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# Teacher Candidates Collaborate to Create Place-Based Integrated Curriculum

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### Cover Page Footnote

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## Teacher Candidates Collaborate to Create Place-Based Integrated Curriculum

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### Abstract

A small group of middle level teacher candidates collaborated to create place-based integrated curriculum. These candidates and the authors, two teacher educators, selected two local sites, visited them together, and debriefed these visits. State and national standards as well as guidelines for integrated curriculum (e.g., Beane, 1997; Nesin & Lounsbury, 1999) informed the process. Through interpretive phenomenology analysis (Smith et al., 2009), we analyzed place-based learning as a catalyst for collaboration. Teacher candidates recognized possibilities with place-based learning to draw on local cultural, historical, and natural resources in ways that are relevant to students and their communities. We offer implications for teacher educators and middle level educators invested in place-based pedagogies and curricula.

### Introduction

As middle level teacher educators, we aim to engage our teacher candidates in extensive and authentic learning experiences so that they are ready to enact challenging, exploratory, relevant, integrative, and diverse curriculum, following keywords from the two most recent versions of *This We Believe*, the position paper of the Association for Middle Level Education, formerly the National Middle School Association (NMSA) (Bishop & Harrison, 2021; NMSA, 2010). Candidates study examples of interdisciplinary and integrated curriculum, and they recognize the importance of these approaches to middle level curriculum (e.g., Association for Middle Level Education, 2019). At multiple points during their program, candidates expand their knowledge and skills for planning curriculum through unit and lesson plans. Candidates usually develop these plans individually, with guidance from instructors, cooperating teachers, and sometimes peers. They also focus these plans primarily in one content area, with some interdisciplinary connections. Through the project described in this paper, we intended to amplify our candidates' experiences with collaborative planning and integrated curriculum. The purpose of this study was to investigate how teacher candidates collaborated to create place-based integrated curriculum.

The spark for this project arose during a conversation we had with two educators in a partner school. As part of our annual program review process, we had engaged these educators as stakeholders to review different aspects of

courses and field experiences. We were discussing the experiences that teacher candidates have with collaboration, planning, and curriculum. One educator, also a program alumna, recalled a visit to a local museum when she was a teacher candidate, and how that experience had generated an idea for a unit. After the conversation with these partner educators, we expanded on that idea, wondering how we could extend teacher candidates' opportunities to collaborate on curriculum through the lens of place-based learning.

Place-based learning provides ways for people to explore topics by engaging with places and spaces. This approach to learning can connect students to their communities in ways that are relevant and meaningful (Santelmann, 2011; Sgouros & Stirn, 2016). We use the term *place-based learning* in this paper; a related term is *place-based education*, which the Center for Place-Based Learning and Community Engagement has defined as education that "immerses students in local heritage, cultures, landscapes, opportunities and experiences, using these as a foundation for the study of language arts, mathematics, social studies, science and other subjects across the curriculum" (Center for Place-Based Learning and Community Engagement, n.d., n.p.). As we studied the literature on place-based learning, we noted clear ties to ideals for middle level education, such as goals for curriculum to be relevant and integrative (Bishop & Harrison, 2021; NMSA, 2010). Drawing on the literature and inspired by our conversation with two local educators, we developed this project.

We gathered a small cohort of teacher candidates to visit two local sites. Then, candidates collaborated to brainstorm ideas for integrated curriculum grounded in these sites and aligned with state and national standards. Throughout the process, we provided time, space, guidance, and modeling for these candidates so they could further develop a collaborative disposition they would carry into their own classrooms.

In developing this project, we had two goals: first, that candidates would gain more experience collaborating as educators; second, that candidates would gain more proficiency with place-based and integrated curriculum. Our hope was that these candidates would enter their own classrooms prepared and eager to collaborate with peers to create place-based integrated curriculum to support student learning. Elsewhere (Norman & Wall, 2020), we described how we developed this project. Our goal in this article is to share the research from this endeavor. We developed two questions to guide this research:

1. How do teacher candidates engage in collaborative, place-based interdisciplinary and integrated curriculum planning?
2. What processes are involved as they plan, self-evaluate, and reflect on collaborative planning?

### Relevant Literature

We anchored this project in middle level philosophy and practices as described in *This We Believe* (NMSA, 2010) and the Association for Middle Level Education's (AMLE) Standards for Middle Level Teacher Preparation (AMLE, 2012). Specifically, we explored the literature on middle level curriculum and collaboration as part of educators' professional roles in the context of place-based learning.

Middle level curriculum should be challenging, exploratory, relevant, and integrative (NMSA, 2010). One model for curriculum at the middle level is integrated curriculum (AMLE, 2019; Beane, 1997; Nesin & Lounsbury, 2019; NMSA). Previous scholarship has explored models of integrated curriculum (e.g., AMLE; Applebee et al., 2007; Wall & Leckie, 2017), and teacher and student perceptions of integrated curriculum (e.g., Barry, 2013; Bishop et al., 2007). There is no single definition of integrated curriculum,

and terminology and its application can vary (Applebee et al.; Springer, 2013). Curriculum can be described along a continuum (AMLE, 2019; Brown & Knowles, 2014) from subject-centered curriculum to integrated curriculum; along the way are models sometimes described as multidisciplinary and interdisciplinary. Springer noted the challenges with terminology used to describe different approaches to curriculum. For this project, we described a goal of interdisciplinary and integrated curriculum. While these concepts – interdisciplinary and integrated – are delineated in the literature, they are often linked in practice as teachers collaborate to cross, combine, blur, and otherwise transcend boundaries between content areas. We wanted to engage the teacher candidates in this study in planning curriculum that would expand their understanding of their own subject-matter knowledge and the interdisciplinary nature of knowledge, following elements of Standards 2 and 5 of the AMLE Standards (2012), which respectively are Middle Level Curriculum and Professional Roles.

One approach to interdisciplinary and integrated curriculum is place-based curriculum; anchoring learning in local places and resources can provide learning experiences that are challenging, exploratory, relevant, and integrative (NMSA, 2010) for students and teachers. Coughlin and Kirch (2010; Teton Science Schools, n.d.) drew on activity theory to conceptualize place-based learning as a “collaborative activity that makes salient the cultural, historical, political, economic, environmental, social, and physical aspects of what and how we teach” (p. 917). Place-based learning can offer a context where students engage with topics and issues relevant for their communities (Santelmann, 2011; Sgouros & Stirn, 2016). Azano (2011) studied a rural teacher who drew on the shared “sense of place” with his students to support their learning and their understanding of place. By drawing on place, candidates are able to create curriculum that allows students to see themselves in the curriculum, bear witness to the historical events of their community, and share their funds of knowledge (Moll et al., 1992; Santelmann; Sgouros & Stirn) as they encounter curriculum through familiar spaces and places. Ruday and Azano also noted that “place-based pedagogy is a form of culturally relevant instruction” (2019, p. 2). Place-based learning can support equitable and culturally sustaining pedagogies (Ladson-Billings, 1995; Paris, 2012) as it “decenters the

traditional classroom as the sole locus of learning” (Estey, 2014, p. 122) and can connect to students’ communities and cultures.

For this study, place-based learning offered a site for teacher candidates to collaborate; planning for integrated curriculum was an outcome of this collaboration. Teacher collaboration creates an environment fruitful for integrated curriculum. Tallman (2019) investigated how five teachers collaborated around common curriculum; teachers experienced “mutuality, trust, and growth” (p. 1) through the collaboration. Moser et al. (2019) described how a team of teacher educators incorporated interdisciplinary planning in teacher education to support teacher candidates. Also, collaboration is an expectation and reality in middle schools, so it is important for teacher candidates to experience a model of collaborating with professional peers (Graziano & Navarrete, 2012). Sibley and Parmalee (2011) called for teacher education programs to teach professional knowledge by organizing candidates into groups. The candidates in this study had had field experiences in schools where teachers collaborate in professional learning communities (PLCs) with a shared focus on student learning (Dooner et al., 2008).

Our focus on place-based education provided a context where teacher candidates augmented their knowledge of disciplinary and interdisciplinary curriculum through connecting ideas and seeking common curricular themes. AMLE Standards (2012) include collaboration in Standards 4, Instructional Practice, and 5, Professional Roles. Professional standards for teachers in our state also emphasize collaboration. The current project adds to the small yet growing research base on *how* integrated curriculum is developed in collaborative contexts – in this case, place-based learning. This project also extends the research on place-based learning within middle level education.

### **Theoretical Framework**

This research was informed by many perspectives nested in middle level philosophy and practice. We initially focused on curriculum integration, a key idea of middle level education (e.g., AMLE, 2012; Beane, 1997; NMSA, 2010; Springer, 2006). From curriculum we extended a focus toward ways that teachers, through collaboration, can develop curriculum that is

relevant, integrative, challenging, and exploratory (NMSA) in ways that are also equitable and empowering (Bishop & Harrison, 2021). Teacher candidates’ planning of integrated curriculum is linked to the interdisciplinary nature of knowledge in AMLE Standard 2 and to the Research Agenda of the Middle Level Educational Research Special Interest Group (Bennett et al., 2016) and its call for research on integrated curriculum in teacher education.

