Improving Student Learning Outcomes with Service Learning

BY MARY PRENTICE AND GAIL ROBINSON

Growing numbers of community colleges are incorporating service learning into the curriculum. While research has documented many benefits to those who participate in this experiential pedagogy, a primary goal of service learning is to increase students' learning of course material.

In 2006 the Learn and Serve America program of the Corporation for National and Community Service awarded a three-year grant to the American Association of Community Colleges (AACC). Selected through a national competition, thirteen colleges participated in AACC's *Community Colleges Broadening Horizons through Service Learning* grant project. AACC measured learning outcomes attainment for students at the *Horizons* grantee colleges.

AACC defines service learning as combining community service with academic instruction, focusing on critical, reflective thinking and personal and civic responsibility. For this grant project, AACC defined academic learning outcomes as comprising six measurable areas: critical thinking; communication; career and teamwork; civic responsibility; global understanding and citizenship; and academic development and educational success.

Learning has always been a primary focus of community colleges as well as four-year colleges and universities. Historically, course grades and cumulative grade point averages have been used as indicators of student learning. In the last half of the 20th century and continuing into the 21st century, however, these indicators have been called into question. In 2006, a policy paper on assessment stated that "postsecondary education today is not driven by hard evidence of its effectiveness. Consequently, our current state of knowledge about the effectiveness of a college education is limited" (Dwyer, Millett, and Payne 2006).

> Service learning participation was a predictor of increased student learning outcomes.

Continuing pressure to identify learning indicators has ramped up educators' need to develop or adopt additional methods to document student learning objectively. Most of these approaches have focused on measuring

student learning at the specific course level (developmental psychology or biology of plant genetics, for example) and/or broader discipline level (psychology or biology). The drawback of assessing student learning in specific courses or disciplines is that these focused assessments are not easily translatable into a larger understanding of how students accumulate learning across the college. In addition, it is difficult to compare a measure of student learning among diverse colleges across the country.

While less common, there is movement toward assessing learning in both specific courses and disciplines and across disciplines and degree programs. Here the goal is to assess the attainment of learning specific outcomes that are generally considered the goal of any higher education (i.e., critical thinking, communication, teamwork, civic responsibility). These institutional-level assessments (such as the Measure of Academic Proficiency and Progress, or MAPP test) are increasingly being developed by test development companies. The benefits of these tests are many, but they come with the disadvantage of financial cost. What higher education also needs are institutional-level assessments that are developed by educators and shared among colleges.

To develop an assessment that is applicable in courses across campus, one approach is to use a common method of instruction in addition to individual instructional techniques. One instructional strategy that can be used in almost any college course topic or discipline is service learning. Service learning educators connect the academic content to community-based projects.

Service learning provides students with experiences that can be linked back to course content, so that they gain both of what Hussey and Smith (2002) note as "knowledge that" (knowledge of facts, rules, procedures) and "knowledge how" (learned skills and abilities). Researchers such as Eyler and Giles (1999) have documented the connection between service learning and student learning, but what is needed in the current assessment climate are additional studies that explore the connection between attainment of specific learning outcomes and service learning.

METHODOLOGY

To investigate the relationship between service learning participation and academic learning, AACC used both quantitative and qualitative methodologies as evaluation tools for its 2006-2009 *Horizons* grant project. AACC developed two quantitative instruments (one addressing students, one addressing faculty) after reviewing the institutional learning outcomes of multiple higher education institutions across the nation. To further explore how service learning affected student learning, AACC conducted five student focus groups and three faculty focus groups during spring 2009.

The *Horizons* grantee colleges were located in large urban population centers as well as midsized cities and small rural communities. The colleges administered surveys from spring 2007 through spring 2009. The service learning coordinator at each college selected the courses to be surveyed; these included courses that required service learning participation as well as those offering it as an option. At each institution, similar courses that did not offer service learning were surveyed to provide a comparison group.

Both the student and faculty surveys contained 24 questions in a six-point Likert-style scale where the number "6" indicated the highest response and "1" indicated the lowest response (see survey on page 5). The 24 questions centered on six learning outcomes: critical thinking; communication; career and teamwork; civic responsibility; global understanding and citizenship; and academic development and educational success. In the Student Survey of Course Outcomes, the presentation of questions was designed to ensure that like items were not presented consecutively.

The student survey also contained demographic questions designed to ascertain the similarities between the students

who participated in service learning ("service learners") and students who did not participate in service learning ("nonservice learners") at the beginning of each term. Six final questions focused on the service learning experience itself. When the demographic questions were analyzed (i.e., the total number of courses taken by each group of students, and students' self-reported cumulative grade point averages or GPAs), results indicated a statistical difference in each group's reported number of courses. Service learning students had taken an average of eight courses prior to the course in which they were surveyed, while nonservice learning students had taken an average of six previous courses.

