Immersive Learning and Community Mapping: The Case of the Whitely Neighborhood in Muncie, Indiana

Evette L. Young, Julius Anderson, Cornelius Dollison, Mary Dollison, Robert Dorbritz III, Ky'Lie Garland-Yates, Judith Hill, Bessie Jordan, Jackson Longenbaugh, Khamari Murphy, Frank Scott Sr., Morgan C. Toschlog, and Jörn Seemann

Abstract

This article discusses the preliminary results of a semester-long partnership between an undergraduate course and a local Black community to map culture and history of the neighborhood. Students of Ball State University and residents of the Whitely community in Muncie, Indiana, worked together in spring 2022 to collect data and produce maps that the community could use for its activities. Within a framework of immersive learning and high-impact practices, this article points out challenges and achievements of this collaboration, based on the observations of the students and community members, who are also coauthors of this publication. Strengths and weaknesses in the mapping process are identified and suggestions are made to improve the project and guarantee its continuity.

Keywords: community mapping, immersive learning, student-community relations, geography education, Muncie (Indiana)

In recent decades, cartographers, geographers, and GIS specialists have paid more attention to how maps and mapmaking could contribute to supporting and empowering communities. Making maps for and with communities is a democratized form of mapping that can give voice to marginalized groups and enable them to make their own maps, especially in the digital age and in the light of information flows on the worldwide web (Perkins, 2007, p. 127). Projects and approaches range from database solutions provided for neighborhoods or specific social groups to community-driven participatory mapping. A critical issue is the degree of participation of the population, which should go beyond a mere transfer of technologies or the delivery of ready-to-go maps and requires a deeper involvement and engagement of all social actors who participate in the project.

In this context, this article looks deeper into the challenges and problems of the practices of mapping collaboration involving undergraduate students and residents of a neighborhood. How can they partner to produce cartographic material that can both contribute to the students' personal, professional, and intellectual growth and support the needs of the community?

In the spring semester of 2022, 14 Ball State University undergraduate students, their professor, and approximately 10 residents of the Whitely community, a historically Black neighborhood in Muncie, Indiana, worked together to produce maps on paper and in a digital format. The Whitely neighborhood wanted to document its rich history and tell stories about the past and culture of its place and people, for example, the history of churches, local businesses, street names, and segregation

spaces in the past, with the potential of using the maps as educational tools. The students aimed to gain hands-on experience with real-world partners to train and to improve their professional knowledge in mapmaking. The professor's role was to organize the activities of the weekly sessions of the class held in the community, facilitate the communication between students and residents, and evaluate the students' overall performance, based on the two student learning goals defined by Ball State's high-impact practices assessment guide: (1) create a constructive, collaborative climate (i.e., the creation of a good work atmosphere, especially teamwork) and (2) apply the students' field-specific knowledge—in the case of this class, geography, cartography, and mapping technologies—to "demonstrate comprehension and performance in novel situations" (S. Plesha, personal communication, April 7, 2022).

In the light of higher education outreach, this student- and community-centered course combined service, teaching, and research. Maps were made *with* and *for* the community—the students, the community members, and the professor of the course were active participants and coauthors in a continuous multivocal dialogue and mutual reflection (Wells et al., 2021). This article is an account of the personal experiences of the project written by multiple hands. It addresses the achievements accomplished and challenges faced by the participants during the 15 weeks of the course. Four students and eight community members agreed on voluntarily taking part in the writing-up of the project and are equitable coauthors of this article (see Miles et al., 2022), rather than sources of information, subject(s), or mere "object(s)" of study, as is common practice in academic writing. The study uses a humanistic approach that focuses on "multidimensional understandings; open, empathetic methods; firsthand experience; and explication and interpretation" (Seamon & Larsen, 2020, p. 1) and does not require IRB approval. This article is unconventional or unusual in the sense that it includes subjective observations and elements of storytelling by the coauthors, who are identified by name in attribution of their direct quotes.

Educational Framework: Immersive Learning and Community Outreach

Since 2000 Ball State University, a public university in East Central Indiana with an enrollment of approximately 20,000 students, has been investing in an educational experience labeled as immersive learning (David, 2016, p. 1), combining experiential learning and service-learning to provide the students with a unique format and theme for classes related to the solution of real-world problems in partnership with communities. The theoretical and methodological framework of this learning experience is based on and inspired by Dewey's (1938) and Kolb's (1984) writings on experiential learning and principles of meaningful service-learning that stress a strong connection between the curriculum and service activities, student leadership, community involvement, diversity, and critical reflection with sufficient duration and intensity (David, 2016, pp. 14–27).

Ball State University provides clear guidelines concerning the main characteristics and desired learning outcomes for immersive learning classes. These courses should be student-driven and faculty mentor-guided interdisciplinary teamwork with community partners, resulting in a tangible outcome or product with an impact on the larger community and the student participants (David, 2016). Student learning outcomes cover a wide range of specific qualities, including the demonstration of professionalism, the understanding of the needs of the community partners (cultural competency) and their ideas and expectations of collaboration that may diverge from the students' own vision, and a commitment to the project. In addition, students should focus on the identification of problems and the reflection on their solution, teamwork, and a high-quality contribution that exceeds the expectation of the community partner and can be transferred to other contexts and spark other competencies (Table 1).

In recent years, Ball State University has been approaching immersive learning projects in a systematic fashion by labeling these classes with a specific code in the university course catalogue that allows easy identification and advertises these projects campuswide. Service-learning and community-based learning classes are conceived as high-impact practices in education that

Table 1. Characteristics and Learning Outcomes of Immersive Learning Projects

Characteristics	Learning outcomes
• Engagement in active learning	• Professionalism, integrity, and ethics
• Student-driven	• Cultural competency
• Guided by faculty mentor	• Interaction with persons with varying points of view
• Tangible outcome or product	• Respect for diverse ideas
• Interdisciplinary teamwork	• Commitment to project
• Work with community partners	• Problem and solution identification
• Impact on larger community	• Integration of disciplinary knowledge
• Impact on student participants	• Teamwork, leadership and conflict resolution
	• Successful implementation of the mission
	• Project will exceed the expectation of the community
	• Acquisition of extended knowledge
	• Articulation of transferable skills

Note. Based on *An Evaluation of Immersive Learning at Ball State University: Relations Between Immersive Learning and Self-Determination Factors* by K. A. David, 2016 [Doctoral dissertation, Ball State University], pp. 2–4.

give students direct experience with issues they are studying in the curriculum and with ongoing efforts to analyze and solve problems in the community. A key element in these programs is the opportunity students gain to both *apply* what they are learning in real-world settings and *reflect* in a classroom setting on their service experiences. These programs model the idea that giving something back to the community is an important college outcome, and that working with community partners is good preparation for citizenship, work, and life (Kuh, 2008, p. 11, emphasis in original).