Also related to middle level philosophy is the importance of experience, following Dewey (1938). We knew that we wanted to engage teacher candidates in a collaborative process to create integrated curriculum, so we added a focus on place-based curriculum. Our selection of place-based learning was designed to draw on and be responsive to our surrounding schools and communities (cf. Estey, 2014).

Following Dewey (1938), we viewed place-based learning through the perspectives of experience and equity as we sought to connect learning to local resources. Dewey wrote that “there is no such thing as educational value in the abstract” (p. 40); this perspective informed our choice to select place-based learning experiences for teacher candidates to use to inform their collaboration and curricular choices. We approached place-based learning understanding the “importance of the participation of the learner in the formation of the purposes” for an activity (Dewey, p. 67), and we interpreted “the learner” as the teacher candidates and ultimately their future students.

### **Methodology**

We designed our qualitative inquiry to study eight middle level teacher candidates’ experiences while engaging in collaborative planning (RQ1), and their perceptions of planning, self-evaluating, and reflecting on their collaboration (RQ2). We collected audio recordings of teacher candidates collaborating in real time, notes written by the candidates while developing their plans for the integrated curriculum, and written reflections from the candidates at the end of their collaboration. For the purposes of this analysis, we will focus primarily on the written reflections by providing statements made by the candidates in relation to their experiences planning and developing their place-based, integrated curriculum together. To distill the essence of these experiences, we

analyzed their written reflections through the lens of phenomenology.

According to Husserl (1931), phenomenology traditionally seeks the context and meaning of people's lived experiences. With the intention of capturing the essence of human experience, "phenomenology originates in acts of negotiation" (Grumet, 1988, p. 62). Looking to collect and analyze the context and meaning of our candidates' experience and their negotiations while working with peers on a single collaborative project, we honed in on one particular branch of phenomenology: interpretative phenomenological analysis (IPA) (Smith et al., 2009). IPA is a psychological orientation of phenomenology that explores experiences of "existential import to the participant" (Smith, 2011, p. 9). Simply, IPA's purpose is to collect and analyze participant statements describing life experiences that are important to them either personally or professionally (Hefferon & Gil-Rodriguez, 2011). These important experiences are presented to researchers in reflective writings and in-depth interviews (Moustakas, 1994). For example, Cuthbertson et al. (2020) used IPA to analyze interview transcripts from radiographers' considering their experiences and perceptions as skeletal trauma reporters. Similarly, we designed a study grounded in IPA to study teacher candidates' experiences collaborating with their peers to design place-based integrated curriculum, and their perceptions of professional collaboration.

We chose to study this phenomenon to better understand how collaborative acts at the pre-service level matter to the professional growth of middle level teacher candidates. The phenomenological approach allowed us to extract the context and meaning of the participants' lived experiences as professionals while they negotiated and participated on a single collaborative project. In gathering these experiences, Moustakas (1994) suggested that phenomenological researchers inductively code their participants' descriptions for themes that create conceptual links across their participants' experiences. These conceptual links are made by researchers recognizing *meaning statements* (Riemen, 1986) shared by participants that are simplified to *meaning units* (Giorgi, 1994). Meaning statements are significant statements made by participants in their interviews and/or reflections that illustrate the context and meaning of their lived experience and have

similar meanings across participants. Meaning units are determined based on researchers extracting these meaning statements for the essence of the participants' lived experiences by determining a thematic pattern. To do this extraction, phenomenologists should purposefully choose to collect data from 5-10 participants (Polkinghorne, 1989), who all encounter and grapple with similar events pertinent to the phenomenon being studied (Creswell, 2013).

In the findings section, we present our analysis of the eight participants' experiences collaborating to create place-based integrated curriculum. This analysis will present the participants' meaning statements through direct quotations pulled from their final reflections that have been distilled and framed within our three meaning units, or what we will refer to as themes: place-based learning, professional collaboration, and integrated curriculum.

