A Logic Model of Service-Learning:
Tensions and Issues for Further Consideration

Daniel Lowery
Calumet College of St. Joseph

Deborah L. May
Ball State University

Kim A. Duchane and **Russell Coulter-Kern**
Manchester College

De' Bryant
Indiana University South Bend

Pamala V. Morris and **John G. Pomery**
Purdue University

Mac Bellner
Independent Consultant

This paper introduces a conceptual model for supporting the continued development of service-learning as a pedagogy of engagement. A logic diagram is used to facilitate understanding of service-learning. The model illustrates the (a) complex elements involved in creating or sustaining a strong program, (b) potential tensions within the field, and (c) evaluation requirements at the level of a program or campus. The logic model also identifies tensions and issues that merit ongoing discussion amongst those committed to the continued development of service-learning in higher education.

Interest in service-learning has grown dramatically over the last 20 years. It is practiced in an increasing number of colleges and universities, and the literature on service-learning is expanding by leaps and bounds. Indeed, this pedagogy may be moving from the periphery of the academy to center stage as institutions of higher learning reassess their place in the democratic project (Coles, 1999).

Prompted by these developments, the Indiana Campus Compact Faculty Fellows Class of 2003-2004 determined that a year-long conversation about service-learning's standing and prospects might prove useful. Three questions guided our effort: What have we, as a group of practitioners, learned to date? How might we contribute to the ongoing conversation about the nature and future of service-learning? And what concerns would we recommend that the field focus on over the course of the next decade?

We approached our extended conversation with a certain degree of trepidation. After all, others have made our inquiry possible. In fact, the service-learning model around which we organized our investigation draws significantly upon the contributions of other scholars and practitioners. At the same time, a comprehensive review of the literature extended beyond the scope of this project. We therefore decided to focus first on certain tensions that have become evident and then look forward. A summary of our deliberations follows on how service-learning practitioners should proceed.

The purpose of this paper is to introduce a conceptual model for supporting the continued development of service-learning as a pedagogy of engagement. In the first section, a service-learning model structured in the form of a logic diagram is presented. This logic diagram, though built to our own specifications, has the potential to act as a powerful vehicle for understanding the complexities of service-learning, analyzing differences in conceptions of the field, and permitting evaluations of specific campuses or programs. As such, the introduction of a model based on a logic diagram provides an example of Boyer's (1990) scholarship of integration, allowing identification and discussion of tensions in the field while creating the

Lowery et al.

Figure 1. A Conceptual Model of Service-Learning in Higher Education

Note. Bold, capital letters highlight tensions.

opportunity for alternative logic diagrams to be compared in ways that further collective understanding of the field. In our second section, six tensions are noted and examined. In the third, we identify ten issues pertaining to service-learning that, in our judgment, will merit attention in upcoming years. Our claims are normative rather than empirical in nature. They constitute, in effect, a reflection on service-learning's past and future.

A Conceptual Model of Service-Learning

The *Alliance for Service Learning in Education Reform* has defined service-learning as "a method of teaching through which students apply newly acquired academic skills and knowledge to address real-life needs in their own communities" (Payne, 2000, p. 41). Jacoby (1996) describes service-learning as a form of experiential education in which students engage in activities that address human and community needs employing both critical reflective analysis and a deep commitment to reciprocity in all interactions with the community. To this end, she argues that a hyphen should both separate and connect the words "service" and "learning" in order to communicate the critical interaction that takes place between the two.

Service-learning is constructed on the foundations of several emerging perspectives, two of which are of particular importance. In recent years "civic engagement" has been effectively promoted by Ehrlich (2000); Bringle, Games, and Malloy (1999); and their respective colleagues. Boyer's (1990) reframing of the academic project as the fourfold scholarship of discovery, integration, engagement[1], and teaching has played a role as well. As we shall see, service-learning can contribute in important ways to three of these forms of scholarship: the scholarship of engagement; the scholarship of teaching; and the scholarship of discovery.

The logic diagram presented in Figure 1 can advance our understanding of service-learning in several ways. It can contribute to the development of self-assessment tools for use in evaluating service-learning capacities and program designs. The model can prompt the development of research projects pertaining to service-learning. Finally, it can reveal tensions reflected in the literature. A brief description of logic diagramming follows. The technique is then applied to service-learning.

Logic Diagramming

Although logic diagramming is often associated with United Way of America (1996), it has been widely used in designing and evaluating social programs of various kinds. Because it explicitly addresses cognitive, affective, and behavioral change, it is particularly useful in the case of transformational technologies (e.g., education, counseling, social action).

Logic diagrams typically employ five or six levels of analysis to delineate a program's overall "logic." In doing so, they serve as conceptual maps. Logic diagrams begin with a full explication of a program's inputs or capacities (i.e., the tangible and intangible resources or assets required to deliver a program or service). By convention, inputs are displayed at the bottom of a logic diagram.

The second level of the diagram may reflect steps involved in an intervention, key activities undertaken, or a process. In effect, the inputs identified at the bottom of the logic diagram are converted into action steps at the second level of analysis.