Literature Review

A literature review on community mapping as educational outreach and engagement requires a brief definition of the key terms. Maps can be conceived as "graphic representations that facilitate a spatial understanding of things, concepts, conditions, processes, or events in the human world" (Harley & Woodward, 1987, p. xvi). Moving away from the traditional conception of maps, these representations can be in printed form or interactive, zoomable online maps such as story maps or ArcGIS applications, with the potential of telling stories. Different from mapmaking (the production of maps), mapping entails any kind of cognitive engagement with information on space and place that could be used (or not) to create a map. A useful definition of community mapping is "local mapping, produced collaboratively, by local people and often incorporating alternative local knowledge" (Perkins, 2007, p. 127). More specifically, community mapping can be conceived as participatory cultural mapping, which "is rooted in practices of community engagement and collaboration, working to make visible and co-produce knowledge that is of value for community identity formation, reflection, decision-making, advocacy and development" (Duxbury & Garrett-Petts, 2024, p. 329).

An early example of community mapping with the participation of residents is from the late 1960s and early 1970s. Geographer William Bunge worked together with teenagers of the African American neighborhood of Fitzgerald in Detroit to map social injustice and document the precarious living conditions of the local population (Bunge, 1971). For what they called the Detroit Geographical Expedition, the participants, mostly young Black people who lived in the location, explored their own neighborhood

and gathered data in the aftermath of the 1967 Detroit Riots. They produced thought-provoking maps on themes such as places where babies were bitten by rats, the limited leisure options for youths, or where children were run over by cars traveling from the more affluent White suburbs and passing through the Black neighborhood on their way to downtown Detroit (Detroit Geographical Expedition and Institute, 1971). Though Bunge's project is a good example of community participation that sparked follow-up projects (e.g., Campbell et al., 2020), the educational dimension did not involve university students, but endeavored to give the youths from the neighborhood potential access to higher education through taking courses at Wayne State University.

A more recent example of a partnership with a community is The Ward: Race and Class in Du Bois' Seventh Ward, a collaboration between professors and students at Penn State University and the residents of the traditionally Black Seventh Ward in Philadelphia, initiated in 2006. The project aimed to provide an online and open-access historical GIS for "a web-based interactive experience for high school students and others who might otherwise never approach it" (Hillier, 2011, p. 285), based on the maps, stories, census data, and statistics published in the book *The Philadelphia Negro* by writer, sociologist, and Black civil rights activist W. E. B. Du Bois (1899). Besides the online map, the website for the project (no longer accessible as of July 2024) included additional features such as lesson plans for teaching, oral histories by residents, suggestions for walking tours, a board game, and the proposal for a neighborhood mural. Community members were invited to tell their own stories and get involved in the activities to "help teach lessons about racial discrimination by introducing students to real African Americans who struggled to make ends meet at the turn of the nineteenth century" (Hillier, 2011, p. 281).

Community mapping could be a powerful proposal for educational outreach (Parker, 2006), though in U. S. higher education, cartography and GIScience classes are still predominantly content- and data-driven rather than focused on pedagogy and people (Barcus & Muehlenhaus, 2010; Elwood & Wilson, 2017; Gilbert & Krygier, 2007). For students, a community-centered course offers the opportunity to apply their cartographic knowledge to a real-world situation and directly interact with their "clients" since the students will have to make maps that the community considers important and useful, stimulating interdisciplinary collaboration and civic engagement (Jung, 2018). However, though the goals are straightforward on paper, the outcomes of the class may raise more questions than answers, and the benefits may differ considerably from those "that were anticipated at the outset" (Elwood, 2009, p. 62).

The literature on community-based learning in geography in higher education has grown considerably in recent years (e.g., Jackson & Bryson, 2018; Robinson et al., 2017; Sinha et al., 2017), which is a sign of recognition of the benefits of these projects for students, communities, and educators since "these connections deepen the educational experience and improve student success and retention, and build civic engagement skills that benefit the university community and the student's home community" (Rock, 2021, p. S235). In addition, universities are starting to pay more attention to community-focused projects, encouraging faculty to redesign their classes for a practical, hands-on experience (Robinson & Hawthorne, 2018; Shannon et al., 2021).

Putting the Whitely Community on the Map

For the project with promise discussed in this article, the professor of the class established contact with the Whitely community in Muncie, Indiana, in fall 2021, based on the indispensable rule that a community must be interested in the partnership and approve the project. The outline for the spring 2022 project was presented at a Zoom meeting on October 26, 2021, during which the professor explained to a group of residents the purpose of the project and how it could be beneficial for the community. The participating community members embraced the idea and assured their support.

One of the main reasons for selecting Whitely was the lack of cartographic material on the community that could narrate its history and culture, in addition to the correction of the stereotypical, almost stigmatic image of the neighborhood as a poor Black community with low education levels, high crime rates, and low economic power.

Whitely's population is about 2,300, with more than 50% self-identifying as Black or African American, a median household income of $22,411 (the county's average is $54,087), and a poverty rate of 44.2% (United States Census Bureau, n.d.). The neighborhood is situated on the Eastside of Muncie, Indiana, a typical rustbelt town that today is struggling with limited economic growth, a declining population, and social issues such as drug use, violence, and even homelessness. Muncie gained national prominence in the 1920s under the pseudonym Middletown, when the anthropologists Robert and Helen Lynd conducted extensive fieldwork for a case study on sociology and social change in an "average" American town (Lynd & Lynd, 1929, 1937). Follow-up studies were carried out (Caccamo, 2002; Caplow et al., 1982, 1983), and voices about the shortcomings and selectivity emerged, resulting in publications that focused on the "other side" of Middletown, namely the African American community unmentioned in and omitted from the Lynd studies (Dennis, 2012; Lassiter et al., 2004), though a significant migration flow of Black people to Muncie had initiated in the early 20th century (Goodall & Mitchell, 1976, p. 9).

