Perspective Transformation:
Effects of a Service-Learning Tutoring Experience on Prospective Teachers

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Introduction

> I feel that tutoring is an escape from [the college experience]—these kids are so different than the average [college] student that it allows me to see the world from a completely different perspective. Their innocence and energy seems to shield me from the negative cynicism that [college] can easily degenerate into. Tutoring has enabled me to look at the world from a different perspective, allowing me to escape from the spoiled world of [college] and look at the world from the eyes of an excited ten year old. I would definitely do this work again. (Undergraduate study participant)

As illustrated by the quotation above, education can be a transformative experience. The goal of learning is not simply the acquisition of knowledge, but the transformation of students' perspectives of themselves and the world in which they live. Identifying ways to foster this kind of personal growth and perspective transformation should be particularly important to teacher educators since their primary goal is to prepare novice teachers to lead others through this transformative process.

Based on our experiences as teachers and our growing awareness of the effectiveness of service-

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learning, we hypothesized that a service-learning tutoring experience was one means of fostering perspective transformation in teacher education students. For the purposes of our research, we defined perspective transformation as the process in which a student substantially modifies his/her self-perceptions and perspectives on various issues. Eyler and Giles (1999) defined perspective transformation as "seeing issues in a new way" (p. 171) and identified it as one of eight central service-learning outcomes.

We defined service-learning as an approach to teaching and learning that actively engages students in community service which is directly connected to academic course content. We distinguished service-learning from volunteer community service, which is not well integrated with academic subject matter. For example, the academic content of an adolescent psychology course might be integrated with a service-learning project that pairs psychology students with at-risk teenagers. While learning about theories of identity development in adolescence, a student might work one-on-one with a teenager who is struggling to form a positive sense of self. In the present study, undergraduates who were enrolled in teacher education courses served as tutors to elementary children who were considered at-risk for school failure.

The three goals of this research were: (1) to examine the transformative impacts of a highly structured and well-integrated service-learning tutoring experience on undergraduates enrolled in teacher education courses; (2) to compare these particular impacts to the reported effects of service-learning in other studies; and (3) to explore the benefits and implications of the results for teacher education.

Background

Service-Learning Impacts in Teacher Education

Billig (2000) claimed that "research in the field of service-learning has not caught up with the passion that educators feel for it" (p. 660). Consistent with Billig, Root (1997) noted that "research on the effects of service experiences on *teacher preparation students* is only beginning" (emphasis added, p. 53). Our review of the literature focusing on our first goal (transformative impacts within teacher education) also yielded a limited number of relevant studies. The research that has examined the effects of service-learning suggests that structured service-learning experiences which are thoughtfully integrated into teacher education courses lead to significant and desired changes in students who are preparing to be teachers (e.g., McKenna, 2000). The findings of these investigations are fairly consistent and suggest that prospective teachers who engage in service-learning as a part of their teacher education program develop skills and attitudes which can be beneficial to them as teachers, including: sensitivity to diversity (Siegel, 1994); increased self-esteem (Green, Dalton, & Wilson, 1994; Wade, 1995); strengthened communication skills (Sullivan, 1991); improved problem solving and critical thinking (Root

& Batchelder, 1994); stronger commitment to teaching as a profession (Flippo, Hetzel, Gribonski, & Armstrong, 1993; Green, Dalton, & Wilson 1994); deeper engagement in critical reflection (Vadeboncoeur, Rahm, Aguilera, & LeCompte, 1995); substantive changes in attitudes, beliefs, and perceptions (Hedrick, McGee, & Mittag, 2000); strengthened caring skills (Swick, 1999); a powerful influence on lives and careers (McKenna, 2000); moral and ethical reasoning (Donahue, 1999); enhanced "moral knowledge" and orientation toward care (Anderson & Guest, 1993; Root & Batchelder, 1994); and an understanding of intelligence as a multiple and dynamic concept (Moon, 1994).

Service-Learning Impacts in Areas Besides Teacher Education

A second goal of this research was to compare the effects of service-learning found in this study with the outcomes of service-learning reported in other studies. We hypothesized that the effects of service-learning experiences on undergraduates enrolled in teacher education courses would be consistent with outcomes reported elsewhere in the research literature. Although our review of the literature yielded numerous studies concerning the outcomes of service-learning, for the purposes of this paper, we focused on four studies which summarized outcome research.

In one of the earliest and most frequently referenced articles on the effects of service-learning, Conrad and Hedin (1991) reviewed qualitative and quantitative research on the effects of service learning primarily on K-12 students. They indicated that three broad areas of development were affected by service-learning: academic, social, and personal. The researchers included in the academic development category gains in reading and math skills, problem solving, and critical thinking. The social development category included changes such as more positive attitudes towards others, effective communication, and social responsibility. Changes in personal development involved such areas as increased self-esteem, self-efficacy, and lower levels of alienation and isolation.

In a more recent examination of the effects of service-learning, Eyler and Giles (1999) outlined the impact of service-learning experiences on college students. The researchers surveyed and/or interviewed over 2000 subjects. Their model provided eight potential "outcomes" of a successful service experience: personal development; interpersonal development; citizenship; problem solving/critical thinking; learning/understanding and application; closeness to faculty; stereotyping/tolerance; and perspective transformation. Eyler and Giles concluded that the quality of the service-learning experience had a significant effect on the impact of the experience.

