universities, a non-governmental environmental advocacy organization in Goa, and both rural and urban community primary schools in Goa, India. After the first iteration of the project in Bhutan, the US-based research team was interested in deepening their understanding of the utility of the project model through a second collaboration. The WSK project's design is driven by relationships, both prior and prospective. The existing relationship between Sameer and Madhura was the principal reason for choosing Goa as a collaboration site; they grew up together in Pune, India, and share a passion for environmental conservation in western India. Early in their careers, Sameer and Madhura worked together at a school that designed programs to help urban youth understand environmental problems in western India. Madhura lives in Goa and Sameer lives in Buffalo, NY. Sameer has spent the last 15 years in the United States, while Madhura works with various environmental conservation organizations in India. As Weaving Strands of Knowledge's local partner in Goa, Madhura and her organization Foundation for Environment Research and Conservation (FERC) served as both project conceptualization and design partners on the project team, as well as liaisons with the two local collaborating schools prior to and during the program.

As with the Bhutan/Vermont iteration, the overarching goal of the project was to develop podcasts on local environmental issues in which individuals from the community both served as primary informants and offered perspectives that framed the podcasts' narratives. Equity considerations in the second iteration sought to build from work in Bhutan and Vermont; however, an explicit aim was to critically examine the power dynamics of a team that included members of varied levels of expertise and varied status positions at their universities, as well as a team that due to limited funding was working within a "one-way, one-time" international program structure. This shift in focus paralleled a shift in undergraduate students' roles in the second iteration – students had written the grant to fund the program, had designed significant components of the program, and were involved as co-leads in carrying out the program activities in schools in Goa.

In each of its iterations, Weaving Strands of Knowledge has considered a wide range of individuals as project participants. For the purposes of this study, the project team members referred to as participants consist of three early-career education professors from three different institutions, two scholars and researchers from an environmental advocacy organization in Goa, three undergraduate students from a research-intensive university in New England, and a doctoral student from a research-intensive university in New York. Though the authors of this paper are identified as the primary researchers on the project team, all members participated in the planning, programming, and evaluation stages of the WSK podcasting project in Goa. Researchers on this project were from different cultural and ethnic backgrounds and shared identity as academics and researchers, which both provided a platform for building relationships with each other.

Equity in Participatory Design and Voluntourism Projects

Recent trends in the learning sciences have affirmed a commitment to centering non-dominant communities in social and collaborative design research, an effort to reject colonialist and extractive methods in favor of co-design and social transformation (Gutiérrez & Jurow, 2016; Gutiérrez et al., 2016). Similar shifts and renewed emphases on collaborative and equitable partnerships can be found in critical perspectives in teacher education (see Zeichner et al., 2016) in the field of citizen science (see NASEM, 2018), and in tourism, international development, and study abroad research (see Hammersly, 2013; Hartman et al., 2014; Atkins & Messerly, 2019). Discussions in these fields reflect a broad appreciation for the importance of carefully considering equity, collaboration, and partnership in enhancing the scientific quality and ethical engagement of research, volunteer work, and educational programming. This scholarship describes equity in collaboration as characterized by establishing teams with a range of skills, interests, and abilities; building mutually beneficial relationships within and across participants; developing and maintaining trust; engaging in collaborative goal-setting and project design; and sustaining reciprocity and transparency in communication (Adkins & Messerly, 2019; Coburn et al., 2013; Gutiérrez & Jurow, 2016; Hartman et al., 2014; NASEM, 2018).

The international aspect of the Weaving Strands of Knowledge project introduces particular equity challenges related to the duration of the short, 2-week project model, and its dependents on cross-cultural collaboration. Some of these challenges overlap with critical considerations of the concept of voluntourism – integrating service learning or volunteer opportunities into travel-abroad experiences. These experiences, like our model, tend to be short-term engagements, oriented towards a group of outsiders engaging in community service or other development work in the community they are visiting (Guttentag, 2009). Voluntourism projects are often focused on "cross-cultural contact and mutual collaboration in local development" (Vodopivec & Jaffe 2011, p. 114).

While there are myriad reasons that a person might choose to participate in voluntourism, research indicates that the opportunity to learn and work in an unfamiliar place may enhance participants' feelings of worldliness and add job market competitiveness (Foller-Carrol & Charlebois, 2016). In fact, service trips are often advertised as a way for students to grow their CV (McGloin & Georgeou, 2015). Despite these ambitious promises, voluntourism experiences often yield superficial and uncritical engagement with the unknown (Adkins & Messerly, 2019; Bone & Bone, 2018) and engender "soft global citizenship" (Andreotti, 2006) that obscures relations between what feels good to do and the structural inequities upon which the "need" for volunteers are predicated (Brondo, 2015; Conran, 2011).

Although many international travel programs begin with good intentions in mind, they do not operate without fault, missteps, or mistakes. Criticism of voluntourism's impact on international communities tends to focus on its potential for both reinforcing problematic historical power inequities on an intimate scale (Grusky, 2000), reinforcing problematic ways of conceiving of "self" and "other" (Guttenag, 2009; Vodopivec & Jaffe, 2011), and for leading to new kinds of colonialism (Caton & Santos, 2009; Guttentag, 2009; Hammersley, 2013). Efforts that support collaborative community development in theory may ultimately subvert it in practice, and in so doing "reinforce inequality, dependency, and/or ethnocentric thinking" (Hartman et al., 2014).