The third level of the diagram usually addresses outputs (i.e., units of service, conformance to specifications, customer or client satisfaction, and timeliness). In high-level logic diagrams, however, a program's components rather than outputs per se are often displayed. A diagram can thus be used to illustrate how the several steps, activities, or discrete processes identified in the second level of analysis can be packaged for delivery (e.g., on-site vs. off-site, inpatient vs. outpatient, middle school programs vs. high school programs). Outputs are then converted into outcomes. Immediate outcomes (i.e., cognitive or affective change) are documented in the fourth level of analysis. It is critical at this stage to articulate the changes in thinking, perspective, understanding, and commitment that pertain uniquely to each target group. For instance, an education program could employ goals and objectives pertaining to both children and parents. A full specification of both sets of immediate outcomes is generally recommended. Immediate outcomes are then converted into intermediate outcomes (i.e., changes in behavior or action). Again, it is important to identify the various changes associated with each target group. Some logic diagrams also include long-term outcomes, which often refer to improved life chances or an improved quality of life.

A Logic Diagram Pertaining to Service-Learning[2]

Twelve categories of essential inputs or capacities are displayed in our logic diagram. To be fully effective, in our view, service-learning must: meet the needs of various kinds of students [1.1-1.4]; engage a broad range of community partners [1.5-1.12]; reflect a full appreciation of a community's assets as well as an understanding of its needs [1.13-1.15]; mirror the institution's mission, vision, values, and strategic objectives [1.16-1.19]; enjoy the full support of the institution's leaders [1.20-

Lowery et al.

1.26]; benefit from robust institutional support systems [1.27-1.36]; engage the support of faculty, staff, students, and interdisciplinary entities of various kinds [1.37-1.40]; draw effectively on the various state and national support systems that promote service-learning [1.41-1.44]; reflect a sound theoretical foundation [1.45-1.52]; fully engage the human resources of the institution [1.53-1.57]; draw on incentive systems that recognize service-learning's value and its relationship to the institution's mission [1.58-1.61]; and be funded adequately [1.62-1.64].

For the moment, we will skip over the second level of the logic diagram and turn to level three. Various inputs or capacities can be "packaged" in unique ways. Heffernan (2001), for instance, draws a distinction between certain initial or preliminary strategies (i.e., pure service-learning, discipline-based service-learning, problem-based service-learning) and three more advanced strategies (i.e., community-based action research, service internships, capstone courses). Although other conceptualizations of service-learning are available, we think that Heffernan's taxonomy captures the full range of options available to institutions of higher learning. Each of these six options or packages is displayed in the third level of the diagram [3.1-3.6].

In one way or another, each of these options should make use of the same eight-step process that is documented in level two of the model. Although our circular diagram draws significantly on the work of the National Association of Partners in Education, it highlights the need to fully engage both community and campus partners before a project or intervention is initiated [2.1]; counsels those who engage in service-learning to consider a community's assets as well as its needs [2.2]; challenges faculty to negotiate goals and objectives in partnership with both the community and students [2.3]; calls for initiatives to be designed in partnership with the community [2.4]; necessitates the identification of resources to support a project [2.5]; requires faculty to prepare participants for learning and service [2.6]; highlights the fact that successful outcomes require projects to be monitored [2.7]; and recommends that the perspectives of a full range of partners be considered when evaluating a service-learning project [2.8].

The second level of the logic diagram also stipulates that the practice of critical reflection by students and faculty and the principle of reciprocity should guide every step in the service-learning process. More will be said about reciprocity later; we turn now, however, to the role that reflection should play in service-learning. Although learning always begins with a project or activity (Dewey,

1933), it requires reflection. Jacoby (1996) and other proponents of service-learning agree with this view.[3] Reflection enables one to step back from an experience so that it can be objectively assessed. One thus learns by connecting reflection with experience and theory.

The articulation of outcomes appropriate to service-learning proved particularly challenging. Research has tended to focus on outcomes pertaining to college students and the community (Markus, Howard, & King, 1993). In keeping with this view, our logic diagram reflects two foci or "targets" in level four. In our view, it is important to include outcomes associated with the community as well as outcomes pertaining to students. If the community is to achieve standing as a true partner, its needs must be foregrounded. Additionally, reciprocity and reflection are positioned as key processes in our logic diagram; they inform all other steps/activities in the diagram. Moreover, the two-way arrow displayed between the two sets of outcomes illustrates the reciprocal nature of the relationship shared by student learning and learning in the community.

Reflecting the importance of practice, the intermediate outcomes pertaining to students extend beyond discipline-specific knowledge to include skills, abilities, and personal dispositions [4.1-4.3]. Further, the cognitive and affective changes on which they are based encompass lifelong learning and professional [4.2] and democratic practice [4.3] as well as learning pertinent to the student's academic discipline [4.1]. If these immediate outcomes are achieved, the logic diagram suggests that students will be well-positioned to achieve their academic goals [5.1] and professional and career objectives [5.2]. They will also be better prepared for lifelong learning [5.3] and to contribute to the community as informed, responsible, and engaged citizens [5.4].[4]

The immediate outcomes pertaining to the community include: its self-perception [4.4-4.5], perception of the partner institution [4.6], store of problem-solving capacities [4.7], understanding of the role played by power in social and economic relationships [4.8], the extent to which it recognizes the need for change [4.9], and its commitment to interventions to be undertaken [4.10]. If these cognitive and affective changes take place, the logic diagram suggests that the intermediate outcomes identified will be achieved as well. Specific projects and initiatives will be developed [5.5], needed resources will be marshaled [5.6], and the projects and interventions selected will be pursued [5.7].