### Data Sources & Analysis

We began our inquiry by planning two site visits to historical spaces in our community. These two sites would be the foundation for all of the data we collected to study our teacher candidates' experiences and perceptions collaborating with their professional peers on place-based integrated curriculum. We chose two sites from the Southeastern US that represented African American heritage and history in the candidates' community. One site permitted candidates to walk through the restored living quarters of enslaved Africans from their community's past. The other site featured artifacts from generations of local African Americans at a cultural center constructed in the community's oldest surviving school for African Americans. We arranged guided tours with historians to learn about each site's historical background. During these tours, teacher candidates were instructed to consider learning opportunities in their middle level content area standards and how those opportunities could inspire collaboration among and across the other content areas. Fortunately, the candidates represented all four content areas in our program: science, math, social studies, and language arts.

After completing the site visits, we collected a transcript from a debriefing session among the candidates, notes written by the candidates while they developed their integrated curricular

plan, a recording of a second debriefing session, and written reflections submitted to us upon completion of the study. For the first debriefing and planning session, we met on campus the day after the site visits, where we set up a recording device to capture the candidates' collaboration while they discussed their thoughts on learning opportunities spanning their specific content areas. We also asked two of the eight candidates to take detailed notes to provide us at the end of this planning session. In this session, candidates decided to plan curriculum for 8th grade students in math, science, social studies, and language arts based on the United Nations' Sustainable Development Goals, specifically Goal #9 "Industry, Innovation, and Infrastructure." We encouraged them to choose one of the Sustainable Development Goals to guide their selection of standards and instructional activities. This plan included math concepts such as area and volume, science concepts such as simple machines, social studies concepts such as civic engagement and civil rights, and language arts concepts such as argumentative writing and poetry.

Unfortunately, this is as far as we were able to get before having to truncate the study. The COVID pandemic impacted our design since we conducted and recorded the first debriefing and planning session on March 13, 2020 – the same day our university suspended in-person classes for what would ultimately be the rest of the Spring 2020 semester. We scheduled a second debriefing meeting later on during the Summer, and we asked the candidates to submit one final reflection with responses to prompts on topics such as collaboration and curriculum, and designed with our state's standards for teacher education and the AMLE Standards (AMLE, 2012). These prompts are included in the Appendix. All eight candidates took part in the site visits and debriefing sessions; all candidates except one completed a written reflection.

As stated above, we will focus on the candidates' written reflections to open-ended prompts to analyze their experiences and perceptions collaborating with professional peers on a single project. To establish our inductive codes, we began by drawing out the participant responses that suggested the collaboration had some particular importance to their growth as a professional. We, then, progressed through Alase's (2017) three generic cycles of data coding with these identified responses. The first cycle of data coding breaks down participants' lengthy

and tangled responses into key words and phrases to represent the participants' meanings. We began this by color coding similar statements and capturing their meanings within three phrases: place-based focus, collaboration with peers, and relevance of integrated curriculum. The second cycle compressed these phrases further to get at the core of the participants' meaning making. For example, while compressing their meaning statements regarding collaboration with peers, we were able to see that candidates were creating future plans for collaboration with their future colleagues as well as evaluating themselves as collaborators. Finally, the third cycle categorizes these words and phrases into a word or two to capture the meaning unit of the participants' meaning statements. Through these coding cycles we were able to compile a list of meaning statements that accurately represented our participants' experiences (Creswell, 2013; Riemen, 1986) and three meaning units (Giorgi, 1994) – place-based learning, professional collaboration, and integrated curriculum. We will refer to these units as themes in the findings section.

## Participants

We explored collaboration among eight undergraduate middle level teacher candidates as a large, rural Southeastern university. These teacher candidates were all female, and their ethnicities broadly reflected the overall student body in our program at the time of the study; these populations were 1% Alaskan or Native American, 21% Black or African American, 6% Latinx, 4% two or more races, 1% unknown/unreported, and 68% white.

The eight teacher candidates represented a small cohort, comprising a purposive convenience sample (Yin, 2009); the inclusion criterion was membership in this cohort. In our program, each teacher candidate selects two content concentrations; among the eight teacher candidates were future teachers of language arts, math, science, and social studies. These candidates were in their final semester prior to student teaching at the time of the study. Each candidate was enrolled in one methods course and a concurrent field experience in a middle grades classroom; across the cohort, different candidates were enrolled in different methods course based on their content concentrations. While membership in this cohort was the inclusion criterion for this study, participation in this project was voluntary and not a course

requirement. We met with the candidates to describe the project and discern their interest in site visits. After all eight expressed interest, we determined a date for the site visit together. We also explained the research component and its purpose. At the time, we both observed candidates in their field experiences, and Taylor taught one of the methods courses. Accordingly, we asked a colleague to distribute and collect consent forms; we did not see these until after the semester concluded. These teacher candidates (all names are pseudonyms) were Christa, Eileen, Judith, Mae, Peggy, Sally, Susan, and Sunita.

