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Using Backward Design to Develop Service-Learning Projects in Teacher Preparation

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Abstract

Service-learning is a pedagogical approach with documented effectiveness for building civic engagement and promoting awareness of social justice issues. Little attention is given in the literature to the design processes that undergird the development of effective service-learning projects. In this case study, authors report on their application of the backward design process to develop and implement a service-learning project. Thirty-seven preservice special education teachers participated in the project to support community needs at an afterschool program. Data sources included planning notes, project meeting notes from the university instructor and the afterschool program director, preservice teachers' guided written reflections, student attendance logs, and responses to open-ended survey questions from community center stakeholders. Participation in service-learning affirmed preservice teachers' readiness for meeting the needs of diverse learners. Community stakeholders reported satisfaction with the project's goals, procedures, and outcomes. Implications relate to the utility of using the backward design process to develop service-learning projects.

Using Backward Design to Develop Service-Learning Projects in Teacher Preparation

Service-learning is a pedagogical approach for increasing civic engagement and social responsibility (Mayhew & Welch, 2001). The role of the teacher, as framed through Dewey's (1916) theory of experience, is to design an academic course throughout which students participate in a service activity that is aligned with curriculum and community needs. By reflecting on the service experience, university students are positioned to gain richer understanding of course-related concepts, greater appreciation of the discipline, and a deeper sense of civic responsibility (Bringle & Hatcher, 1995). Operating within a framework of respect, reciprocity, relevance, and reflection, service-learning connects academic work with community-based engagement (Butin, 2003). Over the past 20 years in the field of teacher education, the positive impact of service-learning has been conveyed through course evaluations and written reflections from university students that reveal satisfaction with the experience, greater understanding of course content, or a broadened perspective on needs and assets of the community (e.g., Cone, 2012; Lin & Bates, 2015; Menard & Rosen, 2016; Santos, Ruppar, & Jeans, 2012; Tinker, Hannah, & Tinkler, 2016). Little attention has been given to the design processes that undergird the development of service learning-projects that are deemed effective by university students and community stakeholders.

University instructors who seek to incorporate service-learning in their courses are left without a clear path for determining how to apply general principles of service-learning to design a relevant and meaningful project. In this article, we recognize that the capacities for designing a meaningful

service-learning project reside alongside the knowledge, skills, and competencies required for effective curriculum design. The *backward design* model mobilizes a process that course instructors at the K–12 and university levels have applied to promote active learning (Graff, 2011; Reynolds & Kearns, 2017; Stiler, 2009). With civic engagement and social responsibility as a focus, we explore, in this case study, how principles of backward design can align with principles of service-learning to promote the development of projects that simultaneously serve needs of the community while achieving course-related outcomes.

Guiding Principles of Service-Learning

Across several decades, researchers (i.e., Mayhew & Welch, 2001; Porter Honnet, & Poulsen, 1989) have identified principles to guide course instructors in initiating service-learning in university-level courses. First, projects should contribute to meaningful connections with community partners and promote genuine, sustained commitment. Second, service recipients should define their needs. Third, clear project goals should be accessible to all stakeholders. Fourth, projects should clearly connect to course content. Fifth, project impact should be measured to reflect students' learning and service recipients' perceptions. Finally, stakeholders should allocate common time and space to share and celebrate project outcomes.

Translating these six principles into action requires mutual effort on the part of the university instructor and the community stakeholders (Pritchard & Whitehead, 2004). Indeed, Ash and Clayton (2009) assert that intentional collaboration is the first step to enacting an effective service-learning projects. By applying the six guiding principles, course instructors can transform Dewey's (1916) theory of experience into practice. To complement reciprocity and ongoing collaboration, we explore the potential of *backward design* as a pathway for navigating the landscape of service-learning project development. One highly regarded characterization of *backward design* is Wiggins and McTighe's (1998, 2005) *Understanding by Design* (UbD).

Backward Design

Understanding by Design (UbD), also known as *backward design*, is an instructional framework for developing curriculum, instruction, and assessment (Wiggins & McTighe, 2005). Developed almost 20 years ago by Wiggins and McTighe, the UbD framework focuses on teaching and assessing students to encourage understanding of main ideas and transfer of knowledge through authentic performance (Wiggin & McTighe, 2011). Planning instruction with a clear vision of its outcomes is the highlight of the framework; thus, identifying desired results and conceiving assessments comes before the development of learning activities (Stiler, 2009).

