

Assessing the Impact of Service-Learning on Preservice Teachers in an After-School Program

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Integrating community service with learning in the public school curriculum is not a new idea in education. The concept of service-learning has deep historical roots and there are numerous examples reported in research of the implementation of this practice in K-12 classrooms (Burns, 1998; Parsons, 1996; Stanton, Giles, & Cruz, 1999; Wade, 1997). While institutions of higher learning have not been exempt from the development of service-learning programs, it has been only within the last decade that there has been an increase in the interest of providing service-

learning coursework at this level (Erickson & Anderson 1997; Eyler & Giles, 1999; Sax & Astin, 1997).

As service-learning gained the attention of teacher educators, teacher education programs have begun to incorporate service-learning into their courses in a variety of ways (Donahue, 1999). Because teacher education programs traditionally include classroom-based field experiences such as classroom observations and student teaching, questions arise as to how service-learning differs from those experiences and

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what difference do these difference make. Up to this point research on the benefits of such programs remain limited in scope. For example, Conrad and Hedin (1991) noted that little is known about the academic benefits of university students' participation in community service and that still fewer studies have examined the benefits for prospective teachers. In fact, Gallego (2001) reports that according to Zeichner, Melnick, and Gomez (1996), the application of such service-learning activities is mentioned only once in the entire 900 pages of the *Handbook of Research on Teacher Education*.

The study reported here uses a qualitative design to investigate the benefits of service-learning through the eyes of the preservice teachers who participated in it. The study focuses on how preservice teachers compare and contrast teaching and learning in the formal classroom during student teaching and teaching and learning in service-learning. It is part of a larger investigation focusing on preservice teacher outcomes related to service-learning activities.

Background

We framed our investigation within three areas of the literature: (a) service-learning as an experience that differs from student teaching, (b) service-learning as an integral part of coursework, and (c) reflective practice as a learning tool.

One rationale that has been offered for including service learning in teacher education is that it has benefits not found in student teaching placements. Erickson and Anderson (1997) have argued that traditional student teaching placements are most often not service-learning experiences, in that they do not address a real need for the students and their teachers (p. 7). The primary reason for placing student teachers in classrooms is to provide opportunities for them to connect theory and practice and to enhance their teaching skills (Krustchindky & Moore, 1981) rather than to provide a service to the community. Another difference between service-learning and student teaching lies in the types of activities that student teachers engage in and the opportunities for learning that are afforded as a result. In the traditional student teaching placement, student teachers are typically assigned to a single classroom with one teacher acting as a mentor. However, it has been suggested that the tasks students conduct often end up being mechanical and management oriented (Goodman, 1985). A possible reason could be that in these cases students are essentially visitors in someone else's "home" and as a result they often take subordinate roles, being neither fully a student, nor fully a teacher. Thus, their voice in deciding curriculum and the methods used for instruction remains limited, which restricts the opportunity for personal learning and professional development (Erickson & Anderson, 1999; Gallego, 2001).

Therefore, it may be that the role for preservice teachers in service-learning differs from their role in the formal classroom because they are more likely to have decision-making authority regarding the service they provide, including the ability

to choose the curriculum they teach and the methods they use (Erickson & Anderson, 1997). In this way, service-learning placements offer preservice teachers stimulating, responsible positions (Eyler & Giles, 1999). As a result, the potential for personal learning and professional growth is expanded through the connection of academic study and a program of service that allows them to be directly responsible for providing a needed service.

Service-learning as it is applied in teacher education programs varies widely, but as noted it is most generally designed to complement and extend field-based experiences already present in such programs. The service-learning assignment described in this study is most closely aligned with what Sigmon (1996) describes in his typology as "SERVICE-LEARNING" (as cited in Eyler & Giles, 1999, p. 5). Both words are capitalized to symbolize the emphasis on both the service being provided *and* the learning that occurs as a result. From this perspective the purpose of engaging students in service-learning activities is similar to that of student teaching (i.e., to offer students the opportunity to connect theory with practice and practice teaching skills). However, service-learning assignments are ones in which students provide a community service outside the formal classroom (e.g., after school programs, community service organizations), and as such they address a real *need* for the students with whom they are working (Wade, 1997).

