

Unpacking What Works in Service-Learning

Promising Research-Based Practices to Improve Student Outcomes

SHELLEY H. BILLIG, PH.D.

Shelley H. Billig is vice president of RMC Research Corporation and Senior K-12 Program Advisor for the Learn and Serve America National Service-Learning Clearinghouse. She leads several national and state research and evaluation projects to understand the impacts of service-learning and to explore educational reforms, including closing the achievement gap and reconnecting disaffected youths. She also directs a training and technical assistance center for southwest states, schools, and districts that receive No Child Left Behind funds.

“I can’t believe everyone doesn’t do service-learning. It changed my life.” - STUDENT

Many individuals associated with service-learning have seen the ways in which participation can change lives. Some young people find that they are successful in school for the first time in a long time. Others report that service-learning gave them a career direction and a sense of purpose. Still others say that their participation convinced them that “kids can make a difference” in how communities operate and in meeting the needs of others (Billig 2004).

While these sentiments are not uncommon, they do not represent the outcomes for all service-learning programs. As the practice of service-learning becomes more popular, the ways in which service-learning is implemented have varied dramatically, often with results that are disappointing, yielding few or no positive impacts. As practitioners have noted for many years, service-learning *can* have strong academic, civic, and character-building outcomes, but these outcomes are not automatic. Rather, *it is the way in which service-learning is implemented that makes a difference*. In short, quality matters, and it

matters even more as service-learning practice spreads.

In this age of educational accountability, outcomes count more than ever. Fortunately, the research in K-12 service-learning has begun to illuminate what it is about service-learning design that promotes stronger outcomes, particularly in the areas of academics and civics.

This article explores eight promising service-learning practices. These eight emerged from the past several years of collecting research on what works, and from recent studies that

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tested the Essential Elements of Service-Learning (National Service-Learning Cooperative and National Youth Leadership Council 1999) and other indicators defined as being associated with quality practice in the field. Each of the eight that emerged as predictive of positive outcomes has statistical evidence of effectiveness in several studies, either within the field of service-learning or in a closely related field of educational reform.

However, the practices are not always as obvious as they seem. This article provides a brief examination of what works, the evidence behind it, and examples of what these promising practices could look like in K-12 and afterschool settings. The order in which these are presented roughly matches the sizes of the effects that the interventions have had, though there is not consistency in the order of magnitude across studies. All of the examples are composites from service-learning projects evaluated by RMC Research within the past five years.

Eight Promising Practices

CURRICULUM INTEGRATION

Curriculum integration is defined here as using service-learning as an instructional method to help students master content standards. Studies have shown that with strong integration, students' test scores in the subject matter area with which service-learning is integrated can increase significantly (Billig and Klute 2003; Billig, Klute, and Sandel 2003; Meyer, Billig, and Hofschire 2004; Santmire, Giraud, and Groskopf 1999). In these studies, curriculum integration meant that service-learning was planned and implemented with specific learning objectives in mind. The learning objectives were tied to the content standards or the specific areas of knowledge and skills that students are meant to acquire.

General meta-analyses of studies of educational reform have found that a "guaranteed and viable curriculum" is the school-level

factor with the greatest impact on student achievement (Marzano, Pickering, and Pollack 2003). As applied to service-learning, Ammon, Furco, Chi, and Middaugh (2001), for example, found that the factors that seemed related to higher academic impacts were clarity of academic goals, clear connections between goals and activities, reasonable scope, and support through focused reflection activities. Billig, Root, and Jesse (2005) found service-learning that featured integration with content standards predicted academic outcomes for high school students.

The implications of these combined results mean that educators should integrate service-learning into curricula by engaging in the same kind of lesson or unit planning that they use for any other teaching method. Teachers start with the standard or curricular objective; think about (and possibly discuss with students) how they will address the standard within the preparation, action, reflection, and demonstration phases of the

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service-learning approach; and devise the specific activities to be used for this purpose, including the rubrics they will use for assessment, the questions they will use for reflection, or the planning steps in which students will engage.

Teachers should challenge and inspire students to learn by making their expectations for learning clear before engaging in activities. Learning goals and objectives should be defined and displayed prominently in written form. Teachers and students should know where goals fit into the curriculum and the expectations for mastery. Teachers should plan for differentiating instruction as needed, the same way they would for any other lesson plan. (See, for example, Marzano, Pickering, and Pollack 2003 for citations of the literature that support the connection between these practices and academic achievement. Correlations were also found between these factors and civic outcomes by Billig, Root, and Jesse 2005; Billig, Root, and Jesse 2004; Ammon, Furco, Chi, and Middaugh 2001.)

EXAMPLE: In one high school, teachers began the planning for service-learning by identifying the standards across content areas that they would like to address through service-learning activities. They listed these standards on the board and reviewed them with students as they discussed the specific community needs the class would address.

Students and teachers co-planned the service activity, identifying the specific standards that they would weave into the various service-learning activities. Any standards that would not be addressed in the service-learning activity were placed aside and the teacher incorporated them into other forms of instruction. Students worked with the teacher to develop an assessment to be used at the end of the service-learning activities to evaluate what the students learned. The students then engaged in the service, reflection, and demonstration activities and were later evaluated using the assessment tool.

ONGOING COGNITIVELY CHALLENGING REFLECTION ACTIVITIES

Reflection is one of the core elements of service-learning and, when done well, leads to stronger and deeper outcomes, often helping the development of metacognition and other higher order thinking skills (Eyler, Giles, and Schmiede 1996; King and Kitchener 1994; Leming 2001). However, many service-learning practitioners do not vary the type of reflection activities they use, resorting exclusively to journal-writing and summaries of service experiences that capture the feelings students had when engaged in service (Billig 2004). The power of reflection can be strengthened considerably if reflection both becomes ongoing and involves more cognitive challenge.

Ongoing reflection occurs before, during, and after service and features multiple forms of reflection: written, oral, and nonlinguistic. Many studies have shown the value of varied and differentiated instruction (see, for example, Tomlinson and McTighe 2006; Marzano, Pickering, and Pollock 2003).

Cognitively challenging activities are those that prompt participants to think deeply about an issue, to deconstruct a problem and find multiple alternative solutions, or to be confronted with situations that cause dissonance and the need for resolution between previously held thoughts and beliefs and evidence to the contrary. The level of challenge should be developmentally appropriate and should build on what the students already know and are able to do. Cognitive challenge has been found to be correlated with academic engagement, civic engagement, and acquisition of academic and civic knowledge and skills (Billig, Root, and Jesse 2005; Billig, Root, and Jesse 2006; Root and Billig in press).

With cognitively challenging activities, those who facilitate learning explicitly teach problem-solving, decision-making, exploration, classification, and hypothesis-testing skills. They ensure that students have time to practice and refine the skills during preparation, action, reflection, and demonstration.

The reflection activities themselves should be challenging, continuous, connected, and contextualized (Eyler, Giles, and Schmiede 1996; Pritchard and Whitehead 2004). Some especially promising reflection activities utilize questions to stimulate affective, behavioral, and cognitive reactions, and ask students to explore metaphors, nonlinguistic representations, conceptualizing activities, analysis of similarities and differences, and perspective-taking (Pritchard and Whitehead 2004; Billig 2006).

Promoting cognitive challenge by using appropriate questioning strategies that probe the thinking behind the service experience assists students in acquiring knowledge and skills. This activity also helps students transfer what they have learned to real-world settings where the variables affecting their experiences are not controlled. The reflection prompts them to make meaning of their experiences and scaffold the new information onto what they already know.

With older students, it is important to ask questions to help them develop metacognitive skills, defined as thinking about their own thinking patterns and learning processes. Illuminating these patterns helps young people develop multiple ways to analyze issues, relationships, and events, and to make better-informed decisions.

Providing youths with opportunities for meaningful participation allows them to engage in problem-solving, decision-making, planning, goal-setting, and helping others.

Probing, redirection, and reinforcement of ideas will help young people improve the quality of their responses to questions.