Billig (2000) summarized the past decade of research on the impacts of service-learning in K-12 schools. Her organizational framework for categorizing the effects of service-learning on individual students included four broad areas: impact on personal and social development, impact on civic responsibility, impact on academic learning, and impact on career exploration and aspirations. Billig

indicated that significant outcomes in each of the four areas were more likely to be achieved if the program design intentionally and explicitly set out to have an impact in that particular area.

Finally, Astin, Vogelgesang, Ikeda, and Yee (2000) conducted a study to explore the effects of service-learning on the development of college undergraduates. Data were collected from 22,236 undergraduates across the nation and the impacts of service-learning and community service were assessed on 11 different dependent measures. Their findings showed significant positive effects on all 11 outcome measures: academic performance (GPA, writing skills, critical thinking skills), values (commitment to activism and to promoting racial understanding), self-efficacy, leadership (leadership activities, self-rated leadership ability, interpersonal skills), choice of a service career, and plans to participate in service after college. The qualitative findings indicated that service learning facilitated four types of outcomes: an increased sense of personal efficacy, an increased awareness of the world, an increased awareness of one's personal values, and an increased engagement in classroom academic experience. In addition, the qualitative findings suggest that students developed a heightened sense of civic responsibility.

Method

Participants

The participants in this study were college undergraduates enrolled in a private university located in North Carolina (N = 108). The majority of the tutors were White (82 percent) and the rest were either African-American (13 percent) or of another ethnicity (5 percent); there were almost three times as many females (73 percent) as males (27 percent). In at least one of three consecutive semesters, the undergraduates were enrolled in one of three introductory teacher education courses: an educational psychology course, a course concerned with the motivation of at-risk students, or a course focused on literacy and tutoring issues. Most of the students enrolled in only one of these courses for one of the semesters; however, three of the students enrolled in two of the courses in two out of these three semesters. Tutoring an elementary school student was a required service-learning component of all students enrolled in these three courses. Although educational psychology was the only one of these three courses required for teacher certification, students who typically enrolled in these courses did so to explore working with children and/or schools as a possible career. There was no education major at the university; however, students could have enrolled in a teacher certificate program in elementary or secondary education which culminated in state teacher licensure. The academic majors of the participants in this study varied greatly and included psychology, English, public policy, history, sociology, biology, and biological anthropology, among others.

The undergraduate students tutored elementary fourth- and fifth-grade chil-

dren, a small fraction of whom were repeating a grade. Most of the children were African-American (86 percent) and the others were White (8 percent) or Hispanic (6 percent); there were about an equal number of boys (51 percent) as girls (49 percent). The elementary school children attended one of four schools in the neighborhoods surrounding the university. The children were selected by their teachers based on the following criteria: they were to have scored a two (out of a possible four; three is passing) on at least one of the two main North Carolina end-of-grade (EOG) tests to measure competence in the North Carolina Standard Course of Study (SCOS) objectives and goals for math and reading (there were a few exceptions where students had scored high ones or low threes); they were to be receiving no other outside assistance (such as additional tutoring or Learning Disabled assistance); and they were to be available for tutoring for at least two hours a week. Every effort was made to work with the same fourth graders for all three semesters of this study. However, because some children moved to other schools and some began receiving other outside assistance (which disqualified them according to the participation criteria), very few elementary students (10 children total) were able to participate in all three semesters of this project.

Training

The undergraduates tutored elementary school students twice a week for a semester as part of their service-learning tutoring experience. As part of their course work, all undergraduates were trained in the following areas: how to prepare and teach a lesson appropriate for a tutoring session; how to develop children's academic skills; how to foster children's intrinsic motivation; how to read and interpret the North Carolina SCOS benchmark tests (given each quarter to measure a child's progress in preparation for the state EOG tests); and how to reflect at the end of each tutoring session. During an initial training session, students were introduced to the structure of the tutoring program and were provided with a tutoring handbook that included: the procedures to be followed as a tutor (e.g., how to check-in to the school); blank reflection forms; relevant sections of the North Carolina SCOS (e.g., fourth-grade math goals and objectives); a list of lesson plans available to them; a blank lesson plan template; and information about their school (e.g., a map, a calendar, the phone number).

Training was ongoing in the sense that class work regularly coincided with issues and problems experienced in the field and there were regular discussions both in and out of class. The college professors made a priority of integrating the tutoring issues into the class discussions to help students connect theory to practice. The site-based coordinator or one of his assistants individually responded to tutors' journal reflections, both in writing and verbally.

Data Sources

Data sources included a series of structured essays that the undergraduates

completed at the beginning and end of each course, as well as an end-of-semester questionnaire.

Students wrote three essays in response to specific questions about their experiences. Students responded to the prompt, "Why are you choosing to do this work? You can give more than one reason" near the beginning of each course and "Why did you do this work? Was it worthwhile? Would you choose to do it again?" near the end of each course. Students were then asked to "reflect on and analyze" both of these responses and to write a third essay in which they compared these two responses. We coded the third essay in which students compared their responses. Consequently, the coded essays reflected what the undergraduates believed to be the most important comparisons and contrasts from their own papers, as opposed to what the authors might have chosen as the most significant statements. This filter allowed the authors to identify ways in which the undergraduates' perceptions of themselves as well as their perspectives on relevant issues were transformed over the four month semester.

The overall analysis strategy involved a microanalysis of the students' essays based on a grounded theory approach to qualitative data (Glaser & Strauss, 1967). As suggested by Schatzman and Strauss (1973), the analysis of our qualitative data involved "discovering significant *classes* of things…and the *properties* which characterize them" (p. 110). The three researchers developed the initial coding scheme after reading 10 random essays. Each of the three researchers coded two-thirds (60 essays) of the remaining 90 essays so that all of the essays were coded by two researchers. The inter-rater agreement for all of the essays was 89.1 percent. Disagreements in coding between two researchers were settled through discussion and consensus making with the third researcher.

After coding the passages, we re-analyzed the codes to ensure that none of them were redundant or overlapped in function. As a result of this re-analysis, we eliminated three of the codes. One of the eliminated codes was re-coded as another code to which it was very similar, and the other two eliminated codes were completely eliminated because only 2 percent or fewer of the essays contained these codes. Our final coding scheme consisted of 14 codes.

To better understand the broader issues and to help summarize our findings, we grouped the 14 codes into four categories based on similarities among code topics. For example, we grouped the *learning course concepts* and the *application of course concepts* codes together in one category named "Perspectives on Teaching and Learning" because these two codes both indicated a change in students' perspectives on the teaching and learning process. The four categories were: (1) Perspectives on Identity and Personal Development; (2) Perspectives on Teaching and Learning; (3) Perspectives on Service and Responsibility to Community; and (4) Personal Satisfaction.

At the end of each course, students completed a 25-item questionnaire that was developed by the authors based on a review of the literature on service-learning (e.g.,

Conrad & Hedin, 1991; Wutzdorff & Giles, 1997). Students rated each item on a 5-point Likert scale ranging from "1=This statement is not in any way true of my experience" to "5=This statement is very true of my experience." These items surveyed students about a broad variety of issues which service-learning experiences have been shown to have an impact. The mean scores were calculated for each item.

Findings and Discussion

Goal 1: Identifying Transformative Effects of Service-Learning in Teacher Education

To better understand the ways the service-learning tutoring experience may have transformed teacher education students, we analyzed the essays and identified 14 distinct themes in the students' essays. We grouped each of these themes into one of four categories as presented in Table 1. The first three categories contain themes which describe how student perspectives were transformed as a result of their service-learning experience. The fourth category ("Personal Satisfaction") is comprised of two themes that relate to the sense of satisfaction that students felt as a result

Table 1
Percent of Students Reporting Responses to Each Theme and Category

Type of response	Response per theme[a] (%)	Response per category[a] (%)
Category 1: Perspectives on Identity and Personal Development		62.2
Clarification of career and life goals	43.9	
Personal growth	25.5	
Increased confidence	12.2	
Category 2: Perspectives on Teaching and Learning		67.4
Learning course concepts	35.7	
Awareness of learning from tutee	24.5	
More holistic view of learning	23.5	
Changed perspective on teaching or teachers	22.5	
Application of course concepts	16.3	
Category 3: Perspectives on Service and Responsibility to Community		59.2
Awareness of positive influence on tutee	38.8	
Valuable insights into how the "real world" worked	15.3	
Stronger connection to their community	12.2	
Shift with regard to focus and reason for tutoring	9.2	
Category 4: Personal Satisfaction		66.3
Sense of satisfaction; experience was rewarding and enjoyable	66.3	
Satisfaction of helping others; enjoying interaction with children	55.1	

[a]n=98 (incomplete essays were not included)

of the experience. Each of the four categories is described in this section. Percentages reflect the number of essays that included the specified theme; we do not mean to imply by these percentages that only the indicated percentage of students experienced a perspective transformation in any particular area. Rather, we err on the side of caution, as it is likely that more students experienced the various transformations than we coded, but did not mention them explicitly in their open-ended essay responses.

Perspectives on Identity and Personal Development (Category 1)

This first broad category contains three themes, each of which focused on issues of self-growth. Overall, 62.2 percent of the participants wrote statements which indicated a change in their perspective on identity and personal development. Students' perspectives on identity and personal development were transformed in three areas: clarification of career and life goals (43.9 percent of students), personal growth (25.5 percent of students), and increased confidence (12.2 percent of students).

One of the strongest effects of the service-learning experience appears to be a change in the undergraduates' views of their career goals. While some students had already explored the idea of becoming a teacher, others had not given it much consideration. The service-learning experience helped many students clarify their career and life goals. For instance, some students who had already planned on becoming a teacher reported that they were more certain that they wanted to become a teacher after the service-learning experience. One student wrote, "I want to be a teacher/coach some day and this experience I had tutoring through this class has strengthened that desire." Another student wrote, "This opportunity really did help reaffirm my interest in pursuing education."

Other students, who had not planned on becoming teachers, reported that after their service-learning experience they did plan to choose a career in teaching, or that they would give it more consideration as a profession. For example, students wrote:

> I never dreamed that my tutoring experience would change the direction of my life. After this semester I now know that I want to teach after college. It was not that I thought I was such a great tutor, but something just felt right. I felt at home, like that was the type of place at which I could spend a lot of time.

> Tutoring has been such a breakthrough for me that I hope to become a teacher some day.

> After tutoring this semester, I have decided that I want to pursue getting my education certificate.

While many students reported positive service-learning experiences which affirmed their plan to teach, a few students indicated that they were more certain that they did *not* want to choose a career in teaching. One student wrote, "I have also gained more teaching experience, and though I do love it, I realized that there is a lot of bureaucracy that goes into schools, of which I do not want to be a part."

The fact that almost 44 percent of the students wrote about how service-learning clarified their career and life goals indicates that these students were likely in the process of searching for their identities. This finding is consistent with Marcia's (1966, 1994) identity moratorium status of identity in which individuals explore and choose from meaningful identity alternatives during young adulthood. We believe that this experience provided many students with an important opportunity to gain more insight into the teaching profession, as well as the world of work in general, and thus helped them form their identities. Whether students became more certain that they wanted to choose a career in teaching or more certain that they did not, they were able to make clearer and more well-informed choices about their careers as a result of the service-learning experience.

We also included the *personal growth* theme in the "Perspectives on Identity and Personal Development" category. We coded an essay as indicating awareness of personal growth when students wrote about how the service-learning experience helped them answer the question "Who am I?" or fostered their personal development in general. These students gained a greater clarity about who they were as people. The following excerpts provide examples of how students experienced personal growth:

> It is beneficial to look back at old papers and old journal entries to see how much I have grown, how my thoughts, feelings, fears and aspirations have changed through my work with Jill.

> I definitely think the tutoring experience was worthwhile. Not only did it give me a chance to share my life with someone else, but it also helped me look introspectively into my own heart. Tutoring opened my eyes to things that I usually take for granted and gave me a sense of added responsibility to take charge of my own education. If I were given the opportunity to tutor again, I would have no reservation whatsoever in saying YES!

> In my last reflection I wrote about the way that I learned and grew through tutoring. I realize now that tutoring can do more than give me experience in the field of education, but also in life. It helped me become more responsible and better at holding leadership positions, both in the classroom and out.

The last theme we identified in the "Perspectives on Identity and Personal Development" category was *increased confidence*; these students felt an increased confidence in their abilities to work with others. For instance, one student wrote that "By the end [of the service-learning experience], I felt a lot more confident about my ability to actually be a teacher to Shanitra and look forward to having further opportunities to do so." Another student commented that "I also learned more about myself and boosted my own confidence in working with people, which was not an initial expectation."

Perspectives on Teaching and Learning (Category 2)

Tutoring helps me learn. I learn how to alter lessons, how to be a role model, how

to figure out how people learn, and how to best foster learning, [all of] which are the goals of our educational psychology class. (Undergraduate study participant)

Students' perspectives on teaching and learning were also transformed as a result of their service-learning experience. Of the total group, 67.4 percent wrote statements indicating a change in this area. We identified five different areas in which students' perspectives changed in this category: learning course concepts (35.7 percent of students), awareness of learning from tutee (24.5 percent of students), more holistic view of learning (23.5 percent of students), changed perspective on teaching or teachers (22.5 percent of students), and application of course concepts (16.3 percent of students).

The *learning course concepts* theme was indicated in essays which described how the service-learning experience reinforced the academic content the students learned in the college classroom and vice versa. Some students claimed that they did not truly understand some of the course concepts until they experienced them firsthand. Students wrote:

> There were so many occasions on which I made connections between things we were learning in class and things I observed at the school, both on a macroscale (in the school in general) and on a microscale (in my interaction with Tiesha).

> I had not realized the intellectual impact the experience would have on me - how it would offer an exciting counterpoint or supplement to my course readings and discussion and how it would allow me to explore different teaching methods and concepts (cooperative learning, constructivism, motivation, prior knowledge, multiculturalism, etc.) in a more direct and personal way.

> Another cool thing was that the issues raised in class came to life in the tutoring sessions. For once, the connection between school and the real world was very clear.

Essays in which students realized that both the tutor and tutee can benefit from the tutor-tutee relationship were coded as showing *awareness of learning from tutee*. In other words, it is not only the tutee who learns from the tutoring; the tutor also has much to gain from the experience. One student wrote "I had originally thought that tutoring would be a one-way street, with me providing all the information while my tutee soaked it all in like a sponge. However, I was surprised at how much I learned about myself through tutoring." Similarly, another student noted "I could never have thought that I would learn more from this tutoring experience than David did."

We identified essays as indicating a *more holistic view of learning* when students wrote that they understood learning in a broader context, or that intellectual, emotional, and social development were not separate events. One student wrote, "Through my tutoring experience I found that each child has the desire to learn and therefore, teachers and adults must encourage that desire and take an active role in educating our children." Other students gained a greater appreciation for service-learning as an important part of the tutee's learning as well as their own

learning. For instance, another student wrote, "I see the need for one-on-one interaction for all students, and tutoring is an important method by which to accomplish this. I still like tutoring just for the sake of tutoring, but I see the deeper needs and benefits of it too." Another student added "I now have a clearer understanding of how service-learning influences my own learning and personal growth."

Students' essays that included a *changed perspective on teaching or teachers* wrote about their growing awareness of what it takes to be an effective teacher or their changing views about teaching in today's society. Many students gained a greater appreciation for the difficulties faced by teachers. As one student wrote "Teaching/tutoring is a lot harder than some people expect. It requires a great deal of energy and creativity." Similarly, another student noted "I guess the experience made the teaching profession more admirable in my eyes in terms of how many problems and differences they have to deal with year after year." Finally, other students changed their perception of the quality of teachers in today's schools: "What has changed is my opinion about teachers in the public schools. Working at the school showed me that public schools do have some very good teachers."

In addition to learning course concepts, students appreciated having the opportunity to apply the course concepts as well (*application of course concepts*). Students believed that applying their knowledge during the service-learning experience was a vital part of their education. One student commented, "The ability to apply some of the teaching methods and styles discussed in class was the best teaching experience I could receive." Other students wrote similar responses: "I realized how valuable an understanding of such an important topic, learning and how to foster learning, would be facilitated by a 'hands-on' learning experience where I could apply what I had learned in the classroom to the tutoring sessions!"

In sum, the experience provided a place in which students could see the theories from their classes play out in practice, and many took the important leap of applying these theories. Students grew in their understanding of and appreciation for the complexity of teaching: many recognized the reciprocal nature of teaching; others began to reassess preconceived notions about the quality of their own education and the quality of educators in the public schools. Overall, the service-learning experience allowed the undergraduates an opportunity to reevaluate their understanding of the concept of education.

Perspectives on Service and Responsibility to Community (Category 3)

> I definitely helped myself with tutoring. But, while I was in the midst of this whole experience, I realized that it was about much more. I could more than just help myself with this. I could make a difference between failure and success for this student. I could instill in her the will to work hard, which her teachers will recognize and encourage, not just give up on her. So I did meet my goals, but I found something much greater to work toward, and I think I also accomplished that. (Undergraduate study participant)

A significant perspective transformation occurred in several students who began to see their roles in the community or as service providers in a different light. Of the total group, 59.2 percent reported a change in their perspective on service and responsibility to others and to the community. Many students indicated that they were aware that they had had a positive influence on their tutees (38.8 percent of students). Several students were able to identify more specific transformations in themselves, such as how tutoring provided a glimpse of the "real world" for them that was often lacking in the college classroom experience (15.3 percent of students), or how tutoring generated feelings of connectivity to their community (12.2 percent of students). Finally, several students were able to identify in their essays a shift from focusing on themselves and what they were getting out of the experience to focusing on how their tutees were benefiting (9.2 percent of students). This finding is consistent with Fuller's (1969) research on changing levels of focus in teachers, which indicated that as teachers develop professionally, the focus of their attention shifts from concerns about their own performance to concerns about students' learning.

Essays coded for *awareness of positive influence on tutee* indicated this awareness in a number of ways. Some tutors wrote about their individual influence, while others noted the overall impact the tutoring sessions had on the tutees as a group. Students reported that:

> There is some positive impact on students when they are tutored. I am not sure how great or how small that impact is for the student, but I believe that my tutee is better off for having a tutor. That is probably true for ninety percent of the students that were tutored for our class this semester.

> I wanted to give Sherry a little of what [an influential teacher] gave to me: confidence and support. I think that in a lot of ways I did that, mostly by being a constant guide, a helper, an encourager and a friend. And throughout the semester I saw these things positively affecting Sherry in her motivation, learning, efforts, and actual concrete learning skills.

Students who noted that the service experience gave them *valuable insights into how the "real world" worked* frequently referred to the great distances the children they tutored had to cross in order to get on even footing with children from a more privileged background, often including themselves. Others noted the roadblocks that often stand between educational systems and their goal of helping each child to succeed.

> Although [elementary school] is only a three minute walk from [campus], the two are completely different environments. Tutoring reminded me that there is a world outside of [college].

> To really teach well and create excellent schools seems like such a daunting task. And then you begin to realize how unfair things can be for some students. Not because that's the way life is, but because that's the way some people make life for some other person. It must be really hard to be an idealist and work in education.

Several tutors mentioned that they felt a *stronger connection to their community* as a result of the service experience, and some even felt empowered by this discovery:

> I have become more exposed to the community in which I live, and feel that I have given something back to it.

> I have the power to integrate community service into my life as I have done in the past. More than that, I can create more connections between giving something to the community and gaining experience.

Finally, a significant handful of tutors were able to identify a *shift in themselves with regard to their focus and reason for tutoring*: they stopped focusing exclusively on their own experiences and began focusing more on the experiences of their tutees. Though only nine percent of students mentioned this shift explicitly in their essays, such a shift was implied in several other students' essays. For instance, students reported:

> [A]s I grew to know Daniel, the tutoring became much more about his improvement than about mine. Although I did learn a tremendous amount, he became the priority.

> The first time I drove over to [the elementary school] and went to get Ken, it was because it was required for the class. I was excited, nervous, and fearful that tutoring Ken would remind me of tutoring lazy, foolish high school students. After the first day out, however, I went more for Ken's benefit, in terms of both learning and friendship, than to satisfy the requirements for this course.

Overall, awareness of their ability to impact others led several students to realizations about how this impact can and does often occur, and about how valuable such an impact can be, not only for the undergraduates themselves but also for the community and the children they serve. Tangentially, through their own struggles and disappointments, many tutors also realized how difficult it is for schools to have the positive impact that they strive for.

Personal Satisfaction (Category 4)

Most of the students (66.3 percent) wrote that they found their service-learning experience rewarding and enjoyable, and more than half (55.1 percent) indicated that this satisfaction came from helping others. The significance of this level of response can be measured in part by realizing that the undergraduates were not responding to specific prompts about the level of satisfaction they felt as a result of their service-learning experience but were responding instead to open-ended prompts. On the whole they indicated that they enjoyed helping others and interacting with children. For example, one student wrote "I love the feeling of accomplishment that I get by tutoring a child."

The data do not allow us to determine whether their perspective about the rewarding nature of service changed as a result of this experience. In other words,

some students might have already had this perspective when they enrolled in the course. Further, we do not know how many of these students will continue to seek out other opportunities that allow them to help others and/or work with children (though we do know that at least 25 students subsequently took service-learning classes involving a tutoring component after completion of one of the classes in this study). However, it is important to note that in addition to perspective transformations, students do receive satisfaction from participating in this type of service-learning tutoring experience.

Finally, we must note that while most of the students participating in the service-learning experience enjoyed it, there were two students (2.0 percent) who did not enjoy their experience. One student wrote that she wished that she had been able to volunteer her time in a classroom where she had previously volunteered, while the other simply "did not really enjoy teaching this semester."

End-of-Semester Questionnaire

The mean scores for the 25 items on the questionnaire are presented in Table 2. Each item was rated on a 5-point Likert scale ranging from "1=This statement is not in any way true of my experience" to "5=This statement is very true of my experience." Since the items were drawn from a review of the literature about the effects of service-learning on the learner, we expected most of the items to be rated as being at least "moderately descriptive" (a scale value of "3") of the experience. A few items consistently topped the list each semester. Students reported that, as a result of their service-learning tutoring experience, they learned "more" and developed a deeper understanding of educational issues; they changed their perspective on their own education; and they gained a greater mastery of the conceptual material covered in the course. Further, they reported gaining a deep sense of satisfaction by helping others, and their general tolerance and empathy grew, as well as their awareness of and sensitivity towards diversity issues. An examination of the data presented in Table 2 indicates that in general the students perceived the service-learning tutoring experience as having had a significant impact on their lives.

Comparison of the Essay and the Questionnaire Data

Many of the items that students rated highest on the questionnaire are similar to the themes that we identified in their essays. For instance, the highest rating (M=4.56) reported by students was for the item which read "I learned 'more' and developed a deeper understanding of educational issues," while the third highest rating (M=4.26) was given for "I gained a greater mastery of the conceptual material covered in this course." Both of these items relate to the essay themes we identified in the "Perspectives on Teaching and Learning" category, especially the themes of *learning course concepts* and *application of course concepts*. Such response overlap indicates a certain level of consistency between our two data sources; that

is, what the students wrote in their essays is on the whole consistent with what they reported on the questionnaires.

Further evidence of the consistency between the essays and the questionnaires is evidenced by the fact that the second most highly rated item (M=4.40) on the questionnaire was: "I gained a deep sense of satisfaction by helping others." This theme is consistent with the "Personal Satisfaction" category in which we found that over half of the students (55.1 percent) reported finding satisfaction in helping others.

The sixth highest rated questionnaire item (M=3.95) indicated that students perceived a change in their perspective on their own education. This item is consistent with the "Perspectives on Identity and Personal Development" category in which we identified themes that reflect students' growth as individuals. Argu-

Table 2
Mean Scores on End-of-Semester Questionnaire Items

Item	Mean [a, b]
As a result of my service-learning experience (tutoring, reflection sessions, class discussions):	
I learned "more" and developed a deeper understanding of educational issues.	4.56
I gained a deep sense of satisfaction by helping others.	4.40
I gained a greater mastery of the conceptual material covered in this course.	4.26
I developed more tolerance and patience when working with others.	4.03
I developed more empathy for children who have difficulty in school.	4.00
I changed my perspective on my own education.	3.95
I gained a deeper sensitivity to and understanding of diversity issues (race, class, gender).	3.82
I strengthened my social interaction, "people" skills.	3.75
I developed more complex ways of analyzing problems.	3.74
I enhanced my sense of responsibility.	3.73
I developed more effective problem solving skills.	3.71
I developed a stronger sense of self and self understanding.	3.66
I clarified my possible future educational and career plans.	3.58
I gained a clearer sense of social problems and solutions.	3.56
I improved my critical thinking skills.	3.56
I further developed my leadership and organizational skills.	3.55
I increased my sense of commitment to social justice and social responsibility.	3.51
I reduced stereotypical views I might have had.	3.46
I contributed to social change and social action.	3.43
I developed stronger citizenship skills.	3.32
I developed leadership skills.	3.29
I clarified my personal values.	3.29
I further developed my ethical and moral reasoning skills.	3.28
I developed a sense of being connected in spirit to something greater than myself.	3.25
I strengthened my organization skills.	3.24

[a]n=73 (incomplete questionnaires were not included)
[b]Rated on a 5-point Likert scale ranging from "1=This statement is not in any way true of my experience" to "5=This statement is very true of my experience."

ably, by changing their perspective on their own education they have grown as individuals. The item also overlaps with the "Perspectives on Teaching and Learning" themes of *more holistic view of learning* and *changed perspective on teaching or teachers*.

Finally, we analyzed the data to identify whether the questionnaire responses were consistent with the "Perspectives on Service and Responsibility to Community" category that we had created as a result of the essay data. There were only a few items on the questionnaire that addressed this issue; however, the "I enhanced my sense of responsibility" item was rated highest of those questionnaire items that do relate (M=3.73). Also rated as being descriptive of the impact of the service-learning experience were the items "I increased my sense of commitment to social justice and social responsibility" (M=3.51) and "I contributed to social change and social action" (M=3.43). Overall, based on our sources of data and on our experiences working closely with the students on a day-to-day basis, it appears that the students' perspectives on their responsibility to others and to the community was enhanced by the service-learning tutoring experience.

In sum, many of the themes that we identified in students' essays were also rated highly in the questionnaire. The consistency between these two sources of data is encouraging and suggests that the identified themes are an accurate portrayal of students' beliefs and a potentially helpful way to conceptualize the impacts of a service-learning tutoring experience within teacher education.

Goal 2: Comparing Outcomes of Service-Learning Found in This Study to Outcomes Reported in Other Studies.

A comparison of the results of this study with the results of the four comprehensive research reports we discussed in the "Background" section of this paper (i.e., Astin, Vogelgesang, Ikeda, & Yee, 2000; Billig, 2000; Conrad & Hedin, 1991; Eyler & Giles, 1999) revealed that structured and integrated service-learning tutoring experiences have outcomes consistent with the outcomes reported in these four studies. Although each of these four studies described the outcomes of service-learning in different ways, each included four broad categories of outcomes: (1) personal growth and efficacy (similar to the "Perspectives on Identity and Personal Development" described in this paper); (2) social responsibility and civic engagement (similar to the "Perspectives on Service and Responsibility to Community" category described in this paper); (3) academic learning and understanding (similar to the "Perspectives on Teaching and Learning" category described in this paper); and (4) career development (included as part of the "Perspectives on Identity and Personal Development" category described in this paper). Given this organizational framework for understanding the outcomes of service-learning experiences, the question "where is the learning in service-learning" (Eyler & Giles, 1999) may no longer be the central issue. The learning which results from service-learning experiences appears to be consistent and well documented.

Although many similarities existed among the outcomes reported in this and in other service-learning studies, there were significant differences. The undergraduates in this study reported changes in their perspectives on their own education. For example, several students indicated a new sense of personal ownership of and responsibility for their academic development. Students also reported changes in their views of the learning process in general. For instance, students expressed a heightened awareness of the reciprocal nature of learning (the tutor learned from the tutee and the tutee learned from the tutor). Students also appeared to increase their awareness of the centrality of the social processes involved in learning. That is, the students appeared to have a deeper understanding of Vygotsky's claim that "higher mental processes in the individual have their origin in social processes" (Wertsch, 1985, p. 14). Students also expressed a greater understanding of the complexities faced by teachers. Several students commented that teaching requires a great deal of energy and thoughtfulness, which made the teaching profession more admirable. Perhaps these findings concerning students' ideas about the nature of learning and teaching are not widely reported in other service-learning studies because they are unique to service-learning <u>tutoring</u> experiences. We believe that it is important for prospective teachers to undergo this type of perspective transformation in which they reformulate their most basic ideas about the learning and teaching process.

Finally, the results of this study differ from other service-learning studies in that the participants in this study did not report significant growth in development of leadership skills or in clarification of personal values.

Goal 3: Determining the Benefits and Implications of a Service-Learning Tutoring Experience

The results of this study have implications for many of the key issues currently confronting teacher educators, including: (1) recruiting prospective teachers to address the projected teacher shortage; (2) improving teacher quality by connecting theory to instructional practice; (3) closing the achievement gap by preparing teachers to teach children from diverse backgrounds; and (4) showing prospective teachers the importance of community involvement in supporting instruction. The results of this study indicate that a structured and well integrated service-learning experience that includes a tutoring component can effectively address many of these issues. This section discusses the beneficial ways a service-learning experience with tutoring can be utilized to address each of these issues, as well as the implications for teacher educators.

America is facing severe teacher shortages in several areas of the country and recruiting and retaining teachers has become a major challenge (Archer, 2000; Darling-Hammond, 1990). The results of this study indicate that a structured service-learning tutoring experience can help college students to clarify their career goals. While some of the students who participated in the service-learning experi-

ence decided not to become teachers, others reported that this experience helped them decide to enter the field of teaching. Although most of the students were initially interested in working with children and schools, some of the students were not seriously committed to preparing to become a teacher before this experience. Overall, the experience helped students to make better choices about their career. As important as it is to recruit teachers, it is equally as important for graduates to be cognizant of whether or not teaching is a good fit for them in the first place. The fact that some students discovered that teaching was not a good fit for them is a positive outcome which could improve teacher retention and quality.

One implication of this finding is that teacher educators should consider making courses that include a service-learning tutoring component available to students early on in their college experience before students select or declare a major. These types of courses would seem to be particularly useful to freshmen and sophomores who are in the process of deciding upon a career path.

A second benefit of this type of service-learning tutoring experience is that it provides teacher educators with a means to improve teacher quality by connecting theory to instructional practice. In many traditional college lecture courses, students are frequently able to absorb information and repeat it when given a paper-and-pencil test. However, high achievement on paper-and-pencil tests does not guarantee that students can *apply* the concepts. Students in this study reported that the service-learning tutoring experience helped them, as one student reported, "make the connection between school and the real world very clear." The knowledge that the students received was not simply inert knowledge that would not be useful as a future teacher. Instead, as another student noted, she was able to explore concepts "in a more direct and personal way." For instance, students not only learned theories of motivation, they practiced using motivational strategies in a meaningful context. As another example, students not only read about high-stakes testing and accountability measures, but also experienced firsthand the challenges involved in preparing children to take end-of-grade tests. As a result, these prospective teachers gained a better understanding of what is required to be an effective teacher.

The implication of this finding is that teacher educators should carefully select service-learning experiences that complement and illuminate academic course content. For instance, the courses in this study included educational psychology, motivating at-risk students, and literacy/tutoring. Each of these courses included topics such as theories of learning, instructional practices, child development, and motivation. The service-learning tutoring experience was specifically selected and structured to provide students opportunities to integrate academic knowledge with teaching experience.

Another key issue facing teacher educators is teaching prospective teachers how to teach children from diverse backgrounds. The majority of prospective and inservice teachers in America are white; however, the number of low income, minority, and English as a second language children is growing dramatically.

Undergraduates in this study noted that this experience provided valuable insights into the "real world" and how this real world differed from their own more privileged world. As one student wrote: "I got a very clear look at what children who are less privileged than the children who I work with every summer [in camp] are like. It seems that the children [we are tutoring] have to come so much farther in order to be able to understand things that other children have been exposed to for so long." Because most of the tutors in this study were white students from higher socioeconomic status (SES) backgrounds and most of the children being tutored were African American or Hispanic (generally from low SES backgrounds), the tutors experienced working in a close personal relationship with a child of a different ethnicity, cultural background, and SES.

One of the implications of this finding for teacher educators is that educators should consider matching college students with tutees who are significantly different in terms of ethnicity, culture, and SES. These types of pairings can provide college students with intense individual experiences that they might not otherwise receive; and thus, better prepare prospective teachers to close the achievement gap.

Finally, this type of service-learning tutoring experience shows prospective teachers how community involvement can support instruction. Service-learning provides a means of showing prospective teachers how members of the community (in this case students from a local university) can become involved in schools to educate children. This study does not provide data to indicate that this type of service-learning tutoring experience will cause these students to use community members in their classroom when they become teachers. However, several students made comments such as "I was able to give to the community and I have helped shape a positive and intelligent member of society." These types of comments indicate that many prospective teachers experienced a perspective transformation about the ways in which community members can have a positive influence on school children. This finding is important even for the students who indicated that teaching was no longer their intended career, as this deeply felt commitment to community involvement in the schools will perhaps remain with them as parents and citizens.

Summary and Conclusions

The first goal of this study was to examine the transformative impacts of a highly structured and well integrated service-learning tutoring experience on undergraduates enrolled in teacher education courses. The results indicated that students were indeed transformed in significant ways by this experience. Participants appeared to develop new perspectives and attitudes in areas such as identity and personal development, teaching and learning, and service and responsibility to the community. These perspective transformations will likely be beneficial to them as prospective teachers. Moreover, tutors reported that the experience was satisfying and that they enjoyed helping others and interacting with children.

A second goal of the research was to compare the impacts of a service-learning tutoring experience on prospective teachers to the outcomes of service-learning reported in other studies. An examination of the results revealed that with a few exceptions, the outcomes of this research are highly similar to reported service-learning outcomes in general. One difference noted was that some students who tutored had a perspective transformation about the learning process.

The third goal of the research was to explore the benefits and implications of the results for teacher education. These benefits and implications will help educators better understand how a service-learning tutoring experience can help them meet many of the key issues currently confronting teacher educators.

Perhaps hidden by the specific changes in the participants' perspectives was the more holistic transformation of students' ideas about their own education and the nature of learning in general. After all, if the true aim of education is to transform, what better experience for a prospective teacher than to experience directly and to reflect explicitly on one's own personal transformation.

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