Although our logic diagram specifically address-

es impacts on students and the community, we also recognize the importance of outcomes pertaining to faculty and the college or university. Because faculties are responsible for curriculum development, designing classes, and developing learning for students, it is important to evaluate outcomes that service-learning engenders for them.

It is also important to determine how service-learning activities can affect a campus culture and learning environment. Proponents of service-learning argue that colleges and universities—often derided for being "out-of-touch" and insulated from "real world" concerns—can benefit from students' engagement in service-learning activities. As our focus on practical education and applied learning intensifies, the demand for well-designed service-learning courses in which students develop skills, abilities, and personal dispositions pertinent to their studies and to their needs as lifelong learners should increase.

Tensions in Service-Learning Pedagogy

As noted above, our model highlights certain "tensions" reflected in the literature. In our view, the following concerns, which are highlighted on the model in bold capital letters, are of particular importance: (a) the purpose of service-learning, (b) the broad range of theories undergirding this pedagogy, (c) student readiness, (d) the extent to which faculty need to be engaged more fully in service-learning activities, (e) the precise function that reciprocity should play in service-learning, and (f) the development of evaluation strategies.

The Purpose of Service-Learning: Educating Students vs. Social Change

The literature reflects a tension with respect to the goals of service-learning. More specifically, should service-learning be pursued for the sake of the community or students (Stanton, Giles, & Cruz, 1999)? One view holds that service-learning should address social and community needs involving race, class, sex/gender, and contemporary challenges such as equal opportunity in education, healthcare, and transportation (Stoecker, 2003). In fact, academic institutions are increasingly challenged to embrace the twin concepts of civic responsibility and civic mission. In this view, habits of civic virtue can be promoted through service-learning.

We agree that institutions of higher learning can and should use curricula to link learning to community needs. Moreover, we endorse the shift away from teaching-interpreting to learning-centered pedagogies in which students are more fully engaged as partners. Community settings can con-

tribute to this end.

The opposing view holds that service-learning should focus exclusively on the traditional goals of education. Leeds (1999), for instance, argues that service-learning's survival will depend on the extent to which it articulates a viable pedagogy. He further contends that teaching may be diminished when it is linked too closely to service. Proponents of this view further hold that applying pedagogy to social change is more likely than not to frustrate the achievement of goals associated with both the community and education (Stanton, Giles, & Cruz, 1999).

Those holding this view are not opposed, per se, to the benefits of social change. At the same time, however, they believe it diminishes service-learning's potential as a pedagogy. Payne's (2000) research supports the view that service-learning can serve as a catalyst for civic and moral education. He found that students surveyed experienced satisfaction in helping others to a significant degree and expressed a commitment to engage in other kinds of service in the future.

Can the twin goals of social change and education coexist? Hesser (1995) argues they can. He bridges the two using a continuum grounded by personal agendas at one end and agendas focusing on community strengths at the other. Others agree (Delve, Mintz, & Stewart, 1990). Stanton (1990) thus describes service-learning as the process of integrating "structured, intentional learning with public service" (p. 345). Sigmon (1994) notes that the twin goals of service-learning can be united (p. 4). Stanton, Giles, and Cruz (1999), applying the perspective of Couto (1982, in Stanton et al.,

Figure 2.
Interrelationship between Learning and Service
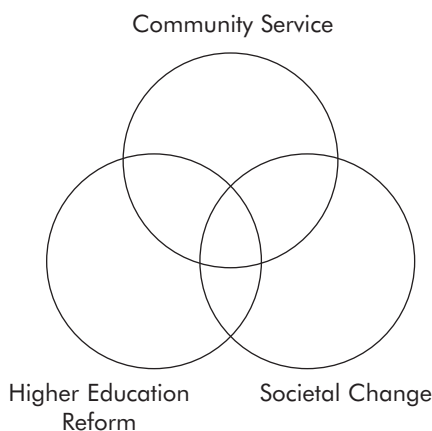
Note. p. 213, in Stanton, T.K., Giles, D.E., & Cruz, N.I. (1999). *Service-learning: A movement's pioneers reflect on its origins, practice, and future.* San Francisco: Jossey-Bass.

1999), employs three concentric circles to help institutions, educators, practitioners, and students understand the interrelationship between academic goals and social change goals that takes place in service-learning (see Figure 2).

Another perspective draws more specifically on conflict theory and the tradition of social action. Proponents hold that service-learning is more about helping others than social justice. Stoecker (2003) contends that service-learning lacks an action component. In this view, service-learning tends to reflect charitable impulses embraced by the political mainstream. It is focused more on community needs than the root causes of social problems. Reflecting this perspective, Boyte and Kari (1996) argue that service-learning should address the underlying causes of community problems through the persistent asking of "why questions."

