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Fostering Community-Engaged Research Through Bolstering Webs of Relationships

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Abstract

Community-engaged research (CER) relies on a multiplicity of partnerships that can be formed and maintained only through sustained reciprocal practice and institutional support. This article examines these webs of relationships through a collective autoethnography conducted by a team of community-engaged researchers. We found that effective CER depends on and is facilitated by relationships within and outside the university and communities. However, the limited discussion of the multiplicity of relationships within academic spaces and the daily efforts required to maintain them contributes to insufficient formal institutional understanding and support. Accordingly, we argue that as part of a commitment to community engagement, universities should pursue everyday and systemic change to better foster such relationships, thereby bolstering CER project development and delivery. This reflective essay contributes to CER literature by highlighting the multiplicity of partnerships critical to success and recommendations for better supporting partnership formation and maintenance.

Keywords: relationships, institutional support, shared learning, maintaining partnerships

In 2024, 368 institutions of higher education in the United States were active holders of the Elective Classification for Community Engagement from the Carnegie Foundation (American Council on Education, n.d.). This classification goes to universities who demonstrate exceptional commitments to community engagement and transforming knowledge into action. The number of universities seeking and achieving this designation over the past 20 years has been growing (up from only 76 in 2006, when the first classifications were offered). This increase demonstrates the growing recognition of the importance of community engagement to universities. However, support and recognition for community-engaged research (CER) at the individual level (in terms of dedicated resources; hiring, tenure, and promotion decisions; funding; and recognition) remains limited (Fisher, 2023). In this article, we use *community-engaged research* as an umbrella term encompassing community-based participatory research, participatory action research, action research, and similar approaches. The daily efforts of building and maintaining partnerships, building trust, engaging in shared learning, and coproducing actionable research are often invisible and unsupported.

In practice, forming relationships not only between academic researchers and community partners, but also within multiple communities, and within the university, requires sustained institutional support. Although the literature on CER makes clear that these time-intensive activities are critical for success, the value and variations in relationships necessary for effective CER are less discussed. The lack of discussion of these critical webs of relationships is a factor in the insufficient institutional support for efforts focused on partnership formation and maintenance as well as project delivery.

In this article, we share the outcomes from a collective autoethnography conducted by seven community-engaged (CE) researchers affiliated with the Charlotte Action Research Project (CHARP) at the University of North Carolina at Charlotte (UNC Charlotte). Through these reflections, we found that effective CER depends on and is facilitated by webs of relationships within and outside the university and communities. More specifically, the science, process, outcomes, and feasibility of CER are improved when completed through multiple collaborations. Accordingly, we argue that as part of a commitment to community engagement, universities should pursue everyday and systemic change to better foster such relationships, thereby bolstering CER project development and delivery.

In the following, we first consider existing CER literature with specific attention to collaborative and multidisciplinary approaches, as well as the role of partnerships. We then describe our collective autoethnography approach and the context from which we are writing before sharing insights regarding the webs of relationships that enable successfully conducting and sustaining CER. We conclude with recommendations for institutionalizing CER and better supporting partnership formation and maintenance through bureaucratic everyday shifts and systems-level changes.

Literature Review

This section reviews the literature on CER, collaborative and multidisciplinary approaches, and partnerships that are foundational to our reflections on the webs of relationships that are formed in, and critical to sustaining, CER.

Community-Engaged Research

CER—as a broad methodological approach including community-based participatory research (CBPR), action research, and participatory action research (PAR)—has been defined as "the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people" (Eder et al., 2018, p. 116). CER grew in the 1940s in the realm of public health and encompasses the engagement and collaboration of a range of stakeholders, including residents, community organizations, academics, government officials, and others toward shaping a research agenda aimed at tackling community issues (Minkler, 2005). Key actors generally include individuals and groups that share a common mission, geographic unit, circumstances, and/or interests whose lived experience and expertise are equitably valued (de Hernandez et al., 2021). The level of community engagement and actions taken can vary from project to project. Some community partners opt to help develop research design and inform data analysis; others prefer to provide feedback on the process and research findings. Some CER projects are focused more on obtaining community input and providing recommendations for change; others put theory into practice, enacting an intervention based on what has been learned from the research process (Minkler, 2005; van der Meulen, 2011).

CER assists community partners in identifying environmental justice hazards (Bacon et al., 2013), furthering sustainable development goals (Snapp et al., 2023), developing violence protection programs (Taliep et al., 2023), and more. It can also make for more effective teaching (Elliott, 2009), offset academic isolation (van der Meulen, 2011), and provide professional learning in practice (Francisco et al., 2024). CER has been used by government agency leaders and academics in several fields (urban planning, public health, geography, etc.) to investigate a vast number of complex issues such as transportation barriers (Idziorek & Zuñiga, 2024), food access (Anderson et al., 2025), energy transition (Pacheco et al., 2022), climate adaptation (Moser & Pike, 2015), and much more.

Relationship formation, trust building, and collaboration are central to shaping CER objectives and approaches, and the goal of CER is to address issues that are important to a particular community, ensuring that the research is relevant, respectful, and beneficial to those involved. Historically, however, academic research related to marginalized and/or vulnerable communities has, at times, been extractive (Schroeder et al., 2024), which has fostered persistent distrust (Corbie-Smith et al., 2002; Shaffer, 2004; Weaver 1997).