UbD consists of three stages that guide instructional design. During Stage 1, *Identifying Desired Results,* the intent is to develop a clear vision of what students should know, understand, and be able to do. In the context of service-learning, this aligns well with the guiding principle of establishing clear project goals that are accessible to course instructors and community stakeholders. The focus is on *transfer of learning*, that is, the ability to apply knowledge to other settings, issues, and problems (Wiggins & McTighe, 2005). Thus, the UbD framework supports the related principle of meaningfully connecting the project's focus to course objectives. To support the transfer of learning, essential questions are developed and used to highlight the big ideas that the curricula will address. An essential question is an open-ended, thought-provoking question that has no simple answer. In the context of service-learning, an essential question might be, "*How can service-learning help me become a better teacher?"* In connection to essential questions are big idea statements, or "specific insights, inferences, and conclusions about the big

ideas that you hope your students will attain as a result of inquiry" (McTighe & Wiggins, 2013, p. 30). An understanding that relates to the essential question on self-awareness and reflection might be: *Through service-learning, teachers can work collaboratively with students to examine conditions and forces that thwart children's efforts at reaching their full potential and can take action to remove barriers* (Baldwin, Buchanan, & Rudisill, 2007).

Stage 2 of the planning process in UbD, *Assessment Evidence*, involves thinking about and designing assessments and criteria that will provide the necessary evidence to demonstrate that the learning goals identified in Stage 1 have been met (Tomlinson & McTighe, 2006; Wiggins & McTighe, 2005). To build appropriate assessment tasks, Wiggins and McTighe encourage wide conceptualization of the various ways in which a student can demonstrate understanding. Six facets of understanding (i.e., explanation, interpretation, application, perspective, empathy, and self-knowledge) serve to facilitate the development of criteria for assessing the degree of understanding (Wiggins & McTighe, 1998; 2005). When developing service-learning projects, course instructors and community stakeholders can identify assessment evidence by thinking about the impact of the project across the facets of understanding. For example, reflective journal entries serve as assessment evidence for preservice teachers' self-knowledge. Further, the assessment plan can incorporate a mechanism for evaluating the project's impact on perceptions of community stakeholders. The melding of UbD and service-learning requires that community needs and voices be incorporated at all stages of the project planning process.

The final stage of UbD, *Plan Learning Experiences and Instruction,* focuses on how to deliver instruction to support students' understanding. In this stage, designers plan to explore students' prior knowledge and misconceptions, find ways to engage and "hook" students into the learning activities, help students rethink and revise their understandings, differentiate instruction, and create opportunities for students to self-evaluate and reflect on their learning (Tomlinson & McTighe, 2006; Wiggins & McTighe, 2005). Within teacher preparation programs, service-learning projects may include learning activities such as readings related to confronting bias (e.g., Dray & Wisneski [2011] article on mindful reflection), tools to promote critical self-reflection (e.g., reflective journal-writing prompts), and exercises to raise students' awareness of their own privileges and biases (e.g., Olsson's [1988] *cage of oppression*). Further, the needs of the community may drive additional learning activities that would not have been considered had the voices of community stakeholders not been included in planning conversations.

Connection to the Current Study

As a curriculum development model, UbD is recognized as a means to foster enduring understanding and to promote the transfer of knowledge to real-life applications (Wiggins & McTighe, 2011). In the context where course objectives align with community needs, UbD can be applied to service-learning project design. To date, the promise of UbD has not been tested in the context of designing service-learning projects in teacher preparation programs. Our purposes in this case study were (a) to report on the application of UbD to design a service-learning project for preservice teachers in a special education teacher preparation program and (b) to explore the impact of the backward-designed project on the perceptions of university students and community stakeholders. Two research questions guided the study.

Research question one. How can backward design principles be applied to design a service-learning project in a teacher preparation program?

Research question two. What are the effects of a service-learning project developed through

backward design, as reported by university students and community stakeholders?

Method

Participants

A convenience sample of 37 preservice special education teachers who were enrolled in one of two sections of the first author's literacy methods courses participated in this study. Both sections of the course integrated service-learning at a local afterschool program that served elementary students (grades K through 6) from low-income families. In the special education teacher preparation program, enrollment in the literacy methods course coincides with a practicum experience that involves spending two full days per week teaching and learning in a K–12 school and two full days per week attending university classes. The service-learning component of course occurred in addition to the practicum experience. Of the 37 preservice teachers, 35 were White, one was Latina, and one was biracial. All attended a predominantly White public institution in the Midwestern United States.

Community stakeholders included the 40 students in grades K through 6 who enrolled in the community center's afterschool program. A majority of the students were Latinos or Latinas from bilingual (Spanish/English) households and a slightly lower percentage of Black/African American students. In addition, community stakeholders included one program director and four "leaders" who held part-time positions at the community center. The program director held an active teaching license and had taught literacy related content in a middle school setting prior to taking the director position. The program "leaders" were university-level students enrolled in college courses at either the local community college or at the same institution as preservice special education teachers.