EXAMPLE: In one middle school, students decided that they should hold a community health fair for migrant farmworkers, restaurant workers, and others who did not have health care through their employers to acquaint them with services available in the community. The students were asked to document the problem, so they initially conducted online research to identify health care access issues.

The teacher asked how they knew that these issues applied to their own community, so the students interviewed farmworkers and restaurant workers to determine what their health care needs were and what it would take for them to come to a health fair. In speaking to the community members, students realized that they could not hold the fair during the working day and that many of the needs had to do with children's immunization, which is required when children move into a new school.

Students reoriented the content of the fair to address children's needs and to discover low-cost alternatives for the uninsured workers. They identified

resources within the community for free or low-cost health care, especially for children, and were able to have many health care providers come to the fair and vaccinate children for free. They were also able to get free screening for cholesterol and blood sugar, and free nutritional advice. As part of their follow-up activities, they investigated health care policies and established a campaign to advocate for health care reform, writing letters to their legislators that expressed their opinions.

YOUTH VOICE

Giving young people a say in every phase of a service-learning project has been shown to have a strong influence on academic and civic engagement (Billig, Root, and Jesse 2005; Bradley 2003; Fredericks, Kaplan, and Zeisler 2001). Without voice, students can feel discouraged, alienated, and disrespected, and they may believe that their contributions are unimportant. Providing youths with opportunities for meaningful participation allows them to engage in problem-solving, decision-making, planning, goal-setting, and helping others. They become an integral part of the process and shape their own service-

learning experiences, which may increase community engagement in the long run (Fredericks, Kaplan, and Zeisler 2001).

Mitra (2004) and Oldfather (1995) found that students who were given opportunities for voice in school increased their abilities to articulate opinions, began to see themselves as change agents, and developed leadership and public-speaking skills. Students increased their sense of belonging in schools and had improved interactions with teachers.

Giving youths voice, however, needs to occur within a framework of learning outcomes, understanding when they can experiment with new ideas and when they cannot, and respectful treatment of others who have ideas different from their own (National Research Council 2004). Adults should expect some initial hesitation and even apprehension from students who may be unaccustomed to taking responsibility for their own learning, since becoming self-directed takes experience and time. Adult facilitators should ensure that students know, and receive, the assistance and support they need throughout the process. This does not mean that students should always be helped to succeed. Instead, students can learn from their mistakes, and these experiences can become significant learning opportunities. However, adults should always be sure that students are safe.

Youth voice should also be developmentally appropriate, with young people being asked to make decisions and choices within established parameters. Discipline of this nature mirrors real life and should not be seen as constraining. Older youths should be given most of the responsibility, including roles as facilitators and resource persons (Bradley 2003).

It is particularly important to ensure that young people have a voice when they are providing service within the community. Young people can provide meaningful input by consulting with government leaders about public policy, participating in community coalitions, engaging in organizational decision-making and activism, and carrying out service-learning projects (Camino and Zeldin 2002). The combination of research, service, and advocacy is associated with the most powerful outcomes for high school students in the area of civic learning (Root and Billig in press).

EXAMPLE: *In one elementary school, students were asked to solve problems they identified within their school and its immediate surroundings. First-grade students reported that kindergartners were running in the hall and that this running made the hallways unsafe.*

The teacher asked the students to document the problem, which they did by counting and graphing the number of running incidents during several timed periods during the day. The teacher then asked the students to brainstorm the potential reasons why the kindergartners may be running and what solutions might address these reasons. Students initially said that the kindergartners were running because they were lost and they needed hallway signs. They solicited names for the hallways from the kindergartners, held an election to name the hallways, and made signs for the hallways.

When they measured the incidence of running again, the first-graders found that the problem was not solved. They then studied how speed was controlled in society and came up with the idea of licenses for the students. They brainstormed what should be on the licenses and composed a letter to a nearby hardware store to request the materials needed to make licenses.

They created a license for every kindergarten student and then measured the incidence of running once again. The first day after the licenses were issued, the running had stopped. However, the running resumed the next week, when many kindergartners either misplaced their licenses or realized there were no negative consequences for running.

Back at the drawing board, the first-graders then devised other possible solutions. The teacher allowed the students to choose solutions and to

make mistakes until they finally solved the problem. In so doing, the teacher covered many reading, writing, math, and social studies standards. At the end of the year, the students scored high on all measures of academic and civic engagement and felt that learning was fun.

RESPECT FOR DIVERSITY

Diversity can come in many forms. For example, students can be exposed to people from diverse cultural backgrounds, to people with different ideas, to people with disabilities, to people from different generations, or to people who face life circumstances different than their own. It is important to note that service-learning participants are likely to be diverse in some ways, especially those who are being served. Research has shown that explicit teaching of respect and discussion of diversity is associated with multiple civic and character outcomes for youths (Billig, Root, and Jesse 2005; Powers, Potthoff, Bearinger, and Resnick 2003; Blozis, Scalise, Waterman, and Wells 2002).

Respect for diversity comes in many forms, many having to do with the way that activities are organized, the language being used, expectations for cognitive processing, and promoting motivation to learn (Nieto 2004). In the learning setting, respect is articulated by making sure that there is equity in the

learning opportunities for all students, regardless of their socioeconomic and cultural backgrounds, genders, or academic performance levels. Teachers should hold high expectations and a caring attitude for all groups. Providing opportunities for culturally heterogeneous cooperative learning with individual accountability and group recognition also promotes respect and equity. Learning activities using print, video, and authentic interactions with diverse populations should be provided and reflections should bring out the need for understanding. (See, for example, Tomlinson and McTighe 2006; Marzano, Pickering, and Pollock 2003.)

Societal practices that have proven detrimental to positive intercultural relationships should be explicitly discussed and the unfairness of prejudice and discrimination should be highlighted. For example, students should become aware of the thinking flaws associated with stereotyping, with adults

showing them that this way of thinking is associated with overgeneralization and a misunderstanding of individuals within society. Explicit social skills, particularly conflict resolution, should be taught and practiced. Differences should be understood and appreciated, even when students disagree with one another (Nieto 2004). Serious scholarship in multicultural education allows students to explore their identities and what it means to live in a democracy.

Within the service-learning setting, it is especially important to design service activities that have mutual benefit for students and those being served so that students' stereotypes of others are not reinforced. For example, working with the elderly should not just entail helping elders with writing or computer skills, but should also include activities such as gathering oral histories from them to document their lives and societal events. This way, both students and elders benefit from the interaction.

Serious scholarship in multicultural education allows students to explore their identities and what it means to live in a democracy.

EXAMPLE: Students in an afterschool program decided to work with families who wanted to learn English. They made arrangements with a local community center to offer classes in English language and to go on field trips with the English learners to help them understand how to buy groceries at supermarkets and how to use the public transportation system.

When the students came to the center for the first lesson, the room was filled with parents and children from many different language and socioeconomic backgrounds. In providing English lessons to the families, the students from the afterschool program learned about the families' lives before they came to the United States. They told of their experiences in America in ways that expanded the students' ways of thinking about everyday life. While the families learned English, the students learned about other cultures and what it is like to negotiate the rules of U.S. life.

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MEANINGFUL SERVICE

When service-learning is viewed as valuable, useful, relevant, and interesting, young people become both more engaged and acquire more knowledge and skills (Billig, Root, and Jesse 2005; Blank 1997). The ways in which meaning is derived vary by individuals and groups and appear to depend upon stimulating both student interest and control (Brophy 2004). Many researchers have found that teachers can enhance students' feelings that activities are meaningful by providing activities that are substantive but not overwhelming; framing the activities so they have clear relevance to students' lives; elaborating beyond information in textbooks; explicitly connecting to previous experiences; and providing activities characterized as having "high academic press," that is, requiring comprehension, explanation, exploration, debate, or other cognitively challenging skills (Brophy 2004).

Service-learning planners can do a lot to ensure that young people find the activities relevant and useful, both for them and for the people they serve. Typically this means that the activities go beyond simple "meeting the community needs." For example, filing papers for an agency may meet a need, but often does not feel very meaningful to the person doing the filing. Instead, meaning should be derived by meeting an interesting challenge and seeing the benefit of one's efforts for both oneself and for others.

Service-learning becomes more meaningful when students choose the issue to address, when the issue requires analysis and problem-solving, and when there is a personal connection to the task at hand, often through the formation of a relationship between the server and the recipient of the service (Billig, Root, and Jesse 2005; Root and Billig in press). Being explicit about why the task is meaningful also helps students to connect to the issue.

To be meaningful, service should actually meet an important need. New research on the connection between service-learning and efficacy shows that when students take on a task that is too big, like solving homelessness, they may not find meaning in the

work they do. Instead, they can feel frustrated because their efforts do not appear to make a difference. When smaller tasks are selected and follow through is conducted so that students see the results of their efforts, they more often say that the service was meaningful to them (Billig, Root, and Jesse 2005; Root and Billig 2006; Billig 2006).

EXAMPLE: *Middle school students decided that they wanted to learn history from the 1800s to 1850s by cleaning up an old cemetery near the school and investigating the lives of the people buried there who lived during that period. The students gathered rubbings from the headstones and then studied the town records to learn about the person they chose. Students uncovered records that told of an indentured servant who ran away, was captured, and stood up for herself as being subject to unfair capture and labor practices. There were records of the trial, and the students were able to trace the lineage of the woman to a family that currently lived in the next town. When they shared the story with the descendants, the family showed them pictures of the woman and discussed what happened to her. Students retained knowledge of that period of history, policies that shaped people's lives, and how experiences in that period still affect people today.*

PROGRESS-MONITORING AND PROCESS-MONITORING

Progress-monitoring and process-monitoring refer to assessing the progress made toward reaching goals and analyzing the processes being used to ensure that the learning is maximized. In service-learning, progress-monitoring typically occurs through measuring gains on a survey, a participation count, or other measures that indicate if goals are being met. Process-monitoring is rarer in service-learning, and when it does occur, it typically takes the form of analyzing student work, including their reflections, and assessing what they learned. Process-monitoring and progress-monitoring are often viewed as types of formative evaluation, though monitoring is typically more frequent and the measures are more discrete and specific than those typically used in formative evaluations. In all of these types of monitoring and evaluation, results are expected to be used to improve practice.

Progress-monitoring, formative and summative evaluation, and use of data for improvement are associated with stronger outcomes in service-learning when the measures are well connected to the tasks and outcomes, and when teachers use the data (Billig, Root, and Jesse 2005b).

Using data for improvement has repeatedly been shown in educational research to increase both individual and group learning, because the data reveal what the impacts of participation have been and whether important goals have been reached. For example, Good and Brophy (2000), in their review of the monitoring literature noted that progress-monitoring helped teachers with diagnosis; teachers could examine errors and treat them as important learning opportunities. Fuchs and Fuchs (2006) identified more than 200 empirical studies published in peer-reviewed journals that attest to the effectiveness of this type of progress-monitoring for helping students improve reading, mathematics, and spelling skills. In addition, student motivation for learning was enhanced when learners could see skills left to master and strategies for how they would learn the skills and accomplish tasks, especially when the information was presented in concrete terms with examples (Brophy 2004).

EXAMPLE: *In one high school service-learning class, students established teamwork as a goal for a service-learning project in which they worked with children of prisoners. After students set the goals, they developed an assessment rubric that would determine how well each of the goals was being*

reached. Every few weeks, students assessed their individual and group efforts, then discussed how well they were doing, whether they were on target to reach their goals, whether the teamwork group process was working, and how they could improve. This self-monitoring led to establishing clear expectations, conflict-resolution skills, and more goal-driven behaviors.

DURATION

Recent research has shown that projects must be of sufficient duration, typically at least a semester or 70 hours long, to have an impact on students (Billig, Root, and Jesse 2005; Spring, Dietz, and Grimm 2006). The 70 hours include preparation, action, reflection, and demonstration of results. Fewer hours simply do not give the students enough time to grapple with difficult issues or to have a deep enough experience to make the learning endure. This is not to say that community service can not or should not be performed in single or multiple events; rather, it is to

point out that if the intended academic, civic, or character development outcomes are to be developed through the service-learning process, more time is needed.