We believe that the twin goals of social change and academic development can co-exist. Service-learning employed in constructive ways can contribute to the achievement of traditional learning objectives. At the same time, it can promote the development of civic virtue and engender social change. We believe that a commitment to lifelong service is an appropriate goal for higher education as well, one that can be promoted in service-learning. Having said that, we are sympathetic to Leed's (1999) argument that service-learning's survival will hinge on its success in the classroom. Although knowledge should be applied to real problems in the community, service-learning must succeed first in the classroom.

Student Readiness

Items 1.1 through 1.4 on the logic diagram are displayed in bold capital letters because student readiness to participate in service-learning can pose a significant challenge both to faculty and the community. Service-learning activities/projects should be designed given the student's state of readiness. Wide differences in student levels need to be considered for service-learning, as much as the many logistical challenges inherently present in the projects designed for nontraditional students, many of whom work and have family responsibilities.

Kolb (1984) identified a learning cycle that addressed four kinds of learning ability: Concrete learning, reflective observation, abstract conceptualization, and active experimentation. The stage in the learning cycle and previous life experiences need to be assessed before assigning and implementing any student a service-learning project and these are particularly important to assess when students are applying "bottleneck"[5] concepts from the classroom to the community setting.

Therefore, concrete learning experiences are recommended when the student is first exposed to service-learning activities. During this time the teacher is encouraged to provide structure and establish an environment for learning so that the student can fully immerse him/herself in the new learning experience (Kolb, 1984). Following concrete experiences, capacity building opportunities are then recommended because they enable the student to integrate concepts and apply theories. As the student acquires more critical thinking and sophisticated skills, he/she will benefit even more from experiences in service-learning settings that allow for more autonomous practice and responsibility.

Kolb (1984) believed that learning occurred based upon reflection from many perspectives. McEwen (1996) drew from Kolb's model and asserted that reflection needs to follow concrete experience. She asserted that "reflection should precede abstract conceptualization and generalization because it allows the student to have the most direct and immediate link to the affective (concrete) experience of learning" (p. 69). These influences of attending to a student's level of learning style/ability, as well as reflection, not only provide support for the utilization of the pedagogy of service-learning but also emphasize attending to each during the service-learning experience.

Underlying Theories

The wide variety of theories on which individual projects are based suggests a tension [1.45-1.52] that may be attributable to the rapidly evolving focus of published work pertaining to service-learning. Our list is by no means exhaustive. Nevertheless, it includes several constructs prominently featured in the literature. Various genres of "analytical writing" concerning campus-community partnerships have been identified: (a) self-study accounts by participants, (b) evaluations of local partnerships, (c) proposals and analyses pertaining to methods, (d) case studies, (e) the creation of data systems to support multisite initiatives, and (f) national evaluations of programs designed to support local partnerships. Unfortunately, few articles in any of these genres articulated their underlying theories. Although a dearth of "intellectually rigorous" analyses has been noted, this finding can be attributed to the newness of the field. As service-learning evolves, we anticipate that authors will be challenged to articulate more clearly the theoretical foundations of their work.

Although we support the exploration of a broad range of theoretical constructs, we recommend two perspectives in particular: social constructivism,[6] and moral and civic virtue.

Schön's (1994) concept of "reflection-in-action" is consistent with social constructivism. It can also be instructive for students and community partners as well as for scholars who engage in community work. Social constructivism emphasizes the unique perspectives that both service-learning practitioners and community partners have in their shared experience. We also believe the current focus on the development of civic and moral virtue is critical to educating students. Indeed, the civic engagement that takes place in service-learning is highly social and democratic in nature.

We are also persuaded by Colby, Ehrlich, Beaumont, and Stephens (2003) that institutions of higher learning are obligated to promote moral and civic virtue, that students and the larger society in which we live can benefit from a renewed focus on democratic practice, and that service-learning can play a significant role in meeting these objectives. Jacoby (2003) similarly notes that service-learning can help prepare students for citizenship. For this reason, item 4.3 (i.e., knowledge, skills, and personal dispositions associated with democratic practice) is identified as a tension. It stands alongside the cognitive and affective changes associated with the student's academic discipline and the goal of lifelong learning as a legitimate outcome. It is not a secondary or ancillary benefit. Indeed, civic and moral education is central to our evolving understanding of the academic project. Although other theoretical constructs will undoubtedly prove fruitful as service-learning evolves, social constructivism and moral and civic virtue provide a sound foundation for the kind of democratic, community-based, and provisional work that is part and parcel of most service-learning projects.

Reciprocity

The principle of reciprocity, reflected in section 2.0 of the logic diagram, commits those who engage in service-learning to attend to the needs of students, institutions, and the community in meaningful and structured ways. As described by Chrislip and Larson (1994), reciprocity is a "kaleidoscope lens" of sorts, in which meanings vary from partner to partner. According to Jacoby (1996) and Sigmon (1994), reciprocity requires all participants in service-learning to proceed as learners, providers of service, and recipients of service; we should all both teach and learn.

Jacoby (1996) further argues that honoring the principle of reciprocity in all interactions promotes relationships that extend beyond the traditional, paternalistic, and one-directional understanding of service in which an individual or organization shares its (abundant) resources with a person or group assumed to be in need. Community members are thus challenged to marshal their own assets and assume responsibility for their own circumstances. Kendall (1990) further asserts that reciprocity is foundational to healthy partnerships involving institutions and communities. Berry (1990) agrees, concluding that reciprocal partnerships are adaptive.

Achieving true reciprocity is difficult work, however. Engaging individuals who proceed from different life experiences and dramatically different sets of professional responsibilities is challenging. Tensions can arise as the needs of students, institutions, and the community play off of one another. Profoundly different conceptions of a project can develop, and misunderstandings, disagreements, and power struggles can develop. Control, in particular, can surface as a nettlesome problem. According to Pompa (2002):

> Unless facilitated with great care, service can unwittingly become an exercise in "patronization"… The crux of the problem revolves around power issues. If "I do for" you, "serve" you, "give to" you—that creates a connection in which I have the resources, the abilities, the power, and you are on the receiving end. It can be, while benign in intent, ironically disempowering to the receiver, granting further power to the giver. Without meaning to, this process replicates the "have-have not" paradigm that underlies many social problems. (p. 119)

Pompa (2002) further notes that those involved in service-learning may lack insight regarding the extent to which academic institutions benefit from community assets. She promotes the virtue of mutuality as an antidote to a charity perspective, and argues that service-learning should be "based on equality and collaboration."

Rhoads (1997) agrees and promotes the concept of mutuality. "Through the other we come to experience the self. Mutuality is about how we both give and receive because we connect to the other through a concern, which in the name of caring, bridges whatever differences we have" (p. 139). Similarly, Sigmon (1979) advances three principles designed to obviate conflicts pertaining to power and control: (a) those being served should control the services provided, (b) those being served are better able to serve and be served by their actions, and (c) those who serve are also learners and should have significant control over what is expected and learned.

Of course, equality, collaboration, and mutuality can be difficult to operationalize in the community. In the case of students, a great deal of time and effort must be expended to connect the classroom experience to clearly identified academic goals,

engage students in responsible and challenging activities, articulate clear learning objectives, ensure that time commitments are flexible and in the best interest of all parties, and provide support (e.g., training, supervision, monitoring, recognition, evaluation). Students also need to be introduced to certain ethical standards and behavioral norms (Cotton & Stanton, 1990).

Students and the community partner must also act responsibly. Students need to be aware of the community's expectations and they must also be sensitive to the culture into which they will be introduced. Community agencies need to be realistic about students' skill levels and their availability at different points in time. Students must be acclimated to the social systems in which they will work and prepared for the tasks they will perform. Reciprocity is thus essential to collaborations involving academic institutions, students, and the community. Reciprocity and the closely related values of equality, mutuality, and collaboration can lessen the likelihood that conflict, exploitation, and coercion will envelop a project.

Our understanding of reciprocity will undoubtedly evolve as our familiarity with service-learning as a pedagogy grows. The critical nature of this principle suggests a need for scholars and service-learning practitioners to document their experiences—both positive and negative—with respect to this concept. We have displayed the immediate and intermediate outcomes pertaining to the community in bold capital letters on our logic diagram in order to highlight the need for institutions of higher learning and individual scholars to attend to the needs of the community in a conscious way.

Faculty Engagement

It is not surprising that faculty engagement [1.53], hiring processes [1.58], and promotion and tenure policies [1.59] are identified as tensions on our logic diagram. Serious discussion is needed regarding the nature of scholarly service. As institutions of higher learning re-orient themselves toward experiential learning, lifelong learning, civic virtue, and engagement with community partners, faculty will be needed who possess the knowledge, skills, and personal dispositions required in service-learning. To this end, recruitment, hiring strategies, and faculty development programs may need to be reengineered to reflect the requirements of service-learning (Ramaley, 2000). Promotion and tenure processes should also be redesigned to encourage faculty members to participate in service-learning and other forms of campus-community partnerships. We are convinced, moreover, that Boyer's (1990) reconcep-

tion of the academic project—as the scholarship of discovery, integration, engagement, and teaching—holds particular promise for institutions choosing to tackle these challenging human resources issues.

Individual faculty members could also benefit from professional development pertaining to service-learning. At the present time, the amount of support and encouragement provided to those interested in this pedagogy is highly variable. The support systems (i.e., innovative training programs, coordinated community liaison services, evaluation support) featured in *Educating Citizens: Preparing America's Undergraduates for Lives of Moral and Civic Responsibility* (Colby et al., 2003) have yet to be widely adopted.

Evaluation Strategies

In our view, significant innovation with respect to evaluation will be required if the pedagogy of service-learning is to achieve its potential. Several issues pertaining to purpose and the use of alternative strategies and tools, in particular, require development. With respect to purpose, there is a deep-seated concern that the social sciences may sanction or promote the neglect of vulnerable populations residing in communities in which interventions are typically pursued. Community partnerships are essential in service-learning. Nevertheless, debates simmer regarding the extent to which the community should participate in evaluation processes and the degree to which students' critical reflections should be featured in formal evaluations (Eyler, Giles, & Schmiede, 1994). Protecting confidentiality and the rights of participants can further complicate these matters.

With respect to strategies and tools, formative and summative evaluations are still the norm. Formative evaluations can be used to identify processes requiring change of one sort or another. Summative evaluations address outcomes and ostensibly permit informed decision-making pertaining to program effectiveness (Wholey, Hatry, & Newcomer, 1994). Pre- and post-intervention analyses represent a tried-and-true technique in the case of summative evaluations. Because it is generally agreed that a sense of moral and civic responsibility can only develop over time, the need for a longitudinal perspective has been noted as well (Colby et al., 2003).

At the same time, the evolving and collaborative nature of service-learning projects can confound compliance strategies embodied in certain formative evaluation designs. Faculties often have little control over critical resources or the learning environment in which interventions take place. Similarly, summative evaluations generally require

the prior stipulation of outcomes. At the level of technique, pre- and post-intervention analyses can fail to reveal the true nature or quality of an intervention, the lived experiences of participants, and the types of changes that occur over time. Longitudinal designs can be complex, costly, and time-consuming.

For these several reasons, multi-constituency and multi-method evaluation approaches will often be required to capture the full range of complexities involved in service-learning initiatives (Colby et al., 2003; Giles & Eyler, 1994). In many cases, studies employing complementary methods will be needed given the complex nature of service-learning projects. Evaluation designs need to reflect the many dimensions typically associated with community-based initiatives (Gelmon, Holland, Driscoll, Spring, & Kerrigan, 2001; Payne, 2000).

Gelmon and her colleagues (2001) present a multi-constituency approach in a handbook for evaluating service-learning activities. Their matrices address the complexities of assessment by stressing the importance of first asking key questions. The questions will articulate the goal of the assessment, identify who needs the assessment, recognize what resources are available to support the assessment, and think through utilization when the results are compiled. The answers will shape the assessment design and clarify the constituency that will be the audience for its findings. The assessment framework that results can be used throughout the process, from designing the evaluation to implementation, data analysis, and utilization of the findings.

Fortunately, a broader range of evaluation strategies and tools are now being developed. One, in particular, appears to hold great potential. Action research is often described in terms of three distinguishing characteristics: (a) its participatory character, (b) the democratic ethos on which it is based, and (c) its simultaneous focus on knowledge creation and social change (Stringer, 1999).[7]

Action research depends on collaboration between the researcher and community. As a result, the evaluation takes into account the nature of these partnerships. Cotton and Stanton (1990) outline guidelines to establish partnerships by looking at the evaluation process—program design, implementation, and evaluation—from both the academic and community perspectives.

The approach also enhances the relationship between college and community, allowing faculty to conduct research relevant to the community and providing students opportunities for learning. For example, action research has been used to guide alcohol abuse prevention and treatment with Alaskan natives (Mohatt, Hazel, Allen, Stachelrodt, Hensel, & Fath, 2004), identify barriers to hospice access by African-Americans (Reese, Ahern, O'Faire, & Warren, 1999), to develop a community-owned farm (Reardon, 1998), and design a strategy to reorient American colleges and universities toward solving real-world problems (Benson & Harkavy, 1996).

Action research is both hermeneutic and cyclical in nature, employing joint constructions of a reality that is shared and interventions that are provisional and thus subject to change as situations warrant. Most importantly, action research can accommodate the evolving nature of most service-learning projects; initiatives often change—sometimes dramatically—as learning takes place.

Recognition of how service-learning initiatives can evolve is the foundation of a handbook on assessing service-learning initiatives (Gelmon et al., 2001). The authors point out that good evaluation is based on a clear understanding of the intervention, constituents, and social context. They go on to say that the parameters of this conceptualization can change as a function of factors, such as the timing of the assessment. Having this conceptual framework also will allow planners to select the most appropriate data collection tools.

Gelmon et al. (2001) present tables comparing different assessment methods for considerations, such as resources needed to conduct an evaluation, issues regarding data collection and analysis, and side benefits or disadvantages of each method. Surveys and interviews, while the most frequently represented in the literature, are not always the best method for a given evaluation.

While longitudinal methods track changes that occur over a period of time, a disadvantage is how to compare differences between factors at the beginning and end of the evaluation period. Equally as problematic would be deciding what is the appropriate way to measure time passing. For example, the "end" of service-learning activities focused on race have been conceptualized at the end of a semester (Coles, 1999) and at the end of an era (Stevens, 2003).

A multi-method approach would allow the greatest responsiveness, though decisions about specific tools to use involve trade-offs. Gelmon and her colleagues (2001) talk about these choices in terms of selecting the tools based on the conceptual framework about the assessment context and its goals. This conclusion is echoed by others, adding a discussion of power issues. Stoecker (2003) distinguishes between service-learning done for charity from that done to bring about social justice.

More broadly, do service-learning assignments

Lowery et al.

promote social responsibility? Do they influence the processes that lead to learning? What impacts do service-learning activities have on relationships shared by institutions of higher learning and the community? What impacts do service-learning initiatives have on society as a whole, particularly with respect to the development of an ethic of caring, commitment, and civic engagement? How can we enhance sensitivity about the level of reciprocity that is appropriate to healthy service-learning initiatives?

Resources to conduct further study do exist to address some of these questions. Colby et al. (2003) present an excellent review of 12 case studies that show strong support for service-learning as a way to provide disciplinary training and foster civic engagement. Campus Compact maintains a Web site clearinghouse of research tools and findings on the impact of service-learning (www.compact.org/resource/aag). Giles and Eyler (1994) outline forms of civic participation, their relation to generating social capital, and how service-learning can provide curricula for citizenship. Jacoby (2003) defines reciprocity as personal relationships, the foundation of service-learning partnerships, between individuals and institutions.

Issues for Further Development

Service-learning has developed considerably during the last 20 years. It is now recognized and valued as a powerful pedagogical tool, one that can benefit students, the community, faculty, and institutions of higher learning. Based on our year-long discussion, we recommend the following 10 foci for scholars who are interested in service-learning's ongoing development.

1. The complex nature of service-learning needs to be recognized. Despite our familiarity with this pedagogy, we were surprised by the number of inputs, processes, methods, and outcomes embodied in fully comprehensive and effective service-learning programs. The interrelationships shared by these variables create additional complexity. We offer our model as a starting point for developing more complete and useful explications of service-learning.

2. In particular, we encourage scholars and practitioners to further examine step two of our logic diagram, which pertains to steps and activities. Although our model expands on the diagram advanced by the National Association of Partners in Education, we still have a great deal to learn about the critical steps included in this stage. This is due, in large part, to the contextual nature of service-learning. In our view, addi-

tional research and documentation pertaining to individual service-learning projects and initiatives will be required for some time to come.

3. We encourage scholars engaged in service-learning to more clearly stipulate the theoretical perspectives grounding their various projects. We agree with Ehrlich (2000) who believes service-learning researchers have set our goals and standards too low. Too often, our efforts represent mere "byproducts of our other efforts." Explicit descriptions of our theoretical perspectives will engender greater rigor and hence credibility in the academic community.

4. As is noted above, much has been written about the principle of reciprocity. Nevertheless, we encourage proponents of service-learning to extend their focus to encompass the many issues embodied in this concept. Empirical work, in particular, is needed to reveal implications pertaining to capacity and power differentials among those who participate in service-learning projects.

5. Similarly, we urge our colleagues to continue to explore a tension that exists between the promotion of moral and civic development, on the one hand, and discipline-specific learning objectives on the other. We support the view that democratic practice is central to service-learning. This is particularly important in a world increasingly divided by ideology.

   We detect, however, a certain defensiveness among proponents of service-learning with respect to civic and moral education. We believe that choosing between traditional academic objectives and civic and moral education represents a false choice. At the same time, however, we recognize that the precise balance appropriate to the two is evolving and may depend on the needs of those who participate in particular projects.

6. Our model represents a conceptualization of service-learning. As it is refined over time, key elements will need to be operationalized and various components of the model will need to be tested using a broad range of qualitative and quantitative techniques.

7. Our model can also be converted into several sets of assessment tools that can be used in institutions of higher learning, the community, and among individual practitioners to implement service-learning as a pedagogy and, in the case of fully implemented programs, to assess their effectiveness.

8. Diagnostic instruments that can test for student readiness to participate in service-learning

activities also are needed. The development of these tools will facilitate, in turn, the development of strategies appropriate to individual student's needs.

9. We do not believe that service-learning will achieve its full potential unless hiring practices are changed, and promotion and tenure policies and procedures are revised to address imbalances that exist among the three traditional pillars of the academic project: teaching, research, and service. In our view, Boyer's (1990) reconception of scholarship provides a theoretical foundation for this most fundamental of changes.

10. Finally, we recognize that it will not be sufficient just to reengineer reward systems in academia. Faculty development programs focusing, in general, on pedagogy and, more specifically, on the theory and practice of service-learning will be required if faculty are to play the critical role envisioned by proponents of civic engagement.

Conclusion

After more than 20 years the community of service-learning scholars has amassed a compendium of service-learning literature. The purpose of this paper was to introduce a conceptual model for supporting the continued development of service-learning as a pedagogy of engagement. The logic diagram can be used to inform policy makers at all levels about the importance of connecting learning with service, and to alert administrators to the complexities involved in creating effective service-learning programs as a central part of an engaged campus. It will create new patterns of conversation that support and encourage the involvement of everyone in defining issues relative to civic engagement. Additionally, it can create new ways to facilitate access to information so that everyone involved (i.e., institutions, students, faculty, community members) can make informed choices and decisions. Finally, it can raise the awareness that there are distinctive evolutionary stages in the implementation of service-learning by providing a rationally designed, comprehensive strategy that generates the foundational knowledge needed to design and implement effective service-learning initiatives.

Notes

[1] Ernest Boyer originally used the term "application," but turned to the term "engagement" toward the end of his life to more clearly reflect the academy's obligation to attend to the social, civic, and ethical challenges of the day (Glassick, 1999).

[2] The authors recognize that models can exclude certain concepts even as they highlight and privilege others. Indeed, few models can capture the full complexity of their respective subjects. This is a particular danger in the case of service-learning because power and capacity differentials exist among the many partners who participate in community-based projects. For this reason, particular attention was paid to issues involving differential access and capacity. We quickly agreed, as well, that knowledge is socially constructed. Indeed, there are multiple ways of knowing. A single model cannot meet every need. We used our model to focus on the big picture, that is, how service and learning interface with one another, and how both can fit within a broader understanding of institutional concerns.

[3] Eyler and Giles (1999) further parse this understanding of learning. Reflection must be continuous in time, enable students to connect classroom concepts to the real world, challenge assumptions and beliefs in order to promote critical thinking, contextualize an experience or event, and be accompanied by coaching for students' intellectual growth. Reflection can thus prompt key questions pertaining to the how, when, where, and why of a service-learning experience. Critical reflection both facilitates learning and provides a foundation for evaluation. Moreover, it influences both affect and cognition, thus establishing a transformative bond between the activities of service and learning.

[4] The student outcomes identified in our logic diagram fully reflect Kolb's (1984) five-fold conception of experiential learning, which includes exploration, clarification, realization, activation, and internalization. In the exploration phase, the student engages in a concrete experience. Service-learning activities enable the student to "sense" and "feel" phenomena of various kinds. Reflection then prompts the student to explore meanings associated with the service-learning activity. In the realization phase, reflection extends beyond intuition to bridge an experience and theoretical constructs introduced in the classroom. In the activation phase, the student engages in more active experimentation through the development and implementation of strategies designed to change peoples' lives or social circumstances. A more mature level of understanding is required in the internalization phase. The student is challenged to open up to new intuitions, feelings, ways of thinking, and cognitions. Action plans may also be developed. Kolb argues that the five steps of the experiential learning model are most effective when they occur in sequence. Therefore, the design of service-learning activities is of critical importance.

[5] Bottleneck concepts are those that are intensely challenging for student s to comprehend but which are critical for understanding foundational knowledge within a course.

[6] The pertinence of social constructivism to service-learning is explained by Schön (1989): "Underlying this view of the practitioner's reflection-in-action is a *constructionist* view of the reality with which the practitioner deals—a view that leads us to see the practitioner as constructing situations of his practice, not only in the

exercise of professional artistry but also in all other modes of professional competence. Technical rationality rests on an *objectivist* view of the relation of the knowing practitioner to the reality he knows. In this view, facts are what they are, and the truth of beliefs is strictly resolvable, at least in principle, by reference to the facts. And professional knowledge rests on a foundation of facts. In the constructionist view, our perceptions, appreciations and beliefs are rooted in our making that we come to accept as reality" (p. 36).

[7] With respect to findings, Stringer (1999) proposes an alternative format for action research. In the place of a conventional headings section, he recommends titles that reflect the process of deconstruction-construction-contextualizing that characterizes much of action research. The structure renders the investigator's frame of reference transparent thus providing the reader with information that can be used to evaluate findings.

References

Benson, L., & Harkavy, I. (1996). Communal participatory action research as a strategy for improving universities and the social sciences: Penn's work with the West Philadelphia Improvement Corps as a case study. *Educational Policy*, *10*, 202-222.

Berry, H. A. (1990). Service-learning in international and intercultural settings. In J. C. Kendall & Associates (Eds.), *Combining service and learning: A resource book for community and public service, Vol. I* (pp. 311-313). Raleigh, NC: National Society for Internships and Experiential Education.

Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professorate*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.

Boyte, H. C., & Kari, N. N. (1996). Democracy of the people: Expanding citizen capacity. In D. F. Burlingame, W. A. Diaz, W. F. Ilchman, & Associates (Eds.), *Capacity for change? The nonprofit world in the age of devolution* (pp. 109-124). Indianapolis, IN: Indiana University Center on Philanthropy.

Bringle, R. G., Games, R., & Malloy, E. A. (Eds.). (1999). *Colleges and universities as citizens*. Boston: Allyn and Bacon.

Campus Compact. (2004). *At a glance*. [Web site clearinghouse of research tools and studies of the impact of service-learning, www.compact.org/resource/aag].

Chrislip, D. D., & Larson, C. E. (1994). *Collaborative leadership: How citizens and civic leaders can make a difference*. San Francisco: Jossey-Bass.

Colby, A., Ehrlich, T., & Associates. (2000). Introduction: Higher education and the development of civic responsibility. In T. Ehrlich (Ed.), *Civic responsibility and higher education* (pp. xxi-xxiii). Phoenix, AZ: Oryx Press.

Colby, A., Ehrlich, T., Beaumont, E., & Stephens, J. (2003). *Educating citizens: Preparing America's undergraduates for lives of moral and civic responsibility*. San Francisco: Jossey-Bass.

Coles, R. L. (1999). Race-focused service-learning courses: Issues and recommendations. *Michigan Journal of Community Service Learning*, *6*, 97-105.

Cotton, D., & Stanton, T. K. (1990). Joining campus and community through service learning. In C. I. Delve, S. D. Mintz, & G. M. Stewart (Eds.), *Community service as value education* (pp. 101-110). San Francisco: Jossey-Bass.

Couto, R. A. (1982). *Streams of idealism and health care innovation: An assessment of service and learning and community mobilization*. New York: Teachers College Press.

Delve, C. I., Mintz, S. D., & Stewart, G. M. (1990). Promoting values development through community service: A design. In C. I. Delve, S. D. Mintz, & G. M. Stewart (Eds.), *Community service as value education* (pp. 7-29). San Francisco: Jossey-Bass.

Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston: Houghton Mifflin.

Ehrlich, T. (Ed.). (2000). *Civic responsibility and higher education*. