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Perspectives on Initiating Community-Based Participatory Research Partnerships

Cover Page Footnote

We thank the following partners for their contributions to the development and implementation of the Medford and Tufts Community Health Initiative: Medford Health Matters; Dale Bryan, Tufts University and Medford Conversations; Josh Quan, Tisch Library; and the Interview Participants. We also thank the other members of the academic team who are not listed as co-authors on this paper.

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Abstract

Community-based participatory research (CBPR) involves partnerships between academics and communities to address community priorities through collaborative research. Undergraduate student engagement in CBPR as part of an academic course is uncommon and there is limited evidence on the lessons learned about partnership initiation from course-based partnerships. This paper shares lessons from Medford and Tufts Community Health (MATCH), a course-based CBPR initiative. At the end of this course, three students, the instructor, and two community partners identified a list of four key lessons learned about partnership initiation. First, undergraduates should understand and explicitly attend to the privileges they bring to CBPR as students. Second, internal "champions," who serve in a dual role in the community and university can provide students with important historical context to support partnership initiation. Third, students should assess and communicate what they can offer to community partners. Fourth, instructors should facilitate relationship building within student research teams. These lessons are critical for undergraduate instructors teaching CBPR courses and looking to initiate community partnerships with students.

Introduction

Community-Based Participatory Research for Undergraduates

The Association of American Colleges and Universities identifies undergraduate engagement in research and service-learning/community-based learning as two of 11 high-impact practices that promote student retention and engagement (Kuh & O'Donnell, 2013). One way to bridge these two high-impact practices is through course-based community-based participatory research (CBPR), a partnership approach to research that calls for the engagement of community and academic partners in all aspects of the research process with the goal of achieving social change (Israel, Schulz, Parker, & Becker, 1998). Service-learning is an experience-based approach to learning where students work on projects in service to communities (Mason & Dunens, 2019). When integrated with service-learning, CBPR focuses on collaboration around research involving higher level research skills and incorporates civic engagement and social justice components (Martinez, Perea, Ursillo, Pirie, Ndulue, Oliveira, & Gutel, 2012; Nyden, 2003). In contrast to traditional research in which research may simply take place within a community, CBPR takes place with communities and engages community members, integrally, in the determination of research agendas and the conduct of the research itself (Israel et al., 1998; Minkler & Hancock, 2003). While there are examples of undergraduate student engagement in both research (Greenawald, 2010; Jansen, Jadack, Ayoola, Doornbos, Dunn, Moch, Moore, & Wegner, 2015) and in service-learning (Anderson, Royster, Bailey, & Reed, 2011; Cashman & Seifer, 2008), and examples of courses where students receive training in the principles of CBPR, there are fewer examples of courses that offer training in research fundamentals that also apply these concepts in the field through direct engagement with surrounding communities (Deale, 2017; Martinez et al., 2012; Paul, 2006). The CBPR literature is largely focused on research collaborations of trained academics and community partners (Israel, Krieger, Vlahov, Ciske, Foley, Fortin, Guzman, Lichtenstein, McGranaghan, Palermo, & Tang, 2006; Levine, Becker, Bone, Stillman, Tuggle, Prentice, Carter, & Filippeli, 1992; Nyden, 2003; Schurman, 1996) and in some cases on graduate student engagement in this type of work (Trush, 2011; Upadhyaya, May, & Highfield, 2015); however, there is limited evidence of undergraduate engagement in CBPR.

Undergraduate student participation CBPR can be beneficial for both students and their community partners. Engagement in this type of research can help students learn and apply appropriate research methods and can promote the acquisition of skills in communication and partnership development (Martinez et al., 2012). CBPR also empowers students to engage with local community members to create change (Weinberg, Trott, & McMeeking, 2018). In the same way that CBPR can promote the development of faculty research networks (Nyden, 2003), so too can CBPR develop early career students' professional and community networks. Furthermore, CBPR has the potential to provide community partners with access to research tools such as data analysis software and peer-reviewed literature databases, and ultimately promote research agendas that address community interests (Caldwell, Reyes, Rowe, Weinert, & Israel, 2015).