Studies related to service-learning state that in order to identify the outcomes of integrating service-learning into coursework there must be opportunity for student reflection (Burns; 1998; Erickson & Anderson, 1997; Eyler & Giles, 1999; Gallego, 2001; Gray, Ondaatje, & Fricker, et al., 1999; Rhodes, 1997), be it through writing or discussion, to facilitate the connection between service and *learning*. It is generally believed that opportunity for reflective thought allows students to step back and be thoughtful about their experiences and monitor their own thinking processes. However, this type of reflective process is not routinely built into most community service work; therefore, reflection activities that tie theory and practice must be developed by faculty and embedded in the service-learning assignment (Eyler & Giles, 1999). The use of such activities can push students toward a more critical evaluation of their experiences. The systematic examination of students' critical reflections (as well as other program data) can yield greater insight into student learning, and help to develop guidelines for the successful use of service-learning in teacher education courses.

Schon's (1983) book, *The Reflective Practitioner*, provides a foundation through which teacher knowledge can be investigated. Schon suggests using reflection in varied professions to analyze, discuss, evaluate, and change practice. Elbaz (1988) and Connelly and Clandinin (1986) argue that rich information is gained from teacher reflections. These reflections help teachers clarify their thinking and anticipate decisions and future action. Teacher education programs based on reflective practice contribute toward (a) enabling teachers to analyze, discuss and evaluate their own practice; (b) fostering teachers' appreciation of

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social and political contexts; (c) enabling teachers to evaluate moral and ethical issues regarding classroom practice; (d) encouraging teachers to take responsibility for professional growth; (e) facilitating teachers' development of their own philosophy of education; and (f) empowering teachers so they may influence future directions of education (Calderhead & Gates, 1993).

In summary, there is limited information related to the efficacy of service-learning in teacher education. Nevertheless, there are good reasons to believe that service-learning can help preservice teachers develop content knowledge, pedagogical skills, and social understandings that will benefit their future students. The focus of this investigation is on how preservice teachers view the similarities and differences between teaching and learning in a traditional classroom and teaching and learning in an informal service-learning environment as contributing to their professional growth

Method

Participants

Fifty-eight preservice teachers from two different instructional methods classes at a large, comprehensive, regional university in southern California engaged in service-learning at an after-school program housed at several local elementary schools. Elementary students enrolled in this after-school program were identified as at-risk for academic failure, and the majority of them were from non-English language backgrounds, with most having Spanish as their primary language. The goal of the after-school program was to help students improve their academic performance by (1) providing them with support in completing classroom and homework assignments and (2) providing them with academic experiences designed to extend and enhance their content knowledge in subjects such as math, social studies, and science. The preservice teachers in this study provided a service to the students in the after-school program by developing and teaching integrated science or social-studies lessons.

Preservice teachers participated in service-learning in the after-school program to fulfill a cross-course requirement in their instructional methods courses in language arts, science, and social studies. Preservice teachers took these methods courses and participated in service learning during the spring semester of a two-semester, fifth-year teacher credential program. Prior to this, during the fall semester, the preservice teachers had successfully completed reading instruction, mathematics, educational foundations and ethnic and cultural diversity methods courses. All candidates had also completed 90 hours of fieldwork in an elementary classroom where they served as observers and teacher assistants. The fieldwork was followed by five weeks (approximately 200 hours) of traditional student teaching.

Course Content and Research Design

Major goals of our courses in the second semester are for preservice teachers

(1) to demonstrate an ability to integrate all aspects of the language arts (listening, speaking, reading, and writing) into the content areas, and (2) to demonstrate an awareness of cultural, language, and socioeconomic issues in doing so. One of the purposes in assigning the service-learning experience was to investigate if preservice teachers could develop an 8-lesson, integrated enrichment unit in science or social studies that would benefit the diverse students in the after-school program. A second purpose was to investigate if the service-learning experience would help the preservice teachers develop content knowledge, pedagogical skills, and social understandings that would benefit their *future* students in traditional classrooms. As part of our second purpose, we were interested in Erickson & Anderson's (1997) and Gallego's (2001) proposal that there are differences between service learning and traditional student teaching that contribute to the professional growth of preservice teachers. The study reported here investigates Erickson & Anderson's (1997) and Gallego's (2001) proposal through the eyes of the preservice teachers who participated in the service-learning experience.