An important initiative to include the African American population of the town on the "map" was a collaborative ethnographic study titled The Other Side of Middletown (Lassiter et al., 2004), which gathered university students and community consultants to explore Muncie's Black community and its history. The project resulted in a book that documented and storified the daily life of people in the Whitely neighborhood, addressing themes such as civil rights, segregation, work, living, young people, leisure, and religious practices (for an assessment of the project see Campbell & Lassiter, 2010; Lassiter, 2012).
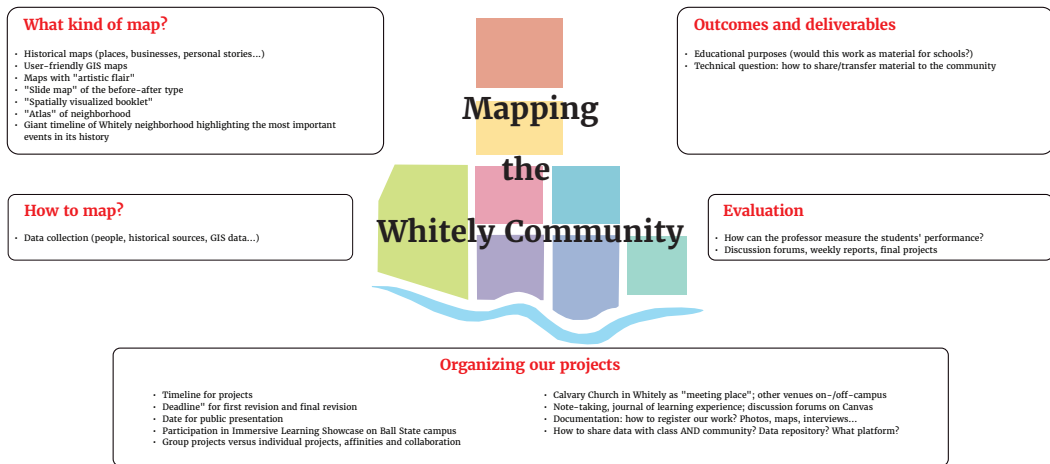
Ball State University has created a tradition of working together with the Whitely community. Among the recent projects are community-engaged and -based teacher preparation (Zygmunt & Cipollone, 2018) and the safety of the neighborhood in the context of criminal justice (Warren-Gordon et al., 2020).

Getting Started

One of the most challenging characteristics of community mapping projects is their uncertainty. Even with clear predefined guidelines and ideas, collaboration with community partners must follow an ever-changing pace and script. Participants must be prepared for surprise moments and changes of direction. The first group meeting of the semester took place on the Ball State University campus on January 11, 2022. The syllabus was introduced as a basic two-page outline of general information and activities to be constructed collaboratively during the semester. In a section called "What Is the Course About," the professor explained the nature of the class (student-, project-, and community-driven, immersive and active learning). The group was expected to meet in off-campus locations with schedules that required flexibility in accordance with the needs and demands of the participants. Four learning outcomes were defined for the course: Students will (1) improve their mapping skills (especially software and online tools) and how to apply these to specific places in need of organization and maps, (2) learn how to collect data and transform them into maps, (3) collaborate and dialogue with different community actors and partners, and (4) plan and execute applied cartography projects. In addition, the professor shared his expectations for the class: Students were required to actively engage in the activities, whereas the professor's role was to facilitate learning, stimulate participation, encourage the students to think outside the box, and even dare to get out of their academic comfort zone to achieve the project's aims. In the first meeting of the group, he jokingly boiled down the aim of the class to the following catchphrase: community needs maps—students make them. However, the semester project was far more complex and challenging since the activities went beyond mapmaking and required social interaction.

A group of five Whitely residents attended the first meeting on campus in January 2022 to brainstorm together with the students about what maps the community would like to see. Based on these initial conversations, the professor summarized the main points of the discussion in a list: What kind of maps? How to map? How to organize the students' projects? Forms of evaluation? Outcomes and deliverables of project? (See Figure 1.)

Figure 1. Brainstorming the Whitely Mapping Project

What kind of map?
· Historical maps (places, businesses, personal stories…)
· User–friendly GIS maps
· Maps with "artistic flair"
· "Slide map" of the before–after type
· "Spatially visualized booklet"
· "Atlas" of neighborhood
· Giant timeline of Whitely neighborhood highlighting the most important events in its history

Mapping the Whitely Community

Outcomes and deliverables
· Educational purposes (would this work as material for schools?)
· Technical question: how to share/transfer material to the community

How to map?
· Data collection (people, historical sources, GIS data…)

Evaluation
· How can the professor measure the students' performance?
· Discussion forums, weekly reports, final projects

Organizing our projects
· Timeline for projects
· Deadline" for first revision and final revision
· Date for public presentation
· Participation in Immersive Learning Showcase on Ball State campus
· Group projects versus individual projects, affinities and collaboration
· Calvary Church in Whitely as "meeting place"; other venues on–/off–campus
· Note–taking, journal of learning experience; discussion forums on Canvas
· Documentation: how to register our work? Photos, maps, interviews…
· How to share data with class AND community? Data repository? What platform?

Note. Drawing by Jörn Seemann.

Though these first ideas remained slightly vague, the initial conversation was a starting point for further reflection. The professor decided not to provide an outline of the semester activities since his aim was to make students and community members step up and discuss details of their collaboration. In an online discussion forum (January 12, 2022) and a retrospective in the form of a final evaluation at the end of the semester, the student coauthors shared their impressions of the class. Their comments show their awareness of the challenges of community mapping, especially with regard to how they could convert personal stories into maps and how they could contribute to place–building in a community.

One critical point was the importance of gathering information about the community that could provide a better understanding of how Whitely was in the past and became what it is now:

> When we were introduced to this class in the first few weeks, I had quite a few expectations. First, I was expecting to make an impact on the Whitely community in some way. Although I had no idea what type of project I would create, I was expecting myself to make an impact with whatever I accomplished. Second, I was expecting to create relationships with Whitely residents and other people of the community. Heading into the neighborhood, I was assuming that there would be community involvement to help

us students navigate our projects. Finally, I had the expectation of the class being a learning experience for all involved. Heading into this project, I knew that it was uncharted territory and had never been done before. This expectation was positive though. I was expecting the experience to be a challenging and eye–opening time in a professional environment. (Jackson Longenbaugh, Geography senior)

Besides collecting data, there was also a human dimension. How to get personally attached to the project to overcome lack of experience with this kind of work?