Though CBPR offers a number of benefits, some potential barriers exist that are unique to the undergraduate context (Allison, Khan, Reese, Dobias, & Struna, 2015). Students in the process of being trained in research themselves often lack the contextual knowledge and professional experience instrumental to working with communities, and thus may not be well-positioned to be effective research partners. They may also lack the cultural humility to understand their own identities or positionalities and how they surface in interactions with community members (Paul, 2006), which can challenge partnerships. Furthermore, undergraduate students do not always come to an academic setting with pre-existing community relationships to serve as a basis for partnership, though this is suggested as a critical strategy for engaging in CBPR (Minkler & Hancock, 2003). Students commonly take new courses every semester and are encouraged to participate in career exploration through short-term internships and opportunities, which may hinder the development of sustainable community partnerships (Fontaine, 2007; Martinez et al., 2012). These many challenges can affect a key principal of CBPR:

the promotion of collaborative and equitable partnerships. Considering these challenges, it is important to explore effective and innovative strategies, such as course-based opportunities that promote undergraduate student engagement in CBPR by supporting partnership initiation.

Overview of a CBPR Course

We describe a classroom-based CBPR initiative: Medford and Tufts Community Health (MATCH) that took place in the academic year 2015–2016. The goal of MATCH is to promote the engagement of undergraduate students in a CBPR community-campus research experience. The MATCH initiative is implemented through the course Community Health Theory and Practice, a year-long seminar course in CBPR led by a Tufts Department of Community Health faculty member with expertise in CBPR. The Department of Community Health offers students opportunities to study health from a multidisciplinary perspective; moreover, students are trained to consider the social determinants of health and to critically evaluate the systemic issues that affect individuals, communities, and populations. The Department of Community Health is located within the School of Arts and Sciences at Tufts University, a small, private, liberal arts college in New England. Tufts has an undergraduate student body of around 5,500 students. The surrounding city of Medford, Massachusetts was founded in 1630 and established in 1892 (City of Medford, 2019). Medford has a population of 57,765 residents. The community is 73.1% white (not Hispanic or Latino), 8.7% black, 9.7% Asian, 5.3% Hispanic or Latino, 0.1% American Indian, and Alaskan Native, and 3.2% multi-racial, with a 21.6% immigrant population (U.S. Census Bureau, 2018). The median household income is \$86,204. The largest industries in Medford include health care and social assistance; educational services; and professional, scientific, and technical services (Data USA: Medford, MA, n.d.).

Overview of the Course Model

To put the lessons learned presented in this paper in context, we first provide information on our course model. Students in this course form an academic team and the intention is for them to work together on a research project with community collaborators. The combination of the academic team and the community collaborators is referred to as the "MATCH team." In 2015–2016,

the academic team consisted of 13 undergraduate students majoring in Community Health (five sophomores, two juniors, and six seniors). Each week, the academic team met for 50 minutes during the fall 2015 semester and 75 minutes during the spring 2016 semester. Students rotated facilitation and note-taking roles for each class. During class sessions, the students and instructor checked in about research progress. The class was intentionally designed such that participating students were expected to spend a significant amount of time outside of the classroom in Medford to understand the community landscape, speak to partners across sectors, and collaborate on project initiatives. Students also received training in qualitative research methods, data analysis, and research ethics and were required to complete human subjects training to prepare them for participation in research.

Course Goals

Though the learning objectives of the course entailed student-community collaboration on a community-driven research project, the instructor was new to the community in 2015 and did not have existing partnerships in the Medford community. Thus, she tailored the course goals for this cohort of students to focus explicitly on partnership development. Given the complexity of this task, a significant portion of the first semester was spent developing partnerships. The instructor also incorporated a second goal, a research component, in the form of a community needs assessment. The research component was largely accomplished in the second semester. The research project was implemented with the support and consistent input of the two community partner authors, and the findings were of interest to and shared with other partners in the City of Medford. These efforts to develop partnerships created a strong foundation for community-initiated projects in all subsequent years for this course with new cohorts of students.