To assist with designing and conducting nonextractive community engagement, universities and government agencies (including the Centers for Disease Control and Prevention, the U.S. Environmental Protection Agency [EPA], and the U.S.

Department of Agriculture) have developed principles for community engagement. For example, the Centers for Disease Control and Prevention (Clinical and Translational Science Awards Consortium, 2011) provided explicit CER principles such as (1) be clear about the goals of engagement and the communities one wants to engage; (2) increase knowledge of a community's culture, history, and existing conditions; (3) visit the community and build relationships and trust; and (4) commit to a long-term commitment with organizations and partners. Academic institutions have also developed CER principles built on inclusion and diversity, transparency, and impact and action. Similarly, several institutions across the United States, varying in size and geography, have committed to setting pillars for their CER approaches and have undertaken efforts to restore or build community relationships and provide service-learning opportunities to students (Grau et al., 2017; Ohio University, 2024; Warner, 2023). Although these principles may drive motivations and provide guidance, challenges remain in practice because of broken trust due to past interactions, power dynamics, and diverging priorities.

Collaborative and Multidisciplinary Approaches

Addressing complex societal problems often requires bringing together multiple perspectives and methods as well as a range of experience and expertise. The practice of multidisciplinary research involves collaborators from multiple disciplines working on a common problem or question. Each team member contributes their own disciplinary expertise, training, and experiences in an approach to research design and execution that can address difficult, multilayered problems more comprehensively and holistically than might a single disciplinary perspective alone (Choi & Pak, 2006). On multidisciplinary teams, researchers engage in collaborative discourse, coordinated data collection, and shared responsibility for disseminating collective work and/or implementing findings (Lasker & Weiss, 2003; Uiterkamp & Vlek, 2007).

Historically, universities have sought to serve communities via a model in which individual researchers serve as expert advisers in a particular field or problem domain (Amey et al., 2002). However, the kinds of problems faced by communities in which outside assistance is often sought (e.g., environmental change, public health challenges, sustainable urban development, water and/or air quality) are multifaceted in nature and can be better addressed from a multidisciplinary perspective in which a range of expertise and resources can be leveraged in the ideation and development of potential solutions. Particularly for institutions that identify as community-serving, supporting a culture of multidisciplinary research and engagement can help to foster more successful university–community partnerships (Amey et al., 2002). Multidisciplinary approaches are often leveraged in CER because addressing place-based challenges benefits from integrating a range of perspectives and disciplinary knowledge bases.

Collaborative, multidisciplinary research can lead to results that both serve a wider range of stakeholders (Cuevas et al., 2012) and produce tangible societal benefits (Arnold et al., 2021). Multidisciplinary research teams can be more innovative (Alves et al., 2007; Cummings & Kiesler, 2005), more productive (Hall et al., 2018), and lead to more impactful scientific discoveries (Slade et al., 2023). Engaging in multidisciplinary teamwork and problem-solving challenges researchers to think beyond traditional disciplinary bounds and to reach beyond established beliefs or disciplines (Dalton et al., 2021; Jacobs & Frickel, 2009). In addition to these external benefits, multidisciplinary collaboration helps create new networks and strengthen the sense of community within an institution (Cantú & Ceballos, 2012). Although engaging in collaborative multidisciplinary research necessarily involves a significant investment of time and effort on behalf of team members, the rewards of adopting such an approach can be substantial for both individuals and institutions involved in the CER project, particularly when addressing complex societal problems.

Multidisciplinary research involves a variety of challenges related to the additional time and resource investments needed to support effective team development. These challenges include learning to communicate effectively across disciplinary language barriers (Slade et al., 2023; Sobey et al., 2013), bridging organizational or disciplinary structures and/or cultures (Arnold et al., 2021), and building trust among team members (Cummings & Kiesler, 2005). However, the very process of negotiating and seeking

to resolve different approaches can generate novel outcomes (Arnold et al., 2021).

Partnerships

Building partnerships has been discussed in the CER literature as critical for coproducing knowledge, ensuring shared ownership of project data and outcomes, producing mutually beneficial outcomes, and ensuring implementation of findings (Hoekstra et al., 2020; Lubar & Marks, 2022). Some argue that incorporating diverse voices from communities involved in CER is essential for improving scientific understanding, allowing individuals to represent themselves, and improving policy and practice (Christopher et al., 2008; Platteel et al., 2010).

Importantly, partnerships are often understood as complex, unpredictable, and always shifting (Platteel et al., 2010). They are shaped by changing needs within communities and universities (Sorensen & Lawson, 2011). Partnerships frequently include multiple actors with different positionalities that bring different expertise and demands to a project (Platteel et al., 2010; Sorensen & Lawson, 2011). For example, university-based actors are often balancing academic demands of educating students and service obligations with research productivity, whereas community-based actors may be more driven by resident demands and changing the material circumstances of specific communities.

CER literature describes strategies for building and maintaining partnerships through trust and respect, valuing diverse expertise, and being cognizant of and addressing power dynamics within teams (Christopher et al., 2008; Hoekstra et al., 2020). Some researchers describe potential pitfalls or failings in maintaining research partnerships with historically marginalized or mistreated communities and individuals, whereas others attend to strategies for building trust, sharing ownership, and identifying collaborative objectives (Christopher et al., 2008). When misunderstandings and differences of opinion arise, they must be overcome (Christopher et al., 2008; Platteel et al., 2010).