A clear theme that connects these suggestions for ethical engagement with the critiques of voluntourism relates to time. Long-term and sustained contact with the hosting community is framed as essential for understanding

the complexity of that place, and the multiplicity of needs represented therein (Banki & Schonell, 2018). The amount of time spent in community engagement is often presented as a key differentiator between voluntourism and so-called "development volunteering" which focuses on long-term partnerships and sustained relations and is often characterized as a more ethical form of international or cross-cultural engagement (McGloin & Georgeou, 2015). At minimum, the short-term nature of many voluntourism projects encourages an emphasis on "delivering" programs and products that have been designed in advance, often without direct input from recipients. At worst, a "save the world in a week" (Vodopivec & Jaffe, 2011) mentality suggests that good intentions are all that are required for even an untrained visitor to make a positive contribution to a community during their brief stay.

College and universities – with their social, scholarly, and educational missions – are well-positioned to serve as standard bearers in the establishment of ethical principles of international collaboration (Hartman et al., 2014). During the 2018-2019 school year in which we completed this iteration of our project, nearly 350,000 US college students studied abroad in countries around the world (US Department of State). Intentional program design that is attuned to ethical considerations and oriented toward collaboration can create conditions to build effective and just relationships between people and place (Hammersley, 2013), develop student understanding of oppressive practice, and work towards the establishment of anti-colonial service learning (Santiago-Ortiz, 2019). We began this work with an orientation toward equity among project partners and made design decisions along the project's trajectory that we felt reinforced this commitment. However, as noted above, good intentions do not always yield intended results. The purpose of this inquiry is, in part, to explore both whether and how we were able to create opportunities for equity given the intentions and time constraints of this particular project, and in so doing respond in part to a call in study abroad scholarship for increased attention to the role of program variables on desired program outcomes (Haupt & Ogden, 2019).

Methods

Place, Relationships, and Positionality

Goa is the smallest state in India in terms of area, situated on the western coast, with more than 33% of its area forested. The state has a coastline of about 105 kilometers and is known for its beaches. Historically iron ore mining, fishing,

and agriculture were the state's major economic activities; today the majority of the Goan economy is dependent upon tourism (Achrekar, 2020) with iron ore mining prominent until very recently. Over the years, the state of Goa has faced many environmental challenges. Rekadwad and Khobragade (2015) reported that Goa's vast marine ecosystem is stressed by overfishing and destructive fishing practices, toxic pollutants, and climate change. Oil spills and tar-ball pollution (i.e., seashore deposits) from shipping and shipping maintenance activities add to these stresses (Dhargalkar et al., 1977). Presently, oil spills and tar-ball pollution have become a global issue, particularly in countries undergoing intensive industrial development such as India. In addition, Goa has recently seen sharp increases in infrastructure development projects for highway construction, rail development, and electrical transmission lines which have not been evaluated effectively for environmental impacts.

The Weaving Strands of Knowledge project model is predicated on the collaborative development of podcasting projects centered on socio-scientific stories of local importance; as such, the project's main deliverable was never a part of project design discussions. Planning and partnership building meetings held via Zoom before the trip included discussions of partnership development (which schools we should collaborate with), logistical considerations (how long to work with each partner school, how much daily instructional time was available to work on the project), and team roles and responsibilities. Between meetings, Madhura served as a broker between the WSK team and our area school collaborators, discussing their interests and goals, and negotiating their availability and schedule for participation. While students and their teachers in partner schools would ultimately choose the topics to cover in their podcasting project, preliminary team meetings also brainstormed lists of potential topic areas based on an understanding of the unique community science issues in Goa, with the goal of developing our own local science knowledge so that we could provide responsive and thoughtful content area support in addition to skill development in storytelling and podcasting technology during the project.

Research Approach

The research approach of the Weaving Strands of Knowledge Goa project was a collective autoethnography and was conducted simultaneously with project activities. The research aim was to understand how project processes and activities may contribute to or undermine equity among project partners,

students, and their families and communities (Coburn et al., 2013; Gutiérrez & Jurow, 2016).

Autoethnography is an approach to qualitative research that uses a range of reflective writing processes focusing on the subjective aspects of researchers' experiences to "describe and critique cultural beliefs, practices, and experiences" (Adams et al., 2014, p. 1). Diverging from classical, colonial, and problematic "view from nowhere" ethnographic methods that often ignored or undertheorized researcher impact on both the collection and reporting of ethnographic data, and on the shaping of those cultural experiences under observation, autoethnography centers a researcher's interactions and relationships with others. As such, autoethnography is predicated on the notion that "culture is a group-oriented concept by which self is always connected with others" (Chang, 2008, p. 13).

Autoethnography aims to "use researchers' autobiographical data to analyze and interpret their cultural assumptions" (Chang, 2008, p. 9), to study phenomena that researchers take part in by centering inquiry on the subjective aspects of their participation. Autoethnographic methodologies always include collecting and reflecting on personal and memory data, engaging in self-observation and self-reflection processes, and collecting external data. The WSK Goa research project involved numerous data sources and methods: fieldnotes and journals which included both observation and reflection, audio-recorded daily group debriefing discussions, photographs, and exit interviews with one another. In this paper, we emphasize the exit interview data: Each project team member selected 3-6 photos to provide a basis for responding to three open-ended prompts about project significance, relationships, and successes and challenges regarding equity.

Our original ethnographic framing considered the project's three undergraduate students, one graduate student, and three professors as the culture-sharing group in which we would explore project experiences with equity. However, as we began our analysis it became clear that in an effort to respect the time of our NGO partners in India, we had missed an essential source of data required to honestly pursue this line of inquiry. To partially remedy this omission, we asked our two principal collaborators (and co-authors on this paper) from Foundation for Environment Research and Conservation (FERC) to

respond to the exit interview and photo elicitation data. Their reflections are included alongside the exit interview data, below.