The research involved semi-structured qualitative interviews with staff from Medford-based organizations and was intended to help students gain a better understanding of community context and perceived health needs of the Medford community. The course's research component entailed data collection and a thematic analysis of interviews with 28 community residents and members of various community organization sectors, including 13 city government groups, 8 education, 11 non-profit, 3 health care, and

2 faith-based organizations. All research activities were approved by the Tufts Institutional Review Board. Through this research, the students identified community concerns about mental health and substance use, housing prices, the need to improve walkability and bikeability of the city, gentrification, and a need to promote a sense of community in an increasingly diverse city.

While we intend to share the findings from the actual research project in greater depth in a subsequent paper, the present paper focuses specifically on student learning, student engagement, and overall reflections on the initiation of community partnerships. Thus, we do not explicitly discuss student reflections on the research conducted with community partners. The intended audience of this paper not only includes academics in higher education, but also educators at other levels, such as middle schools, secondary schools, graduate schools, and post-graduate continuing education programs.

Partnership Initiation Process

The partnership initiation process, which is the focus of this paper, was complex and presented a unique learning opportunity for students. Acknowledging that it was important to not replicate existing work that was likely taking place in the community already, the instructor encouraged the students to first initiate contact with partners internal to the university who had connections to the Medford community. Thus, one of the first meetings was with the Medford-Tufts community relations officer, a co-author on this paper, who was uniquely positioned to provide historical and organizational context regarding the Tufts and Medford relationship. She served as a valuable bridge to the community given her dual role as a Tufts employee and a Medford community member. This partner introduced the academic team to the second key community partner who had a leadership role in the City of Medford.

Ultimately, these two partners remained most closely connected to MATCH's work and served as advisors and mentors throughout the partnership development and research process. They also connected the academic team to a wider group of partners in Medford as a result of their involvement in Medford Health Matters, a local coalition of residents, community organization representatives, human and social service providers, and government officials who aim to foster an environment of wellness and healthy

lifestyles for all of Medford. Connecting with the two partners initially provided the students with an entry point into the Medford Health Matters meetings, which the academic team began to attend monthly. Through these meetings, the academic team was able to design the research project based on community needs and gained a deeper understanding of Medford's organizational landscape and how these organizations operated within the community. These community organizations included more than 60 stakeholders in education, faith-based organizations, historical societies, and the arts.

Methods

Given the lack of literature specifically on partnership initiation in the context of applied CBPR courses for undergraduates, we undertook a multi-step process at the end of the course to identify lessons learned and key steps forward, related to partnership initiation, for future cohorts of students. First, the course instructor and two student members of the academic team met in person and via phone every 3-4 weeks for 1-1.5 hours to reflect on the partnership building experience and to generate a list of preliminary lessons learned. After this initial list was developed, one student member and the course instructor met individually with each of the two community partner authors to conduct hour-long unstructured interviews regarding their perspectives on partnership initiation and undergraduate student engagement in CBPR. The conversation included questions about challenges to academic/community partnerships, aspects of the course that worked well, and recommendations for future students interested in CBPR. Notes from these two meetings were transcribed and shared with the other student members of the research team. This content from the community partner interviews was then synthesized and integrated to develop the final list of four key lessons for CBPR partnership initiation among undergraduate students.

Theoretical Underpinning

This course emphasizes both CBPR principles and the application of these principles through intensive experiential learning. According to the Association for Experiential Education, experiential education is "a teaching philosophy that informs many methodologies in which educators purposefully engage with learners in direct experience and focused reflection in

order to increase knowledge, develop skills, clarify values, and develop people's capacity to contribute to their communities" (Association for Experiential Education, n.d., para 1). While academic departments of public and community health provide students with rigorous content and methods training to ultimately improve the health of populations and communities, a survey of employers conducted by the Association of American Colleges and Universities and Hart Research Associates (Kuh & O'Donnell, 2013) found that less than one-third of employers believed college graduates had sufficient preparedness in communication and analytical skills. Taking part in experiential learning opportunities through CBPR can enable students to develop these skills and teach students how to initiate long-term collaborations.

Lessons Learned

Lesson 1: Provide students with opportunities to reflect on personal privilege and practice humility.