In comparison, on the second measure there was no statistical difference in the two groups' self-reported GPAs (3.070 to 3.052; see figure 1). Thus, in the measure of academic learning as represented by GPA, both groups were similar before the service learning assignments began. However, the groups were not similar in the number of previous courses each had taken. The service learners reported having taken statistically more courses than the nonservice learners.

The Faculty Survey of Course Outcomes contained the same 24 question topics representing the six learning outcomes used in the student survey. The wording of the questions was changed, however, to assess the degree to which the surveyed faculty members had addressed the specific learning outcome in the courses in which students were surveyed. Faculty survey responses were used to contextualize students' responses in light of the degree to which their instructors had focused on the assessed learning outcome. For example, a question in the student survey was worded, "As a result of taking this course, I can communicate more effectively using writing skills." The comparable faculty survey question was worded, "By the end of the course, students would be able to communicate effectively using writing skills." Unlike the student survey, the presentation of questions was not random in the faculty survey, but instead was organized around each of the six learning outcome areas (see page 5).

By the end of the three years, the *Horizons* grantee colleges returned a total of 2,317 student surveys: 1,687 from service learners, and 630 from nonservice learners. The colleges also returned 68 faculty surveys: 46 from faculty who used service learning in the surveyed courses, and 21 from faculty who did not use service learning in the surveyed courses.
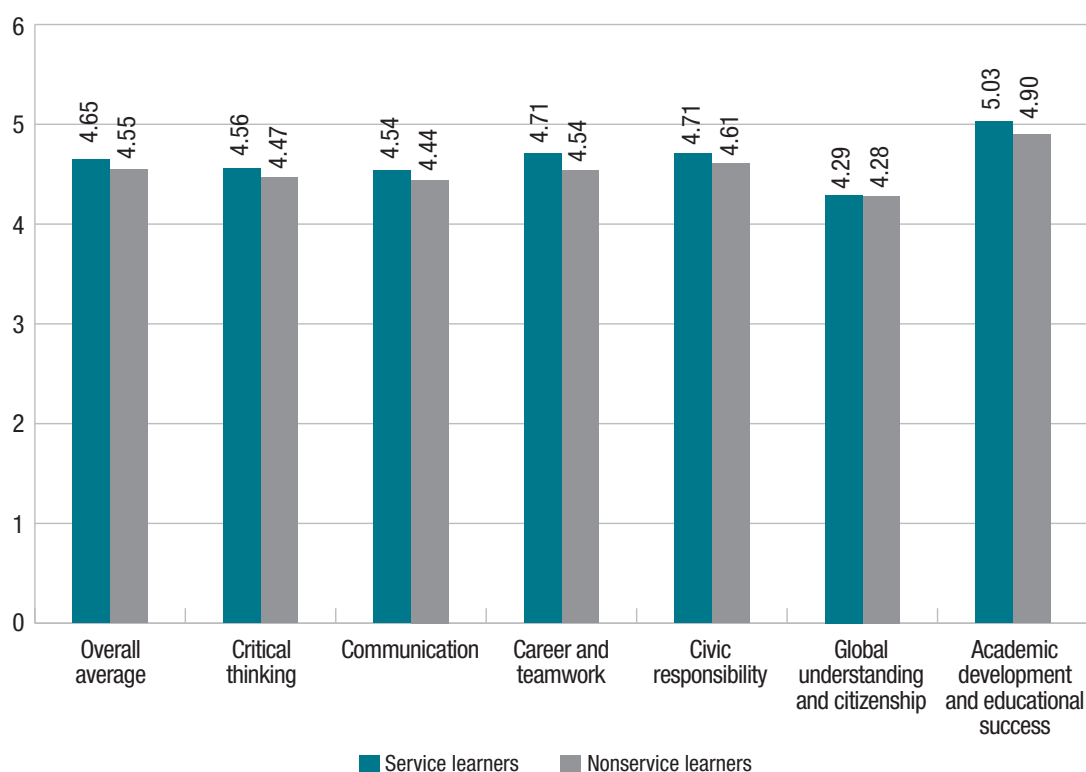
ANALYSIS

When the student groups' average score for all 24 learning outcome items were compared and faculty's use of service learning was statistically controlled for, the service learning students scored statistically higher than the nonservice learning students (4.65 average compared to 4.55 average on the six-point scale). In other words, service learners scored significantly higher than nonservice learners, even when faculty reports of the