Much of the partnership-focused literature attends to relationships between academics and community partners. Although those partnerships are critical and present multiple opportunities and challenges, they are not the only partnerships that are important for successful CER. In order to implement and sustain CER efforts, researchers also rely on or seek relationships with other academics, between principal investigators (PIs) and students, and with university administrators. These kinds of partnerships are understudied in CER scholarship. Accordingly, and given the potential impacts of multidisciplinary CER described in the literature above, this article examines and argues for the importance of the varied partnerships that form webs of support for CER.

Context and Approach

This article reports on findings from a collective autoethnography conducted by faculty and graduate students affiliated with CHARP, a community-engaged action research group at UNC Charlotte, an urban-serving research university. UNC Charlotte specifies its commitment to community engagement as collaborating with partners "to prepare our students to be engaged and effective citizens and to promote the common good through research and service that addresses a broad range of social needs" (UNC Charlotte, n.d., Guiding Commitments). The university earned a Community Engagement Classification from the Carnegie Foundation in 2008 (which was reaffirmed in 2015 and 2025; Office of University Communications, 2026). CHARP was founded in 2008 with a mission to integrate teaching, research, and action in order to create sustainable neighborhood coalitions that can create structural change in the pursuit of social justice (Morrell et al., 2015). In 2009, CHARP was strengthened by a formal partnership with the City of Charlotte that created paid positions for graduate students to work in specific neighborhoods. In 2012, when the city-provided funding ended, the University's Academic Affairs and Metropolitan Studies program demonstrated their commitment to community engagement by absorbing and funding CHARP (Howarth et al., 2017). Although funding sources have shifted, from 2012 onward, CHARP has focused on building sustainable coalitions for engaged resident partners and training graduate students in CER.

CHARP furthers CER by seeking direct community engagement with historically marginalized neighborhoods in its region. From the outset, its model was unique for its hiring of graduate students into paid positions focused on CER, which was deemed

central to its mission of integrating teaching, research, and action (Morrell et al., 2015). Through building teams of faculty, graduate students, and community leaders, CHARP was also able to focus on relationship building. For example, in 2009, CHARP-funded graduate students and its community liaison embedded themselves in a declining neighborhood to engage residents, understand neighborhood priorities, and foster strong ties with residents seeking change in their community. This model was replicated in several other neighborhoods with an emphasis placed on forming partnerships with residents to achieve lasting change (Howarth et al., 2017). Today, through a network of seven affiliate faculty (in geography, urban planning, atmospheric sciences, social work) and students working with those faculty, CHARP continues its commitment to doing research *with* communities instead of *on* them via an immersive model that enables sustained partnerships and shared power approaches.

CER calls for engaging in critical reflection to understand the potential and realized impacts of research as well as the power relationships among researchers with different positionalities (Koch et al., 2005; Kindon & Elwood, 2009). Autoethnography is increasingly used in research in the social sciences and humanities as an approach to placing "the self within a social context" through self-narratives (Reed-Danahay, 1997, p. 9, as cited in Butz & Besio, 2009). Autoethnography entails systematic reflections and analysis of individual or collective biographies in order to shed light on broader social or cultural phenomena (Butz & Besio, 2009; Wall, 2006). Collective autoethnography pursues this reflection through coconstructing narratives in collaboration with others (Karalis Noel et al., 2023). Pursuing collective reflection can produce in-depth, nuanced, and multilayered narratives that illuminate broader phenomena. Collective reflections are typically completed systematically through sharing narratives, transcription, and analysis, producing a thematic consensus. The CHARP team undertook such a reflection process, using a collective autoethnography approach, in 2022–2024.

Regular CHARP meetings frequently centered on challenges that individual researchers faced in implementing their projects and strategies for overcoming them. In recognition of some recurring trends that were arising organically in those discussions, and a need to engage in the reflexive process discussed in CER literature, we developed a more systematic approach for examining the opportunities, challenges, and potential avenues for better supporting CER at our institution. We did not seek IRB approval for this autoethnography since it was a reflective project in which all of the participants are also coauthors on the publication. To begin, we collectively determined a set of reflection questions (see Appendix). Each team member (of seven) then led a CHARP meeting by sharing their reflection through responses to the questions and in conversation with meeting participants. This process was an important activity for both reflecting on our individual CER practice and sharing knowledge and expertise across the team. Reflections were recorded, transcribed, and coded using qualitative data analysis software, NVivo. The team identified a priori codes based on CER literature and their experience as well as inductive codes created during the analysis process (see Figure 2). Each reflection was coded by at least three team members.

Our analysis found that relationships, both their importance and challenges, were frequent topics in reflections (Table 1). Relationships arose as important influences in multiple codes, including partnership development (the most frequent code), challenges—relationship building, challenges—competing goals, learning from others, project development, partnership outcomes, and strategies for overcoming challenges—overall. A multiplicity of relationships (between university and community actors, across the university, and within communities) were discussed, shedding light on the importance of bolstering webs of relationships for CER success. The remainder of this article shares our reflections on the importance of different kinds of relationships in CER, how a collaborative environment (as in CHARP) can support forming the necessary webs of relationships, and the institutional support needed to build and sustain such collaboratives.