Theorizing Photo-Elicitation

Photo-elicitation is an interview technique in which a researcher uses a photograph as a tool to engage participants and to foster discussion. Photo-elicitation may be used in individual or focus group interviews, and photos may be supplied by the researcher or by the interviewee (Harper, 2002). Although themselves abstractions, photos make it possible for a passing moment to be considered by others not present, as well as to be revisited, evaluated, and re-evaluated by those who were. Photos can trigger memories and introduce the process of decoding from image to words into the interview process (Collier & Collier, 1986). Describing photos can enhance participant reflexivity, allow participants to surface tacit knowledge, and help to express ideas better (Richard & Lahman, 2015; Scarles, 2010).

Photo-elicitation research draws on a post-positivist tradition suggesting that although photos do represent a moment of observed reality, their interpretation is rarely bounded by what is inside the photo's frame. A viewer's interpretation of an image is dependent on what they see in the image as filtered through the lens of their own personal experiences and the context in which they are viewing the photo (Torre & Murphy, 2015). In fact, research on photo-elicitation methods finds that viewers tend to construct meaning without considering the framing, subject matter, or photographer intentions in their analysis. Instead of "discussing a photo as a concrete object or in a symbolic manner, the viewer uses the photo as a point of reference to share a personal narrative" (Torre & Murphy, 2015, p. 11). Thus, one photo is open to many interpretations, and may naturally elicit a range of responses from interview participants. By introducing the possibility for multiple interpretations of a single text, photo-elicitation methods reflect the values inherent in a self-reflective, autoethnographic project like ours.

As is the case with any methodology, photo-elicitation has limitations, particularly when the subject matter addressed in the research is challenging. What individuals are willing, or able, to photograph limits what is available as a referent in an interview and what is visually absent from an image may be more difficult to discuss than what is visually present. Socially awkward or vulnerable situations may be particularly difficult to document and discuss

(Torre & Murphy, 2015). Given our inquiry on possibilities for and challenges to equity in short-term partnerships, it seems important to attend to the notion that the most inequitable moments may have also been the least likely to be documented by project participants or brought to the interview.

The Photos in this Study Photo-Elicitation

Because of the close-up nature of all participants' involvement in the project, photo-elicitation allowed for a "second subjectivity" that could be taken up by exit interviewees as a resource for critical reflection. This process allowed interviewees to more easily discuss, for example, both how they felt in a photographed moment and how they felt about that moment. Across the two-week project in India all project members were encouraged to take photos as a part of our collaborative autoethnography; the use of these photos for research was built into our methodology as a means of democratizing the research process and encouraging multiple modes of representation in the data (Raby et al., 2018). As part of negotiating consent with schools to involve students in the podcast development program, we also were given permission to take photos. Together, all members of the project team took just over 2,200 photos and videos in the course of two weeks, which were collected in an online archive. The majority of photos in the archive depict collective, social events: photos of our research team in our shared rental apartment in debriefing sessions, students in our collaborating schools interviewing members of their communities, university students leading planning discussions with faculty and students.

As the team's lead researchers (the authors of this study) developed the interview protocol, we compiled a smaller set of 60 photos into a shared Dropbox archive, representing all project collaborators from both school sites and across our time in India. Sara first discarded irrelevant photos (i.e., scenic photos) and duplicative or similar photos. From the set that remained, Sara and Andrew chose a range of photos that depicted dyads or groups representing a range of people and that reflected key points of conversation or group process and established the analytic set of 60 by comparing and compiling the photos we'd individually chosen into a sample that represented the project in content, scope, and membership, and was large enough that interviewees had a range of choices. As a part of the interview preparation, interviewees (including the lead researchers) were asked to choose 1-2 photos from the smaller set that evoked or reminded them of (1) what was significant about the project; (2) the kind of relationships that were a part of the project; and (3) that said something

important about the successes or challenges in the project team's focus on equity. During the interviews, we asked participants to describe each picture they chose, and reflect on why they chose each photo in relationship to each of the above themes.

Across the seven completed participant interviews, 33 different photos were chosen. For the purposes of this paper, we focus on six photos that were discussed by multiple respondents and that elicited sharing in relationship to concepts of equity. All six of these photos were chosen by participants for the prompts about project significance and successes and challenges for project equity. Two rounds of thematic qualitative analysis of the photo elicitation data for these six photos yielded four primary themes. We will discuss the themes and associated images below.

Results

In this section, we elaborate three themes that characterize Weaving Strands of Knowledge team members' comments during the exit interviews – ideas about equity across differences within the group, ideas about equity in collaborative storytelling, and ideas about equity between adults and students. In each theme, we highlight evidence from the exit interviews that points to strengths of the project in developing and putting to use equitable processes as well as evidence that complicates and challenges the notion that the WSK Goa project processes could be characterized as equitable.

Theme #1: Intra-group equity across difference

The idea of intra-group equity across difference was the first theme that emerged in analysis in relation to photos that depicted various social configurations of our research group during moments of discussion and debriefing. Photo (1) below shows a group debrief at the apartment. The photo was one of the most often discussed, with four of seven interviewees selecting it for discussion. In the photo, five people sit together in an apartment's living room with white walls and a high-polish cream-colored floor. On the left a student sits on the floor and leans over a notebook to write. Three others sit on a couch against the wall with notebooks and backpacks. One student sits with a laptop open in her lap. Their attention is focused on a man, also sitting on the floor to the right. His face is turned towards them, and he is gesturing with his

hands as he speaks with them. To the right of the man are a row of identical black bags propped against the wall.

PHOTO (1): GROUP DEBRIEF AT THE APARTMENT

In a basic sense, there was widespread agreement in the project team that the kinds of conversations represented in Photo 1 were a principal means of pursuing intra-group equity as well as refining our process vis-à-vis partnership with schools in Goa. These daily debriefing sessions, led by one of the team's professors, served the dual purpose of reflecting on and troubleshooting group concerns, and planning for the next day's work.

> Andrew, professor: I think this was one of the main venues for us pursuing sort of intra-group equity… There were ways that we were successful in this and ways, that you know, that we weren't. Some of these conversations came at the end of the long days and they felt a little bit like pulling teeth. Some of them got a little bit cut short cause it's like, oh shit, we don't know what we're going to do tomorrow and let's take the rest of the time and plan and all that kind of thing.

Student project members described these debriefing conversations as opportunities to connect and interact with all members of the project team. Those who had participated in both iterations of the Weaving Strands of Knowledge project (Bhutan and India) described more- and less-formal exchanges between students and professors as marking important learning opportunities.

> Kristen, undergraduate student: Just sitting down and having those conversations… we're all just kind of hanging out. That was such a big

change from the first sort of iteration of the project... And the tone, just like how casual it was. We were all just not wearing shoes and hanging out.

Morgan, undergraduate student: In the house. That to me was also one of the biggest things, when we would debrief and when we were talking about stuff. Because I personally learned so much, a lot in Bhutan and a lot in this project and every time we would interact in between there would be new things and new ideas that I just don't think about on a day to day basis.

Devi, the team's graduate researcher, used the photo to reflect on the intentionality with which these group conversations were constructed.

Devi, doctoral student: Number one that Andrew was so thoughtful about the way he constructs conversations and his responses. He never cuts anybody off. He always provides space for everyone to speak... He never sat on the couch and I dunno if that was on purpose or not, but obviously he was putting himself in an uncomfortable position cause he's the biggest guy in the group... I don't know if that was a unconscious, subconsciously or consciously just kind of making sure that he wasn't indicating any kind of power or, or feeding into any kind of power dynamic.

She continued, sharing that the careful and intentional design of these conversations was a key factor in their ability to support project equity goals.

Devi: So these conversations were, were very important toward the end of internal equity... because everyone had a chance to say what they thought, take notes, and everyone's thoughts were heard.

However, inclusivity was a challenge and as awareness of the importance of the conversations grew it became more apparent that some project partners were not a regular part of these conversations.

Devi: I kind of wish Madhura was in these conversations because she very much ended up becoming a team member in this kind of way that we were... I think that would've made even more of a difference. It ended up like her having to like catch up the next day a little bit. And I think

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that could have been better if she- but I know she was busy and I don't know if she could have even come to all of them.

Devi's comment creates space for questions about who was able to participate in these conversations, and in what way. This observation encouraged reflection on the question of how to respect the voluntary time commitment of collaborators, or more generally how to balance efficiency and equity on a short project timeline. Further reflections on the social dynamics of these debrief, reflection, and next-day planning conversations raised a core issue regarding how to think about equity in a mixed-experience and mixed-status group: Is it possible for group hierarchy (power differences that exist in the relations, for example, between professors and students) and verticality (like different levels of experience with podcasting technology, or levels of comfort in classroom-based instruction) to support rather than undermine equity?

Andrew: The conversations weren't always equal. I mean… first of all I ran them… I started every single one with like a little mini diatribe about like, here's why we're here, and blah, blah, blah, you know, and all that kind of thing. So, for better or worse, I don't know how equitable that is. Maybe it was appreciated, but I dunno if it was equitable… An ungenerous but possibly fair read on equity in the project is that the students were allowed to do some project stuff and take lead on that. But in terms of like, digging into and making decisions about what the conceptual importance and significance of the project was, they were made to take a back seat.

These comments provide a different perspective on equity, acknowledging that the professor-facilitated discussions may have been at odds with the broader project goals of equitable engagement and collaborative design.

Theme #2: Collaborative podcast storytelling

A second set of photos provided insight into the complexities of establishing equity in collaborative storytelling. These photos show Indian students and our project team members in their communities collecting interview data for their podcasts about local environmental issues. Shown below, Photo (2): Interview at the Construction Site was selected in the exit interview by 3 project participants, and Photo (3): Interview with the Fish Seller was selected by two project participants. Both of these photos were taken up by project participants to discuss similar ideas and themes. Photo (2) shows six people together on a construction site. The ground around them is rocky and dusty with churned up earth and pieces of cement debris. A new, partially constructed building with open walls frames the right side of the photo. Two students in school uniforms stand to the left; the female student looks into the group, while her male classmate, in the front, talks to a worker standing against the building's exterior wall. Another man stands, facing into the circle with a smile on his face, watching the worker's response. To the right of the two men, tucked into the new construction, another worker sits, not looking but listening to the conversation. The view of a third student is obstructed by his classmates; he holds a microphone into the circle's center. In the background of the photo is a school building.

PHOTO (2): INTERVIEW AT THE CONSTRUCTION SITE

Photo (3) shows a woman sitting on a short stool in a stall dug into a brown earthen floor. Wooden posts support a roof, unseen, above her. Surrounding the woman are blue produce crates covered with wooden boards, with small silver-colored fish piled and displayed on top of them. She is speaking

to two students in school uniforms who are standing and leaned over the fish. In the background a woman with a camera stands, looking on. Behind her is a street where two others watch the interview unfold.

PHOTO (3): INTERVIEW WITH THE FISH SELLER

Both Photo (2) and Photo (3) highlighted for several project team members the possibilities for equity and for transforming conventional patterns of knowing in schools in a project like this. Referencing Photo 2, one team member offered,

> Andrew: [T]hat guy's never asked about this stuff... obviously I'm assuming, right? But just provided that's a safe assumption, [that's] [t]he enduring impact and the enduring, I think, significance of this project. And it's something that I've liked about podcasting that I didn't realize about podcasting when I first started doing it in these two projects... the symbolic quality of students and people like me and people like [Professor 3] and people like you holding a microphone out to somebody and really wanting to hear them is, is just really big for me. You know, it's better than many research interviews where those research interviews are trying to extract something that's relevant... to a set of research questions that are already formed.