FIGURE 1 Comparison of service learners and nonservice learners on total number of previous courses taken and cumulative grade point average
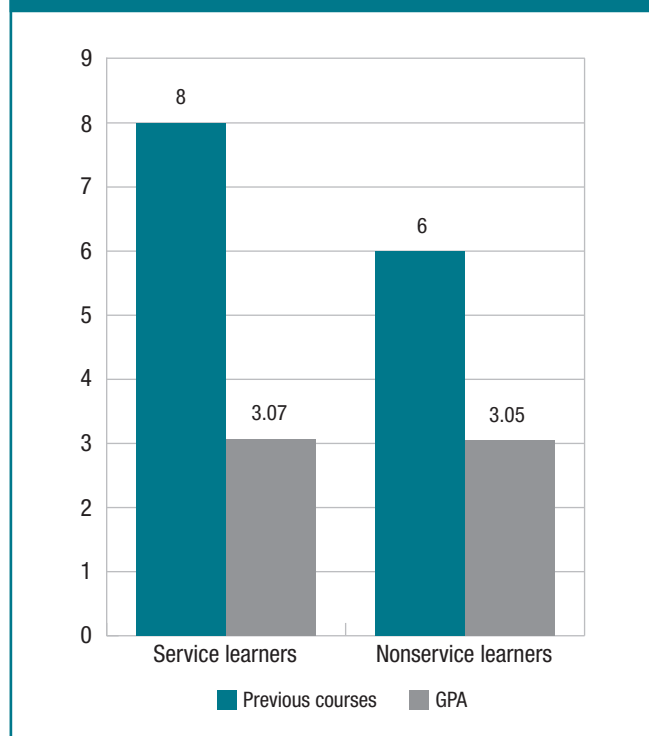
FIGURE 2 Comparison of service learners and nonservice learners on overall survey and individual learning outcomes measures after controlling for faculty use of service learning

degree of learning outcomes focus in the course were removed from the analysis (see figure 2). Service learning participation was a predictor of increased student learning outcomes.

> Service learning students scored statistically higher in five out of the six learning outcome areas.

This outcome was also representative of the results when the average scores for each of the six learning outcome items were compared by group. After one academic term, service learning students scored statistically higher in five out of the six learning outcome areas investigated in this

study. Of these five, service learners scored highest in career and teamwork, civic responsibility, and academic development and educational success. The two groups did not differ statistically in their responses to global understanding and citizenship (see figure 2).

Finally, AACC analyzed the six survey questions on students' service learning experiences. The service learners indicated that, because of their experiences, they would encourage other students to take courses that offer service learning, and they affirmed their belief that the idea of combining course work with service to the community should be practiced in more courses at their college (see figure 3). The students also reported that service learning had shown them how to be more involved in their communities; helped them to have a better understanding of their role as community members; and helped them to have a better understanding of the

Faculty Survey of Course Outcomes

For each item below, circle the number that best describes the degree to which that learning outcome is addressed in your course. On a 1-to-6 scale, 1 indicates the lowest amount and 6 indicates the highest amount of that learning outcome.

CRITICAL THINKING
By the end of the course, students would know how to:

Not at all – Somewhat – Moderately – Definitely

1. identify problems in the community.	1	2	3	4	5	6
2. uncover the root cause of a problem.	1	2	3	4	5	6
3. generate alternative solutions to a problem.	1	2	3	4	5	6
4. evaluate information for possible biases.	1	2	3	4	5	6

COMMUNICATION
By the end of the course, students would be able to:

5. communicate effectively using speaking skills.	1	2	3	4	5	6
6. listen during a conversation.	1	2	3	4	5	6
7. communicate effectively using writing skills.	1	2	3	4	5	6
8. argue effectively for a particular alternative or idea.	1	2	3	4	5	6

CAREER AND TEAMWORK
By the end of the course, students would:

9. have strong leadership skills.	1	2	3	4	5	6
10. be able to work well in teams and with others.	1	2	3	4	5	6
11. have a realistic understanding of the daily responsibilities involved in the jobs or careers in which they are interested.	1	2	3	4	5	6
12. obtain the skills to work in a career that will make contributions to society.	1	2	3	4	5	6

CIVIC RESPONSIBILITY
By the end of the course, students would:

13. think that people should find time to contribute to their community.	1	2	3	4	5	6
14. be concerned about local community issues.	1	2	3	4	5	6
15. plan to improve their neighborhoods in the near future.	1	2	3	4	5	6
16. believe they can have a positive impact on local social problems.	1	2	3	4	5	6