Utilizing and Fostering Webs of Relationships

Our collaborative autoethnography identified the multiple relationships formed and utilized in CER projects, the importance of those relationships for learning and for building and sustaining projects, and the

Table 1. Reflection Questions Codebook and Summary, According to Most Frequently Discussed Topic

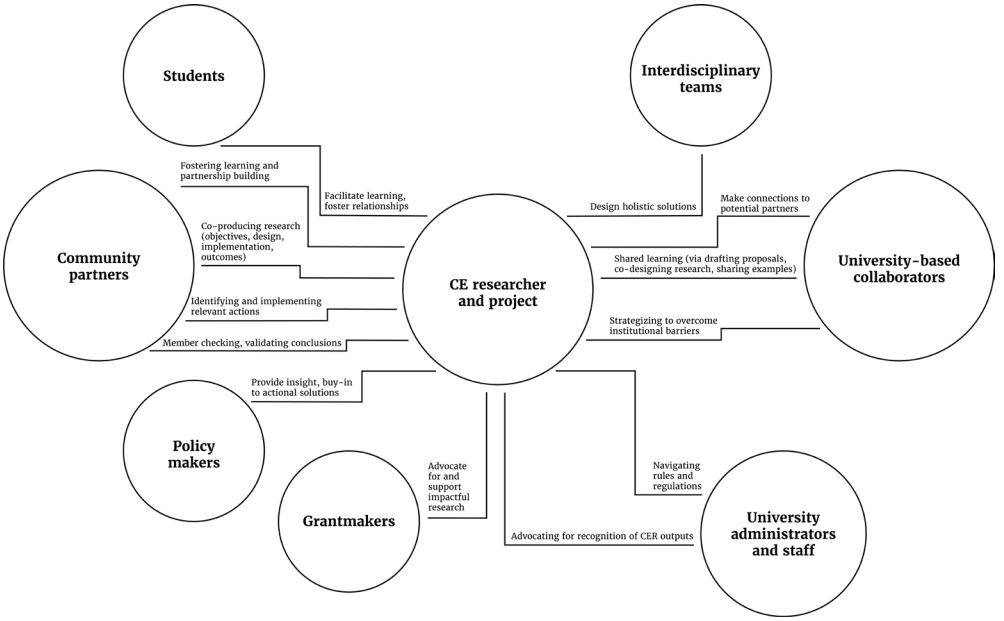
Code	No. of reflections	References
Partnership development	7	54
Successful outcomes	7	51
Challenges—overall	7	48
Challenges—relationship building	7	44
Motivations for pursuing action research	7	42
Challenges—competing goals	7	31
Time	7	28
Strategies—all	7	27
Learning from others	7	27
Tangible project outcomes	7	18
Project development	6	33
Advantages	6	20
What has been helpful	5	23
Partnership outcomes	5	22
Challenges—institutional support	4	27
Challenges—experienced as students	4	20
Challenges—publishing	4	15
Strategies for overcoming challenges—attitude	4	13
Interdisciplinarity	4	10
Strategies for overcoming challenges—overall	4	8
Strategies for overcoming challenges—new approach	4	5
Strategies for overcoming challenges—bureaucratic changes	3	5

challenges to sustaining partnerships. As a whole, we found that, as CE researchers, we rely on webs of relationships that are formed while conducting and learning about CER. These webs (illustrated in Figure 1) support the feasibility and success of CER projects, and there is a need to better support the multiplicity of these relationships.

Learning From Others

In reflections about involvement in the CHARP collaborative, faculty and students reported learning from others in ways that improved their own CER. In CHARP, collective learning is facilitated, in part, through biweekly meetings that begin with attendees sharing updates on their CER projects, including any successes or challenges encountered. Several CHARP faculty and students reflected that participating in those sharing dialogues enables learning from what other people are doing, what is working for them, and what is not. Coauthor Turner, a geography PhD candidate utilizing CER in his dissertation research, explained how these opportunities enable learning:

Figure 1. Critical Relationships Identified in Reflections



> In all of our meetings, we start typically with updates and everyone's projects. And that alone has been very useful for me to kind of understand the breadth of topics and approaches to doing this work. . . . So just having that exposure to the range of things that you can do in geography as a discipline, but then also, as a participatory or action research–oriented researcher, has been useful to understand.

Other reflections similarly noted that having a regular space available for discussing the challenges faced in CER and collectively strategizing about how to overcome them were beneficial for the success of their projects. Because CHARP comprises faculty at different career stages and graduate students, there is opportunity to learn from both peers and researchers with different levels of experience. Coauthor Suarez, a geography PhD candidate, expanded on how this collective approach also helps to break down power hierarchies and foster relationships:

> To know that there's other people doing this type of research and learning more about their research and kind of the obstacles they face and how they've overcome those obstacles, and different strategies and just having a group to have those discussions as here. . . . You don't feel this disconnect, you don't feel this hierarchy of like professors and director and then students. You have the ability to share your ideas as equals, have discussions with each other and all the connections that are made.

In this regard, coauthor Zuñiga, an assistant professor of urban and community planning, reflected on how she was inspired, by learning about other CER projects in the CHARP collaborative and at national conferences, to orient her graduate qualitative methods course toward a CE project. Learning about what other researchers were doing enabled her to identify a tangible project with a community partner focused on housing justice in which her class could participate to provide qualitative data to advance the partner's goals of protecting renters. These reflections demonstrate the ways in which relationships formed through learning how to do CER can foster collective learning that improves our research.