Andrew highlights the ways in which collecting podcast data opens up possibilities for the inclusion of new voices in science discourse, and addresses some of the challenges to equity common to traditional research methodologies. His comments on the construction site interview turn toward the epistemological divisions between school and community ways of knowing:

The other reason I picked this picture is that the school is in the background... it's right there, you know? So it just struck me that that school is so close and these individuals are working right here and they might as well be on separate continents. I mean, so this, the segregation, the systematic historical segregation of kids from their communities, of schools from the communities, and of school ways of knowing from conventional ways of knowing or even... just sort of collaborative and messy ways of knowing outside of schools. Like it is epistemic violence. I mean, it is putting up walls and boundaries and all that kind of thing that just don't need to be there... Even the guy in the background, he's sitting squatting on the ledge. He's enjoying himself. I mean, he's doing this sort of like overhearing piece... this kind of eavesdropping piece, which is perfectly appropriate. And he doesn't have to, um, there's no such thing as like stealing knowledge when it's not, you know what I mean? He's, I mean, he's stealing knowledge, but it's not possessed.

Referencing Photo 3, two team members offered similar reflections on the potential for equity evinced in the fish seller image.

Sara, professor: I am totally struck by these private school girls in their private school outfits with their fancy researcher associates talking to this woman who is clearly living a very different life from them and probably a life in which they do not often engage. Certainly, it's not one that I would imagine whoever took this picture spends a lot of engagement with. And yet this woman is now, she's a key informant. She's a person who holds knowledge. She's a person whose story matters and that's big... this makes me hopeful.

Sara describes the interview as encouraging privileged students to ask questions of an informant who they may not have engaged in the context of a traditional school assignment. Looking at the same photo, [Andrew troubles that way of seeing:

Andrew: [S]o yes, these women made it into the podcast. Their responses did not structure the podcast, nor did their perspectives on the issue... there's this like very sexy like sort of ways of knowing kind of thing that I think we fancy ourselves as getting involved with in sort of a cultural differences type of way. And there are a lot of levels above our head left

to go in terms of digging in on that ways of knowing piece. And one of the main ways would have been doing a ton more listening.

He goes on to not that, while the photo tells an incomplete story about equity, it still represents work worth doing, and worth improving and reflecting upon:

And for all the limitations... the truth of the photo is still something that I stand behind, you know, but, um, it would've been better if right on that, like dirt corner ledge behind that woman if we had just sat there for an hour, you know, or asked a few questions and merged into her flow, the flow of her day a little bit more than like sort of pressed paused on her day, inserted ourselves and then said like, okay, now keep going.

In their reflection, FERC collaborators Madhura and Shraddha reiterate the importance of acknowledging that, in this project, the privileged positions of the research team members created the conditions under which apparently more equitable or representative stories could be collected and shared.

Madhura and Shraddha: The sense of privilege and the notions of equity... are insightful in that they reflect on the consciousness that WSK team members individually carried with them regarding their 'privileged' position in this entire project. For us as facilitators, it was only being the intermediary that would allow these schools and the project participants a unique experience. However the comments on the photos..., make one realize that the team members were conscious of having the privilege of being the conductors of the interviews, and not on the receiving end... [T]he conclusion about the socio-political status as a lever in gaining access for the smooth execution of the project is absolutely well-articulated.

These equity-oriented interview opportunities were closely linked to power, equity, and social hierarchy. The class-relevant social dynamics of arriving in rural communities or approaching people in non-dominant class/caste/religious community members for interviews were a notable dynamic to the WSK projects in both Bhutan and Goa. It is important to consider that these dynamics may have been heightened by the fact that the interviewers were often majority White American foreigners, a global class group that continues to draw on its imperial and colonial history, dynamics that many

voluntourism programs draw from as well (Brondo, 2015; Caton & Santos, 2009; Vodopivec & Jaffe, 2011; Wearing & Wearing, 2006). Referencing Photo 2, a student team member commented:

> Kristen: It was super awkward. So this guy did not really want to talk to us, and Sameer's [professor] trying really hard to get him to be excited about it. I think this was a picture that I took too, and I remember being there with the camera because I was like, I feel like me trying to be like engaged in those conversations is not gonna help it at all.

Kristen was not able to identify the discomfort she felt coming from the construction worker, but was able to connect to the student interviewers. She goes on to say:

> So I'm just kind of hanging around and taking pictures. But it was cool because it was the first time that [the Goan student interviewers] had gone out and done an interview. And they were like really excited about it afterwards even though it didn't go super well and the guy didn't really want to talk to us and they were sort of talking about why maybe he didn't want to talk to us.

Also referring to Photo 2, a team member placed the complications of the interaction in a broad context of power and social hierarchy in Indian society.

> Sameer, professor: So the other thing which I have to address in India is the equity between classes and caste, right, and that is so apparent there that that laborer is not from around there, but he's from a lower caste. Those are equity pieces in India which really need to be addressed. The castes. Just in terms of how that all plays out and what the students are seeing and, and how they are indoctrinated into the system. That does suddenly a person like me who speaks more English and, and definitely is from the upper caste or class have more power in that situation? That person and the students definitely are picking up on that. So then how in education do you achieve that equity?... [H]ow do you teach your students to negotiate that? And that piece is clearly for me, it's important to acknowledge it and say that I am actually in that piece socializing the students to think about them as laborers. I am socializing them to... I am reinforcing their class and caste ideas in that picture.

Sameer's reflection highlights the ways in which issues of power can be invisible to some participants, while being very clear to others. He reinforces the need for teaching about these moments at a number of sociopolitical levels, but also asks important questions about how to negotiate complex educational aims while learning in new cultural contexts. He continues:

> Just soliciting that interview from that person. Right? So the fact that I walk in there and I say, 'Hey, can I interview you?' And the person says yes means that then they answer all the questions I have without asking any questions to me, means that I am reinforcing that whole thing. That was not a conversation. It was like, "let me ask you, and you cannot say no to me because I have so much more power than you do."