Setting

The setting for the service-learning project was an afterschool program for students in grades K through 8. The program was housed at a local community center. In part, the afterschool program was funded through a United Way grant, which required the director to gather evidence on the effectiveness of the afterschool tutoring program. The remainder of the program's funding was secured through donations. The director of the afterschool program had collaborated with the course instructor to implement a previous service-learning project focused on literacy assessment. Thus, the collaborative context for the current project was such that the program director and the course instructor held a reciprocal relationship and shared commitment to the implementation of quality literacy tutoring in the afterschool program. Based on the course instructor's partnership with the community center, she established in her classes a learning community that focused on developing cross-cultural competencies and learning about culturally responsive practices. The structure of collaboration for this case study is depicted in Figure 1.

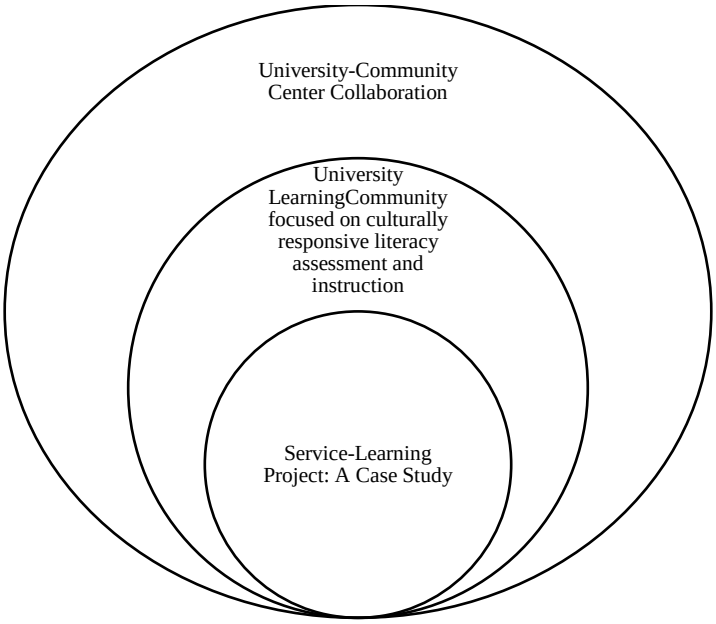

Figure 1. Collaboration structure for the service-learning project.

Project Design Procedures

The development of the service-learning project was guided by UbD, or the principles of backward design. From inception to completion, the project evolved through six phases (see Figure 2). Collaborative planning conversations between the course instructor and afterschool program director anchored the overall design process. Throughout a 15-day period at the start of the semester, the course instructor, preservice teachers, and the program director developed a written set of plans for each of the six phases. Written plans are summarized in Table 1.

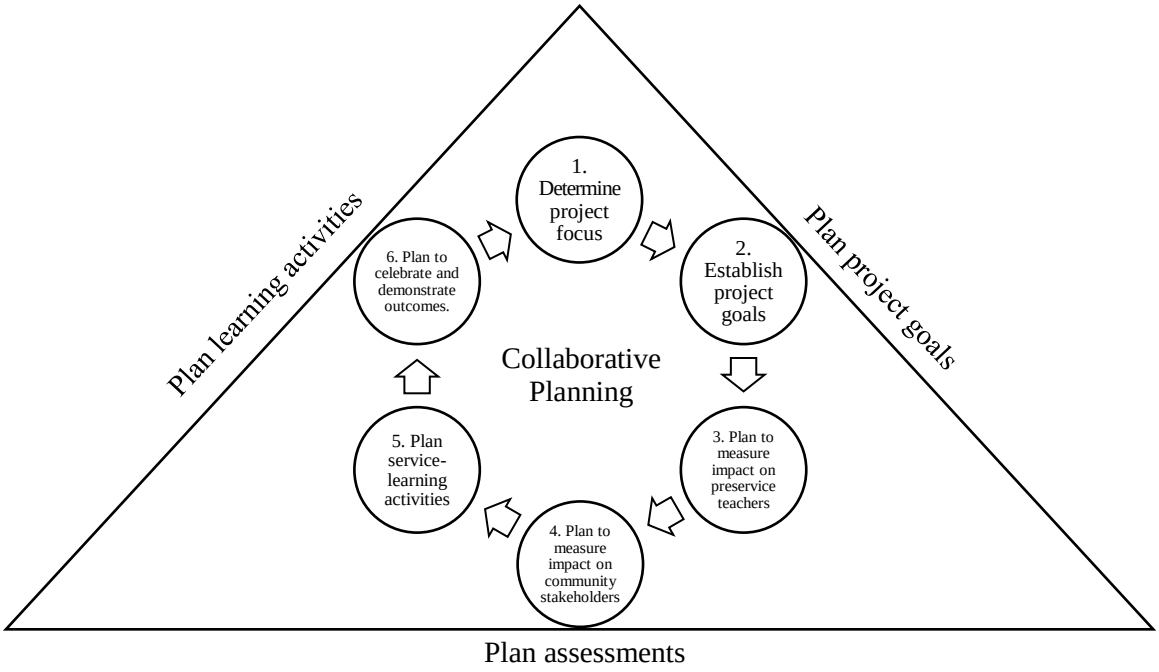

Figure 2. A model for service-learning project design using Wiggins and McTighe's (2005) *Understanding by Design*.