GLOBAL UNDERSTANDING AND CITIZENSHIP
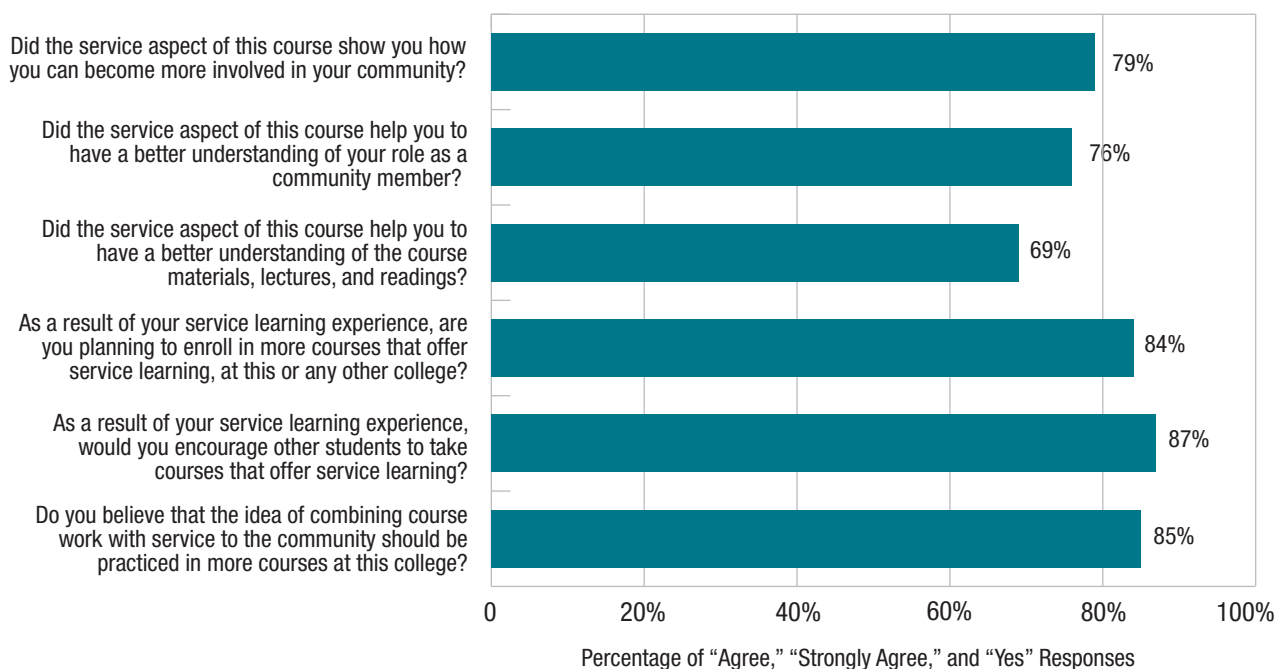By the end of the course, students would:

17. be comfortable working with cultures other than their own.	1	2	3	4	5	6
18. know about different cultures of people in other countries.	1	2	3	4	5	6
19. understand that there are different perspectives on international issues.	1	2	3	4	5	6
20. recognize that what they do in their jobs or work might have implications beyond the local community.	1	2	3	4	5	6

ACADEMIC DEVELOPMENT AND EDUCATIONAL SUCCESS
By the end of the course, students would:

21. understand how the subject matter of this course can be used in everyday life.	1	2	3	4	5	6
22. learn better when courses include hands-on activities.	1	2	3	4	5	6
23. see the connection between their academic learning at this college and real-life experiences.	1	2	3	4	5	6
24. be committed to finishing their educational goals (either earning a degree or certificate, transferring to another college or university, or taking all of the classes that they had planned on taking when they first enrolled at this college).	1	2	3	4	5	6

Did the service aspect of this course show you how you can become more involved in your community? — 79%

Did the service aspect of this course help you to have a better understanding of your role as a community member? — 76%

Did the service aspect of this course help you to have a better understanding of the course materials, lectures, and readings? — 69%

As a result of your service learning experience, are you planning to enroll in more courses that offer service learning, at this or any other college? — 84%

As a result of your service learning experience, would you encourage other students to take courses that offer service learning? — 87%

Do you believe that the idea of combining course work with service to the community should be practiced in more courses at this college? — 85%

Percentage of "Agree," "Strongly Agree," and "Yes" Responses

course materials, lectures, and readings. These results mirror the findings from AACC's 2003-2006 *Horizons* project (Prentice and Robinson 2007); there are now several years' worth of community college student data that affirm the benefits of service learning.

SERVICE LEARNING FOCUS GROUPS

AACC conducted eight focus groups in spring 2009 to gain qualitative insights on the direct impact of service learning on students and faculty. Students who had participated in service learning at *Horizons* grantee colleges were included in five groups; faculty who had taught using service learning were included in three groups. Focus groups included students and faculty from Baton Rouge, Laramie County, Lorain County, Queensborough, Tacoma, and Western Piedmont Community Colleges. The majority of participants had also been part of the survey research.

STUDENT FOCUS GROUP RESULTS

AACC's program evaluator asked the 30 student participants (five to seven per group) a series of questions regarding whether their service learning participation was related to their academic learning. The evaluator began each group by asking students two background questions. The first question related to the number of service learning courses in which the participants had enrolled, while the second question established the total number of college courses they had taken to that point. The majority of students had taken between two and five previous service learning courses, and most were close to graduation.

When the transcripts from the student focus groups were analyzed, comments reflecting five primary questions emerged.

Learning course content

Did participating in service learning help you to learn or understand the course material better?

As long as faculty members related the service learning experience directly to the course curriculum, service learning aided students in learning more than in courses without service learning. Students repeatedly mentioned the benefits of relevancy, enthusiasm, and application of textbook material.