> I know our class will be able to make any kind of map that the community wants, but I can definitely see us making historical maps, more artistic maps that include personal stories from community members, and scientific–based maps that can help educate the neighborhood on the geographical characteristics that surround them so they can protect what is theirs. To be able to make these maps come to life we will need to submerge ourselves in the neighborhood and collect any useful data that can showcase the culture of Whitely. Personal stories will be crucial to creating a great final product because we are focusing on people and their livelihoods. Getting the opportunity to tour the

neighborhood and speak directly to those who know the history will boost our cartographic confidence and put a more caring perspective on what we want this semester-long project to look like. Collecting the data will most likely be from word of mouth, or in the collected records/history of Whitely. The only challenges I expect to face are a lack of information for certain topics or too much information for certain topics to the point we have to cut back on some of the information to be able to create a clean map product. (Morgan Toschlog, Geography senior)

Students were aware that working with an African American community also required sensitivity and understanding of the people and their neighborhood, which are essential to help the community relive and remember the past and create a sense of belonging that could also be passed to younger generations:

> I did not necessarily have a set of expectations for this project, more so hopes and goals. The reason being is I did not want to stick way too heavy on a strict set plan because oftentimes things do not work according to plan in life, and you have to maneuver yourself around what life throws at you. I will say that before we started this project, once we learned what we would be doing I did hope to receive a close bond with the community, which we did. If I had to choose an expectation to have with this project, it would be to convey the message that the community wanted and to get closer to them on more than just a class assignment level. I wanted to develop my own connections with the community because I felt that was important not only just for networking purposes, but you never know how people who were once strangers can impact your life. Our mission is to let the Whitely community live on and educate others about Whitely's great community through maps. I believe including testimonials from the people of the community would be a great idea as well because it's one thing seeing it but it's a different story when you can actually hear it from a person. I believe in the end

we can achieve the goal that they want, the only problem is the lack of information that might be difficult to obtain. I am excited to see where this goes! (Ky'Lie Garland-Yates, Geography junior and only African American student in the group)

Some students initially had a rather technological vision of the project, focusing on data collection and GIS maps to tell the story of the community, but then realized that the crucial point was not the data, but how to obtain it from the community:

> Going into the project I knew that Muncie had an extensive and rich history, so I was expecting to do historical mapping of some kind. I was excited to learn more about Whitely's history as I hadn't heard much about it before. After meeting the community members and representatives I understood that we would be conducting much of our research through interviews. This was a new and exciting way of collecting data for maps which I had not previously considered. (Robert Dorbritz III, Geography junior)

The expectations of the participating community members were a mix of curiosity about mapmaking, the hope to make Whitely a "better livable place" (Khamari Murphy, resident), and to mobilize and engage more residents in these activities. Frank Scott Sr., the president of the Whitely Community Council and coauthor of this article, stressed the importance of highlighting the history of the neighborhood, especially its businesses and places of reference, to keep the memory alive and teach future generations:

> I wanted to discover and uncover many of the Whitely businesses and landmarks that have faded away over the years. I also wanted to highlight many of our residents who were successful in various areas and at many levels of business and government. I wanted to see this information made available to this next generation and generations to come. (Frank Scott Sr.)

In the second week of the semester, the group scheduled a field trip with community members to get known to the neighborhood by walking through its streets (Figure 2).

However, the low temperatures in mid-January, accompanied by a brisk wind, reduced the field experience considerably. Despite this challenge, students were able to gain an idea about Whitely:

> The field trip to Whitely furthered my suspicion that there is a lot of work to be done in a small amount of time. I believe there are still countless themes of maps that can be made, however. I am most excited to hear personal stories from some of the elders and get the chance to bring that point in time back in the form of a map. (Morgan Toschlog)

The field trip provided the students with insights into local community life, an experience that is not taken for granted since the student population at Ball State generally do not explore Muncie beyond campus and do not know much about the neighborhoods. By walking through the streets of Whitely, students had the opportunity to engage with "real people" and gain an idea of what community spirit is:

I enjoyed myself more than I thought I would. I was surprised about how much we covered in one day far as walking around the community and gaining knowledge. Being able to experience the community firsthand was amazing. It opened my eyes to see what was lost, changed, etc. My first impression was that there is a lot to be done in the maps. Due to hearing what the people of the community were saying and seeing in person, you can tell a lot of historical aspects are gone and/or forgotten about. To hear personal accounts such as interviews (audio/visual) would paint a clear image for outside viewers and viewers within the community. I am excited to see where this all goes. I believe this is a solid team and we are going to create something magical. I cannot wait until we get moving further along in the process, anticipation is killing me. (Ky'Lie Garland-Yates)

Figure 2. Participants on Field Trip Through Whitely, January 2022

*Note.* Photo by Robbie Mehling. Used with permission.

Mapping It Out: Activities and Deliverables

The design of the course consisted in weekly meetings at the Greater Mount Calvary Church in the Whitely neighborhood, whose community room was graciously offered by the church's reverend. The room served as a meeting place to discuss projects, chat with residents about Whitely's history, and define the semester projects for each student. For each session, community members prepared hot food to be shared with the students. Guest speakers and spontaneous walk–ins engaged with the students and replied to their questions about the neighborhood. For example, in a panel with local business owners, the participants initiated a discussion on the economic history of Whitely (e.g., shops and stores that existed in the past). The direct contact with people from the community aimed to "break the ice" and make students feel more comfortable about their projects, though there was a constant struggle about how to retrieve data and how to insert them in a map, or, in more extreme cases, what should be the theme of the project.

In addition to the weekly meetings, students had to submit ideas and updates on their project to an online discussion forum. Since the regular schedule did not allow lecture–style classes or a deeper engagement with literature on community mapping, students had to read additional texts on cartography, methodologies, and race and submit short reflection essays on the contents and how these texts can help with their projects.

The students selected a wide variety of themes, from the history of businesses, "invisible" (racial) borders, street names, and local church history to a local census atlas of the neighborhood, and "Whitely–Opoly," a Monopoly–style board game (Figure 3). The preliminary projects were presented publicly in mid–April in a session with community members who also provided feedback. The final products were shared at the Immersive Learning Showcase on campus (Seemann et al., 2022). A link to the maps ("additional Whitely neighborhood history") was also included on the website of the Whitely Community Council.