Phase 1: Determine project focus. The focus of the project was established by prioritizing the afterschool program's goals (i.e., to provide individualized literacy tutoring) and analyzing related course objectives (i.e., to apply evidence-based practices for supporting literacy development). To complement this, preservice teachers and the program directors conducted a needs assessment during the first two weeks of the course, which entailed gathering data about the number of K–6 students enrolled in the afterschool program and gathering information about the students' reading interests/background experiences. The program director, the course instructor, and preservice teachers met to establish the focus of the project as developing, tailoring, and implementing literacy tutoring plans.

Phase 2: Develop project goals. Immediately after gaining consensus on the focus of the project, the same stakeholders (i.e., program director, course instructors, and preservice teachers) specified project goals. Through collaborative discussion the overarching goals of the project were to (a) promote reflective practice in preservice teachers and (b) build capacity for volunteers at the community center to implement individualized literacy instruction using culturally responsive pedagogy. With these goals in mind, teams of preservice teachers worked to set short-term benchmarks, which they shared with the course instructor and program director for feedback. Benchmarks included (a) forming a team of four to five members, (b) developing a rotation schedule so that one team member could attend the afterschool program each day of the week, and (c) using needs assessment data to write plans for four to five students who attended the afterschool program.

Phase 3: Plan to measure impact on preservice teachers. Informed by the first two stages of the project planning, the course instructor and program director developed a plan to measure the impact of the project on preservice teachers' learning, particularly in connection with the course objective and the focus on reflective practice. The plan to measure the project's impact on preservice teachers reflected that, as part of required coursework, the preservice teachers would write eight guided reflections as weekly entries in a reflective journal. For this case study, researchers gathered data from preservice teachers' reflective journal entries; they secured approval from the Institutional Review Board to use data for the purposes of research and dissemination.

Phase 4: Plan to measure impact on community stakeholders. In a collaborative planning conversation, the program director and course instructor specified that they would access data sources (e.g., meeting notes, tutoring attendance logs, and tutoring plans) to evaluate the project at the midpoint and at the end of the semester. Moreover, the course instructor and program director designed an informal survey to gain perceptions about the literacy plans from community center stakeholders (e.g., program leaders and students). The survey contained two parts. At the midpoint of the project, part one was administered to the program "leaders" for feedback on (a) the attendance rates of preservice teachers volunteering as tutors, (b) the engagement of students who received literacy tutoring, (c) the overall impression of the tutoring plans, and (d) any challenges or suggestions for improvement. The second part of the survey contained three open-ended questions that were developed by preservice teachers (i.e., what has been the best part of tutoring? What have you not liked about tutoring? What suggestions do you have for making tutoring better?). On a biweekly basis, the preservice teachers administered the survey to students in the afterschool program. The results were recorded on literacy tutoring plans at four points in time and were shared with both the course instructor and program director.

Phase 5: Plan service-learning project activities. Having articulated the project goals and the plan for assessing and data collection, the course instructor and program director brainstormed and selected project activities. In keeping with the tenets of UbD, the project activities were selected to support stakeholders in reaching the overall project goal. As a result, four activities were selected for inclusion. First, the program director designed a face-to-face training in which she engaged preservice teachers in activities and discussion centered around the impact of poverty on literacy development. Second, the course instructor facilitated a 75-minute lecture with embedded video clips and opportunities for discussion that focused on culturally responsive practices and the use of the doors, windows, mirrors framework for selecting culturally relevant text (Bishop, 1990). Third, the course instructor introduced a protocol for mindful reflection (Dray & Wisneski, 2011) and modeled using the protocol to reflect on a shared classroom experience. Over eight weeks of the semester, preservice-teachers were expected to use the process to write one reflective journal entry per week. The development of literacy instructional plans was central to the focus of the literacy method's course; providing feedback on the developed tutoring plans was specified as the fourth activity. A total of eight teams of four to five preservice teachers collaborated to develop five tutoring plans that contained different literacy related activities for each of five school days across eight weeks. The course instructor recorded logistics of the project (i.e., timelines, grading criteria, and schedule) in an electronic document, which was made available to preservice teachers and the program director.