### **Role of Researchers**

Like Hood's (2015) IPA study, we were "interested in how people understand and attach significance to their experiences...and in drawing out the unique and shared elements of that experience" (p. 165). This sharing includes the experiences of us as researchers and teacher educators as well. Because we as colleagues were collaborating to study our teacher candidates' collaboration, there were shared and similar experiences across the researcher-participant boundary. Hence, we followed Groenewald's (2004) idea that the "aim of the researcher is to describe as accurately as possible the phenomenon, refraining from any pre-given framework" (p. 44). Smith et al. (2009) recommended that researchers refraining from preconceived notions about the phenomena 'bracket' their preconceptions during data collection and analysis to "enable participants to express their concerns and make their claims on their own terms" (p. 42). Heading this recommendation, we bracketed our experiences from our participants' experiences and will present what we learned from our collaboration with each other and the teacher candidates in the implications section.

### **Findings**

We engaged teacher candidates in visits to two local sites with a goal of supporting them as they collaborated to create place-based integrated curriculum. Throughout the project, from the planning to the written reflections, teacher candidates were focused on student learning, consistent with ideals that education for middle level students be challenging, empowering, equitable, exploratory, and integrative (NMSA, 2010). We studied the phenomenon of their collaboration, and based on the research

questions, we were able to develop three themes: place-based learning, professional collaboration, and integrated curriculum. The research questions were as follows:

1. How do teacher candidates engage in collaborative, place-based interdisciplinary and integrated curriculum planning?
2. What processes are involved as they plan, self-evaluate, and reflect on collaborative planning?

First, we share findings related to the context of place-based learning and how this set the stage for teacher candidates' collaboration throughout the process. Then, we turn to the ways they viewed their collaboration to develop place-based integrated curriculum. Finally, we consider how they understand the relevance of integrated curriculum. These three themes will be supported with statements from the debriefing sessions and the reflective open-ended prompts presented to the participants at the end of the study. We conclude this section with a description of the candidates' overall experiences participating in this study.

### **Place-Based Learning**

Place-based learning provided an inspiring context for integrated curriculum. The local sites provided tangible sights, sounds, and experiences for teacher candidates. At the first debriefing session, one teacher candidate who took notes from the conversation wrote, "Bring kids to place; bring place to classroom." This comment reflected the teacher candidates' own experience from the previous day's visits; this experience was valuable for them, so they began to understand the value of place-based learning for their future students. The candidate went on to note the idea from the conversation that, "Seeing it, experiencing it will last longer than hearing it." On a practical note, the candidates agreed that place-based learning was not only valuable but also "realistic." The experiential component of place-based learning was powerful for the group.

Mae wrote later in her reflection, "Another reason why I enjoyed these field trips so much is because I have a very difficult time trying to visualize people, places, and things in my brain when I am learning about them," and she linked her own experience to the importance of middle level students seeing, hearing, and engaging with

curricular questions and topics in concrete ways. Eileen captured this when she wrote in her reflection that:

A place-based approach helps the students step outside of the classroom to visually see and experience what they are learning about. It is an excellent opportunity for the students to achieve their academic goals outside of the classroom but inside of their community.

In the second debriefing conversation, we asked teacher candidates about place-based learning. They enjoyed choosing and visiting sites together. The sites we visited connected to cultural and historical themes in the community. Teacher candidates also listed a range of natural resources that could be part of place-based learning as well. Susan, for example, noted that coastal barrier islands offered rich possibilities for place-based learning. In further conversation, candidates acknowledged that many sites could be interpreted through historical, natural, cultural, and various other lenses. Through place-based learning, candidates literally and figuratively moved beyond the classroom (cf. Estey, 2014), a dynamic that nurtured collaboration. Place-based learning for these candidates became the catalyst for collaboration.

### **Professional Collaboration**

Teacher candidates engaged in collaborative planning through contributing and building off of peers' ideas. While at the two sites, we noted how the candidates shared ideas, bounced different thoughts around, and expanded on peers' thinking. Questions starting with "What about...?" and connections like "That makes me think of..." reflected their convergent and divergent thinking as they connected different aspects of the two sites to different parts of middle level curriculum. Candidates pointed out several details at each site that they considered to be interesting, relevant, or otherwise linked to middle level curriculum. The first site we visited included an historical mansion, and some candidates were interested to see where ice had been stored. They considered this a launching point for possible curriculum but ended up framing the icehouse as an example of innovation of the times rather than the central story at the site. The site had historical ties to the institution of slavery, and we toured a house where people who had been enslaved lived.

Teacher candidates considered the site as a way to engage students in necessary learning about and reckoning with the past – and present. Candidates noted the opportunities to see different stories and narrative and contrasted this with examples of regular school curricula and textbooks.

This perspective on different stories and narratives developed as we visited the second site, an African American cultural center, where a docent explained the stories behind examples of local art in different media. As an example, candidates learned how certain quilt patterns were communicative symbols within the Black community in the area. At that site, which originally was a school, we sat in an old classroom and started to consider how place-based curriculum could engage students in local stories, cultures, and history. Across both sites, teacher candidates toggled between specific artifacts at each site and larger cultural and historical themes. Their conversation about quilt patterns is one example. Another example is from a machine they saw at the first site, where they discussed the cultivation of cotton and how that related to technology, economy, and the institution of slavery. They considered how they made meaning of the sites, and how students would see and experience the sites.

The next day we met on campus to debrief the site visits with the teacher candidates. We recorded this conversation for transcription; two candidates also took notes. Again, teacher candidates moved from specific artifacts (like the icehouse and a quilt) to larger themes. We introduced the students to National Academy of Engineering's Grand Challenges; this framework was selected based on its use in a partner middle school that many of the teacher candidates had visited in a previous semester. While the teacher candidates did not select a specific Grand Challenge, the larger themes in the challenges (e.g., providing access to clean water, improving urban infrastructure) inspired them to consider innovation and change through the sites. They connected these ideas to several specific points our state's 8th-grade curriculum.

Teacher candidates considered how they would engage students in difficult topics, and how students could learn about and honor multiple stories connected to places. One teacher candidate recorded the question posed by a peer, "What do we choose to accept as normal?" Another recorded this as, "What do we choose to

say is normal?” Susan elaborated on this framing by explaining how she had grown up in the area and passed by one of the sites many times without visiting. She commented that local sites are places to learn about different stories – including background information or perceptions that students may have from being part of the community, relating to Dewey’s (1938) idea of the principle of interaction.

We did note some pauses in the discussions during the site visits, at the initial debrief, and in the second debrief. As candidates worked toward common understandings, there were some ideas that gained traction and others that did not. Collaboration is not linear, and through everyone’s participation and through some fits and starts, the candidates landed on the theme of innovation to explore in different meanings through the sites and through integrated curriculum.

At the sites, the candidates asked the docents questions to establish general understandings of each site overall as well as specific details about people, places, and things. Throughout the conversations, teacher candidates listened to one another, contributed ideas linked to the sites and linked to curricular topics and standards, and posed questions for one another. In answer to the second research question, teacher candidates engaged in several iterative processes to collaborate. Their questions to the docents and to us and one another showed their interest in understanding the nuances at each site and how each fit into local histories and communities. They made connections to other sites and local concerns and to the curriculum. In these ways, they toggled between fine-grain and big-picture thinking to understand sites in terms of larger themes, finding salience between places and ideas (Coughlin & Kirch, 2010).

### **Integrated Curriculum**

Teacher candidates gained valuable experience creating integrated curriculum through this collaboration. Conversations at and about the site visits included multiple ideas to connect aspects of the sites to content-area standards and broader themes of interest to middle level students. During the site visits, teacher candidates became intrigued with the icehouse, as mentioned, and started to list ways they could integrate different content-area topics with the ice house as an example. Reflecting on these ideas during the initial debrief, they situated the

icehouse as an example of innovation within a broader framework of continuity and change. The meaning units for integrated curriculum related to collaboration, students, and place.

During the site visits, teacher candidates listed several specific ideas for aspects of place-based integrated curriculum, from items of furniture to machines to works of art. They were expanding ideas and making possible connections. In the debriefing conversations, they sorted and consolidated ideas, drawing on themes relevant to young people, larger trends (as in the Grand Challenges), and overlaps in grade-level standards.

On the written reflections, we asked teacher candidates what they had learned about integrated curriculum, and how they planned to approach integrated curriculum as teachers. Christa wrote that she had not seen models of integrated curriculum before college; the experience gave her a model she could adapt for her own teaching. Both Mae and Judith mentioned collaboration with future colleagues to determine common themes for integrated curriculum. Eileen, whose concentrations were language arts and social studies, commented that she wanted to integrate these subjects as much as possible within her own classroom as well. Sunita added an element of time, writing that “being given time to take what we learned and connect it to the curriculum, all of our subjects combined, was an interesting experience and had me frequently thinking outside of the box.” This was reassuring to read since we delayed the second debriefing conversation due to concerns mentioned above, we were a little nervous that the candidates would have disengaged from the project. It turned out, though, that distance from the site visits revealed how powerful the learning experience had been.