The CHARP collaborative includes researchers from multiple disciplines (geography, community planning, atmospheric sciences, anthropology, public health, social work, etc.) who also work with colleagues in cognate disciplines, supporting an interdisciplinary perspective that enables approaching community and research challenges in a more holistic way. It also provides opportunities to further CER over the

long term. For example, coauthor Magi, an associate professor of atmospheric sciences with expertise in climate and air quality (i.e., a physical scientist), described how he and faculty colleagues (community geographers in CHARP, and public health researchers in the College of Health and Human Services) began a relationship with a nonprofit and county air quality regulators to help articulate community engagement dimensions in a grant proposal. The $750k proposal, which focused on portable air quality monitors and community engagement, was a response to the "Air Pollution Monitoring for Communities" 2014 request for proposal (RFP) from the EPA and was codeveloped with academic, government, and community input. Magi commented, "The [2014] proposal was not funded, but the process of writing helped me become more comfortable talking beyond my academic expertise. I learned a lot from the process." Although this multidisciplinary proposal was not selected for funding, Magi developed three paths to CER that were ultimately realized over many subsequent years. First, in 2015 (shortly after the proposal was rejected), Magi was invited to participate in day-to-day strategic planning with the nonprofit as a member of their Board of Directors (BD). Importantly, the invitation to the BD was not in response to Magi's connections to donors, which is often a prerequisite for a nonprofit BD. Rather, the nonprofit's executive director and Magi had built a relationship from writing the unfunded EPA proposal that allowed for understanding the strengths a physical scientist could bring to a nonprofit BD. Second, Magi was also invited to join the county's public oversight commission for air quality permitting and outreach. Again, this partnership development and outcomes arose only after the relationship building had started from the meetings related to that unfunded EPA proposal. Third, Magi was only in his 3rd year as an assistant professor at the time, so the engagement with senior faculty across his multidisciplinary department and across campus helped elucidate connections between his research interests, which were grounded in physical sciences methods, and putting his science into practice. The excitement of grounding expertise within the community where he lived helped set the stage for all of these relationships to expand and strengthen over the course of the intervening decade.

Many of the projects pursued by CHARP faculty and students address long-standing and complex social problems that require interdisciplinary perspectives and collaborative approaches. For example, coauthor Hammelman, an associate professor of geography and CHARP director, explained this need for interdisciplinarity through reflecting on a project addressing limited food access in a historically disinvested neighborhood (see also Anderson et al., 2025 for more details).

> In order to address food access in [neighborhood] we needed to hear not only from researchers focused on food security, but also from perspectives on place (where is the best place to put a grocery store, how do we know, what sort of business can it attract), business and marketing, health outcomes, and more. Therefore, an interdisciplinary team is necessary for matching the complex nature of problems we are trying to solve.

Others similarly reflected that merging qualitative, engaged research that provides in-depth understanding and enables storytelling with quantitative and/or technical approaches (such as GIS, statistics, economics, and ecology) facilitates meeting the needs of varied stakeholders, community partners, and student learning. Our collective autoethnography brought to light the ways in which webs of relationships formed in CER collaboratives enable learning from other researchers, interdisciplinary teams, and community experts.

Building and Sustaining CER

The webs of relationships formed in CER can build and sustain CER via fostering new partnerships and projects and overcoming challenges by connecting to relevant resources, experiences, and expertise. In our reflections, several examples arose in which existing relationships led to additional connection-building that bolstered CER efforts. Regular CHARP meetings with faculty and students enable everyone to hear about individual CER projects and learn about potential linkages. For example, Zuñiga reflected on how some of her early community relationships and projects were forged through connections made by CHARP faculty members to a local transportation coalition. Connecting with that coalition then enabled meeting more community partners and identifying local issues of importance for

them. Suarez also valued these opportunities for connection-building:

> I know it happens a lot in our conversations, when we're like, "Hey, we're working on this project" and someone comes [to say], "oh, well, I know, this person from this group that can be beneficial or helpful for your projects." And this happens all the time. And as we learned, connections are everything.

The relationships formed between researchers in CHARP also provide new ideas, build confidence in conducting CER, and foster collective strategizing to overcome obstacles. Zuñiga reflected that participating in these conversations as a junior faculty member made her feel more confident, empowered, and supported in pursuing CER. "I feel like there's a structure in place to help accommodate that as well, even though there are some, you know, little challenges here and there. And it is good to be in a space where this work is upheld and you feel like you have other collaborators to help you get through it."

Finally, collaborative CER has the potential to improve our understanding of the world through theory building and science production, make tangible community change, and contribute to sustainable university–community engagement and teaching missions. For example, coauthor Partridge, a geography PhD candidate studying human–vulture conflict, argued that utilizing a CER approach in her dissertation provided opportunities for improving outcomes for all of the actors in her work. "If we can work with the people impacted to understand their issues, goals, values, and perspectives, we have a better chance of actually making a difference for the people and the wildlife both." Hammelman similarly explained that CER created better science "because I develop a more complete understanding of the issues I am researching through sustained engagement with community leaders." This understanding in turn also improves her teaching in urban geography by enabling her to stay current on happenings within the city and region. Zuñiga also found that embedding CER in her classes enhanced student learning by getting students out of the classroom and interacting directly with residents, organizers, and local decision-makers.

> And many of the students who have attended one or all three of [public events such as city council meetings] . . . say "wow, I never expected it" or "this is something that really blew my mind, I never was immersed in a world like this." And it provoked more conversation, more discussion in our class.

In this way, students involved in CER are also able to form relationships and learn from others, thus improving their learning outcomes.