Although students enter undergraduate education privileged or marginalized in different ways, as undergraduates, they share common privileges associated with attending a higher education institution that is important to continually recognize and reflect upon. These privileges include access to resources such as research methods courses, faculty who can scaffold learning experiences, access to journals and databases, institutional review boards, meeting workspaces, and technology such as data analysis programs. In addition, undergraduate students are privileged to engage in academic exploration and experimentation via short-term learning experiences, an opportunity distinct to the undergraduate student experience. Students are not expected to demonstrate the same professional expertise as faculty or graduate students, or the same level of professional accountability as community partners. Their mistakes are more easily forgiven, and perhaps even expected and assumed to be a hallmark of personal growth and learning.

In the cohort of students who participated in the CBPR course, many students recognized that they were representatives of the university, but they first and foremost saw themselves as "learners." For students who are working to initiate CBPR partnerships, their identities as learners provides the flexibility of not being tethered to a predefined research grant or existing collaboration. These privileges should be acknowledged by the students and attended to explicitly before students engage in CBPR partnerships through classroom discussions and in-depth reflections.

We have found that instructors should provide explicit opportunities for students to acknowledge their privileges and practice humility. In the CBPR course, students were encouraged to continually reflect on their privileges through discussions within the academic team. These discussions were designed to help students consider and acknowledge where power is perceived to sit in partnerships in order to ensure that the academic voice was not overrepresented in the research process to the detriment and disadvantage of community partners. These discussions included an emphasis on the value community members bring to research partnerships. Students were given an opportunity to practice humility when they attended community meetings and were encouraged to learn how to listen and communicate respectfully, often taking a back seat in these community conversations. Finally, students were continually reminded about the importance of carefully navigating relationships in the community and the potential consequences of poor relationships on future cohorts of students. Though their involvement in the course and partnership was time-limited, they were wellaware that the repercussions of their involvement extended beyond their enrollment. Ultimately, these discussions and opportunities to reflect were fruitful and well-received by students, enabling students to foster more effective partnerships within the community.

To address the fact that students were privileged to engage in a short-term learning experience, several features of the course attempted to mitigate disruptions in partnerships caused by different groups of students cycling through the course each year. First, the course required a full-year commitment from students, and the same professor taught the course yearto-year. This structure allowed for continuity of relationships and transfer of historical knowledge. Second, the instructor was mindful about staying in contact with community partners when the class was not in session. Third, all the final reports and presentations developed by the student team were shared with the next group of students. Finally, the course instructor would informally debrief with the community partners after each year to ensure that each new cohort of students engaged in a learning experience that was informed by the experience in the prior year.

Lesson 2. Individuals with dual roles can provide the historical context of university/community relationships and facilitate partnership initiation.

In CBPR, community members play a central role in guiding the goals and implementation of a project and can provide important perspectives on the community's historical context; however, it is also important to first gain understanding of the history and nature of the academic institution's engagement in the community. In an effort to facilitate partnership building and understand the history and context of community/university relations, the academic team reached out to a member of the Tufts Community Relations Department, also a co-author on this paper, who served in dual roles as Director of Community Relations within the university and as a board member of Medford Health Matters, a community coalition. Ultimately, through continued engagement with students in the course, this person became the academic team's entry point into the community and a "community champion" of the students and their work. She provided critical insights into both the university operations and relevant cultural norms and political considerations within Medford that the academic team used to orient themselves in the community.

This community champion also facilitated connections for partnership development. At an early community meeting attended by the academic team, she chose to leave her seat around a conference table where Medford Health Matters board members sat and very intentionally walked over to sit with the academic team. This gesture indicated her support of the students and provided them with more credibility in the community meeting. The team maintained a relationship with this champion throughout the course of the project through regular email and in-person communication about project progress. Ultimately, this partner introduced the academic team to their second community partner author, a leader in the city of Medford, who provided additional key introductions to other community members.

Lesson 3: Undergraduate students should assess their individual and collective research skills and communicate these skills to community partners in efforts to initiate partnerships.