In describing relevancy, one student remarked, "Service learning in the class made the information that was presented more helpful and relevant because [we're] learning everything and then going outside and applying that. And it makes a lot of sense." A second student commented that, without service learning, he would have "missed that real-world experience." Another student expanded on this by explaining that service learning is different because "when you're doing a project like [simulations or case studies], you don't have to worry about an end result" in terms of its impact on real people.

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Students cited enthusiasm as a benefit of service learning. One student summed up the experience this way: service learning "ups the excitement of the whole class. It made you want to learn it more." Another student observed, "Service learning brings the class together more than any other classes that I've been to."

Students in all of the focus groups cited the added benefit of service learning to help them understand and apply information learned in textbook material. One student stated, "I learned my course material for that class better through the service learning than I did through the book." Another student responded that, with service learning, "you can apply what you read in the textbook, and that's how you learn it so much better." In the same vein, another student concluded, "I think it's great that we have service learning projects because you learn more than people who just read [the] books."

Learning skills and knowledge

Did service learning help you to learn specific skills or knowledge that you might not learn in college classes that did not offer service learning?

Students mentioned increases in reasoning, logic, leadership, and confidence. One student said, "I think [service learning] teaches students how to assess a situation better. It teaches every student how to get into a real-life situation and think about it critically and logically." Another student explained, "There [are] a lot of challenges, especially in working in groups. I'm not a very confrontational person, so I had to be the leader. I had to tell people, 'You know we have to get on the same page.' I think everyone should benefit from this in school." Several students also mentioned that their service learning experience helped them develop confidence. One said, "I really think that people don't realize until they've done something like this what they're capable of doing."

> "[Service learning] teaches every student how to get into a real-life situation and think about it critically and logically."

Benefits of service learning

What would you have missed learning if service learning did not exist?

Student comments revealed that service learning increased retention of academic content because it provided students with experiences that had real-life consequences. When comparing service learning with in-class group simulations, students repeatedly spoke about the added benefits they thought service learning provided. One student explained, "Even though it's academic I feel that service learning is always going to be fun, which I think is different from a group project. Because most of the time, I see the students who are involved in service learning want to participate in it for the most part, which is more than you can say for [other] academic group projects."

Students agreed that service learning brought added stim-

ulation and passion to a course: "With group projects, most of the time you have to worry about getting people together. But with service learning I think the students are more apt to be excited about it and actually want to put forth the effort to reach the common goal. If you are actually doing the work for a reason, it makes you want to do the work, because you don't want to mess up." Students reported that service learning was more beneficial than a group project around a simulated problem because "you wouldn't be as passionate about it." One student said, "When you read the book, you have the idea. [But] the book doesn't tell you about the frustrations or the satisfaction you get from doing the job." Another student admitted, "I would have missed everything. I hate school. I always have. But when I do service learning, I learn because it becomes something that I'm actually doing. It's not something I'm just learning about, and that helps retain knowledge for me. I remember everything when I'm actually doing it hands-on."

ONE STUDENT'S STORY

In March 2009 AACC conducted student focus groups at a small community college participating in the *Horizons* project. In a county that was experiencing unemployment rates of more than 13 percent due to the economic downturn, students emphasized the importance of their service learning experience in "getting a leg up on others" when applying for jobs.

As at many community colleges around the country, several of these students were retraining for new careers after losing their jobs. By participating in service learning, they gained experience in those careers and understood how service learning could help them get a job in a competitive environment. They valued the career exploration and connections to community by learning how to help others.

One older student had worked in a factory for most of her adult life. After being laid off, she enrolled in medical

office administration courses at the college. Her service learning placement sites included a hospice and a health care provider, where she helped with client intake.

After 30 years of working in an assembly-line environment, she now had to learn how to communicate and work with different types of people every day. Suddenly she discovered she was a "people person."

"I've always been a quiet person," she said. "Now I want more one-on-one with people, and not just sit back in an office somewhere. I want to get out there more, maybe in social services. I like to deal with people and lend a compassionate ear.

"I'm a displaced worker. I don't have a choice—I have to learn a new profession," she continued. "Service learning has given me experience to step into another field."

> Service learning increased retention of academic content because it provided students with experiences that had real-life consequences.

Value of service learning

Is there information that you could only learn through service learning?

As one student explained, "[Service learning] is important for the benefit of society in the long run because it builds character in us. It gets us out there and makes us realize the difference between the teachings [and] the potential that we have." Another mentioned that service learning is "character building. It's the 'helping other people' factor." Still another student stated, "Without service, what intensity and passion do you have? I mean, if you've been there and your hands and feet have been dirty and you sweat blood and tears for it, then you come out with this oomph that is extraordinary. And people see that."

A student majoring in dental hygiene explained, "I could sit in class and read in the book about how people can have tooth decay and how income can affect that. But then to actually go out and put a face to that really did affect us. It taught a lot of compassion and understanding." An education major said, "One of the goals of education, by the time your students leave your school, is: Are they going to be able to be well-rounded individuals who can work well in society? I think that service learning does exactly that."

Retention and persistence

Did service learning play a role in your decision to stay enrolled in school and finish your education?

The majority of students who participated in the focus groups were close to earning their degrees or certificates and said they were already committed to their degree completion by the time they participated in service learning. However, their service learning experience motivated higher degree attainment. According to one student, "It's helped me want to pursue my education in that field [technology] and move on and get as high as I can." Another student, reflecting on other service learners, said, "I have seen them change their mind from merely wanting a two-year degree to wanting a four-year degree, and from only wanting a four-year degree to wanting a doctorate. And it's all because of certain aspects of service learning we've done. They would sit there and they'd say, 'Wow! That is really cool! I want to know more about that.'"

Students described the value of service learning in exposing them to a wider variety of job possibilities than they had known existed for graduates in their academic major. "The biggest thing service learning did for me," said one student, "was to help me realize that there are different positions for dental hygienists, rather than just being in a dentist's office." Finally, students responded that service learning experiences had helped them confirm their future career choices. As one explained, "It was always a question for me that I could be a business administration major. [Service learning] was kind of like a prize for me to see I was going [in] the right direction choosing business administration."

FACULTY FOCUS GROUP RESULTS

ACC's evaluator asked the 17 faculty participants (five to seven faculty per group) a series of questions regarding their experiences with service learning as it related to student learning in their classes. Initial background questions established how many years they had been teaching and how many of their courses included service learning. Participants had taught between three and 20 years, with an average of 11 years of teaching among them. They also reported using service learning in an average of six courses each.

When the faculty focus group transcripts were analyzed, answers to five primary questions reflected their comments.

Learning course content

Did your service learning students learn the course content better than nonservice learning students?

Responding faculty all affirmed that service learning enhanced student learning. Examples given varied across disciplines, but underlying them all was the idea that service learning provides students with experiences so varied and unstructured that a single classroom cannot offer them all. One faculty member who required service learning participation in a statistics class put it this way: "Think of concepts like the mean, the median, the mode. [Students] know the theory, and they can find it if you give them a database. But when the database represents real situations, they have no clue what the mean represents in that situation. There is something about real-live, real-time projects that really drive the students to go deeper."

Faculty affirmed that service learning enhanced student learning.

A foreign language instructor said, "Service learning students do learn the content better. My [service learning] students have learned more vocabulary, more content beyond the textbook. The ones that go to the [service learning partner] school get exposed to the language more than the ones that are [only] in the classroom." Describing how these conversations are different than conversations in class or in a language lab, she noted, "It wouldn't be the same because, in the school, they're seeing the children actually speaking to each other in their target language and having a conversation with the teacher and with my students. It is a more interactive experience."

One faculty member thought that this more involved style of learning led to more student engagement regarding classroom participation: "Definitely I agree that the service learning students are able to grasp the course work a lot better than the ones who choose not to get involved in that particular project. The students who are willing to participate raise their hands, contribute to discussion. All the ones who are actively engaged in the service learning are the ones who do that. So the ones who didn't want to get involved, they really don't have much to say to add to the class discussion."

Learning skills and knowledge

Are there skills and knowledge that students would not learn if you did not include service learning in your courses?

According to faculty respondents, service learning helped students experience the joys and excitement as well as the frustrations and setbacks that are a part of any career or work situation. Several mentioned that service learning provides students with a safe arena in which to apply their learning and make mistakes in the process. A nursing instructor remarked, "[Some] skills they are learning [are] time management, critical thinking, and conflict management. They've learned persistence. They've learned to be patient. You are going to have to problem-solve and use your critical thinking skills to apply to that [situation]."

"I really appreciate the fact that students get to apply what they are learning in the classroom," replied one instructor. "It's one thing to lecture about management, but when they're getting to actually experience what it's like to be a manager of a project that they have ownership in, then they really [see] what that's like. Not all the aspects of management are fun, and they're not all pleasant. So they get the ups and downs of what management would be like every day in a very safe environment. They're not going to get fired. They are not going to hurt anybody."

A theater instructor said, "I have students who perform a children's show in front of children. They could read about what is appropriate to perform in front of children, but until they experience that, they have no idea what it's like." A professor in allied health said, "Typically, [students] have been through pathology and learned about developmental disorders. But many of them have never worked with anyone with a developmental disorder of any type before, so we go to the Special Olympics summer games and they do screening on some of the athletes."

Benefits of service learning

Why should faculty use service learning in their classes?

Faculty described three primary benefits that would be absent from their classes without service learning. The first two benefits accrued to students. One instructor noted that participation in service learning can help a student develop future academic and career goals. She explained, "College is more than just academics. When you [transfer to] other colleges, they're going to look for community service. And when you're being interviewed by a company, they're going to look for a well-rounded individual."

A second benefit mentioned by several faculty members was that service learning allows students to identify their biases and to replace those biases with accurate information. One faculty member stated, "Without service learning, what the students may lack is understanding their own biases, because they have a lot of different perceptions on communities. In order to be culturally competent, you really have to understand where you're coming from before you can change. I think that would not be present without service learning."

Similarly, another professor explained that "oftentimes students don't realize that you have to respect and recognize and realize and embrace everyone's humanity and that—as human beings—we all need each other. So the students realize, 'Well, if I just place myself in someone else's shoes, then I can kind of realize what they might be going through.' So that's crucial, being able to realize our humanity and see yourself in that person's position."

> "We can give them all the book knowledge they want, but if they can't use it when they leave here, what have we given them?"

A final benefit accrued to faculty themselves. One instructor explained, "I integrated service learning for the first time basically as a self-preservation tool. I used to have a team of students in each class work on research projects on a corporation, looking at the principles of management. And I got so tired of reading semester after semester about [the same well-known company. Now] I'm very pleased to have [new] results in the classroom, but I'll be selfish, too. My relationship is better with my students. I get to know them better. I get to work with them on a closer level. And so you really become a mentor for them as they learn these life skills."

Value of service learning

Is there information that students can only learn through service learning?

Overall, faculty mentioned that what is learned through service learning is how to transfer and apply academic learning. One faculty member responded that, "I think it has to be engage[ment] within the community. Learning takes place when the student is engaged with the subject and the concepts, and the direct application in the community and the civic engagement." A second participant commented, "I think the great advantage of service learning is that it's realistic. It's life itself happening. Life is a learning process: problems, solutions. . . .

The approaches to the problem evolve." Another instructor replied, "It's understanding how to integrate what they've learned in the service learning environment and bringing that into the classroom."

> "The great advantage of service learning is that it's realistic. It's life itself happening."

"We can give them all the book knowledge they want, but if they can't use it when they leave here, what have we given them?" reflected one professor. Through service learning, another observed, students learn to be less reliant academically on the instructor. She said, "Maybe one of the things you can't learn without service learning is that the teacher is not going to pour the knowledge in. You have to do that work. You can know when the papers and the tests are, but [in service learning experiences] you have to genuinely transfer that learning into some kind of scenario where the teacher isn't in control, you are."

Retention and persistence

Do you think that service learning influences students to stay enrolled in either your classes or college?

Respondents unanimously agreed that service learning has this influence. Many faculty described specific situations in which they saw the service learning experience influencing a student's decision to stay enrolled and come to class. One participant responded, "Definitely, because it gives the students more of a sense of obligation once they're really serious and passionate about it." She described one student who had many difficulties distracting her. "But [service learning] kept her motivated. Without that, she might have dropped out because she'd done this several times before."

Another participant agreed: "I have a student [who] had similar issues. He was kind of drifting and kind of immature. I know [service learning] had an impact on him coming back this quarter." One faculty member reflected the student perception that service learning motivates students to earn more advanced degrees. She commented, "I know we've had several who have gone on and are getting a master's degree in public health. If they had never been exposed to the public side of it, I don't think they ever would."

> Faculty unanimously agreed that service learning influenced students to stay enrolled in college.

IMPLICATIONS

Previous research on the connection between service learning and academic learning has found mixed results when the measure of academic learning is the GPA. However, when using specific learning outcomes attainment as a measure for academic success, the results of this study on community college students and faculty show support for the connection between service learning participation and increased learning. Survey analyses comparing the service learning students with the nonservice learning students revealed that service learners reported learning more than nonservice learners in similar courses.

Especially important in light of community colleges' focus on student learning and career training, students reported that the greatest learning gains were in the areas of career and teamwork, and in academic development and educational success. This may indicate that service learning provides students with opportunities to learn information that is important not only in acquiring specific curricular content, but also in developing

skills beyond the curriculum that are necessary for their academic development and preparation for professional success.

In addition to the survey results, student and faculty focus group participants provided a more intricate look into what service learning may offer that is different from other instructional methods. Overwhelmingly, students described the value of service learning in that it provides varied, unique, and sometimes unexpected opportunities for them to practice applying their newly acquired academic knowledge to complex real-world situations and problems.

Faculty affirmed service learning's unique role in providing their students with application experiences beyond what they would be able to provide through simulations or case studies in class or through group projects. Faculty mentioned the benefits that both they and their students experienced when instructors were not in control of the entirety of student learning during service learning assignments.

Another aspect of service learning that students and faculty mentioned as beneficial beyond the classroom is its focus on experiences with people and problems in their communities. Engagement in service learning provides a window for many students to meet and get to know people whose life experiences are unlike their own. Students and faculty reported the benefits that come from confronting unconscious biases and prejudgments and from facing unfamiliar situations. Often students described that, before their service learning experience,

> Service learners saw themselves as more competitive in the job market than those who did not have service learning experience.

they had never previously interacted with people with disabilities or from a different ethnic or socioeconomic group. At times there was initial fear of the unknown, but repeatedly students reported the compassion, the passion, and the empathy they developed as they learned others are "just like me."