Teacher candidates considered the development of integrated curriculum from the perspective of their future students. During the site visits, they considered how students would see and engage with the sites: what would be familiar, what would be new, what would challenge them. Sunita thought that integrated curriculum would be “more real” and memorable for students. Christa likewise wrote that integrated curriculum “allows the students to see the importance of certain topics.” Many mentioned the power of students making connections

across content areas, as they had during the site visits and debriefing conversations. The collaboration among teacher candidates inspired Peggy, and she wrote about engaging her future students in a similar process; she “hoped to do the same” with her future students so they could “work with new information, then collaborate with their peers and teachers to discuss where else they may see this and how it could relate to other contents.” The entire experience, from planning to debriefing, provided a concrete model that she could adapt for her future teaching.

### Reflections on the Experience

At the second debriefing conversation and in the written reflection, teacher candidates reflected on the experience and interpreted the phenomenon of collaboration for themselves. They offered important perspectives and pragmatic insights related to place-based interdisciplinary and integrated curriculum. Words like *engage*, *connect*, and *relate* from their reflections demonstrated the value of the collaboration. Although we emphasize collaboration in the program, these teacher candidates had a specific extended experience of collaboration. Peggy, in her final reflection, appreciated this collaboration, noting that “it is important to hear others’ opinions because an idea or thought that you may not have comprised yourself could arise from them.” Sunita expressed a similar idea: “I tend to come up with my best ideas when I have people to help me work them out.” Christa saw the phenomenon of collaboration as beneficial, writing that “it’s not so much about competing, but working together to make things work for all parties.”

In terms of place-based learning, teacher candidates’ comments related to the hands-on, real aspects of being in spaces and places beyond the classroom (cf. Estey, 2014). The candidates also acknowledged that place-based learning is not dependent on a monumental location. As Eileen realized,

I learned that place-based resources can be found anywhere. It does not have to be a place with a historical reference or with a famous reputation, it can just be any place the students are gaining an educational experience outside the classroom walls.

This insight relates to equitable learning as candidates realized local resources in any community can provide powerful learning experiences. Mae shared a similar insight when she wrote that “place-based resources give students the opportunity to grow and learn better. They are able to connect what they are learning in school to people and places in the real world.” Another parallel idea was shared by Christa: “Students may even have a clearer insight on a topic because of the place-based learning opportunity versus a traditional lecture on the same topic.” Through the experience with place-based integrated curriculum, teacher candidates realized several possibilities for their future teaching.

Along with these perspectives, teacher candidates also had insights on pragmatic aspects of place-based learning. Judith, for example, commented that she would want to discuss expectations with students. She admitted that her own attention had waned at a couple of points during the site visits even though she was an adult, so she was realistic about students needing to be engaged in purposeful learning. Judith also stated that she would seek cost-effective resources for her students. Sally likewise wrote about funding and permission after she noted, “I plan to bring place-based learning in my classroom/school as much as possible. I hope to bring this new knowledge to my colleagues and principal.”

Overall, the experience was meaningful for these teacher candidates. Through this collaboration, they were able to synthesize and experience many aspects of being a teacher. Sally wrote:

I have learned that working with others is a huge part of making sure interdisciplinary activities work well. I think that I have learned a lot about what goes into collaborating with fellow teachers and classmates.

Mae also stated:

I have learned that working with others is a huge part of making sure interdisciplinary activities work well. I think that I have learned a lot about what goes into collaborating with fellow teachers and classmates.

Finally, Christa shared that, “I think each day I am becoming a better teacher. I am learning

about collaborating, integrated curriculum, and lots of resources that can help me better serve my students.” Teacher candidates learn about collaboration in their coursework, but actual time spent collaborating showed them possibilities for their futures as teachers. This experience contributed positively to their development as educators.

We found that these candidates collaborated as professional peers throughout the process. During the site visits, they noted several items and how those related to specific points in the curriculum as well as overall themes, especially in social studies and science. The group dynamic was helpful for each candidate to offer and evaluate ideas. The candidates generated, considered, and refined ideas iteratively together to work toward consensus.