From the position of an individual with a particular type of insider cultural knowledge, Sameer describes the ways that this type of research, while focused on equity in collaborative storytelling, can reinscribe deep cultural divides through project design and methodological choices that can superficially seem uncontroversial or benign. Shraddha and Madhura reinforced the importance of this insider knowledge in their reflection:

> Shraddha and Madhura: Sameer's comments on the caste-economic class setting and positions of power came from knowing the background social hierarchy, and having lived in the country earlier, thus being able to discern the experience that each of the entities in the entire project was feeling. His thoughts are deeply valuable precisely because he had had the privilege of experiencing all the experiences that each one was separately having. Thus, he satisfied the prerequisites of social, historical, cultural knowledge of the place.

Here, we see plainly one of the greatest values of collaborative partnerships in short-term cross-cultural projects: The conditions under which a robust, critical appraisal of equity-based goals can occur were created by engaging a team with a wide range of lived experiences and by developing project processes which embraced the unique value of that individual and of situated knowledge.

Theme #3: Equity between adults and students in school-based collaborative partnerships

A final set of photos provides insight into ideas about equity between adults and students in school-based collaborative partnerships. Although Photos (4), (5), and (6), respectively, were each taken up by only two or three interview respondents, reflections about the strengths and challenges of adult-student relationships were a part of many exit interview responses and in reference to many of the photos which depicted adult and students together.

In Photo (4), A group of people gather outside to watch a student, with her back to the camera, as she speaks. A teacher watches over the speaker's shoulder with a smile on her face. To the speaker's left, a row of classmates with notebooks on their laps sit and watch the presentation. WSK project members stand, completing a circle around the speaker, watching her presentation.

PHOTO (4): REVIEWING THE STORYBOARD

In Photo (5), two students, with their backs to the camera, interview a teacher on a porch at their school. On the left, a boy wears headphones and holds a microphone to the teacher. On the right, a girl holds a sheet of paper with interview questions.

Photo (5): Interviewing a Teacher at the Rural School

In Photo (6), four students stand in a line, listening to an interview being played back on an audio recorder that a WSK project member is holding up for them to hear. On the right, two students cover their mouths and laugh. On the left, two students look into the group and smile.

Photo (6): Listening to Recorded Interviews

Across project team members' reflections on these images, there is a shared interest in joy, engagement, and meaningful interaction for our school-age student collaborators. Like Photos (1), (2), and (3), the images that centered on experiences with students evoked reflections on interpersonal relationships and equity. Photos that featured children elicited feelings of satisfaction with achieving project goals related to short-term relationship building and related to designing activities in which students could "try on" social positions that are uncommon in many conventional classroom roles and instructional formats.

For Morgan, establishing connections with the students was what motivated her work, despite noting that those relationships are in some ways necessarily short-term.

> Morgan: I'm probably never going to see these kids again, but I really hope that, I think it had the last thing, you know, that's that five-day relationship that we had had a lasting impact on me and I hope it does for them as well.

In response to Photo 4, Devi reflected on how seeing adults listen as students presented their research embodied one of the principal purposes of Weaving Strands of Knowledge project.

> Devi: We were just all listening and everyone had their notebook out. And this seemed really significant because of the fact that she was standing and we were listening to her, all equally. We were all listening at the same time, instead of like, us telling them what to write down or what to say or what to do. Providing that voice to a student just seemed very significant to me because I felt like that was the whole point... It was supposed to be very much their project.

Another project member reflected a similar sentiment in describing the photo of students interviewing their teacher. Jordan described student autonomy and self-directed learning as a successful component of the podcasting project.

> Morgan: I was really happy to like to see the kids forming their own opinions and forming clusters and like being not scared. I feel like it's just like equity in that they're getting what they want out of the project... just the fact that they were like gaining their own footing.

[Professor] reflection on Photo 5 illustrates a shared commitment to shifting the relationships between children and adults through collaborative work.

> Sameer: I think there are lots of fun relationships [in these photos], but I chose [this one]. That teacher who is talking to the students- I think that that is the relationship I'm trying to change [toward]... in what I'm doing. That relationship is something where I want the teachers to share their personal experiences with their students so that the students start seeing

the teacher as human. In that picture that is a relationship. All of us are trying to change where the students have the power. They're asking the question, they have come up with these questions.

Here, too, Madhura and Shraddha's reflection echo Sameer's], and provide further acknowledgement that cultural and historical knowledge is required to best understand what might otherwise be experienced and understood as merely positively valanced exchanges between individuals (Bang & Vossoughi, 2016).

> Madhura and Shraddha: Sameer's comments on Photo 5 are especially important in the context of the rural school because of his prior understanding of how these teacher-student relationships have always been top-down, not yielding power to the students, and how this particular experience must have been so empowering to the students, also enabling them to see the 'human' in the teacher. Thus the statement about issues of power being invisible to some participants is very aptly expressed here.

There was also some ambivalence in the project team about how successful we were in allowing for and supporting students to take lead on significant aspects of the podcasting project. Many of these photos provided opportunities to critically reflect on age-based power asymmetries and the success of efforts to mitigate them. Sameer comments on Photo 3 add context to some of the ambivalence that could be gleaned from Devi's response. Sara described the photo as "a circle of adults around a group of kids in the middle" with the student in the foreground "rehearsing what she's done." Although everyone looks happy and engaged, Sara notes that the photo masks significant structural equity challenges.