Traditional Student Teaching. The preservice teachers in this study had approximately 200 hours of experience in elementary classrooms, first assisting their cooperating teachers by taking responsibility for parts of the curriculum and then taking full responsibility for student learning for a week or more. This experience occurred in the fall semester. Therefore, the preservice teachers had considerable classroom experience before they participated in service-learning in the spring semester. During student teaching, each preservice teacher was supervised by his or her cooperating teacher and a university field supervisor. The cooperating teachers interacted with their respective preservice teacher daily. The supervisors observed and held individual conferences with their student teachers for an hour or more each week during student teaching. The classrooms in which the preservice teachers served ranged from kindergarten to 6th grade. Classrooms in which the preservice teachers served had a teacher-student ratio of approximately 1: 20 in the lower grades and 1: 30-35 in the upper grades. Each classroom had students with a wide range of performance levels, and 89% of the preservice teachers served in classrooms in which 25% or more of the students were English language learners. Preservice teachers engaged in most of the activities that are the responsibilities of classroom teachers. For example, they set standards for behavior, developed and delivered whole-group and small-group instruction in all areas of the curriculum, assessed student progress, and interacted with other faculty and staff at the school site.

Service-Learning. Preservice teachers participated in service-learning for approximately 20 hours. They worked in teams of three to four to plan and implement eight integrated science or social-studies lessons for elementary students who attended an after-school program at various school sites in a local school district. The teacher-student ratio ranged from 3: 6 to 4:12. The grade levels of the students in each group ranged from 3rd grade to 6th grade. All of the students in the program were recommended because of low academic skills or other factors

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that placed them at-risk for school failure. Almost 100% of the students were from non-English language backgrounds. As in traditional student teaching and fieldwork, the preservice teachers engaged in many of the activities that are a part of classroom teaching. They set standards for behavior, developed and delivered integrated language arts instruction in either science or social studies, assessed student progress, and interacted with other faculty and staff at the school site. There was no on-site supervision of the preservice teachers during service-learning.

Data Sources

Because the preservice teachers were not supervised by a cooperating teacher or a supervisor during service-learning, we used a showcase portfolio submitted at the end of the service-learning experience as our primary assessment measure. The portfolios were developed collaboratively by each team of preservice teachers. Evidence of their learning within the portfolio included: (a) a graphic organizer that provided an overview of the team's unit; (b) eight collaborative lesson plans; (c) each team member's reflection on the initial site visit; (d) each member's reflection on each lesson; (e) each member's self-assessment of his or her learning and performance; and (f) evidence of elementary student learning and interest, including written work, photographs and any other documentation that team members chose to demonstrate student knowledge and their teaching abilities. We used the different member reflections, eight collaborative lesson plans, and elementary student written work and documentation as data. These multiple data sources taken at six different after-school program sites provided a triangulation of data collection.

We provided the preservice teachers with reflection topics (see Figure 1) and asked that they respond to each topic at least once in their written reflections. These topics were aimed at encouraging them to critically evaluate their experience across a variety of issues related to both service-learning and the course content. The

Figure 1: Reflection Topics: Service-Learning Lessons

1. Describe contributions you made to the after-school program.
2. Describe your interactions with students.
3. How did this differ from your formal classroom teaching experience?
4. Describe your understanding of student diversity and cultural awareness.
5. How will this experience help your career as a teacher?
6. Describe your application of learning theories, readings, and course content.
7. Describe your understanding of students and how they learn language arts, science, and social studies.
8. What challenges did you encounter?
9. Describe any personal gains you experienced by participating in a community service project.
10. Describe how working with peers to plan and teach lessons helped or hindered your experience.

decision to require each topic to be addressed at least once was made to insure that we did not structure the reflections so tightly that the preservice teachers did not have the opportunity to respond uniquely to the experience.

Data Analysis

The reflections that the preservice teachers wrote after each lesson and as a self-assessment were used as the primary data for analysis for this investigation. Preservice teachers' unit plans and lesson plans were analyzed to check for consistency with their written reflections. Reflection data were analyzed using pattern matching and open coding techniques. We used pattern matching as a form of analysis for matching preservice teacher reflection responses with specific service-learning outcomes for our courses (see Figure 2) and with the reflection topics that were given to preservice teachers before service-learning. Pattern matching (Yin, 1994) in a descriptive study is considered relevant when specific variables are defined prior to data collection.

We matched these specific outcomes (See Figure 2) and reflection topics with the content of preservice teachers' written reflections. In addition, we used open coding techniques (Strauss & Corbin, 1998) to further analyze preservice teachers' reflections to identify categories not included within the course outcomes and reflection topics. Furthermore, we used open coding to determine similarities and differences between teaching in an after-school program and in a traditional classroom. Open coding entailed breaking down, examining, comparing, and categorizing data to determine core categories. Categories were determined through constant comparisons, sifting back and forth between data. The pattern matching and open coding was completed by two different researchers and a trained research assistant. In cases where there was a discrepancy between researchers, it was resolved through reexamining the data and through discussion. A content analysis of preservice teachers' unit plans and lesson plans was conducted to check the accuracy of preservice teacher reflections and to compare the content of the lesson to each reflection. Moreover, three preservice teachers participated in a "member check" to review the content of the results section and confirm that the data represented their service-learning experience accurately.

Figure 2: Course Outcomes

- ◆ Ability to plan, teach, and assess integrated language arts lessons
- ◆ Ability to actively engage students in learning opportunities
- ◆ Make decisions related to content, pedagogy and curriculum materials/resources
- ◆ Build professional collegial relationships with peers
- ◆ Gain confidence in teaching science and social studies lessons
- ◆ Gain personal satisfaction and self-worth by participating in community service
- ◆ Gain an understanding of student learning and development

Limitations

This study was designed to gain insight from preservice-teachers' perspectives how service-learning experiences at a local after-school program impacted their professional growth. All of the reflections were self-reported and were part of a portfolio that was submitted by each team at the end of the service-learning experience.

Results

Based on the results of the analysis procedures, we present four differences between the regular classroom and the service-learning environment that preservice teachers consistently mentioned as having affected their professional development. These are (1) working with a group of students from different grade levels, (2) having a low teacher-student ratio, (3) teaching in an after-school program, and (4) working with a team of teachers.

Each category, along with supporting evidence, is described in this section. In analyzing the preservice teachers' comments and perceptions, it will be apparent that although each difference is discussed separately for clarity purposes, there are many intersections among the categories and between categories and the course outcomes. The referencing codes for data used in this article (e.g., 28b/r1) represents two pieces of information. The first part indicates the data source (e.g., preservice teacher 28's portfolio) and the second the number of the reflection (e.g., reflection 1). The lower case letter indicates where the data came from (e.g., "b" represents written reflections within the portfolio). All names used are pseudonyms.

Working with a Group of Students from Different Grade Levels

While many of the preservice teachers noted the need for carefully constructed lesson plans in both the service-learning and student teaching environments, they were surprised and challenged by the differences in student performance and background knowledge that they found within their groups. The preservice teachers attributed this diversity to the nature of the groups. That is, they attributed the diversity to differences in students' ages and grade levels. For example, Helen commented on this issue after the first lesson:

(W)e were shocked at the range of background knowledge that the students had on this topic . . . (I)t became difficult when planning lessons that would cater to the various grade levels represented. It was the first time I had had that experience . . . (31b/r2)

Shana had a similar reaction after her first meeting with the students:

The only thing that worries me is the broad range of grade levels present. We have grades three through six present, which means we will have to make our lessons multilevel. I am hoping that we will be able to challenge each student (41b/r2).