Figure 3. "Whitely–Opoly" Game Board
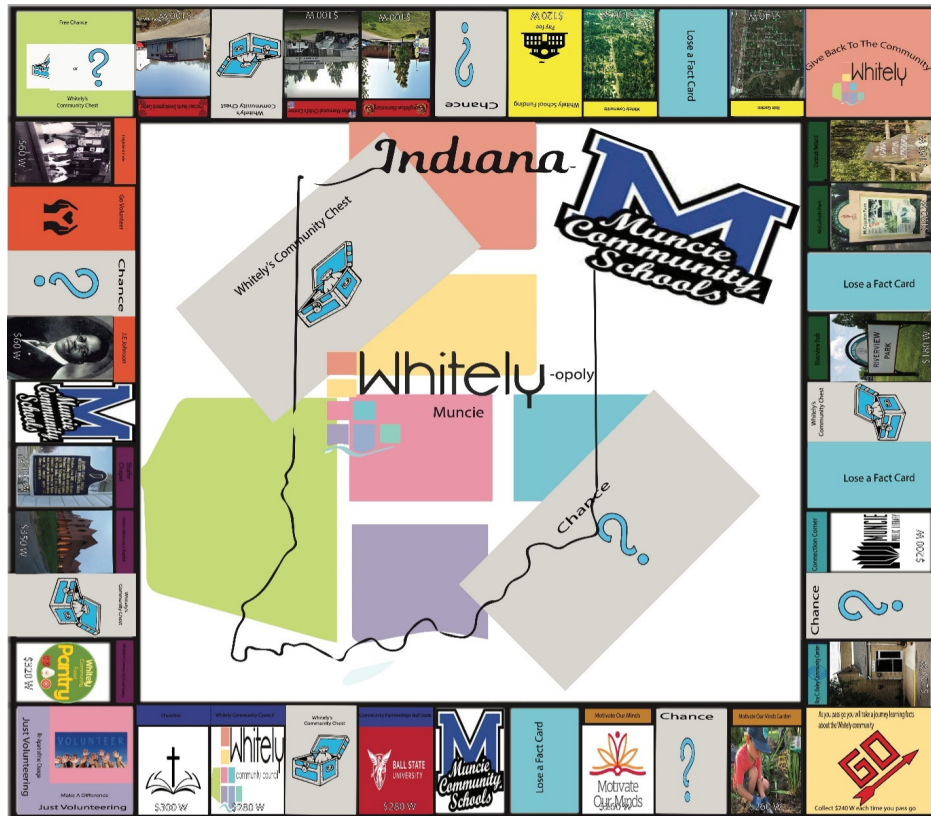
Note. Source: Personal collection, Ky'Lie Garland-Yates.

Mapping Multiple Perspectives

As a paper written by multiple hands, this article about a project with promise seeks to present the views from different participant groups—the students, the community, and, as facilitator and listener in the background, the professor—who all had distinct or even diverging ideas about the class and its outcomes, especially since many students found themselves in an unfamiliar learning situation (student- and community-driven class) and setting (off-campus location in the Whitely neighborhood). Community members had the desire to receive maps but were not acquainted with the full potential of mapping, whereas the professor hoped that having students and residents in the same space would facilitate data collection and communication among the participants. In retrospect, despite the direct contact with the community members, students found access to information a major challenge:

> During my time in this class, I feel like I accomplished what I was aiming to do. I wanted to research and investigate the local impact of churches in the neighborhood. Initially though, there were challenges that I faced for a few weeks. When the class began, I struggled to find legitimate information, church histories, or speak with knowledgeable residents. It took me quite a while to find the right people to talk to or find any information online. Looking back on this experience, I wish I would have been more proactive in looking for residents to speak to and visiting these churches in person. Many of these things were hard to do because of time constraints and, naturally, navigating this brand-new experience made these tasks even more difficult. (Jackson Longenbaugh)

In general, the community members were less map-minded than the students; that is, they had an idea about what information they wanted to have mapped, but did not know much about the mapping process, from data collection to map production. For them, it was already an achievement to be remembered by the university and to be contemplated for the immersive learning project, as observed in the following comment:

> For me, the achievement is that we were able to UNIFY with great understanding for one another, both students and community (respecting backgrounds, culture and the unfamiliar due to exposure). In the beginning, the territory was unfamiliar and so were the people, on both sides, which posed a challenge until everyone warmed up to another. I've done all that I could to engage with great results and wouldn't change a thing. (Evette L. Young, resident and one of the leading contacts)

A key issue was the collaboration between students and community members. Students did not receive specific training for community projects, and some of them, due to their personalities (e.g., shy, introverted, not a public speaker, not used to a think-outside-the-box class) struggled to connect with the Whitely residents, even when sitting next to them, giving the impression that "we got the cold shoulder in the beginning" (Mary Dollison, resident and one of the leading contacts). Establishing relationships between the students and residents was time-consuming, and only a small group of the neighborhood actively participated in the project:

> One thing I think was a notable achievement was the interaction we saw between the students and the residents. Apprehension soon turned to anticipation and apathy to interest. The discoveries brought a new level of appreciation and respect on both fronts. One of the challenges was getting residents and students together. Correlating schedules and developing a strategy to move forward took a lot of time and left little time for actually completing the project. One of the things we could have done better was secure more residential involvement earlier in the process. (Bessie Jordan, resident and retired social worker)

Often collaborations terminate when the semester comes to an end, so many projects must start from scratch for a new edition without building on what has already been produced. Frank Scott Sr., the president of the Whitely Community Council, considered the project "a success that exceeded my ex-

pectations in several areas (Whitely board game, interactive searches for businesses, etc.).” However, at the same time, he also showed his concern with the continuation of the partnership:

> Since this was only the beginning of what we envisioned, the next steps might be to see how we can build and continue the process. Researching photos of business owners and businesses. Bios of residents and possibly something that will capsulize the project and give an overview of what has been developed.

Frank concluded that “we don’t want to lose access to all the work that has been done. I know the student[s] left links [to their online maps] but we want to make sure that we have the ability to continue to add to and make any corrections that may be needed.” Though the outcome was considered “outstanding . . . and a win–win for both the students and the community” (Cornelius Dollison, resident and one of the leading contacts), participants longed for “additional tangible products to engage the community on behalf of our history” (Evette L. Young).