> Sara: I think we talked a lot about gender, power, culture, equity, and I think that age is something that is important to me... kids' voices and kids' participation in kids' authorship and kids' ownership. And, you know, we had more and less success with that here. I'm sensitive to the fact that these kids [from the rural school], who were relatively disadvantaged in relationship to the other kids ultimately had way less authorship over the work that they did than the other students did.

Photographs have the ability to representationally flatten a complex social and political topography (Richard & Lahman, 2015; Scarles, 2010) and to some extent this may have been a dynamic at work in our reflections. For example, less ostensibly clear in Photo 4 is that the boys in the photo were "surrounded" in a way that was meant to encourage the kinds of things that the exit interview quotes recalled and celebrated. The boys in this photo at times resisted taking part in the activities in the ways that we and their teachers would have liked, and that resistance pressed us to consider difficult questions about whose goals the program served, what goal alignment looked like on a moment-to-moment basis, and what different goals and motivations each student carried with them on a given day. The girl speaking, in addition to highlighting her exceptional contributions, was pedestaled as an example and hoped-for role model for the boys in some way. Especially in short-term project with small and large structural asymmetries, it can be all too easy to overlook the fact that project success is as much a matter of skillful and creative design and delivery as it is a matter of cooperation or even compliance. These are tensions that must be managed with extreme care and ethical sensitivity.

We close this section with a nod to "lighter" and more humanistic sides of international collaboration that can find footholds in even the imperfect efforts of individuals of divergent backgrounds coming together to share experiences and work collaboratively:

> Sara: However, when I was looking at pictures, trying to think about what was the impact I found myself drawn in… to like moments of real pleasure that experienced by the students… I just think the sort of joy that's happening in this picture is really, it's fun. It's embarrassing. It's kinda silly. They were embarrassed. It was silly to do. Um, but it was sort of, you know, a great equalizer in that way… There was a moment in the small group where we were practicing using the microphones for the first time that Sameer had us go around, first me and then Morgan, and asked us to sing a song and in the microphone, so we could practice passing it. And we picked really silly stuff and we sang really loud and he sang some really silly song in Hindi and everyone was laughing and it was just really goofy. And then all the kids did a bunch of goofy shit and it was just like, okay. You know, it was fun in school. The whole first part of it was so school-y. This is where it started to be more integrated, I guess.

Andrew: I felt that too. There was this moment of like, okay, we goof together.

Sara: And so the impact- this may be me totally projecting, but I think about that in my work and beliefs too, like, um, and it happens in the states. Like school is boring, school is hard, it is top down, it is didactic, it's all the things. I think I always find myself drawn to moments where we can create space in school that feels productive and authentic and generative and engaging. I think I see that here too. I think that these partnerships… that's what I like so much about this work is that you can do it inside of school, but you get a little bit more freedom to do.

Andrew: I mean it's like you don't know what to expect on these new roles because it's a new activity. And so you can sort of step out of these well-worn paths of like, okay, here's what this person says and here's what I do and all that kind of thing. And, I'm constantly reminded in my regular university classes of how little humanity I have to show to like make a connection, which is for me more of a critique of schooling than anything else.

Sara: I think we all thought a lot about right was like insider, outsider power, you know, experience and experience all of these sorts of tensions. When I see people laughing, it makes me feel as though we did something in this one moment to reduce those barriers between people. I don't know if that's true, but you know, I like to think it's true.

Discussion

Our analyses highlight both accomplishments and shortcomings in the WSK project's engagement with issues of equity. While we succeeded in creating some in-group structures that reduced differences in power between students and faculty and created creative spaces for collaboration, our project could have done more to promote individual expertise and agency, particularly for our undergraduate student researchers, in our shared work. While the project began with collaborative and consultative discussions before our travel to India, our US-based team came up short in extending and sustaining this equity-oriented creative space with our local partners. Among the many ways of approaching such an inquiry, we took the relatively unusual path of looking inward at the critical reflections of members of a relatively long-term research

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and project collaborative who engaged with unfamiliar international collaborators on a short-term basis. Given the ubiquity of short-term international research and educational projects and travels, our position is that the insights gained from this inward critical reflection will be useful to wide range of researchers, students, guides, and practitioners who are committed to pursuing equity among project partners and collaborators.

We began this project and study with the following questions: What are the possibilities for equity in short-term international and cross-cultural educational programming? Was the work that we engaged with aligned with critical, participatory practice? Or, did we facilitate what was largely a "voluntourism" project? What possibilities lie in considering the strengths, and challenges, of doing work centered on collaboration and equity under the real constraint of time?

Perhaps most importantly, our FERC members rejected the notion that this project fell in to the short-term "voluntourism" trap of reinforcing historical inequities in power, or reinscribing new colonialized relations.

> Madhura and Shraddha]: Reflecting back upon the time spent by the Weaving Strands of Knowledge team in Goa, [we] feel immensely grateful that we got this opportunity to be part of this initiative. Here I want to clearly state that this is not from the perspective of being benefited by a project that 'provided' us – from an economically less developed world – with resources and training that we would otherwise not have easily received, but more so from the perspective that we had not considered this avenue of approaching the issues of environmental awareness – podcasting – in our regular work life with our NGO.

The success of our collaboration, however, was hampered by the short-term nature of the project.

> Madhura and Shraddha: A bit more time for the actual field work would have gone a long way in making it more engaging, immersive and an enriching learning experience for all of us here in India – the school staff, Foundation for Environment Research and Conservation team, and the students. Although this was a short-term project, the duration hardly allowed time for getting to know each other, or the subject of this

exercise, as well as for the students to think a bit about being creative and making the end product a bit more refined.