Other studies in the larger body of literature on student academic performance support duration as a key to increased learning. For example, the National Research Council (1999) found that coherence, or the connectedness of the ideas and skills presented to students over an extended period of time, is related to increased achievement. To have coherence, a curriculum must focus on important ideas or skills, help students have a logical and developmentally appropriate experience of those ideas and skills, help students see the connection between the ideas and skills, and assess and diagnose what students understand to determine the next steps in instruction. Quality service-learning practice displays these characteristics by addressing “power” or “essential” standards

and helping students to transfer the academic knowledge learned through their service experiences (such as problem-solving or how to find the answer to a mathematical question) to other parts of the curriculum.

EXAMPLE: When one teacher learned that duration was important, she stopped to think about her current practice. She had let the students choose an issue of importance to them, and they decided they wanted to reduce the incidence of rape in their community. Students studied the incidence rates and the research on how to prevent rape. They established a campaign and made people aware of cell phone programming that would alert authorities immediately if there was an imminent problem, and they sponsored an awareness night. The teacher realized that they never followed through to see whether their strategy had worked, whether others actually programmed the cell phones and knew what to do in a dangerous situation, or if the incidence of rape declined in their community.

Working with the students, the teacher brainstormed what the class needed to do to identify the impact of their efforts. The students designed the studies, carried them out, and then when they found only limited impact, developed additional strategies that were more powerful.

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RECIPROCAL PARTNERSHIPS

Partnerships with community organizations are a strong feature of most service-learning programs. Partners bring many important resources to service-learning, such as providing a site for projects; resources in the form of funding, time, or materials; and opportunities to involve young people in meeting urgent needs. Reciprocity in partnerships means that both sides benefit through the activities, and usually involves having a shared vision, regular two-way communication, interdependent tasks, and common goals.

Reciprocity was found by several researchers (Kramer 2000; Ammon, Furco, Chi, and Middaugh 2002) to be associated with sustainability of service-learning. On the other hand, when partnerships were short-term and isolated, both teachers and students were less engaged and less likely to continue participating in service-learning because of the lack of local support and the difficulty in initiating more partnerships.

Abравanel (2003) found that partnerships worked better when there were ongoing dialogues to guide their development. She advised that schools need to communicate a clear definition of service-learning, the

essential elements of a service-learning program, the benefits to the community, the academic and curricular standards for which teachers are held accountable, and the role of youth voice in implementing projects to the community partner. The community partner, in turn, needs to communicate its mission, the capacity of the organization to provide service-learning opportunities, and the resources available and the costs required to support the service-learning partnership to the school.

EXAMPLE: Students in an alternative school had been conducting water studies in the nearby watershed for years and received consistent recognition from the Bureau of Land Management for their efforts. The Bureau counted on these students to keep track of progress being made in reducing pollution. The students learned valuable skills in measuring various aspects of stream health. When the school district put the alternative school on the list for closure, due to budget cuts, the students and the Bureau partnered to develop a campaign for the school board to keep the school open. They went door to door to voters to tell them of the need for the school and the benefits for the community of having the school in place. Voters passed a tax levy and the board was convinced to keep the school open.

Conclusion

The composite examples included here illustrate that the eight characteristics of effective service-learning practice need not be difficult for practitioners to implement. However, these practices must be intentionally woven into service-learning and monitored for quality in order for impacts to be shown. Developing expertise in each of the principles will go a long way toward helping make the case for service-learning in K-12 schools and to deepen both the quality and the outcomes of service-learning. This need is particularly important for educators working with the growing number of high-poverty suburban schools, since some evidence indicates that quality is relatively lower in these settings (Pritzker and Moore 2005).

Educators generally know how to operationalize the ideas presented here. It will take some time in terms of personal reflection and professional development, however, for change to occur.

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