Undergraduate students who are early in their career may struggle to identify skills that may be relevant for CBPR projects or lack confidence in these skills. Given that the academic team was comprised of second-, third-, and fourth-year students,

students were asked to identify individual and collective strengths in terms of preparedness for research collaborations at the beginning of the course. To do this, the academic team conducted an initial assessment of strengths, skills, and content areas of expertise relevant to research through individual reflection and group discussion and also identified areas for skill development, such as qualitative data analysis. These discussions allowed students to reflect on what they could learn from one another. Furthermore, these discussions enabled the students to better understand what they might offer to community partners through research collaborations.

It is not enough, however, to internally assess team skills. Partnerships with student teams have the potential to add to the capacity of community partners, who often have long lists of tasks to accomplish, limited time, and limited funding. However, student teams also need to communicate their skills to community partners, so partners can best envision how to collaborate. In order to facilitate this, the academic team began to regularly attend Medford Health Matters meetings. They introduced themselves at one of the early meetings and provided a brief overview of the course. These meetings provided students with an opportunity to learn about the community and make partners aware of the existence of this course and their availability as a resource to community organizations. Attending these meetings yielded some interest in collaboration; for example, a partner also presenting at Medford Health Matters requested that the academic team develop a small health communication tool to be distributed in the community, recognizing that a student on our team had experience with health communication messaging. This small project represented the first acknowledgment of the fact that the academic team had something to offer to the community. Furthermore, taking this project on demonstrated the academic team's willingness to collaborate on both small and bigger research projects.

However, in hindsight, these meetings could have been used more effectively to communicate what students could offer in a research partnership. Furthermore, students could have also more effectively communicated their availability as a resource to the two community partners who served as bridges between the community and the students. This could include the sharing of concrete examples (e.g., reports) of prior research work completed by the academic team; that would

have allowed the community partners to envision additional ways to collaborate with the academic team or suggest collaborations with others. Neither of the community partner co-authors on this paper nor any of the members of the Medford Health Matters group were aware of the existence of this course prior to initial outreach and none had worked previously with a fieldwork course. Thus, it is unlikely they would have sought the academic team out directly or known how best to collaborate with the students, making it even more critical to demonstrate the team's availability and capacity to provide useful research products and services.

Lesson 4. Relationships within academic teams must be consciously and carefully fostered.

Relationships between community academic partners are central to CBPR; however, relationships within academic teams are equally critical for the success of CBPR projects. Undergraduates often come to college and are met with opportunities to assist professors in somewhat limited aspects of faculty research. While these opportunities can strengthen research skills, there are further benefits to authentically engaging undergraduates in all aspects of the research process (Jansen et al., 2015). We learned that it is critical to invest time and energy into teaching undergraduates to collaborate effectively. This task involves providing them with opportunities to develop relationships with each other, build trust, and practice collaboration with community partners.

In the CBPR course, the academic team used several strategies to promote relationship development. There were many opportunities for students to share meals, which provided them with spaces for informal conversation and peer engagement at a more personal level. For example, each classroom meeting included a breakfast provided by the instructor, and the team also shared meals in the community. The instructor set up many opportunities for students to work together on research tasks (e.g., development of instruments, data collection, traveling to and from community meetings). This work often involved pairs and small groups, allowing students with different participation and learning preferences to have an opportunity to contribute in varying ways. In addition, students rotated weekly class facilitation responsibilities, giving them an opportunity to both lead and follow. This task enabled students to feel more accountable to each other. As the semester progressed, the initial nervousness students felt in contributing their thoughts during the research process was diminished and each member of the team was more comfortable sharing ideas or expressing discomfort in a group setting. These strategies ultimately promoted group cohesion. (See Figure 1 for a summary of lessons learned.)

Limitations

Several limitations related to these reflections should be noted. First, this paper reflects lessons learned related to CBPR partnership initiation elicited from a small group of undergraduate students at a small, private, liberal arts college. Thus, the findings may not be generalizable to other populations of undergraduate students in different universities and settings. Second, the course model represents a year-long course with the same group of students. Most undergraduate courses are one semester long, and thus the experiences of students in this course may be atypical of other similar course-based CBPR partnerships.

Conclusions and Future Directions

Despite these limitations, the lessons shared in this paper are vital for instructors and undergraduate student researchers to consider as they initiate CBPR partnerships with communities. Conducting CBPR as an undergraduate student comes with unique benefits as well as challenges that are distinct from those experienced by more senior researchers. Undergraduates carry particular privileges as students at higher education institutions. Explicitly attending to these privileges early on in the process of partnership initiation is critical. In addition, learning more about the history

of the relationship between their institution and the community is important and can be facilitated through partnerships with internal "champions," particularly those who serve in a dual role in the community. Furthermore, student researchers must first assess their own strengths and skills so that they can effectively communicate them to the community partners. Finally, instructors should recognize the importance of building relationships both between student and community partners as well as within student research teams. CBPR courses provide undergraduate students with the unique opportunity to learn in a format that can be valuable to both students and community partners. These courses can strengthen students' understanding of community-engaged research approaches as well as expand their experiences working within various communities. Despite the potential impact of this experience on undergraduate students' education, CBPR classes are extremely rare. The key lessons we highlight here are essential for universities interested in fostering community partnerships because they shed light on the importance of authentically engaging communities in respectful and useful ways.

The lessons learned may facilitate the sustainability of academic/community partnerships and further aid new and innovative approaches to CBPR that include undergraduate involvement. This course's partnerships provided the basis for future work on CBPR courses taught at the undergraduate level. As mentioned, we are currently developing a manuscript focused on student learning outcomes for five cohorts of students who have completed this course in the past five years, paving the way for future cohorts of students to develop community collaborations.

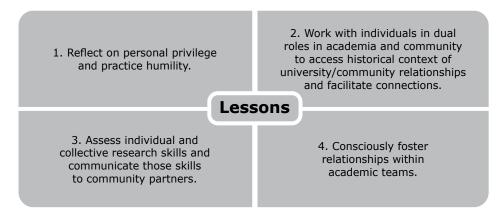


Figure 1. Summary of Lessons Learned from CBPR Course

References

Allison, J., Khan, T.R., Reese, E., Dobias, B.S., & Struna, J. (2015). Lessons from the Labor Organizing Community and Health Project: Meeting the challenges of student engagement in community based participatory research. *Journal of Public Scholarship in Higher Education*, *5*, 5–30. Retrieved from https://pdfs.semanticscholar.org/e39f/bae7b17b49514daf9ddfde1238b6f135e545. pdf.

Anderson, L.S., Royster, M.O., Bailey, N., & Reed, K. (2011). Integrating service-learning into an MPH curriculum for future public health practitioners: Strengthening community-campus partnerships. *Journal of Public Health Management and Practice*, 17(4), 324–327. Retrieved from https://doi.org/10.1097/PHH.0b013e3182140bcc.

Association for Experiential Education (n.d.). What is experiential education? Retrieved from https://www.aee.org/what-is-ee.

Caldwell, W.B., Reyes, A.G., Rowe, Z., Weinert, J., & Israel, B.A. (2015). Community partner perspectives on benefits, challenges, facilitating factors, and lessons learned from community-based participatory research partnerships in Detroit. *Progress in Community Health Partnerships: Research, Education, and Action*, 9(2), 299–311. Retrieved from https://doi.org/10.1353/cpr.2015.0031.

Cashman, S.B., & Seifer, S.D. (2008). Service-learning: An integral part of undergraduate public health. *American Journal of Preventive Medicine*, 35(3), 273–278. Retrieved from https://doi.org/10.1016/j.amepre.2008.06.012.

City of Medford (2019). Retrieved November 11, 2019 from http://www.medfordma.org/history/.

Data USA: Medford, MA. (n.d.). Retrieved from https://datausa.io/profile/geo/medford-ma/.

Deale, C.S. (2017). Learning through engagement: Undergraduate students engaging in community-based participatory research (CBPR) in hospitality and tourism education. *Journal of Teaching in Travel & Tourism*, 17(1), 55–61. Retrieved from https://doi.org/10.1080/15313220. 2016.1270180.

Fontaine, S.J. (2007). Integrating community-based participatory research into the curriculum. *Journal of Higher Education Outreach and Engagement*, 11(2), 45–56.

Greenawald, D.A. (2010). Faculty involvement in undergraduate research: Considerations for nurse educators. *Nursing Education Perspectives*, 31(6), 368–371.