Interestingly, as the preservice teachers gained more experience addressing the

diverse needs of their service-learning students, the nature of their response on this issue changed. While they still commented on the unique make-up of their groups, they began to make connections between the diversity they found among service-learning students and the need to meet the individual needs of students in the traditional classroom. Helen who initially expressed shock at the diversity among her students indicated that at the end of service-learning she had “gained an increased understanding of the diverse backgrounds and experiences students come from and how important it is to make that experience one that caters to all students” (31b/r10). Elana made a similar comment:

Because they are all at different levels, they are getting different things from our lessons. I suppose this is true in classrooms of all the same grade also. I think we are learning how to modify and adjust lessons so that all learners are actually learning. (37b/r5)

Jessie agreed:

(Teaching students from a range of grade levels) forced our group to make sure each of our lesson plans would include something that each student could learn from. . . This made us consider the type of lessons we were presenting and if they had a variety of modalities included. This was wonderful practice to ensure that we (will) teach to all students. (33b/r10)

Having a Low Teacher-student Ratio

The preservice teachers saw the low teacher-student ratio as having benefits for both the students and the teachers. Wesley noted both of these benefits after his first meeting with the students. In describing the small-group structure of the program, he first commented on the benefits to the students: “This is exactly the kind of instruction these students, who have been identified as at-risk . . . should be receiving” (39b/r1). Later in the same reflection, he addressed benefits for the teachers:

The low teacher to student ratio allows the instructors to get to know each of the students on a much more personal level much quicker than in a typical classroom with a considerably larger group of students. . . Because of the small size of the group, the pace of the instruction can be geared toward the learning ability of the individual student. (39b/r1)

Below are other examples of the perceptions of the preservice teachers on the benefits of to the small student/teacher ratio. These responses have been organized under two subcategories, one related to assessment and feedback and the other related to teaching English language learners.

Responses Related to Assessment and Feedback. One way in which preservice teachers perceived the benefits of the small student/teacher ratio was in assessing student learning. Sara found it easier to assess students and plan instruction when her team was working with small groups. She noted:

Today, this ratio was beneficial because we were able to walk around to every student

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and look at his or her journal entry. We were able to give a lot of attention to the students and help them understand the differences between observation and inferences. (41b/r2)

Leyla made similar observations:

Due to the small amount of students in our group (6) we are able to assess the students on a one-on-one basis and target their needs. . . We are able to design the lessons around the needs of the students. . . (47b/r6). We are able to address all questions and concerns about anything. We are able to see how students “light up” when they learn something new, even if it is just a new vocabulary word. We are able to praise their eagerness to learn and to give support when they are not completely sure of anything. (47b/r7)

Wesley also addressed the advantages of working with students in small groups and in his self-assessment related how he will use what he has learned in his own classroom:

(M)y work with this project has exposed me to the advantages of working closely with students in small groups. . . I plan on using this technique in my classroom by working with individual students or small groups while the remainder of the class is performing independent work at their desks. (39b/r10)

However, more typical were the comments of preservice teachers who appeared not to believe that the advantages of small teacher/student ratios could be carried-over to the traditional classroom. Belinda made this clear that she when she wrote:

This was a great lesson because we were able to constantly interact with the students. If they needed help or had a question there was always someone there. In a real classroom, I am afraid it would not go so smoothly. The students would learn, I am sure, but there would not be the one-on-one assistance that we can provide right now. (48b/r6)

Donald made a similar point when he observed, “The extremely low teacher-to-student ratio has really come in handy for the pair work we have been doing with the trees. This is one luxury that we will miss in our classrooms (49b/r5).

Overall, the preservice teachers’ reflections indicated that they appreciated the opportunities that the small groups afforded them. They felt confident in their ability to assess student learning and saw the impact that providing support and feedback made on students’ performance.

Responses Related to English Language Learners. Our university is located in an ethnically and culturally diverse urban area. In order to prepare preservice teachers to teach diverse populations, they take classes that address diversity issues and present strategies for teaching English language learners (ELLs). In addition, they are required to have student teaching experience with minority students, where they are expected to use strategies that support ELLs. As has been noted previously, when the preservice teachers began the service learning project, they had completed the majority of this coursework. In addition, many of them had been in a student teaching placement that met the diversity requirement. However, the knowledge that came from working with a small group of ELLs differed from what they gained

from their prior professional experiences and university coursework. Candice reflected on how service learning helped her understand more fully the needs of English language learners:

I really learned that the culture(s) of our students need to be embraced. Students need to know that family history, heritage and culture are valued in school. I truly believe that the more students feel comfortable and respect for who they are, it will reflect in their work, participation and self-esteem. (36b/r5)

Sophia stated that service learning helped her grow in her knowledge of effective strategies for English language learners. She wrote, "I am learning more and more how important it is to allow students, especially English language learners, to experience something first hand. Students need to see it as well as hear it as often as possible" (42b/r4). After describing a lesson in which she provided support to a student who was having difficulty understanding the English directions, Belinda noted, "When I begin to teach this experience will help me teach other students like (him). I have learned to say a few more words in Spanish and I realize that providing hands on experiences and visuals is essential for ELL students" (48b/r7).

Preservice teachers also discussed the value of structuring lessons so students who were having difficulty could receive support from their peers. Shirley described how students were divided into pairs to research and prepare a presentation on water pollution and commented that, "Grouping students into pairs was a good idea; I believe that it made the students who were not as confident in their language skills more confident" (35b/r5). Elana also saw value in having students support each other. After describing how one student helped another by paraphrasing some of the information in Spanish, she remarked, "It was great to see the students working together... It seemed as though she was able to get as much out of the lesson as the English proficient students and I feel good about that" (37b/r3).

Teaching in the After-school Program

Preservice teachers viewed the after-school program as much less structured than the traditional classroom. Two subcategories were identified in this category. One concerned classroom management and the other language issues related to ELLs.

Classroom Management. Preservice teachers tended to attribute student behavior, whether positive or negative, to the informality of the after-school program. Lauren explained how much she enjoyed the relaxed atmosphere of service learning and how surprised she was to see the students be well behaved. She stated, "The students are participating and cooperating better than I had anticipated. It is nice to work with students who are all willing to leave their bad attitudes about school at the door" (44b/r3). Cate also believed that the less structured environment provided a supportive environment for students. She commented, "The after-school program was much different from that of the typical classroom, and it allowed for more freedom and less structure. The students did

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not feel nervous or apprehensive, because the atmosphere was supportive, interactive, and very interesting” (43b/r9).

On the other hand, Shana stated that her students did not view the after-school program as a learning opportunity. She remarked, “One of the first things I noticed is how hard it is to get and keep their attention...(T)hey saw it as an opportunity to chat and socialize” (41b/r4). Kristen agreed: “Because we acted so informal and relaxed in our discipline, the students were more active and somewhat distracting...I like the informal environment but I get stressed out when students are acting out” (34b/r6).

Language Issues related to English Language Learners. Preservice teachers emphasized how the informality of service-learning allowed them to use strategies with English language learners not widely used in the traditional classroom. One strategy that was often mentioned was using Spanish to support student learning. In California, all English language learners receive academic instruction in English unless their parents sign a waiver to permit them to be educated in a bilingual classroom; so this is a strategy that is used with relative infrequency in traditional classrooms. Preservice teachers, however, found it valuable in helping to overcome language barriers. For example, Sophia saw service-learning as an opportunity to communicate in Spanish:

When describing certain weather in English, I would try and describe it in Spanish as well. I feel that this was beneficial for both me and the students. It allowed the students to see that I was not afraid to try speaking Spanish and therefore it gave them more freedom to try English. (42b/r2)

She and her team used other strategies as well. They had the students with stronger English language skills translate for others and wrote materials in Spanish so “that our non-English speakers could have the opportunity to be successful” (42b/r8). Using these strategies helped Sophia feel satisfied about the work she had done. In her self-assessment she stated, “These students are in the program because they need some added help, and we were able to provide that to them”(42b/r10).

The preservice teachers believed that these and other strategies they used helped them become more sensitive to diversity and to confront misconceptions they held about English language learners and at-risk students. They began to comment on the role language plays in learning. For example, Kathy described what happened when a student was having difficulty writing in English and was given the opportunity to write in Spanish, “This made her extremely comfortable and she ended up writing nearly a half a page poem about butterflies” (32b/r6). She also indicated that because students were given the opportunity to use the language they were most comfortable with the majority of the students were confident enough to share their poems with the class. In her final reflection she remarked: “I learned that each and every student is entitled to a quality educational experience - one that is meaningful to he or she. Students should not be ignored or neglected if they speak

a language different than English” (32b/r10). Donald makes a similar point in his discussion about at risk learners:

This experience has greatly changed my attitude toward these students, especially in the upper grades, labeled “at risk.” . . . These are not slow students at all. They caught on to new concepts rapidly and were able to think like scientists and communicate effectively, even if they sometimes struggled to find the correct words in English. (49b/r10)

Working with a Team of Teachers

Preservice teachers viewed working with a team as being both problematic and a benefit. Some of the teams had difficulty in defining the role each one should play during a lesson. Candice described an incident where her team needed to make a decision about a lesson. She remarked: “ This was a challenge because none of us wanted to step on the others’ toes, so instead we avoided saying what was on our mind. It made me think about how it would be to team teach and also how it would be at grade level meetings” (36b/r6). Kendell also used the term “stepping on others’ toes” to express her feelings about working in a team. She indicated that while she thought team planning to be useful in a traditional classroom, she viewed her service learning classroom to be unorganized. She stated, “We are all trying to talk and explain, but we end up stepping on each other’s toes” (46b/r3).

On the other hand, many preservice teachers stated that while challenging, working as a team offered them opportunities to learn from and support one another. Kristen addressed this in her self-assessment:

To begin, working as a team of teachers was interesting and always helpful. We planned, experimented, and instructed together, all along learning from one another. We all have different learning styles and I believe we were all effective. I liked that we could support each other during our instruction. . . (34b/r10)

Helen also stated that she had learned a great deal from working with her peers:

All of us worked extremely well together. There were times where we had to be flexible and pull together to make things run smoothly and we did a great job of that. These adaptations and the teamwork ethic that came from that only strengthened our abilities as teachers. (31b/r10)

Discussion

As demonstrated by their service-learning reflections, these preservice teachers had a well-developed sense of the similarities and differences between service-learning and their experiences in traditional classrooms. Specifically, they were able to describe how conditions such as ranges in grade level, low teacher-student ratios, teaching in an after-school program, and working in a team influenced their learning. Moreover, they discussed at length how factors related to English language learners helped them grow as professionals.

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The results support and extend views of service-learning that assert that there are important differences between service-learning and traditional student teaching that complement and enrich field-based experiences already present teacher education programs. Erickson and Anderson (1997) have suggested that the differences lie in two areas. One is in the autonomy that the preservice teachers have in service-learning to develop curriculum and methods used for instruction versus the more restrictive environment of the traditional classroom. The other resides in the opportunity in service-learning for preservice teachers to perform a needed service that does not exist in the elementary classroom where there is a trained teacher. Our results provide partial support for the importance of the differences described by Erickson and Anderson (1997).

Analysis of the preservice teachers' reflections supports the notion that the less restrictive environment of the after-school program influenced some of the choices they made. For example, the preservice teachers made decisions that allowed students to use Spanish as the language of instruction in ways it may not have been used in California's elementary schools. Furthermore, this decision helped preservice teachers understand more fully the role of language in teaching and learning and to correct some misconceptions that they held about English language learners and at-risk students (Boyle-Baise, 1998; Seigel, 1994). On the other hand, since service-learning was a part of university course work, the preservice teachers did not have complete autonomy in developing the curriculum they used or in choosing methods of instruction. The preservice teachers received specific guidelines based on course goals to use in developing their eight-lesson curriculum. Weekly class discussions were held to give them feedback on lesson plans and lesson outcomes. Thus, while they did not have a master teacher, they were given some direction, although it was not from a supervisor who was on-site.