Phase 6: Plan to celebrate and demonstrate project outcomes. Using voices of multiple stakeholders (e.g., the program director, the preservice teachers, and the course instructor) allowed for the design of project that held strong potential for culminating in an opportunity to reflect upon and evaluate the project. The course instructor planned to devote one 75-minute session to in-class debriefing. Likewise, the program director arranged for one afterschool tutoring session to include an opportunity for preservice teachers and elementary students to celebrate their progress and development. These sessions were scheduled into the course calendar early on but purposefully did not specify agendas or outcomes for the sessions in advance. The intention in refraining from a prescriptive approach in phase six was to allow for a genuine celebration and demonstration of how the project evolved over the course of a semester.

Table 1. Service-Learning Project Plan

<table>
<tr><td rowspan="4">Phase 1</td><td colspan="2">Focus of the Project: Literacy Tutoring</td></tr>
<tr><td>Course Objectives</td><td>Community Needs</td></tr>
<tr><td>Apply evidence-based practices for supporting literacy development.</td><td>Provide individualized literacy tutoring to students in the elementary program.</td></tr>
<tr><td colspan="2">Essential Question: How can service-learning help me become a better teacher?
Understanding: Through service-learning, teachers can work collaboratively with students to examine conditions and forces that thwart children's' efforts at reaching their full potential and can take action to remove barriers (Baldwin, Buchanan, & Rudisill, 2007).
Knowledge…… Skills
Inventory biases and engage in critical self-reflection; develop tutoring plans that align with students' background experiences and interests; conduct running records; engage in comprehension-assessment conversations about text; apply the doors, windows, mirrors framework to select texts with and for students; collect, record, and interpret data to monitor reading progress.</td></tr>
</table>

Table 1. Service-Learning Project Plan (continued)

Phase 2	Goals of the Project and Desired Outcomes
	The project will build capacity for volunteers at the community center to implement individualized literacy instruction. *Preservice teachers will engage in mindful reflection as they gather data and design individualized tutoring plans for students in grades K through 6.*
Phase 3	Assessment of Students' Growth and Learning
	Guiding Questions for structured reflection: *What does service-learning reveal about me? What would it be like to walk in [student at after-school program]'s shoes? How are my views about literacy shaped by my assumptions and habits? How can I be a change agent?* X Pre/post intercultural competence survey completion X Reflective journal writing, one entry per week
Phase 4	Evaluation of Perceptions of Community Partners
	The project will begin in the first quarter of the spring semester and will continue until the end semester. The afterschool program director will access data sources (e.g., tutoring logs) to provide feedback to the course instructor at the mid-term and at the end of the semester.
Phase 5	Project Activities and Implementation Plan
	Learning activities to prepare preservice teachers *-Face-to-face training (60 minute) centered around the impact of poverty on literacy development.* *-Face-to-face session (75-minute) focused on culturally responsive practices and the use of the doors, windows, mirrors framework for selecting culturally relevant text (Bishop, 1990).* *-Face-to-face session (30 min) introduce and model using the protocol for mindful reflection (Dray & Wisneski, 2011)* Project activities *-Preservice teachers form teams of four to five. They develop a tutoring rotation schedule and collaborate to design and individualize literacy plans to follow and resources to use during tutoring sessions.* *-Preservice teachers maintain a reflective journal with a minimum of 10 entries (once per week of tutoring).* *-Teams of preservice teachers submit their tutoring plans and lists of resources on a bi-weekly basis for feedback from the course instructor.*
Phase 6	Demonstration and Celebration
	During the final week of the semester, a session will be devoted to project reflection. Following this, a final celebration event will be held at the community center (with activities to take place inside and outside, weather permitting).

Data Analysis

Upon the completion of the service-learning project, researchers reviewed the written plans for the project, notes from project meetings, responses from program "leaders" on their perceptions of the tutoring, and separately read preservice teachers' reflections to establish a general sense of the data. Tutoring plans in their entirety were not included in the research team's data analysis; however, the responses or dictated responses from students about their perceptions of tutoring were extracted from four sets of plans per student and were read by the researchers alongside the previously listed written records. After the initial pass at reading all data sources, researchers

conducted a second reading to distill themes related to design process itself and to the development of reflective practices. The researchers independently generated codes to categorize the data, which were subsequently discussed and applied to determine overlaps and contradictions (Patton, 1990). Through discussion and collaboration, six codes were generated: (a) feasibility and manageability, (b) project transparency and shared responsibility (c) problem-solving and flexible thinking, (d) diversity, (e) relationship-building, and (f) critical self-reflection. Based on the codes, the research team searched for patterns and subsequently generated unifying assertions.