Finally, because the student and faculty comments emphasized the role that service learning plays in career preparation, it is important to address this role further. Repeatedly, students said that, because of service learning, they believed they were more prepared to be successful in their careers from the first day on the job. They saw themselves as more competitive in the job market than new graduates who did not have service learning experience. They believed that service learning had provided them with situations through which they could learn the skills and job knowledge that the typical new employee needs time to learn before becoming fully productive at work. Students repeatedly remarked that service learning had provided them with confidence in applying their new academic knowledge when working in their chosen careers. Their service learning experience confirmed for them that they would be successful when working in their chosen profession after graduation, when the formal support and aid of teachers would be behind them.

Limitations

While the results of this study are encouraging, it is important to note several limitations to its conclusions. First, while AACC provided guidelines for *Horizons* grantee project directors to use when selecting the nonservice learning comparison courses to survey, project directors at each college made the decisions regarding the service learning and comparable nonservice learning courses to survey. The degree to which the service learning and nonservice learning courses were similar in instructor, course level, and academic content cannot be determined definitively in this study.

Additionally, service learners reported taking, on average, two more courses than nonservice learners by the time of the survey. These additional courses cannot be ruled out as an explanation for service learners' higher learning outcomes scores. It is possible that students who have taken more courses report learning more in subsequent courses, regardless of service learning participation. Whether two additional courses would be enough to cause the differences between the two groups cannot be determined through this study.

Finally, the level of faculty training and experience in service learning was not assessed, nor was the quality or length of students' service learning experiences. These variables may have affected the results in this study in ways that cannot be determined.

SUGGESTIONS FOR FURTHER STUDY

To expand on the findings of greater learning outcomes attainment by service learning students in this study, further research is needed to investigate what specific knowledge and skills are gained through service learning that appears to affect most strongly students' academic development and educational success. As service learners scored highest on the acquisition of this learning outcome, it is important to explore further what is learned through service learning that influences this outcome to the greatest degree.

Additionally, studies are recommended that can explore the unique contribution that service learning appears to provide in preparing students for the workforce. Since community colleges offer many degrees and certificates in career preparation programs, a large number of community college students will benefit from any instructional method that enhances both academic learning and career readiness.

Finally, it seems important to continue to investigate the perceptions of faculty regarding the enhancement of academic learning. Faculty in this study described serv-

ice learning as having a value that was absent from other instructional methods such as simulations, case study analyses, and group projects. More detailed information about the value of service learning appears warranted from the faculty comments recorded in this study.

CONCLUSION

The connection between service learning and community colleges would seem apparent in that a primary mission of both is to increase student learning. Due to the centrality of this mission, increasingly colleges and universities are being asked to document student learning in ways other than the traditional grade point average. In a national climate of increased attention to accountability and learning outcomes assessment, educators are spending significant amounts of time developing measures of learning that are applicable across disciplines and degree programs throughout the institution.

In this study, student learning was assessed in relation to service learning participation through an end-of-course survey. Enhancement of learning was detected in the community college students who participated in service learning, either as a course option or a requirement. Additionally, the voices of community college faculty and students in this study validate the benefits of the service learning pedagogy as an active, engaged method of learning skills and knowledge that will be important beyond graduation.

Through this study's results, those community college faculty and students who have experienced service learning appear to affirm that service learning is a key strategy for student engagement and a valuable learning tool for students across disciplines and academic majors, while at the same time providing these students with experiences that dissolve the classroom walls and help launch them more solidly into their careers of choice.

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DISCIPLINES REPRESENTED IN THIS STUDY INCLUDE:

- Accounting
- Adult Basic Education
- Aquaculture
- Biology
- Communication
- Cosmetology
- Criminal Justice
- Dental Hygiene
- Education
- Engineering
- English
- Government
- History
- Management
- Massage Therapy
- Math
- Music
- Nursing
- Office Systems Technology
- Physics
- Psychology
- Reading
- Sociology
- Spanish
- Study Skills
- Theater

WEB RESOURCES

American Association of Community Colleges
www.aacc.nche.edu/servicelearning

Campus Compact
www.compact.org

Center for Information and Research on
Civic Learning and Engagement
www.civicyouth.org

Community-Campus Partnerships for Health
www.ccph.info

Community College National Center for
Community Engagement
www.mesacc.edu/engagement

Corporation for National and Community Service
www.nationalservice.gov

Effective Practices Information Center
www.nationalserviceresources.org

International Association for Research on
Service-Learning and Community Engagement
www.researchslce.org

International Partnership for
Service-Learning and Leadership
www.ipsl.org

Learn and Serve America
www.learnandserve.gov

National Service Inclusion Project
www.serviceandinclusion.org

National Service-Learning Clearinghouse
www.servicelearning.org

President's Higher Education
Community Service Honor Roll
www.learnandserve.gov/honorroll

United We Serve
www.serve.gov and *www.servir.gov*

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