The Impact of Service-Learning Engagement on Teacher Candidates in an Elementary Education Literacy Course

Laura Piestrzynski[1] and and Jillana Williams[2]

Abstract

This study examined the experiences of elementary education teacher candidates in a service-learning literacy methods course in which they were placed in two public school settings—one urban elementary school and one urban laboratory school. This was teacher candidates initial field experience in elementary classrooms. Teacher candidates explored various aspects of literacy assessment and instruction, particularly ways to assess students and use assessment results to screen students, monitor students' progress, and provide effective instruction. Candidates reflected regularly on their practice and participated in discussions with classroom teachers, peers, and university faculty. The research was conducted using a mixed methods design which included analysis of a survey and nine critical reflections. Findings indicated that teacher candidates' service-learning experiences provided opportunities to engage in teaching and reflect on practices while connecting with their school communities. Teacher candidates described the impact from their work in the classroom, exposure to schools and student populations that were previously unfamiliar to them, and participation in a service-learning model that focused on critical reflection.

Key Words: Service-learning, community, mixed methods

Introduction

Field placements are an essential component of teacher education programs. Pre-service teachers should be engaged frequently in field experiences across different settings. In the last few decades, more universities integrated service-learning opportunities into their field placements to promote a deeper understanding of course content, pedagogy, and community. Teacher educators believe that service-learning is valuable because theory and practice are intricately connected (Resch & Schrittesser, 2023). Service-learning courses include experiences and critical reflections as the foundation for learning (Jacoby, 2015). By integrating a meaningful service-learning component into required field experiences, pre-service teachers are encouraged and supported to become an integral part of the school community. Bringle and Hatcher (1996, 2003) asserted that service-learning approaches allow for a "course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such

[1] Louisiana State University, USA, lpiestrzynski@lsu.edu, ORCID: 0000-0001-5351-7976
[2] Louisiana State University, USA, jcava18@lsu.edu, ORCID: 0009-0009-2191-784X

a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility" (p. 83). Kruger et. al (2017) stated that "teacher preparation involves authentic experiences for candidates to observe first-hand high quality, accessible, culturally responsive caregiving to develop reciprocal relationships with families and communities" (p.47). Service-learning provides important opportunities for students to practice teaching strategies that address issues that are vital to school communities. The purpose of this study was to examine pre-service teachers' experiences in a literacy methods course that included a service-learning component. We defined service-learning as a field experience in an elementary school classroom with the purpose to develop understand of and support for literacy development, which was identified as a need within the school, and to critically reflect on the experience to enhance students' learning of course content, identity as future teachers of literacy, and understanding of community. Our definition aligns with Bringle and Hatcher's (1996, 2003) description of service-learning approaches.

This study examined the experiences of elementary education teacher candidates in a service-learning literacy methods course in which they were placed in two public school settings—one urban elementary school and one urban laboratory school. The students were concurrently enrolled in additional service-learning courses. In this semester long program, students spent six hours a week in each school, for a total of twelve service-learning hours weekly. The service-learning model partnered our university with local schools which increased community engagement and exposed teacher candidates to diverse teaching environments. We analyzed participants' experiences and perceptions using a survey and critical reflections completed by participants over the course of the semester. This study focuses on the following research questions:

1. How do pre-service teachers describe and engage in literacy practices during a service-learning experience in urban schools?
2. What reflections do pre-service teachers provide about their experiences with students and their understanding of the methods and approaches used for literacy instruction?

Theoretical Framework and Literature Review
Theoretical framework
This study employed two theories to frame this work. The first is the work of Shulman (1986) who highlighted the importance of pre-service teachers having content knowledge and pedagogical content knowledge. This work is seminal in the teacher education field as he shifted the conversation from teacher preparation focusing on aspects such as classroom management to the importance of teacher candidates having a firm understanding of the content they are teaching. He asserted that teachers must not only know the content of the subject they are teaching but must also "…further understand why it is so, on what grounds its warrant can be asserted, and under what cir-

cumstances our belief in its justification can be weakened and even denied" (p. 9). An essential part of a teacher education program is ensuring that teacher candidates have a deep knowledge and understanding of the content in which they will teach. In addition to content knowledge, he also emphasized the importance of a teacher's pedagogical content knowledge or the way in which a teacher makes content understandable for students. He emphasized the importance of subject matter knowledge and understanding the effective methods for teaching that include both comprehensible delivery and awareness of the possible student misconceptions. Teachers require knowledge of the content, an understanding of what makes learning specific topics easy or difficult, and a diverse set of instructional practices that make content understandable to all students. In teacher education programs, pedagogical content knowledge is often one of the tenets of the program.