Results

Application of Backward Design Principles on Project Development

Planning documents reflect that the stakeholders (i.e., course instructor, program director, and preservice teachers) were able to schedule and conduct three planning sessions that lasted approximately 30 minutes each during the first three weeks of the spring semester. In a total of 90 minutes, project plans (as reflected in Table 1) were established. In terms of feasibility, this consumed less than 20% of the scheduled class time during the initial three weeks of the semester.

Once the project advanced from planning into the implementation phase, the course instructor and program director planned one 15-minute check-in meeting at the midpoint in the semester. This checkpoint conversation took place outside of regularly scheduled class time. At the end of the semester, the course instructor planned one 75-minute class period to focus solely on the service-learning project. Thus, the project absorbed 165 minutes of class time and required up to 45 hours of preservice teachers' out-of-class time, inclusive of planning and on-site participation at the community center.

Review of cumulative meeting notes as well as feedback from the program "leaders" director revealed strengths and weaknesses of the project's design. On the whole, the community center staff members shared favorable impressions of the project's goals, procedures, and outcomes. Specific comments addressed how preservice teachers brought forth innovative ideas that were beneficial to the community center's afterschool program. In connection to this, program leaders noted that individual tutors seemed to incorporate students' interests in the plans. Moreover, the director noted that preservice teachers entered the setting with alacrity, eager to work with students each day. She indicated that students did not always match this level of enthusiasm but that preservice teachers were interested in trying their best to make the sessions interactive and engaging. Likewise, the course instructor noted that preservice teachers' written reflections included thoughts that indicated engagement in critical self-examination while also signifying recognition of the value of planning activities that would interest and engage students whose fatigue was high at the end of the school day.

The project director's concerns at the project's midpoint focused on the format and accessibility of the tutoring plans and adjacent resources that were embedded into the plans. For example, the plans were developed electronically but delivered in single hard copy. Since tutors rotated their attendance across the days of the week, the single hard copies became misplaced on occasion. In addition, some of the resources referred to in the tutoring plans (e.g., texts or materials) were not consistently accessible across sessions. From the program "leaders," suggestions at the midpoint included requests related to using technology and incorporating more movement as part of the lesson plans. The course instructor's concerns at the project's midpoint reflected some tension between the complexity of the tutoring plans and the richness of the written reflective entries. For example, a pattern emerged wherein tutoring plans were developed

thoroughly and were aligned closely with students' interests and needs, but the written reflections were shorter and more focused on surface level observations.

After the midpoint check-in conversation, project notes reflect that adjustments were made to the project's initial plans. These included having preservice teachers prepare "tutoring binders" that included multiple copies of lesson plans. In addition, several copies of text-based resources were prepared or secured from the library ahead of time and were included in the binders. In addition, the course instructor recorded that she addressed midpoint feedback in two ways. First, she devoted class time to a discussion and activities on ways to build reading motivation and offered examples of technology-based resources that incorporate opportunities for movement (e.g., the go noodle website). Then, she asked preservice teachers revisit the project's plans and reevaluate their personal schedules to allot adequate time for commitment to developing quality plans and for crafting thoughtful reflective journal entries.

Notes from the culminating event, where project outcomes were celebrated, reflect that the program director, students enrolled in the afterschool program, and the preservice teachers shared genuinely favorable impressions of the project. In addition, feedback from each student at four points in time throughout the project showed patterns where some students (n = 4) consistently expressed a dislike of tutoring and offered suggestions of "not having tutoring" at the beginning of the project. By the sixth and eighth weeks of the project, each student named at least one aspect of tutoring that they liked best (e.g., bilingual books, break breaks, hangman games, Reader's theatre, and flashcard drill games). Suggestions for change included offering titles of books that students wanted to read (e.g., Harry Potter books), offering suggestions for how to structure the time (e.g., read aloud one chapter to me and then I will take turns), and offered suggestions of other materials to incorporate into tutoring (e.g., use mini white boards more). The notes taken during the end-of-semester debrief reflected that preservice teachers shared that their participation in the project (a) promoted a sense of civic engagement and (b) supported development of reflective thinking.

Project Impact on the Development of Reflective Practice

Written reflections from the 37 preservice teachers contained salient themes of diversity, relationship-building, and flexibility, which emerged as they began to recognize and affirm within themselves a disposition for teaching in diverse settings, such as the one afforded at the afterschool program. These themes developed over time, as a common aspect of reflective journal entries written early on in project implementation was a sense of nervous excitement and self-doubt. One preservice teacher wrote,

> At the same time, I am a little nervous about this new experience. It is human nature to be nervous going out of your comfort zone. I only know the home life and school setting that I have experienced myself. I grew up in the [city name redacted], my family is in the upper-middle class socioeconomically, my parents are married, I am a college student; these are the experiences I am walking in with. I am nervous to see how my bias and privilege effect my subjectivity. I know that it might not be easy at first to check my privilege and bias and sometimes I may feel out of place in this new setting. But, the only way to become more familiar and comfortable with these "self-checks" is to emerge myself into situations where I am able to practice. With practice, these self-checks will become second nature and something I do while I am teaching in front of my classroom mindlessly.

As a result of participating in service-learning and "stepping outside of one's comfort zone," preservice teachers commonly named the benefit of gaining a "broadened worldview." For example, one preservice teacher wrote,

> This experience helped me step outside my comfort zone. It opened my eyes to a lot that goes on this community that I don't see on campus. I have constant access to food, but this is a huge issue in this community. I have been able to learn so much more about the impact of poverty on a child's experience. I don't know who my future students will be or what their socioeconomic status will be, but I will definitely remember this experience for the rest of my life.

The urgency and necessity of broadening their worldviews was captured across multiple participants' journal entries. A common occurrence was participants' recognition of the lack of diversity in their own educational backgrounds. One participant offered, "If I only connect with students whose backgrounds are similar to mine, I might be able to reach 85% of the students [at the school in my home town], which may seem high, but in reality all I am doing is furthering the culture of power and inequality."

Another theme in the development of critical self-reflection occurred at the point where preservice teachers had visited the tutoring center for their third or fourth session. The relationships they were building started to become more obvious, and simultaneously, preservice teachers' self-awareness revealed that they recognized when they were "being quick to judge." Many preservice teachers reconciled the experience of naming their implicit biases by sharing insights on the value of "walking in another's shoes." One preservice teacher wrote,

> As I walked into the gym, I overheard one child whine, "I am going to be at for the rest of my life." With that, he slouched down in his chair and put his head on the table. It was then that I realized that I was voluntarily there and excited to be spending my afternoon at the program. However, the students had gone to a full day of school and now would continue working for another two hours. I could understand why the students were hyper and not wanting to focus, they have had a long day and were not excited to finish their days doing school work. One important lesson for me has been a reminder to put myself in my student's shoes and understand the other factors that are contributing to their behaviors and backgrounds. This will help me be a more successful teacher.

None of the participants specifically named the protocol for writing mindful reflections as instrumental to their practice of examining potential biases; however, the adherence to this protocol in their journal entries allowed for recognition of unchallenged assumptions. For example, one student wrote about learning to read into the underlying functions of students' behavior, which afforded flexibility and responsiveness to support student learning. This was also conceived as "problem-solving" or "thinking on my feet" opposed to the rigid adherence to prescribed tutoring plans. An example of this took shape when one preservice teacher wrote about how she turned a rhyming task into a game that involved physical movement. The preservice teacher perceived that the student was reluctant to work due to boredom or fatigue, so she used a basketball and bounce-passing as a way to engage the student in completing the rhyming exercises.

On the whole, preservice teachers reflected on their identities, biases, and understanding of community needs. Their participation in a service-learning project that was developed through the backward design process positioned them to achieve the goals of (a) developing skills and competencies necessary for engaging in reflective practice and (b) generating individualized tutoring plans that could meet needs of elementary students enrolled in the afterschool program.

Discussion

The principles of backward design, when applied to curriculum development, have led to increased rigor and overall improved course quality (Michael & Libarkin, 2016; Minbiole, 2016). Given its solid foundation as a model for curriculum development, we offer an initial effort to leverage Wiggins and McTighe's (1998, 2005) UbD model toward the development of a service-learning project in a teacher preparation program. Results suggest that the principles of backward

design, when applied through collaborative conversations with community stakeholders, can be used to design a mutually beneficial service-learning project. Moreover, the process of *planning with the end in mind* allowed for community and university stakeholders to work toward fulfilling clearly defined, mutually established goals. In addition to clear goals, the application of UbD fostered transparency with the project's procedures and outcomes. Results obtained in this case study show that developing clear project plans through the backward design process translated into a shared sense of responsibility and purveyed meaningful and relevant actions that met both community and curriculum needs.