As for the students, the immersive learning experience, though challenging, was a valid form of education, though the project appeared as a permanent work in progress that would require a narrower focus due to the abundance of possible studies:

> I think the results we collected at the end of our class were very useful for both students and community members, but we only scratched the surface of Whitely’s history and future. The next steps would be to solely focus on certain years/periods in the Whitely community. While I think it is useful to see different projects over different topics from different times, to serve the community better, I believe taking this community project step by step will give the students a better foundation to build their projects. This approach would also give the community a limit on what situations and topics they can talk about, giving more details about one topic compared to many details about many topics. (Morgan Toschlog)

Communication between students, the professor, and the community and among students was a key issue for a successful project. Appreciating the limits and skills of each participant was also a factor:

> The most common issue that we faced during this project was communicating our limitations to the Whitely representatives. Had we figured this out as a group beforehand, we may have been able to complete the project sooner and deliver a better product. This also would have helped the community representatives decide better what the product should be. Going forward I think it would be wise to assess the capabilities of team members before meeting with community members. Additionally, I think a reliable and accessible form of communication should be set from the beginning. This would help to keep everyone on the same page and avoid confusion. (Robert Dorbritz III)

The first edition of this community mapping project taught many lessons to the participants and will allow them to adjust strategies, contents, and activities for the next “round.” The following issues were identified and were considered for the next editions of the class in fall 2023 and in spring 2025.

Physical proximity to the community is a crucial aspect in this work. For this reason, the classes took place in a location inside the community and were used as meeting time with the community. Some residents attended almost all sessions; others were invited guests or just stopped by. However, being in a community does not automatically create understanding and collaboration between community members and the students. Not all students felt comfortable talking with residents face-to-face. Some students were not aware of cultural diplomacy and unpacked the afternoon lunch they brought to class, even knowing that the community adamantly insisted on providing food for them, since they considered sharing food as an important social function. Good social skills were essential, and some students showed frustration since the data was not simply out there. Community members liked talking, but not always about what students wanted to hear. For future editions, it will be necessary to prepare students

better to interact and communicate with community partners.

Working with a community means knowing its space. Extensive fieldwork (i.e., guided and unguided walking tours through the neighborhood) is an essential part of community mapping. Being in a space in person is a completely different experience from seeing images of the neighborhood on Google Maps.

Immersive learning classes are not lecture-style courses, though students needed further input and context to understand theory and practice of community mapping. In the class, there were uncertainties about forms of evaluation, and some students felt overwhelmed with the coursework since they had to submit shorter assignments every week, raising the question of how to bridge the gap between empirical work (talking to people), technological training (e.g., making story maps), and the reading of additional texts on theory, methodology, and practices.

Student-centered classes require a stronger hand from the professor. For GEOG434, the idea was to put the students into the driver's seat and let them decide about their projects. However, some students felt insecure because nobody was telling them what to do. They became frustrated but did not ask the professor for help.

Several participants mentioned activities to "break the ice" and make both students and community members feel comfortable in each other's presence. In this case, a simple mental map exercise to draw each participant's idea of the neighborhood could have been a starting point (see Zardiny & Hakimpour, 2021).

Data storage and continuity of activities remain pressing issues. Though there was no lack of data, there was no central repository to gather all information:

> We delivered an abundance of information, research, and visual aid to the community. However, it could have been more cohesive and usable across the board. I think that the biggest step we could take to better our results and further the project would be to develop a more permanent website including the research of all group members. Not only would this be a much more usable product for Whitely, but it would also represent the project in a more cohesive manner. (Robert Dorbritz III)

The main challenges and difficulties of the project perceived by the professor, the students, and the community members, discussed above, are summarized below (Table 2) and will provide food for thought for the next edition of the class.

Table 2. Challenges and Difficulties of the Project

Students	Community members	Professor
• Unfamiliar learning situation	• Desire for maps, but not many ideas about their potential use in the community	• Uncertainty of planning the classes since the directions of the project changed frequently
• No specific training for community mapping and student-driven projects	• Lack of familiarity with mapping processes	• Time-consuming preparation
• Access to information (data collection)	• Doubts about how the project could continue	• Shortcomings of student evaluation strategies
• Conversion of qualitative information into maps	• Direct communication with students required time	• Precarious communication with students who did not always ask questions or share their difficulties
• Diverging ideas about class and project outcomes	• Low involvement of community members	
• Communication skills varied (e.g., shy or uninterested students)		
• Slow warm-up to interact with community		

What to Map Next?

Since summer 2023, the professor and the Whitely Community Council have been working on a website that will serve as a repository for maps, memories, and histories, using the acronym MASTS (MApping and STory-telling System). Launched in late fall 2024, MASTS of Whitely aims to create a community-centered, open-ended, interactive online platform that allows Whitely community members to gather and share place-based histories of the neighborhood, historical sources, and personal spatial biographies. This platform will be driven primarily by community input but will also draw on the materials produced in immersive learning classes at Ball State and archival documents available in the university library. As a unique placemaking tool, MASTS will help consolidate the cultural identity of the neighborhood and provide reference material and educational resources to learn about Whitely. The pilot project and experiences in Whitely also aim to serve as a model for other neighborhoods in Muncie and other places to help them retrieve their stories.

As a project with promise, the mapping experience in Whitely is only an initial step in the partnership between university and community and aims to make a plea for more student- and community-centered immersive learning classes in higher education. Despite the difficulties and challenges, the project gives hope for new, improved editions. Coping with technological problems and frustration with data collection, many students learned something that conventional professional or service training does not provide: the human and humanistic aspects of community mapping, as testified by two of the student coauthors:

> When thinking back to this experience in Whitely, I'm blown away by the dedication and passion the Whitely residents showed us students every week. I truly appreciated every relationship that was formed and valued the time the residents spent helping form our projects. Seeing the passion the residents had for their community and neighborhood inspired us students to create impactful projects. (Jackson Longenbaugh)

> I had a great time with this project overall. I learned a lot about a great community and its people. This was a great learning experience and I gained so much out of it. The people of the community were so welcoming, and they represented the true definition of knowing your roots and never forgetting where you came from. I hope that I made half of the impact on their lives as they did on mine. It was truly a great time and I hope this isn't the end of me working and communicating with the Whitely community. (Ky'Lie Garland-Yates)

These last two observations are the most rewarding statements at the end of the course and, ultimately, confirm that projects of this kind do enrich educational experiences by immersing students in their local reality.

Acknowledgments

Author Note

About the Authors

Evette L. Young is a proud native of Muncie, Indiana, community activist, entrepreneur, transformative life coach, educator, and creative artist in the Whitely neighborhood. She attended Muncie Central High School and studied health and human services at Ivy Tech Community College of Indiana. Evette's commitment is further underscored by numerous certifications, awards, and recognitions for her exceptional civic leadership, a legacy passed down from her grandmother, Alice McIntosh-Kelly, a "change-maker" of Muncie in her own right.