Israel, B.A., Schulz, A.J., Parker, E.A., & Becker, A.B. (1998). Review of community-based research: Assessing partnership approaches to improve public health. *Annual Review of Public Health*, 19, 173–202. Retrieved from https://doi.org/10.1146/annurev.publhealth.19.1.173.

Israel, B.A., Krieger, J., Vlahov, D., Ciske, S., Foley, M., Fortin, P., Guzman, J.R., Lichtenstein, R., McGranaghan, R., Palermo, A., & Tang, G. (2006). Challenges and facilitating factors in sustaining community-based participatory research partnerships: Lessons learned from the Detroit, New York City and Seattle urban research centers. *Journal of Urban Health*, 83(6), 1,022–1,040. Retrieved from https://doi.org/10.1007/s11524-006-9110-1.

Jansen, D.A., Jadack, R.A., Ayoola, A.B., Doornbos, M.M., Dunn, S.L., Moch, S.D., Moore, E.M., & Wegner, G.D. (2015). Embedding research in undergraduate learning opportunities. *Western Journal of Nursing Research*, *37*(10), 1,340–1,358. Retrieved from https://doi.org/10.1177/0193945915571136.

Kuh, G., & O'Donnell, K. (2013). *Ensuring quality & taking high-impact practices to scale.*Washington, DC: Association of American Colleges and Universities.

Levine, D.M., Becker, D.M., Bone, L.R., Stillman, F.A., Tuggle, M.B., Prentice, M., Carter, J., & Filippeli, J. (1992). A partnership with minority populations: A community model of effectiveness research. *Ethnicity & Disease*, *2*(3), 296–305.

Martinez, L.S., Perea, F.C., Ursillo, A., Pirie, A., Ndulue, U.J., Oliveira, C., & Gute, D.M. (2012). Research as curriculum: Engaging undergraduates and community residents in immigrant health research partnerships. *Progress in Community Health Partnerships: Research, Education, and Action, 6*(4), 491–498. Retrieved from https://doi.org/10.1353/cpr.2012.0059.

Mason, M.R., & Dunens, E. (2019). Service-learning as a practical introduction to undergraduate public health: Benefits for student outcomes and accreditation. *Frontiers in Public Health*, 7. Retrieved from https://doi.org/10.3389/fpubh.2019.00063.

Minkler, M., & Hancock, T. (2003). Community-driven asset identification and issue selection. In M. Minkler and T. Hancock, (Eds.), *Community-based participatory research for health*, pp. 135–154. San Francisco: Jossey-Bass Publishers.

Nyden, P. (2003). Academic incentives for faculty participation in community-based participatory research. *Journal of General Internal Medicine*, *18*(7), 576–585. Retrieved from https://doi.org/10.1046/j.1525-1497.2003.20350.x.

Paul, E.L. (2006). Community-based research as scientific and civic pedagogy. *Peer Review*, 8(1). Retrieved from https://www.aacu.org/publications-research/periodicals/community-based-research-scientific-and-civic-pedagogy.

Schurman, S.J. (1996). Making the "new American workplace" safe and healthy: A joint labor-management-researcher approach. *American Journal of Industrial Medicine*, 29(4), 373–377. Retrieved from https://doi.org/10.1002/(SICI)1097-0274(199604)29:4<373::AID-AJIM18>3.0.CO;2-Z.

Trush, M.A. (2011). An essential role for graduate students in environmental public health community engagement. *Progress in Community Health Partnerships: Research, Education, and Action, 5*(1), 1–2. Retrieved from https://doi.org/10.1353/cpr.2011.0008.

Upadhyaya, M., May, M., & Highfield, L. (2015). Integrating classroom, community, mixed-methods research, and community-based participatory research to teach public health practice. *Public Health Reports*, 130(3), 286–292.

U.S. Census Bureau QuickFacts: Medford City, Massachusetts (n.d.). Retrieved from https://www.census.gov/quickfacts/fact/table/medfordcitymassachusetts/PST045216.

Weinberg, A., Trott, C., & McMeeking, L. (2018). Who produces knowledge? Transforming undergraduate students' views of science through participatory action research. *Science Education*, 102(6), 1,155–1,175.

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