Challenges

These collaboration efforts are not without challenges, many of which arose as important topics in our reflections. In particular, many people in our collective reported on the extensive time involved in building relationships and trust. Magi discussed the many steps involved in building relationships: "When I wrote the unfunded EPA proposal, I realized how much detail was associated with that relationship building process." Relationships can also be disrupted by the geographic mobility of many university researchers. For example, coauthor Idziorek, an assistant professor of geography and community planning, provided several examples of how she collaborated with interdisciplinary teams at a previous institution, but that those relationships were difficult to maintain after moving across the country for a tenure-track position. She recounted: "And I've been thinking a lot about how humbling it is, as an urban planner to move from a place where I spent 19 years building connections and getting to know community groups and finally engaging in this research project, and then . . . moving." Idziorek further explained how her existing relationships with faculty and community partners at her previous institution enabled her work with some of these partners to continue, even at a distance, through virtual meetings and frequent research trips. In this way, partnerships within universities can support building and maintaining relationships outside the university and help researchers identify strategies to implement CER projects and overcome obstacles.

Other challenges include limited institutional support for CER when there are fewer funding opportunities compared to more traditional research approaches, when the timelines for completing research are longer and spent on hard-to-measure activities

like partnership formation and trust building, and when more traditional publication opportunities are limited. Hammelman reflected on these ongoing challenges: "It can be hard to get support from proposal reviewers for work that sees community leaders' lived experience as expertise and that pushes the boundaries of what is considered research." The longer timeline often involved in CER can also be challenging for students who must meet thesis and dissertation defense deadlines to graduate.

Webs of relationships, especially across the university, can also sustain CER through helping to navigate institutional logistics. Such relationships can support making CER more visible and legible to university decision makers and adapting to or seeking to change policies related to budgeting and contracts; institutional review boards; and hiring, tenure, and promotion. Zuñiga reflected on how the relationships that are formed in CER support both research outcomes (and their impact) and her navigation through academia.

> Especially as universities seek to address issues of equity and recognition of historical harms, historical wrongs on low-income communities and communities of color, I think it's an opportunity to rebuild bridges with communities as well. So I think it's preparing me also in a sense of navigating the university as well—what's possible, what's not, what are the areas that need to be improved to facilitate community based work, in my research and also with my classes as well, how can I teach about it as students themselves go out to carry out this work? What are some of the admin, the IRB process, even the relationship building as well, that is important to know when carrying out this work?

Through CER collaboratives, strategies can be brainstormed for overcoming these challenges and raising the visibility of CER impacts. These strategies include, for example, identifying publication opportunities that can be generated (like this article) and connecting with different funding or partnership opportunities. When multiple faculty and students engage in collaborative CER, they generate more opportunities to publicize the work and connect project outcomes to the community engagement mission of the university. For example, Idziorek, who led a community science urban heat island mapping research initiative, found that the interdisciplinary nature of the project supported broad interest and excitement on the part of potential volunteers. Sharing the project information via community networks resulted in the participation of more than 60 community scientists from a variety of neighborhoods and backgrounds. The interdisciplinarity and community-engaged nature of the effort also appealed to the media, as the volunteer mapping campaign generated 15 local news stories.

It can also be challenging to navigate university policies and processes that are established for more traditional research approaches but do not align as well with CER. Efforts to compensate community partners for their role in conducting research are one such challenge. For example, university bureaucracy calls for personal participant information such as citizen status to receive research incentives like gift cards. In this regard, Zuñiga reflected: "So it's been a learning process to learn about what's the easiest way to go about doing some of these admin pieces of the community engagement project." But, being able to talk with other CE researchers about how to accomplish those goals and how they have been achieved in other departments or university units can more quickly and effectively enable completing project objectives.

Additionally, asking community partners to complete a lengthy research ethics training in order to be included as coresearchers in IRB protocols can be a barrier to implementing CER. Zuñiga explained that when bringing a CER project into her class, they encountered delays in navigating IRB regulations, especially in asking already overburdened community partners to complete time-consuming trainings. Although traditional IRB protocols and federal regulations position research partners as research subjects, cogenerating CER means recognizing partners as experts in the topic and involving them as full participants in research design and implementation. Complying with such protocols can present challenges in codesigning research instruments that require advance IRB approval of items like interview guides. As Zuñiga explained: "Community based participatory research is based on involvement of community members to help develop those questions. And so we weren't there yet to the point of having our

interview question guide" when seeking IRB approval as a class. Hammelman similarly experienced these challenges in developing cogenerated research and now frequently shares strategies for working with the IRB to include community partners as collaborators instead of research subjects (Anderson et al., 2025).

Finally, students and faculty must successfully navigate hiring, tenure, and promotion in order to continue their CER. However, the outputs of CER are not always rewarded, or even legible, in those processes. Through our collective reflections, several participants noted the ways in which it can be difficult to translate CER outputs, such as public reports or the development of new parks, into the metrics reviewed by hiring, tenure, and promotion committees. Forming internal university partnerships through collaboratives like CHARP can help identify more effective ways of describing impact in the context of hiring, tenure, and promotion. A growing cadre of CE researchers can also help to change policies to be more supportive. In the department where CHARP is situated, the growing ranks of CE researchers and a supportive department chair enabled changing departmental bylaws to recognize public reports, presentations, dashboards, and similar community-facing outputs in faculty reviews. This type of support is critical for enabling researchers to focus on impactful outcomes without feeling that they must produce double the amount of work (e.g., both a public-facing report and a peer-reviewed journal article from the same project) in order to obtain reappointment, tenure, or promotion.