Our data do not support Wade's (1997) proposal that performing a needed service was a powerful difference between service learning and the traditional classroom. We asked the preservice teachers to describe any personal gains experienced through participating in service learning and many did. However, in comparison to other issues, performing a service received little attention across written reflections. For example, Elana concluded her self-assessment with, "I think it (service-learning) is a very valuable and wonderful thing to do for ourselves, our school, and our community" (37b/r10). Jan concluded her self-assessment with a similar statement, "It also made me feel like I was doing something wonderful participating in a community service project" (33b/r10). This type of one-time, unelaborated response was typical. We interpreted it to mean that while the service they provided was meaningful to them, other aspects of the experience made more of an impact. We speculate that service may not be viewed as an important difference between traditional classrooms and service learning in our study because the focus of our service learning project was on teaching children science and social studies concepts in order to improve the children's performance in their classrooms. This

focus differs from that in other types of service-learning where typically preservice teachers work with children in community outreach programs such as childcare, sports programs, field trips, and other activities that are not as directly related to the classroom. Thus, preservice teachers in this study may have not seen a great deal of difference between teaching children in the after-school program and in the traditional classroom.

In reflecting on the data presented, we believe that the power of service learning in teacher education lies in the nature of the interaction between the teacher and student in service-learning and the teacher and student in the traditional classroom. In our study, there were very specific differences between the after-school program and those found in a typical traditional classroom: wide ranges in age and grade level, low student-teacher ratios, a less structured environment, and the opportunity to work in a team. All of these intersected to affect how the preservice teachers interacted with the students they were teaching in the after-school program. The service-learning context put them in an environment in which they were forced to deal with these differences and could see the effects of their efforts over time. In addition, the focus on science and social studies may have made more obvious the needs of English language learners since there is a high vocabulary and concept load in these content areas. Furthermore, we required their lessons integrate the language arts, and this created a need for students, many of whom had limited English skills, to read, write, speak, and listen. In order for the lessons to be successful, the preservice teachers needed to develop strategies that supported students in these areas. These findings support previous research that show that the features of the service-learning experience help to influence participants' professional development during service learning (Eyler & Giles, 1999; Waterman, 1993)

In this study, we believe that the benefits of service-learning were mediated by two factors. The first factor is the preservice teachers' ability to address constructively the differences they found in the service-learning context. Not surprisingly, preservice teachers who were successful in developing strategies for dealing with the challenges they faced grew from the experience and those who found it difficult to modify their usual way of doing things to accommodate a difference were frustrated. One example of this was the difficulty some preservice teachers had working in a team. For example, early in her service learning, Lauren remarked: "Being accompanied in the classroom with three other student teachers presents even different obstacles. I believe our teaching style and uncertainty may cause frustration down the road" (44b/r2). Toward the end of the project, it was obvious that her prediction had come true: "What I dislike most about this service leaning assignment is being one of four teachers who are responsible for every lesson. We should have split up the lessons . . ." (44b/r9). Because she was not able to find a satisfactory resolution to this problem, she did not benefit from working in a team in ways that her peers described.

The second factor is preservice teachers' ability to make connections between

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what they learning in the after-school program and their previous experiences and expectations about teaching. One of the purposes of our service-learning project was to develop preservice teachers' teaching skills while providing a service to the elementary students. In order for this to occur, the preservice teachers needed to make a connection between learning to teach in service-learning and learning to teach in the traditional classroom. The data suggests that most of the preservice teachers were able to make strong links between the teaching skills and strategies they developed in service-learning and those that they would need in their own classrooms. In their reflections they specifically discussed valuing service-learning because they gained knowledge that would benefit them in their own classrooms. On the other hand, there were cases in which some preservice teachers did not make connections. Take for example, David, who saw the benefit of using an effective strategy like paired learning with his small group of service-learning students, but could not conceive of how to incorporate it in a traditional classroom.

In conclusion, this study supports the view that service-learning can provide preservice teachers a rich context to build and extend their knowledge of teaching (Erickson & Anderson, 1997; Gallego, 2001; Krustchindky & Moore, 1981). The voices within the reflections of preservice teachers engaged in service-learning provide insights into how a service-learning experience impacted their knowledge about teaching and student learning and development. We recommend that additional investigations be conducted to add to our knowledge about the benefits of service-learning within teacher education programs.

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