Shraddha and Madhura's comments provide an essential perspective on the shortcomings of the central goal of our own project – designing for equity. Yet, our study identified a number of dynamics that may help to name or prepare for equity constraints in other short-term programs. The time that was available for community inquiry and podcast development significantly shaped how we engaged with local community members. Given the abiding constraints of long-term field engagement (Fine & Hancock, 2017), our commitment to understanding what is possible in short-term programs remains firm. Our findings suggest that the project was able to, in several ways, work equitably and subversively vis-à-vis conventionally power-asymmetric relationships in education and research.

Concluding Comments and Future Directions

Drawing from these findings and our ongoing reflections, conclusions, and suggestions for future research, as well as refinements in our own collaborative processes, cluster along three dimensions. First, a central aim of our collective auto-ethnography was to examine equity by "studying up" and "studying us" (Gusterson, 1997; Nader, 1972). We undertook the Weaving Strands of Knowledge] project with a complex partnership design and our conviction was that equity across (less visible) difference in within-team dynamics ought to be a central design priority. Evidence from exit interviews suggested that a core dilemma of the project was understanding and working to balance what might be called vertical differences in expertise (such as in curriculum design, teaching, interviewing, technology use, age, and project management) with a collective commitment to shared leadership, student voice and agency, and collaborative podcasting.

Although WSK team members agreed that equitable processes had been developed and put to use during the project (e.g., the in-depth, daily debrief conversations), several questions remain regarding how best to work equitably as a group with varied levels of expertise, comfort, and experience.

> Shraddha and Madhura: I think the partnership was quite successful in that we were each able to gain something from it – the project proposers, the facilitators, and the subjects of the exercise... It would have definitely

been a bit nicer if we FERC project members were informed of the theme and methodology of this part of the project earlier – researching on possibilities for equity in such short-term projects – and we could've participated in a more engaging, informed way. In absence of this prior knowledge, we now look at it as 'their research project' rather than observational learning for us.

An important question that emerged from this theme was: In what ways can verticality in expertise be distinguished from verticality in social power, such that the former can be put to use as a resource in collaborative and equity-focused educational programming?

Further research in this area might explore how individual participants think about and act on their own expertise in collaboratively-designed and equity-focused projects, as well as a range of pedagogical and structural ways that groups can support meaningful engagement for participants of all types. Based on our findings, future iterations of the Weaving Strands of Knowledge project will include individual and group asset mapping and goalsetting activities geared towards facilitating an open and ongoing conversation about project roles that speak to the strengths and opportunities for development that exist for all participating team members.

Second, we sought to work toward equity in science education by challenging the global hegemony of Western science epistemologies, developing collaborative climate science storytelling through podcasts as both pedagogical and scientific method. In several important ways we were successful in this aim. Our stories challenged conventional environmental science narratives about who is an expert, what they know, and how environmental problems and issues common to their communities are defined. Students went into their communities and learned valuable information from individuals whose social position distances them from conventional assumptions about which cultural ways of knowing are valid or veridic.

Although podcast development with schools, families, and communities was predicated on giving prominence to local voices and perspectives, the editing of those stories fit what we heard into foreign and pre-existing narrative genres. The social dynamics that guided community involvement in podcast development were also not free from concerns. Our sociopolitical status in post-colonial Goa (e.g., as American visitors, as upper-caste Indians) was

unmistakable and at times a notable lever in our ability to gain access to interviewees, regardless of whether this privilege was exploited or leveraged explicitly.

At the end of this project, we are left with unanswered questions about what a distinctively Goan podcast would sound like, how it would be narratively structured, and whose voices would be included. Moving to more general considerations, an important question that emerged from this theme was: What social, historical, and cultural knowledge should be considered a prerequisite for short-term cross-cultural collaborations? We believe that one strategy for exploring this question is simply to ask. While our project model already includes research about the places in which we will work, future iterations of the project should include work with a local partner who guides our pre-visit study to include areas of interest, concern, or opportunity that might not otherwise be apparent to those of us looking in from the outside. This study should be paired with reflective exercises which encourage program participants to think about the ways that their identity positions bring them into unique relation with the place, project, and people engaged in the shared work.

Third, we are distinctly aware that the single most important asset to our short-term work in Goa – a buffer that shielded us from the worst of these kinds of efforts – was Madhura, our local collaborator and Secretary of the collaborating Foundation for Environment Research and Conservation. Perhaps the most important message in relation to establishing equitable relationships in short-term cross-cultural partnerships is having a local partner whose values, interests, and investments align with the project goals. However, as outsiders "dropping in" for a brief and intensive educational experience, we often had concerns that project work was organized on a timeline that was at odds with the daily life of local partners. Reflection on this set of photos, from which Shraddha and Madhura are not as central as they should have been, highlights for us the missed opportunity of including them more intimately in the planning, design, and research process (Reynolds, 2014). Here, too, the opportunity to redesign our project to address this concern in the future presents as a relatively straightforward one; just ask. Early conversations between participating groups that outline what each group has to contribute in terms of time, expertise, material resources, for example, and what each group stands to gain through the project's completion, can serve as a kind of contract that clearly delineates the project parameters and acknowledges structural imbalance sand in so doing

works towards equity, fairness, and integrity in project implementation (Banki & Schonell, 2018; Hartman et al., 2014).

As we develop the Weaving Strands of Knowledge model in light of this study's findings, we are also working toward an identity-focused analysis in future iterations. As noted in the literature, there are limitations to what people are both willing and able to photograph. None of the most intense challenges to equity are pictured anywhere in our archive. The bank of photos that we have are particular kinds of photos, and the ones that people chose tended to be happy looking. Future work will use these exit interviews featuring photo-elicitation to unpack the complex identity work that happens as people actively construct their own memories and meaning around the project. Unlike what the photos might suggest at first look, we expect to continue to find that they allow for reflections on complexity and opportunities for critical reflection on the development of group role and identity in short-term cross-cultural research abroad.

Acknowledgments

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