Discussion

This article shares reflections from a collaborative autoethnography focused on CER implemented by faculty and students affiliated with a university-based CER collaborative. Key among these reflections was the argument that a multiplicity of relationships with different university and community stakeholders are critical to successfully implementing CER (see Figure 1). These relationships are important for shared learning, partnership and project development and success, and overcoming institutional and systems-level challenges. Based on our collaborative reflections, we close with three recommendations that would help to bolster CER, support the (often unquantified and unrecognized) everyday activities of building CER projects and partnerships, and institutionalize CER in universities: (1) Include the time and efforts invested in relationship-building as part of the measurement of academic productivity, (2) consider recognition and measurement of CER outputs in academic productivity, and (3) streamline the policy and practices on which CER depends. These recommendations arose as we identified challenges in our reflections and discussed potential solutions, as well as in our ongoing conversations about these topics as we developed this article.

Recognize the Time and Efforts Invested in Relationship Building

For researchers practicing CER, systems-level structures and support are needed to enable long-term commitments with partners in accordance with the best practices guidance (Clinical and Translational Science Awards Consortium, 2011). The time and resource investments needed for CER and relationship building are often considered "extra" and not accounted for in faculty workload assessments, level of administrative support provided, or amount of resources available for building and sustaining partnerships. Structures are needed that can help to institutionalize collaboration practices (while still allowing for flexibility for partnerships to grow and change), facilitate relationships among researchers, and support relationships with (and even between and among) community partners.

Systems-level structures such as funding of dedicated positions for university–community "points of contact," or designated persons who can facilitate interactions between researchers and community partners across projects and time scales, could help to maintain institutional knowledge and ensure continuity of communications. Such structures formalize some of the partnerships in the web that we identified as critical to building and sustaining CER. An individual in this position could facilitate regular check-ins with community partners and keep track of shifting partner interests, needs, and priorities. The University of Washington's (2024) Livable City Year Program, for example, provides a structure by which the university engages with partner communities across varied scopes and timelines and is run by a team of faculty codirectors and dedicated program managers. Making space and time available for shared learning through research collaboratives was also discussed in our reflections

as important for CER success. Partridge succinctly explained: "Being a part of the CHARP collective and community-engaged research forced me to grow as a person and as a researcher." Universities are increasingly supporting such centers—multidisciplinary hubs for faculty collaboration—focused on community engagement and action research (Post, 2023), and more of those intentionally collaborative spaces are needed.

Dedicated funding to support the integration of CER into classroom activities is another systems-level change that could encourage CER more broadly within institutions while also improving university–community partnerships. Our reflections and CER literature indicate that these activities have the potential to enrich research while also providing experiential learning and opportunities for real-world skills-building and connecting students to career opportunities (Elliott, 2009; Francisco et al., 2024). However, Zuñiga described challenges with embedding CER into her class that included the need for flexibility to accommodate changing community partner schedules and needs and arranging transportation for students to attend community activities. Additional resources could make it easier for students to participate in these activities. For example, the Center for Community Geography at the University of New Mexico offers CER fellowships to both graduate and undergraduate students and administers a classroom fund for supporting the integration of CER into coursework (University of New Mexico, 2024). Investments like this would fortify the relationships between students and CE faculty that our reflections found to be important for learning and professional development.

Explicitly Recognize CER Outputs Contributing to Academic Productivity

In order to institutionalize support for CER and the webs of relationships upon which it relies, it is important to revisit how CER is recognized and measured. First, as described in the challenges identified above, it is critical to recognize the multiple outcomes of CER beyond peer-reviewed academic publications. Often CER produces tangible outcomes (e.g., a new park or cooperative grocery store, policy changes, new community associations) that can have long-lasting impacts in ways that are analogous to the products of basic and applied academic research in social and physical sciences. CER projects typically report findings through public reports, policy briefs, action plans, presentations, websites, dashboards, toolkits, and other products utilized by policymakers, community leaders, and residents. These products are generated through rigorous research processes and undergo a community partner peer review process that validates research findings (but not through blinded peer review in traditional academic journals). Accordingly, we argue for the importance of review processes and university metrics to recognize the impact and validity of those products in line with academic publications.

The home department for CHARP made strides in this regard by revising its bylaws to recognize these products in annual reviews. We have been able to achieve this outcome due to the growing ranks of CE researchers in the department and supportive administrative staff. Because of bureaucratic structures' pervasiveness, we needed the support of not only a department chair, but also decision-makers throughout the university who were committed to acting on the university's community engagement mission. Since this change is new, we do not yet know the formal outcomes, but already CE researchers have expressed appreciation that their work will now be visible in annual reviews. This possibility is especially important for junior faculty pursuing reappointment and tenure.

Additionally, and perhaps most challenging, there is a need to think critically about how universities measure success in achieving their community engagement missions. Faculty and students can engage with community partners in multiple ways across a spectrum of possibilities: from one-off visits to community spaces by a class or service-learning projects to semester-long research projects or classes focused on a CE effort (often with research questions more formally designed by university partners) to multiyear partnerships grounded in coproduction principles, reciprocity, and pursuing social change. The needs, activities, and impacts of these approaches are different, and university metrics should vary to accommodate them.

Often, community engagement is measured in the number of partnerships developed, students involved, or dollars generated. This focus on quantifiable products aligns with an increased focus in higher education on an "audit culture," "new public management"

approaches, and a turn toward web-based analytic tools for measuring research outcomes (Spooner, 2020, p. 1). However, these numbers are not always a good measure of impact and can make invisible the time-intensive, complex relationship-building work characteristic of much CER. For example, a large class project in which students design solutions that are simply shared with a community partner may include many students in a discrete time period, but with limited impact on the activities of those community partners and their ability to overcome challenges. Alternatively, as evident in several of the projects discussed in our reflections, a small group of students and faculty working over several years on a project codesigned and implemented through deep and reciprocal relationships with community partners could lead to much larger change yet reach only a small number of students or partners over a long time period. Therefore, we argue here for a need to think critically about university metrics and go beyond such numerical assessments to also provide space for deep descriptions of impact. Such a change in how we measure community engagement can better support relationship building and would call needed attention to the significant impacts that can come from a small group of students or faculty working on transformational projects over several years as well as the different resources needed to achieve these impacts.

Streamline the Policy and Practices That Enable Community-Engaged Research

Finally, facilitating CER-focused relationships within universities often requires rethinking and revising bureaucratic structures and policies, especially related to funding, IRB protocols, and interdisciplinary collaborations. In discussions of challenges in our reflections, it became clear that existing structures are typically designed to support research that produces peer-reviewed academic papers and funded proposals, and that maintains divides between researchers and "participants," which may not align with the dynamic and collaborative nature of CER. This misalignment creates significant obstacles that both community partners and academic researchers must overcome: limitations on grants and contracts (including compensating community partners), IRB protocols (that do not easily allow for codesign with partners), and barriers to interdisciplinary collaborations (as described in the examples above). When advocating for changes to reduce these obstacles, it is crucial to recognize that institutions differ in their prioritization of community engagement, their processes for modifying long-standing policies, and their locations of power for decision-making.

Despite these variations, our discussions identified several institutional strategies that can enhance the facilitation of CER: establishing mechanisms to ensure fair and timely compensation for community members' contributions to research, updating IRB processes to account for the iterative and participatory nature of CER, and offering internal funding to researchers initiating CER to cover expenses related to relationship building. For example, streamlining processes for community partner reimbursement and providing food at meetings and events are immensely important components for CER and relationship building but can be difficult for researchers to achieve due to budgetary constraints related to certain funding sources (e.g., state funding). Changes to these everyday bureaucratic processes can help create a more supportive environment for meaningful collaboration. Finally, it is important to recognize that university policies and practices are developed and implemented through bureaucratic structures with differential power relationships that value research outcomes most in alignment with the institution's economic interests (i.e., can best generate research grants) and are beholden to political and economic powers that dictate how resources can be used. Without garnering support throughout those structures, it will be increasingly challenging to shift policies (and paradigms) toward supporting CER.

Conclusion

This article shared reflections from a collective autoethnography conducted by CE researchers affiliated with an action research collaborative at an urban university. Our reflective process brought to light the webs of relationships within the university and communities that are critical for effective CER. In particular, we found that relationships enable shared learning, building and sustaining CER, and improve our science and impact. However, the multiplicity of relationships relied upon in CER are often hidden and relatively undiscussed in the literature, such that they are not sufficiently supported or recognized within the university. We argue that more should

be done to facilitate partnership and project development and outcomes, including breaking down everyday bureaucratic barriers, institutionalizing collaboration opportunities, and rethinking institutional measurements and recognition to more accurately reflect the impact of webs of relationships for CER outcomes. These learnings and recommendations emerge from the perspective of faculty and student researchers, and future research would benefit from better understanding the webs of relationships that community partners also rely upon to effectively implement CER. Wider implementation of CER can emerge from the expansion of university civic engagement missions; increasing academic association support for community engagement; and pushes for public scholarship, as in the U.S. National Science Foundation's (n.d.) focus on "broader impacts" and the American Association of Geographers' emphasis on community engagement (Koopman 2024). These avenues of advancement present both individual institutions and academia more broadly with important opportunities to bolster existing efforts and to fortify the webs of relationships critical to sustaining successful community-engaged research.

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Appendix. Reflection Questions for Improving Community-Engaged Research

1. Describe your community-engaged project(s) and/or experience in conducting community-engaged research.
2. What brought you to community-engaged research? Why did you get involved in the project and/or decide to pursue a community-engaged approach to producing scholarship?
3. How did you plan a project that had an action research approach (organic identification of the topic, intentional actions, the time it takes, etc.)?
4. What are some of the key successes you have experienced in your community-engaged research?
5. What challenges did you encounter? Are there things that did not go well?
6. What do you know now that you wish you'd known before starting your project? What would you have done differently?
7. Our meetings have regularly brought to light tensions that exist between objectives in generating knowledge/science, creating change, and achieving researcher/community partner goals. Did you experience such tensions in your work? If so, in what ways? And what were some strategies you pursued to overcome them?
8. Where do the obstacles and/or tensions you encountered come from (positionality, community partners, research methods, structural challenges (including as a student, working in the academy), etc.)?
9. Where have you found support for community-engaged research?
10. How does an interdisciplinary perspective support community-engaged research efforts?
11. How does the CHARP collective dynamic (what everyone brings, their objectives, etc.) impact your research, participation in the collective, and achieving goals? How do you manage across differences?
12. How does participating in action research (and/or CHARP) prepare you for future careers (in academia or not)?