### **Limitations**

We would like to recognize the limitations of this project. Conducting an inquiry during the Spring of 2020 caused for a contextual event that makes replication of this study nearly impossible. With the advance of COVID-19, the teacher candidates left campus right after our first debriefing session, and all instruction pivoted to online modalities during this semester. Our first goal became the well-being of our students; accordingly, we decelerated the timeline for this research. Although a limitation, the information brought forth about teacher candidates' propensity for collaboration is still worthy, even if it was not our original intent to present findings of such a nature when we began designing this study.

The impact of not being able to conclude this study with a completed collaborative project from the participants as initially intended is furthered by the response rate to our final reflective prompts. Because it is the intent of this analysis to report the experiences and perceptions participants had reflecting on the collaboration and its particular importance to their growth as professionals, we see the limitation in only collecting seven of the eight participants' responses to these final open-ended prompts. Despite these limitations, we find value as researchers and as teacher educators in our findings from this project.

### **Discussion and Implications**

The teacher candidates in this study visited two local sites that became the context for their collaboration to create place-based integrated curriculum. While teacher candidates study integrated curriculum in courses, they noted that they had less experience planning and teaching integrated curriculum. Through this experience, they saw several possibilities to connect different content areas along specific aspects of curriculum and according to larger themes. Our two pedagogical goals for teacher candidates to gain experience with collaboration and proficiency with place-based integrated curriculum were achieved through this endeavor. Like Moser and colleagues (2019), we aimed to provide some structure for candidates. Through place-based learning, we foregrounded local sites as possibilities for learning (Azano, 2011).

Initially, we had planned for candidates to create specific, detailed curriculum after the site visits, but this changed in response to new realities with COVID-19. Instead, teacher candidates reflected on ways to sustain what they had experienced in their own teaching, and they offered suggestions to us for incorporating more place-based learning with other cohorts of teacher candidates. They encouraged our colleagues and us to incorporate such an experience throughout one course in the program, noting how different project elements could be substituted for current weekly assignments. In the second debriefing conversation, they advocated for a site visit early in the semester so that the experience could frame several aspects of curriculum and planning within the semester. Their insights on how to carry these experiences forward have informed program discussions and our planning in one course.

As teacher educators, we share different models for planning, and we engage teacher candidates in collaboration with their mentor teachers and university supervisors. Through this experience, we reaffirm the value in ongoing, structured opportunities for teacher candidates to collaborate with one another as professional peers. The teacher candidates in this study advanced in their knowledge and skills related to AMLE Standards and state standards.

As researchers, we are interested in future iterations of this project in different dimensions.

First, we plan to continue to engage teacher candidates in collaborating to create place-based integrated curriculum as ways for them to put middle level ideals into practice. We are also interested in a longer study, where we could follow participants from a place-based learning experience when they are teacher candidates through to the ways that they implement place-based learning in their first years in the classroom.

The teacher candidates experienced place-based learning and collaborated to develop place-based integrated curriculum. Through the process, teacher candidates experienced challenges but also realized possibilities for drawing on local resources to strengthen students' learning and support their sense of place (Azano, 2011). Teacher candidates enacted several middle level ideals through collaborating as a team of teachers to engage in place-based integrated curriculum; this experience aligned with different AMLE Standards (2012) and state standards for teacher candidates. This was a collaboration that inspired them to continue in this approach to places, people, and planning to support student learning. As teacher educators, we have analyzed the experiences of this small cohort of teacher candidates and considered ways to refine our program as a result (cf. Moser et al., 2019). Distilling the essence of this phenomenological study has revealed a powerful conclusion: teacher candidates found the place-based integrated curriculum collaboration to be purposeful and empowering.

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## Appendix

Reflect on your experience with this project (collaborating to create place-based integrated curriculum that is developmentally responsive to students and their contexts)

1. Summarize your overall experience.
2. What have you learned about place-based resources?
3. How do you plan to draw on place-based resources in your future teaching?
4. What have you learned about yourself as a collaborator?
5. How do you plan to collaborate with your future colleagues?
6. What have you learned about integrated curriculum?
7. How do you plan to create integrated curriculum in your future teaching?
8. What have you learned about planning with students in mind?
9. How do you plan to learn about and plan with your students in mind in your future teaching?
10. What else would you like to share about this experience? Ideas, Insights, Suggestions, etc.

Evaluate your participation in this project in terms of:

- a. AMLE Standard 1 (Young Adolescent Development)
- b. AMLE Standard 2 (Middle Level Curriculum)
- c. [State Standards]
- d. Your overall development as a teacher