The results of integrating a collaboratively designed service-learning project into a teacher preparation program support previous findings on the positive impact experienced by preservice teachers and community stakeholders (e.g., Baldwin et al., 2007; Lake & Jones, 2008). With the project's focus on developing reflective practice, authors extend the findings of previous service-learning research by not only offering an application of the backward design process but also uncovering project-related factors that supported preservice teachers' development of reflective practice. To begin with, many preservice teachers who participated in this study were able to articulate their own development of a sense of agency (e.g., feeling empowered, ready, or eager to teach in diverse settings) as well as their increased awareness of systems that put service recipients in the position to "need" service. Others, however, focused their reflective writing on feeling proud of the time and effort they put forth into participating in the project but did not explore the experience through a social justice lens. One factor that related to this pattern of difference was cumulative hours of practical experience. The preservice teachers who acquired a greater number of clinical hours on site at the community center wrote reflections that pushed past surface-level experiences, regardless of the content of the guided refection prompts. In the teacher preparation programs, reflection is a required component of clinical experiences. A viable explanation for this may be that more practice with reflective writing allows for richer written reflections.

Another factor that contributed to the richness of preservice teachers' written reflections was the setting in which service-learning took place. The service learning experiences elicited leadership skills, innovative practices, and coordination of activities (e.g., conducting needs assessments, attending planning meetings, participating in training sessions) to meet identified community needs. The setting for the project was selected with intention, after the course instructor and program director established a collaborative relationship. Ultimately, the setting and the nature of the university-community relationship played a role in influencing the relationships and connections that preservice teachers formed with the students at the community center. As an illustration of this, 12 of 37 preservice teachers continued to volunteer at the center after the project concluded. Service-learning projects, designed and evaluated with community stakeholder input can build lasting relationships. We offer that the design and outcomes in this service-learning project reflected authentic relationship building. As such, we see ways in which this project deviated from Butin's (2003) critique of traditional service-learning as a "voyeuristic exploitation of the cultural other that masquerades as academically sanctioned service leadership" (p. 1675).

A final factor that nurtured the results reported in this case study may directly relate to the intentional planning and implementation of guided reflections. The guided reflections included prompting questions as listed in Table 1. In some cases, the questions sparked prolific and insightful responses. Yet, in other cases, the questions generated responses that were generic or trite. The use of Dray and Wisneski's (2011) mindful reflection protocol in addition to the project's guiding questions helped to promote the practice of reflective writing. However, to sustain this practice, the course instructor recognized that her feedback to preservice teachers was necessary.

Indeed, writing a journal entry is not the only way to engage in reflective practice. In this project, journal entries served as a direct path to preservice teachers' reflective thinking. In the future, a recommendation is to incorporate a structure to facilitate reflective dialogue between the course instructor and the preservice teachers.

Limitations

A number of factors limit this case study's findings. To begin with, the backward design process was applied in only one undergraduate course in this study. The course instructor and community stakeholders had established a collaborative relationship prior to the start of the study. As a result, the feasibility of project plan development as demonstrated in this study may not transfer to other contexts. For instance, in cases where less familiarity exists between the university and community partner, the process of using backward design to collaboratively develop a service-learning project may require more time than was required in this study.

A second limitation relates to the data sources analyzed in this study. Heavy emphasis was placed on collecting and analyzing data from secondary sources (e.g., meeting notes and completed planning documents). In evaluating the application of UbD and in evaluating project outcomes, these data sources reflect subjectivity on the part of the course instructor and/or program director, both of whom communicated an interest in and investment in the project. Video recording or direct observation of actual meetings did not take place. Therefore, it is not possible to detect whether unreported challenges or successes took place. In the future, including opportunities for direct observation will allow for objective observations.

Next, the design of this case study was such that results in terms of the development of reflective practices were situated in the context of a project developed through backward design. Therefore, researchers can report only that the backward design process led to the development of a project that fostered reflective practice for preservice teachers and that generated reports of favorable impressions from community stakeholders. Nevertheless, questions remain about how outcomes of projects designed with and without UbD might compare. Further, the lasting effects of project participation were not assessed. Therefore, questions remain as to whether reflective practice garnered through this project transfer to future clinical experiences.

Implications for Practice

The effectiveness of service-learning attracts the attention of course instructors in teacher preparation programs. The process of designing a service-learning project, however, can seem daunting to novice and veteran instructors. In response to this, we offer suggestions that relate to our experiences with project design and project implementation. To begin with, we found that Wiggins and McTighe's (1998, 2005) UbD model was amenable to service-learning project development. The procedures described in this report and the template onto which Table 2 is crafted can serve as a model to practitioners who seek to design service-learning projects through collaborative conversations with community stakeholders. By following the backward design process, project goals were mutually developed and stated clearly at the outset. In implementing the service-learning project, we found that adjustments were needed at the midpoint. From a pragmatic perspective, it is plausible that a need for change could have been detected earlier and that changes could have been implemented on a more frequent basis. Thus, we offer a suggestion to design frequent formative assessments during phases three and four of project development cycle. Given the positive experiences garnered through applying UbD to service-learning project design, we aim to include a more formal project evaluation component in our next project.

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