In addition to Shulman's concepts of content knowledge and pedagogical content knowledge, Jacobs (2018) introduced a framework for understanding additional components of practice that are present in urban field experiences. Jacobs expanded on the work of Shulman by recognizing content knowledge and pedagogical content knowledge, and then adding community and cultural knowledge, and critical self-knowledge. Her four-part model served as an integral frame for this study. According to Jacobs (2018), it is imperative that teacher candidates have meaningful field experiences and methods courses that provide them not only with pedagogical and content knowledge, but also provide the opportunity for critical reflection and increased exposure to various cultures and communities which are strategies that reflect the tenets of culturally responsive pedagogy (CRP). CRP is used as a framework in many teacher education programs. CRP requires teachers to recognize the intersecting mechanisms that impact learning including teacher identities, student identities, and teaching practices. Culturally responsive practices include identification of potential biases, knowledge of students, recognition of differences to implement supportive practices, and community building. Unfortunately, "…often discussion of CRP or critical reflection is part of field experiences or social foundations courses, but not integrated into methods instruction" (Jacobs, 2018, p. 1543). It is this separation of field experience and methods courses that can send a message to pre-service teacher that content knowledge is separate from community or cultural knowledge. Jacobs called for field experience, particularly those in urban settings, "…that explicitly explores the tensions and overlap of content knowledge, pedagogical knowledge, self-knowledge and culturally/community knowledge" (p. 1543). While this integration of methods and field experience is difficult, Jacobs asserted that this intersection is necessary for teacher candidates to have critical practice-based field experiences. This study sought to describe student experiences with service-learning in a literacy methods course.

Literature review

Numerous studies have reported the benefits for students who enrolled in university courses with service-learning components. Some students identified a positive influence on practical skill development (Lester et al., 2005). In other words, service-learning improved students' practical knowledge that supported completion of a task or process. Other students reported that service-learning provided an opportunity to increase citizenship skills (Caspersz & Olaru, 2017) which promotes participation as a full member of society. In pre-service teacher education courses, students reported positive effects on personal and professional development. They discussed growth in confidence, empathy and compassion, and respect for others (Lavery & Sandri, 2021). In a reading course, students exhibited in-depth understanding of reading behaviors, significant commitment to student success, and increased belief in their ability to teach (Griffith & Zhang, 2013). Pre-service teachers also reported greater willingness to include diversity following service-learning experiences (Mergler et al., 2017). Interestingly, even when students have never participated in courses with service-learning components, they have reported that service-learning experiences are valuable (Bordelon & Phillips, 2006).

When academic course work is connected to service-learning experiences, there is a positive impact on pre-service teachers' belief in their ability to be effective classroom teachers (i.e., self-efficacy) (Bernadowski et al., 2013; Griffith & Zhang, 2013; Gutzweiler et al., 2022). Bandura (1986) defined self-efficacy as a person's belief in their capability of achieving a specific result. For teachers, self-efficacy develops through experiences both in and out of the classroom. Hoy et al. (2009) determined that higher teacher efficacy beliefs were associated with greater effort, persistence, and performance. Development of self-efficacy is important for new teachers and can be cultivated by coursework and service-learning experiences.

Jacoby (2015) believed that critical reflection was essential for optimal learning to occur during experiences. Reflection activities prepare pre-service teachers to be effective teachers for all students by nurturing their teacher identity, understanding of student motivations, development of teacher practices, and understanding of the importance of community engagement (Tinkler et al., 2019). Maynes et al. (2013) recommended including reflection to provide opportunities to explicitly describe service-learning experiences and knowledge growth. Otherwise, student learning is not fully expressed or known. Critical reflection both deepens student knowledge and documents student learning for assessment (Ash & Clayton, 2009). Critical reflection provides an important opportunity for students to synthesize course content and field experiences.

While research has demonstrated positive impacts, incorporating service-learning into teacher education programs requires considerations. These include partnering with community members who offer opportunities that align with course learning out-

comes and maintaining communication with partners to ensure that expectations are being met (Jacoby, 2015). In addition, students may encounter new experiences that are different from their own schooling experience. These situations create opportunities for students to reflect and grow in their understanding of what it means to be a teacher for all students.

Methodology

This project focused on pre-service elementary education students who participated in service-learning as part of an elementary teacher program, and more specifically, a literacy ion methods class that included a service-learning component. This class included lectures and field experiences. The study was conducted using a concurrent triangulation mixed methods design. Creswell et al. (2003) recommend using this design to minimize weaknesses present in performing either quantitative or qualitative research and to increase strength of the findings. For this study, the chosen design increased the validation of the findings. Two sources were used for data collection—a survey given at the end of the course and nine critical reflections that participants completed over the course of the semester. The Institutional Review Board at our university approved this study.

Participants

Participants were undergraduate elementary education students, focusing on grades one to five, who were enrolled in one section of a university course on assessing and guiding classroom literacy instruction, a requirement in the elementary education program. There were 18 students enrolled in this section and all 18 students agreed to participate in the study. The participants were in the third year at the university and the first semester of the teacher program when the data was collected.

Context

Our university offers a graduation distinction known as the Engaged Citizens Program. The university's Center for Community Engagement, Learning, and Leadership (CCELL) offers this distinction to students who take at least 7 credit hours of service-learning courses. CCELL also provides summer training to faculty who are interested in integrating academic service-learning into courses. Jacoby (2015) defined service-learning as hands-on education in which students participate in activities that support an identified community need. Service-learning does not end with engagement but continues with reflection about the experience. Student learning is only one side of service-learning. The other side is community outcomes. One should not exist without the other. This description framed the service-learning experience in the current study.

The course used in this study was one of 5 courses elementary education majors

completed in the first semester of their third year. For this course, teacher candidates met in class each week for 2 lecture hours and then spent 2 field hours in an elementary school. The other fall courses included: reading, writing, and oral communication (3 lecture hours; 6 field hours); planning, managing, and evaluating school instruction (2 lecture hours; 2 field hours); integrating children's literature across the disciplines (3 lecture hours); and integrating the arts (2 lecture hours; 2 field hours). In total, students spent 12 field hours in elementary schools each week, observing, participating, and instructing.

In the elementary education pre-service literacy course in which this study took place, the primary service-learning goals were to:

• develop an increased sense of civic awareness and engagement regarding literacy education.

• consider literacy learners' academic, social, and cultural capital when interpreting assessment results, selecting reading materials, and designing differentiated reading and writing instruction.

• consider one's own academic, social, and cultural capital regarding assumptions and perceptions when interpreting assessment results, selecting reading materials, and designing differentiated reading and writing instruction.

• engage in structured reflection that allows for the application of a social justice lens regarding methods and approaches to literacy assessment and instruction.

These goals were used as guidelines for developing critical reflection questions that required students to examine their experiences with students and their understandings of the methods and approaches used for literacy instruction.

Setting

Participants were placed in two public elementary schools for their field placement. The 18 pre-service teachers were placed in pairs across nine classrooms at each site. Site 1 was an urban K-5 elementary school in a large urban school district. The school included traditional, special education, and gifted and talented classrooms. The pre-service teachers were placed in grades 1-5. Four pairs were placed in gifted classrooms and 5 pairs were placed in traditional classrooms. Site 2 was a public laboratory school operating in partnership with the university. The teacher candidates were placed in grades 1-5 at this location. All pairs were placed in traditional classrooms.

Data collection

For the quantitative portion of this study, the researchers created a 24 question Likert scale survey for participants to complete. The first researcher created a list of questions to address the four critical knowledge areas recommended by Jacobs (2018): pedagogical content knowledge; critical self-reflection; content knowledge; commu-

nity and cultural knowledge. The questions were based on Shulman's (1986) concepts of content knowledge and pedagogical content knowledge and Jacobs' (2018) additions of community and cultural knowledge, and critical self-knowledge. The second researcher verified that each question addressed the intended knowledge area. To determine validity, both researchers discussed each question to determine if it would address what was intended and if the question required revision for clarity. The purpose of the survey was to measure participants' engagement in service-learning at the conclusion of their experience. To achieve reliability, both researchers agreed to administer the survey within one week of field experience completion. Each construct contained six items for participants to answer according to the following scale: strongly disagree, disagree, neutral, agree, strongly agree. The 24 prompts are listed in Appendix A.

For the qualitative portion of the study, the researchers created critical reflections which asked students to apply the concepts they read and discussed in class to their understanding of experiences with literacy learners. Reflection is a key component in service-learning courses, and assignments are designed to address both academic and service-learning goals (see Appendix B).

Analysis

In order to describe pre-service teachers' service-learning field experiences, first, we analyzed the quantitative data. We assigned numerical values 1-5 to each Likert scale response: strongly disagree, disagree, neutral, agree, strongly agree. Then, we obtained descriptive statistics, including the means and standard deviations for each survey question and for each section pedagogical content knowledge, critical self-reflection, content knowledge, community and cultural knowledge) within the survey. Next, we conducted a one-way ANOVA in SPSS to compare the means of the four categories.

Second, we analyzed critical reflections using qualitative analysis techniques. Participant identification numbers were assigned to each critical reflection (e.g., Participant 1, Participant 2, Participant 3, etc.) The critical reflections were deductively coded in NVivo using the four concepts identified in the literature review: pedagogical content knowledge, critical self-reflection, content knowledge, community and cultural knowledge). Bingham and Witkowsky (2021) describe qualitative deductive analysis as a concept-driven process that uses literature to define codes prior to analysis and the examines the data to decide how the data corresponds to codes. Analysis of the data was grounded in the assertion that reflection during field experience deepens course content knowledge (Bringle & Hatcher, 1996; Bringle & Hatcher, 2003) and the overlapping components of practice (i.e., four categories) that exist during field experiences in urban schools (Jacobs, 2018). Our codes, explanations for each code, and examples that were coded from critical reflections are listed in the *Service-Learning*

Impact Codebook (Table 1). Each example was from a single participant. Participant identification numbers are included with each example. Then, we calculated the relative frequencies for each category to determine how often students provided reflections in each of the four practice categories. Determining the relative frequencies was important because it enabled us to analyze both the students' experiences during service-learning and the effectiveness of our critical reflection questions in prompting students to consider their observations, implementation of practices, and broadening understanding of what it means to be a teacher of literacy. Next, we looked through the coded data within each category to further identify patterns and themes.

Table 1.

Service-Learning Impact Codebook

Code	Explanation	Critical Reflection Example
Pedagogical Content Knowledge	Students applied content knowledge to teaching students and understanding what may make these topics attainable or unable to students (Shulman, 1986).	"Discussing PASS Assessment…I think it is important for teachers to administer this assessment in elementary classrooms so they can see where their students are struggling. The teacher will have a better idea of their students' skill level and where some may need extra work." (Participant 1)
Content Knowledge	Students demonstrated their understanding of the literacy assessments introduced.	"The PASS assessment is used to assess a student's ability to decipher different syllables, sounds, and letters in words. It is important for a teacher to use this in their classroom because each section is focused on a certain topic." (Participant 2)
Critical Self Reflection	Students self-reflected personally and professionally in relation to field experience.	"I learned that I am more patient than I thought. I've been working on my patience because I normally don't have much, but I was surprised to find that I had a lot of patience while working my student on these assessments." (Participant 3)

Community and Cultural Knowledge	Students described the sense of community in their field experiences.	"This first experience was not exactly what I expected. I had initially thought that we would get a teacher that would make us sit in the back of the classroom and watch her teach. We are so blessed with a teacher that is kind and wants us to form connections with these students and help them academically. That is exactly what we did on our first day. When we left, the students were wondering about when we were going to come back." (Participant 4)

Findings
Quantitative results

We conducted a one-way ANOVA to compare the overall means for each section of the survey. The one-way ANOVA indicated no significant statistical difference in participant survey responses between the four categories $F(3,68) = 0.803$, $p = 0.496$. These findings suggest that participants responded similarly to prompts related to pedagogical content knowledge (M = 4.6, SD = 0.4), critical self-reflection (M = 4.6, SD = 0.4), content knowledge (M = 4.7, SD = 0.4), and community and cultural knowledge (M = 4.6, SD = 0.5). The mean score for each category indicated that participants mostly responded in agreement or strong agreement to survey prompts.

Pre-service teachers responded to six prompts regarding pedagogical content knowledge and the service-learning experience. All respondents agreed that the service-learning experience helped them to apply course content to classroom situations, learn how to assess students' literacy abilities, and understand how to analyze literacy assessment. The majority of the pre-service teachers (83.3%) discussed teaching practices with their placement teacher and were provided the opportunity to plan differentiated literacy instruction based on literacy assessment.

Pre-service teachers responded to six prompts regarding content knowledge and the service-learning experience. All respondents agreed that the course helped them to understand how students' literacy skills develop and how to apply course content into classroom teaching. Almost all pre-service teachers (94.4%) agreed that the service-learning experience helped them to understand course material and prepare them for lesson planning for diverse groups of students.

Pre-service teachers responded to six prompts regarding critical self-reflection

and the service-learning experience. All respondents agreed that the service-learning experience provided important opportunities to critically reflect on their professional development. More specifically, respondents believed that the service-learning experience helped them to identify personal strengths and areas for growth, contribute in their placement classroom, understand their role as a future literacy educator, improve literacy knowledge and teaching practices, and gain teaching methods and approaches related to utilizing literacy assessment and instruction. The majority of pre-service teachers (72.2%) agreed that the experience made them more aware of some personal biases and prejudices.

Pre-service teachers responded to six prompts regarding community and cultural knowledge and the service-learning experience. All respondents agreed that they have a responsibility to serve the community and that the experience enhanced their understanding of students' experiences and cultural backgrounds. Almost all of the pre-service teachers (94.4%) agreed that they became more aware of the needs in their community and that the experience increased their knowledge about diverse populations in multiple school settings. The majority of respondents (77.8%) believed that the teaching placement showed them how to be more involved in their community.

Qualitative results

As part of the course requirements, the pre-service teachers completed nine critical reflection assignments. Each critical reflection prompted students to answer two to five questions regarding their field experience, application of course content, understanding of literacy development, assessment, and instruction, and/or their growth as future literacy teachers. All critical reflections were coded by reference to pedagogical content knowledge, critical self-reflection, content knowledge, and community and cultural knowledge categories. A total of 650 units were coded. The total number of references and relative frequencies for each category were calculated. Pedagogical content knowledge was coded the most often with 368 references (56.6%). Content knowledge had a total of 156 references (24.0%). Critical self-reflection had a total of 96 references (14.8%). Community and cultural knowledge had a total of 30 references (4.6%). The *Relative Frequencies of Practice Categories* table lists each category, the relative frequency, and total number of references.

Table 2.

Relative Frequencies of Practice Categories

Category	Relative Frequency	References
Pedagogical Content Knowledge	56.6	368
Content Knowledge	24.0	156
Critical Self-Reflection	14.8	96
Community and Cultural Knowledge	4.6	30
Total	100	650

The following sections contain examples and descriptions of participants' critical reflections that corresponded to the four concepts identified from the literature.

Pedagogical content knowledge

In this study, participants reported growth in pedagogical content knowledge resulting from first learning course content and then applying new knowledge during field experiences. Teacher candidates attended weekly lectures in which they learned about components of literacy, literacy assessments, and how to choose appropriate instructional practices based on the results of literacy assessments. Thus, this model afforded the opportunity for teacher candidates to apply course content knowledge directly during their field experience which required demonstration of content knowledge and pedagogical content knowledge.

In a critical reflection that asked students to discuss their administration of the Quick Phonics Screener (QPS) (Hasbrouck & Parker, 2001), Participant 5 reflected on their field experience by writing:

The QPS assessment tests students' phonological abilities in progression
from letter sounds to whole words. This is an important assessment because it
requires less time than the other formal assessments I have completed, and it
can provide a snapshot of the phonological level a student is at. I completed
this assessment with my student John and found he understands individual letter
sounds but struggles with letter parings. This information can help me develop
a lesson that will directly address his weakness and build on his strengths (Critical
Reflection #3).

Participant 5 demonstrated their understanding of the student's level and how to use this information to plan for instruction. However, they used incorrect terminology when describing the purpose of the assessment. They stated that the assessment was to determine phonological skills instead of phonics skills. This showed their current

level of understanding and identified the need for in-class discussion about the differ-
ences between phonological awareness and phonics. Teacher candidates had multiple
opportunities to express and develop their pedagogical content knowledge.

Participant 6 provided a different perspective by first discussing their growing
knowledge, and then identifying the need to develop instructional practices that sup-
port students. Participant 6 provided the following reflection:

> *I have learned so much from these assessments and material learned in class
> from the past few weeks. The main thing that I have realized is that there is
> so much more to teaching phonological skills than I thought! It does not scare
> me but makes me more excited to learn and understand how to teach this to
> students. I also realized the importance of checking in on students and giving
> them assessments to see where they stand* (Critical Reflection #3).

Both teacher candidates discussed how field experiences connected course con-
tent and instructional practice. Across all critical reflections, teacher candidates most
frequently wrote about teaching practices that required pedagogical content knowl-
edge (56.6%).

Content knowledge

Teacher candidates regularly demonstrated their understanding of course content.
In critical reflections, participants discussed literacy knowledge, purposes of literacy
assessments, assessment results, and potential plans for instruction based on assess-
ment results. In writing about the sight word assessment developed by Dr. Edward
Fry, Participant 7 demonstrated their content knowledge in writing:

> *The FRY assessment tells teachers about students' reading abilities by
> showing what words they know. It can also be an indicator of how fast they
> can read and recognize words. This assessment is very important for teachers
> to use in early elementary classrooms because it can allow the teacher to see
> where a student is and what he/she needs to work on. Students need to learn
> their sight words and how to sound out words at a young age so they can excel
> in upper grades. By doing this assessment in a lower grade, teachers can
> assess students' abilities and help them form a firm foundation of their word
> recognition and vocabulary* (Critical Reflection #4).

This reflection demonstrated the student's growing understanding of the impor-
tance of teaching both high frequency words and decoding skills in early elementary.
Prior to administering this assessment, in class, students discussed characteristics of
fluency outlined in the course textbook, including reading words quickly and accurate-
ly, maintaining an appropriate rate, using volume and expression, and proper phrasing
(Reutzel & Cooter, 2019). Teacher candidates discussed their experiences administer-

ing assessments and then analyzed the results using their knowledge of literacy skills and literacy development.

Critical self-reflection

Participants responses also highlighted the ongoing opportunity to reflect, not only about their experiences in the classroom, but also their practices as teachers. Data from both the survey and the critical reflections revealed that through this service-learning course model, participants had the opportunity to learn the methods and assessments they learned in class, practice them with students, reflect on their teaching experiences, and make future adjustments. One teacher candidate described their experience administering an assessment and reflected on her rate of speech. Participant 8 wrote:

Something I learned about myself as a future teacher is that I give instructions quickly. Although my students seemed to have no issues following along, I was finished giving my assessments way before my partner was. It is important that I slow down and remember not everything is a race. Time management is important; however, I need to find a good balance between going too fast and going too slow (Critical Reflection #1).

Participant 8 realized that a change was needed in their practice. In this instance, the teacher candidate needed to slow the rate of giving directions, which was connected to the importance of pacing. This showed that the student engaged in critical self-reflection which is a significant component of teacher practice (Jacobs, 2018) and service learning (Jacoby, 2015).

In addition to reflecting on their teaching practices, participants also reflected on themselves and the growth they noticed in themselves. Participant 9 wrote:

I learned that I am more patient than I thought. I've been working on my patience because I normally don't have much, but I was surprised to find that I had a lot of patience while working my student on these assessments. I let her take her time and guided her towards an answer when she struggled to come up with something (Critical Reflection #1).

Community and cultural knowledge

Through this service-learning course, participants connected with members of the school and community. In Critical Reflection #1, several participants noted their surprise at how welcoming their classroom teachers and students were at the school sites. Participant 9 wrote, "The classroom teacher and assistant teacher were extremely welcoming." Participant 5 stated:

My first field experience was not what I expected. I was nervous to meet the class, but I was warmly greeted by students as soon as I walked through the door. Mrs. Meadows was also welcoming and excited to meet me. She

explained the classroom layout, learning centers, and her career path. After meeting, I walked the classroom and introduced myself to groups of students. I was surprised how happy they were to see a new face and share with me their interests.

In addition to feeling welcomed, participants also learned valuable lessons about connecting with students. When reflecting on their first field experience, Participant 10 wrote:

I learned that I can't ever read a file about a student to make a judgement about them. We had a student that was late to school, and Ms. Williams said she wanted me to work with him. She explained that his parents were going through a messy divorce, and he was having behavioral issues. I started to get nervous based only on what I'd heard about him. When he showed up to school, I got a chance to work with him, and we really connected!

While most teacher candidates expressed positive experiences as they attempted to integrate into the school community, some conveyed less enthusiasm. For example, Participant 11 reported, "Once we got there, I felt like we were just thrown into a classroom and put to work." In our study, teacher candidates entered a variety of classrooms across two schools with classroom teachers that utilized different teaching practices. Jacobs (2018) supported exposure to various cultures and communities as an important component of meaningful field experiences and methods courses. In this study, we found that teacher candidates discussed community and cultural knowledge the least in their critical reflections (4.6%). However, discussions in the lecture portion of the course frequently focused on the unique experiences in each school community.

Discussion

The purpose of this study was to describe pre-service teachers' experiences in a literacy methods course that included a service-learning component. Our first research question asked, "How do pre-service teachers describe and engage in literacy practices during a service-learning experience in urban schools?" Our second research question asked, "What reflections do pre-service teachers provide about their experiences with students and their understanding of the methods and approaches used for literacy instruction?" We recognized three primary findings from our study. First, we determined that the service-learning approach successfully integrated course content into the pre-service teachers' field experiences. Second, we established that the service-learning experience included important opportunities for pre-service teachers to develop and refine content knowledge, pedagogical knowledge, critical self-reflection, and cultural and community knowledge. Finally, we identified several areas requiring improvement in future offerings of the service-learning course related to the pre-ser-

vice teachers' reported experiences.

Almost all the pre-service teachers believed that the service-learning experience provided opportunities to integrate course content with field experiences, including how students' literacy skills develop, how to assess students' literacy abilities, how to analyze literacy assessment, and how to plan lessons for diverse groups of students. Previously, research has associated the connection of course work and field work in teacher education programs with the development of essential characteristics of effective classroom teachers such as self-efficacy (Bernadowski et al., 2013; Griffith & Zhang, 2013; Gutzweiler et al., 2022), personal and professional development (e.g., confidence, empathy and compassion, and respect for others) (Lavery & Sandri, 2021), understanding students' reading behaviors (Griffith & Zhang, 2013), and commitment to diversity (Mergler et al., 2017). Pre-service teachers were provided with a service-learning experience that incorporated content knowledge with teaching practices which provided opportunities to grow in proficiency as a teacher.

Jacobs (2018) claimed that field experiences should prioritize the intersection of content knowledge, pedagogical knowledge, critical self-reflection, and cultural and community knowledge so that students can critically analyze the practice of teaching. The survey results revealed that students believed the service-learning experience improved their knowledge of literacy and appropriate pedagogical practices. In their reflections, the students most often wrote about topics related to pedagogical content knowledge (56.6%) and content knowledge (24.0%). Shulman's (1986) work emphasized these two areas as crucial components of teacher preparation. Our pre-service teachers demonstrated that these knowledge areas were an important part of their experiences. The survey results showed that students also believed that critical self-reflection and community and cultural knowledge were important to their development as a teacher; however, the critical reflections contained fewer references to these areas. Critical self-reflection had a reflective frequency of 14.8% and community and cultural knowledge had a reflective frequency of 4.6%. It is possible that the students were influenced by the types of questions that they were asked to answer. The critical reflection questions frequently asked students to write about their experiences conducting assessments, interpreting assessment results, and planning for individual instruction. These types of questions would lead to answers that were focused on content knowledge and pedagogical content knowledge. Students were less frequently asked to reflect on their developing understanding of the role of literacy teachers which would lead to answers focused on critical self-knowledge. Our results suggest that pre-service teachers were provided with an integrated experience that emphasized different aspects of teaching. In the future, to enhance students' understandings, we will revise critical reflections to include questions that will promote critical self-reflection and thinking about cultural and community knowledge.

Our findings revealed additional areas that require further consideration to im-

prove the experiences of future students enrolling in our course. Some pre-service teachers reported that they did not have opportunities to discuss practices with classroom teachers. Classroom teachers have experiences and knowledge to bestow on developing future teachers. It is vital for teacher education programs to communicate with field placements to ensure that opportunities are present for pre-service teachers to discuss and reflect with classroom teachers. Maintaining communication with service-learning partners will ensure that participants' expectations are being met (Jacoby, 2015). As previously discussed, pre-service teachers' critical reflections contained fewer references to self-reflection and community/cultural topics. Interestingly, the survey results identified two related areas that require consideration in the course. First, while 83.3% of participants believed that the service-learning experience increased their awareness of personal biases and prejudices, 16.7% of participants did not agree. Future teachers must be aware of unintended influences on their practice, such as personal biases and prejudices. Second, while 77.8% of participants believed that they learned how to be more involved in the community, 27.2% of participants did not agree. Teachers are a vital part of the community in which they work. Previous research has demonstrated that service-learning experiences increased pre-service teachers commitment to diversity (Mergler et al., 2017) and understanding of the importance of community engagement (Tinkler et al., 2019). However, the participants in this study did not achieve the same results. The course content and experiences will be examined to foster the importance of understanding personal biases and prejudices, and how to be more involved in the community.

Conclusion

The integration of service-learning into an elementary education literacy course provided a unique approach to advancing learning in teacher education programs. Teacher education programs must provide opportunities for pre-service teachers to increase their knowledge of what it means to be an effective teacher. Our goal as teacher educators is to prepare future teachers to meet the needs of students in the communities in which they will teach. Service-learning effectively prepares future teachers.

Through the synthesis of theoretical frameworks, existing literature, and empirical findings, this study highlighted the value of service-learning experiences that enhance teaching practices, improve student learning, increase community engagement, and facilitate critical self-reflection. Service-learning approaches connect course content and field experiences. This study described students' understanding of literacy learning, methods, and assessments and could be replicated in other settings. Teacher educators and researchers must continue to study service-learning to further advance our understanding of pre-service teachers' learning and effective teaching practices.

Limitations

This study was limited to one section of one course at a public university in the southeastern United States. While the elementary education program and experiences of the pre-service teachers were similar in other locations, our findings were influenced by the unique characteristics of our location and generalizability may be limited. However, the findings are important to consider in methods course that heavily focus on pedagogical content knowledge and service-learning experiences.

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Appendix A

Service-learning questionnaire

Content knowledge
1. Participation in this service-learning course helped me understand how students' literacy skills develop.
2. This service-learning experience increased my understanding of literacy assessment and instruction.
3. This experience helped me to see how information that I learned in this literacy course can be used in classrooms.
4. Participation in service-learning helped me to better understand the material from my lectures and readings.
5. I have gained valuable information from my service-learning experience.
6. This experience better prepared me for lesson planning for diverse groups of students.

Pedagogical content knowledge
7. This service-learning helped me to apply course content to classroom situations.
8. I discussed teaching practices with my placement teacher(s) during my service-learning experience.
9. My service-learning experience was directly linked to building my teacher practices.
10. I have learned how to assess students' literacy abilities.
11. My experience has helped me understand how to analyze literacy assessments.
12. Service-learning provided an opportunity to plan differentiated literacy instruction based on assessment.

Community & cultural knowledge
13. The field placement showed me how I can be more involved in my community.
14. Service-learning at the field placement helped me become more aware of the needs in my community.
15. I have a responsibility to serve the community.
16. I had an opportunity to increase my sense of community and engagement.
17. This placement enhanced my understanding of students' experiences and cultural backgrounds.
18. This experience increased my knowledge about diverse populations across multiple school settings.

Critical self-knowledge
19. This service-learning experience helped me to identify my personal strengths and areas for growth.

20. I made a contribution during my service-learning experience.
21. Service-learning made me more aware of some of my own biases and prejudices.
22. This experience increased my understanding of my role as a future literacy educator.
23. I have increased my literacy knowledge and teacher practices as a result of this experience.
24. I have gained additional methods and approaches to using literacy assessment and instruction.

Likert Scale:
Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

Appendix B

Critical reflection #1
1. Was this first experience what you expected? Why or why not?
2. What did you learn about your student from the interest inventory and attitude survey? Be specific.
3. Do you think these types of assessments are important for teachers to use in classrooms? Why or why not?
4. What did you learn about yourself as a future teacher? Explain.

Critical reflection #2
1. What does the Listening Comprehension assessment tell teachers about students' reading abilities? Do you think this type of assessment is important for teachers to use in early elementary classrooms? Explain.
2. What did you learn about your students' reading abilities from the Listening Comprehension assessment? Be specific by including the results, student behaviors, and any other interesting patterns you found.
3. Using the results, what lesson would you plan for your student? (What skill area would you focus on? Why? What activity would you plan?)
4. What did you learn about yourself as a future teacher? Explain.

Critical reflection #3
1. What does the PASS assessment tell teachers about students' reading abilities? Do you think this assessment is important for teachers to use in early elementary classrooms? Explain.
2. What does the Quick Phonics Screener tell teachers about students' reading abilities? Do you think this assessment is important for teachers to use in early elementary classrooms? Explain.
3. What did you learn about your students' literacy abilities from the assessments given today? Be specific by including the scores, student reading behaviors, and

any other interesting patterns you found.

4. What are you beginning to understand about your role as a literacy teacher in an elementary classroom? Explain.

5. Based on your student's performance, what LA standard would you choose and what objective and activity would you plan to support your student? How would you assess the activity? Be prepared to conduct this tutoring session with your student next week.

Critical reflection #4

1. Provide a brief report on your tutoring session (planned based on PASS and QPS).

2. What does the Fry Instant Words assessment tell teachers about students' reading abilities? Do you think this type of assessment is important for teachers to use in early elementary classrooms? Explain.

3. What did you learn about your students' reading abilities from the Fry Instant Words Lists? Be specific by including the level and number of words read, student reading behaviors, and any other interesting patterns you found.

4. What else would you need to know about a student before making plans for reading instruction? Explain.

5. Based on your student's performance, what LA standard would you choose and what objective and activity would you plan to support your student? How would you assess the activity? Be prepared to conduct this tutoring session with your student next week.

Critical reflection #5

1. Provide a brief report on your tutoring session. (Planned based on Fry)

2. What do the DIBELS assessments say that they tell teachers about students' reading abilities? Do you think this assessment is important for teachers to use in early elementary classrooms? Consider both the benefits of the assessment and the critiques you might have.

3. What did you learn about your students' reading abilities from the assessment given today? Be specific by including the scores, student reading behaviors, and any other interesting patterns you found. Is there anything you would like to know more about in terms of your students' reading abilities?

4. What are you beginning to understand about the role of assessments in elementary classrooms? Explain.

5. Based on your student's performance, what LA standard would you choose and what objective and activity would you plan to support your student? How would you assess the activity? Be prepared to conduct this tutoring session with your student next week.

Critical reflection #6

1. Provide a brief report on your tutoring session (based on DIBELS).

2. Discuss your experience administering the STEEP. How did it go? How

did your student respond? What are the strengths and weaknesses of this type of assessment?

3. Report the score(s) for your case study student. What types of errors do your student make while reading? Based on the errors, what would you plan for instruction? If your student did not make any errors, what would you plan for future instruction (use what you have learned from previous assessments)?

4. If you were to explain your case study student's strengths and areas for i provement to his/her parent/guardian in a conference, what would you tell them? What would you tell them they could do at home to help their child continue to grow as a reader?

5. Based on your student's performance, what LA standard would you choose and what objective and activity would you plan to support your student? How would you assess the activity? Be prepared to conduct this tutoring session with your student next week.

Critical reflection #7

After you have conducted your first tutoring lesson with your student, please reflect on your experience and answer the following questions which are also located at the bottom of your lesson plan template:

1. To what extent did your student meet your learning objective(s)? How do you know? If possible, organize your data into a simple chart or graphic for a visual display.

2. How would this reflection inform what you would plan for this student in the next lesson? How would you build on what you have learned so that you continue to grow as a teacher?

Critical reflection #8

After you have conducted your second tutoring lesson with your student, please reflect on your experience and answer the following questions which are also located at the bottom of your lesson plan template:

1. To what extent did your student meet your learning objective(s)? How do you know? If possible, organize your data into a simple chart or graphic for a visual display.

2. How would this reflection inform what you would plan for this student in the next lesson? How would you build on what you have learned so that you continue to grow as a teacher?

Critical reflection #9

After you have conducted your third tutoring lesson with your student, please reflect on your experience and answer the following questions which are also located at the bottom of your lesson plan template:

1. To what extent did your student meet your learning objective(s)? How do you know? If possible, organize your data into a simple chart or graphic for a visual display.

2.   How would this reflection inform what you would plan for this student in the next lesson? How would you build on what you have learned so that you continue to grow as a teacher?