Julius Anderson is a community activist, a former president of the Whitely Neighborhood Association, a former Muncie School Board member, a three-time city councilman for Muncie, and a retired residence life manager at Ball State University.

Cornelius Dollison is a past president of the Whitely Community Council and the Kiwanis Club of Muncie. He graduated from Muncie Central High School, attended Ball State University for vocational training in electrics and electronics, and worked as process engineer for General Motors. He served as a board member of the Black YMCA, Muncie Habitat for Humanity, and Black Expo of Indiana. Cornelius is a member of the National Association for the Advancement of Colored People (NAACP) and recently received the Leadership in Civic Education and Public Service Award (together with his wife Mary) for his service to the Muncie community.

Mary Dollison graduated with a bachelor's and master's degree in education from Ball State University and started teaching at Longfellow School in the Whitely neighborhood in 1964. In 1987, she cofounded Motivate Our Minds (MOMs), a nonprofit community-based organization to educate and empower young children. As a lifetime community activist, she has worked with organizations such as the Whitely Neighborhood Association, the NAACP, the Martin Luther King Dream Team, and the Kiwanis Club. She has received many awards for her service, including the Delaware County Personal Integrity Award presented by the Committee for Integrity Enhancement.

Robert Dorbritz III obtained his BS in geography at Ball State University in 2024, with a concentration in GIScience.

Ky'Lie Garland-Yates obtained her BA in geography at Ball State University in 2023, with a concentration in meteorology and GIScience and a minor in Spanish.

Judith Hill is a lifelong resident in the Whitely neighborhood, where, in her early life, she went to Longfellow School and through segregation. Before her retirement, she had worked as a staff technologist at Ball State Memorial Hospital for 37 years.

Bessie Jordan is a retired welfare care worker and longtime resident of Whitely, where she attended Longfellow School. She received a BA in social work from Ball State University in 1981.

Jackson Longenbaugh is currently the assistant city planner for the City of Warsaw, Indiana. For the community project, his research focused on the history and impact of churches located in the Whitely neighborhood. He received his bachelor's degree in geography with a concentration in GIScience and a minor in urban planning from Ball State University in 2022.

Khamari Murphy is a Whitely resident and currently a junior at Delta High School, Muncie, Indiana. He is deeply committed to his community, which is evident through his active involvement in diverse organizations, including the National Association for the Advancement of Colored People (NAACP), Fellowship of Christian Athletes (FCA), Future Farmers of America (FFA), and 4-H. He has received the Devin Carter Jr. Award for youth innovation and the 2024 Forward Visions Music Scholarship.

Frank Scott Sr. is the president of the Whitely Community Council not-for-profit organization. He also serves as president of the Whitely Neighborhood Association, on the Greater Muncie Chamber of Commerce Board of Directors, the Delaware County NAMI (National Alliance on Mental Illness) Board, and the Muncie Cradle to Career Leadership Team. He received his associate of science degree in human services from Ivy Tech Community College and received the Ivy Tech Distinguished Alumni Award in 2018.

Morgan C. Toschlog is a GIS analyst at Tallgrass Energy in Lakewood, Colorado. Her research interests focus on mapping qualitative data, specifically how to code interview-based data and

produce interactive and inclusive online maps. She received her BA in geography (magna cum laude) from Ball State University in 2022 and her MS in GIScience from the University of Denver in 2024.

Jörn Seemann *is an associate professor in the Department of Geography & Meteorology at Ball State University, where he teaches cartography and cultural geography. His particular research interest is in the relations between maps and society, including community mapping and cartography education. He received his PhD in geography from Louisiana State University in 2010.*

References

Barcus, H., & Muehlenhaus, B. (2010). Bridging the academic–public divide in GIS and cartography: A framework for integrating community partnerships in the classroom. *Journal of Geography in Higher Education, 34*(3), 363–378. https://doi.org/10.1080/03098260903555818

Bunge, W. (1971). *Fitzgerald: Geography of a revolution*. Schenkman.

Caccamo, R. (2002). *Back to Middletown: Three generations of sociological reflections*. Stanford University Press.

Campbell, E., & Lassiter, L. E. (2010). From collaborative ethnography to collaborative pedagogy: Reflections on the Other Side of Middletown Project and community–university research partnerships. *Anthropology and Education Quarterly, 41*(4), 370–385. https://doi.org/10.1111/j.1548-1492.2010.01098.x

Campbell, L., Newman, A., Safransky, S., & Stallmann, T. (2020). *A people's atlas of Detroit*. Wayne University Press.

Caplow, T., Bahr, H. M., & Chadwick, B. A. (1983). *All faithful people: Change and continuity in Middletown's religion*. University of Minneapolis Press.

Caplow, T., Bahr, H. M., Chadwick, B. A., Hill, R., & Williamson, M. H. (1982). *Middletown families: Fifty years of change and continuity*. University of Minnesota Press.

David, K. A. (2016). *An evaluation of immersive learning at Ball State University: Relations between immersive learning and self-determination factors* [Doctoral dissertation, Ball State University]. Cardinal Scholar, Ball State University. http://cardinalscholar.bsu.edu/handle/20.500.14291/200284

Dennis, R. (2012). *Finding the African-Americans that Middletown left out*. Edwin Mellen Press.

Detroit Geographical Expedition and Institute. (1971). *The geography of the children of Detroit* (Field Notes: Discussion Paper No. 3). https://antipodeonline.org/wp-content/uploads/2017/01/dgei_fieldnotes-iii_b.pdf

Dewey, J. (1938). *Experience and education*. Kappa Delta Pi.

Du Bois, W. E. B. (1899). *The Philadelphia Negro: A social study*. Ginn & Co. https://archive.org/details/philadelphianegr00dubo_1/

Duxbury, N., & Garrett-Petts, W. F. (2024). Re-situating participatory cultural mapping as community-centred work. In T. Rossetto & L. Lo Presti (Eds.), *The Routledge handbook of cartographic humanities* (pp. 329–338). Routledge.

Elwood, S. (2009). Integrating participatory action research and GIS education: Negotiating methodologies, politics and technologies. *Journal of Geography in Higher Education, 33*(1), 51–65. https://doi.org/10.1080/03098260802276565

Elwood, S., & Wilson, M. (2017). Critical GIS pedagogies beyond "Week 10: Ethics." *International Journal of Geographical Information Science, 31*(10), 2098–2116. https://doi.org/10.1080/13658816.2017.1334892

Gilbert, M., & Krygier, J. (2007). Mapping campus–community collaborations: Integrating partnerships, service-learning, mapping, and GIS. In D. S. Sinton & J. J. Lund (Eds.), *Understanding place: GIS and mapping across the curriculum* (pp. 63–75). ESRI Press.

Goodall, H., & Mitchell, J. P. (1976). *A history of Negroes in Muncie*. Ball State University.

Harley, J. B., & Woodward, D. (1987). Preface. In J. B. Harley & D. Woodward (Eds.), *The history of cartography: Vol. 1. Cartography in prehistoric, ancient, and medieval Europe and the Mediterranean* (pp. xv–xxi). University of Chicago Press.

Hillier, A. (2011). Teaching race and history with historical GIS: Lessons from mapping the Du Bois Philadelphia Negro. In M. Dear, J. Ketchum, S. Luria, & D. Richardson (Eds.), *Geohumanities: Art, history, text at the edge of place* (pp. 277–286). Routledge.

Jackson, T. O., & Bryson, B. S. (2018). Community mapping as a tool for developing culturally relevant pedagogy. *The New Educator, 14*(2), 109–128. https://doi.org/10.1080/1547688X.2018.1426323

Jung, J.-K. (2018). Mapping communities: Geographic and interdisciplinary community-based learning and research. *The Professional Geographer, 70*(2), 311–318. https://doi.org/10.1080/00330124.2017.1366787

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.

Kuh, G. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter*. Association of American Colleges and Universities.

Lassiter, L. E. (2012). "To fill in the missing piece of the Middletown puzzle": Lessons from re-studying Middletown. *Sociological Review, 60*(3), 421–437. https://doi.org/10.1111/j.1467-954X.2012.02092.x

Lassiter, L., Hurley, G., Campbell, E., & Johnson, M. N. (Eds.). (2004). *The other side of Middletown: Exploring Muncie's African American community*. Alta Mira Press.

Lynd, R. S., & Lynd, H. M. (1929). *Middletown: A study in contemporary American culture*. Harcourt, Brace and Company.

Lynd, R. S., & Lynd, H. M. (1937). *Middletown in transition: A study in cultural conflicts*. Harcourt, Brace and Company.

Miles, S., Renedo, A., & Marston, C. (2022). Reimagining authorship guidelines to promote equity in co-produced academic collaborations. *Global Public Health, 17*(10), 2547–2559. https://doi.org/10.1080/17441692.2021.1971277

Parker, B. (2006). Constructing community through maps? Power and praxis in community mapping. *The Professional Geographer, 58*(4), 470–484. https://doi.org/10.1111/j.1467-9272.2006.00583.x

Perkins, C. (2007). Community mapping. *The Cartographic Journal, 44*(2), 127–137. https://doi.org/10.1179/000870407X213440

Robinson, J. A., Block, D., & Rees, A. (2017). Community geography: Addressing barriers in public participation GIS. *The Cartographic Journal, 54*(1), 5–13. https://doi.org/10.1080/00087041.2016.1244322

Robinson, J. A., & Hawthorne, T. L. (2018). Making space for community-engaged scholarship in geography. *The Professional Geographer, 70*(2), 277–283. https://doi.org/10.1080/00330124.2017.1366775

Rock, A. E. (2021). Bringing geography to the community: Community-based learning and the geography classroom. *GeoJournal, 87*(Suppl. 2), S235–S247. https://doi.org/10.1007/s10708-021-10408-3

Seamon, D., & Larsen, T. (2020). Humanistic geography. In D. Richardson, N. Castree, M. F. Goodchild, A. Kobayashi, W. Liu, & R. A. Marston (Eds.), *The international encyclopedia of geography*. John Wiley & Sons. https://doi.org/10.1002/9781118786352.wbieg0412.pub2

Seemann, J., Smart, E., Simmons, H., Toschlog, M., Whitehurst, L., Dorbritz, R., Garland-Yates, K., Grigsby, N., Hale, L., Koons, B., Kuntz, R., Longenbaugh, J., Norwalk, K., Privett, W., & Shanayda, B. (2022). *Mapping the history and memory FOR and WITH the Whitely Community in Muncie*. https://digitalresearch.bsu.edu/immersive-learning-showcase-spring-2022/exhibits/show/mapping-the-history-and-memory

Shannon, J., Hankins, K. B., Shelton, T., Bosse, A. J., Scott, D., Block, D., Fischer, H., Eaves, L. E., Jung, J.-K., Robinson, J., Solís, P., Pearsall, H., Rees, A., & Nicolas, A. (2021). Community geography: Toward a disciplinary framework. *Progress in Human Geography, 45*(5), 1147–1168. https://doi.org/10.1177/0309132520961468

Sinha, G., Smucker, T. A., Lovell, E. J., Velempini, K., Miller, S. A., Weiner, D., & Wangui, E. E. (2017). The pedagogical benefits of participatory GIS for geographic education. *Journal of Geography, 116*(4), 165–179. https://doi.org/10.1080/00221341.2016.1215488

U.S. Census Bureau. (n.d.). *Census Tract 12; Delaware County; Indiana*. Retrieved July 10, 2024, from https://data.census.gov/profile/Census_Tract_12;_Delaware_County;_Indiana?g=1400000US18035001200

Warren-Gordon, K., Hudson, K., & Scott, F. (2020). Voices of partnerships within the critical service-learning framework. *Journal of Community Engagement and Higher Education, 12*(2), 17–25. https://jcehe.indianastate.edu/index.php/joce/article/view/603

Wells, R., Barker, S., Boydell, K., Buus, N., Rhodes, P., & River, J. (2021). Dialogical inquiry: Multivocality and the interpretation of text. *Qualitative Research, 21*(4), 498–514. https://doi.org/10.1177/1468794120934409

Zardiny, A. Z., & Hakimpour, A. (2020). Integration of sketch maps in community mapping activities. *Spatial Cognition & Computation, 21*(2), 114–142. https://doi.org/10.1080/13875868.2020.1841202

Zygmunt, E. M., & Cipollone, K. (2018). A pedagogy of promise: Critical service-learning as praxis in community-engaged, culturally responsive teacher preparation. In T. D. Meidl & M.-M. S. Dowell (Eds.), *Handbook of research on service-learning initiatives in teacher education programs* (pp. 333–354). IGI Global.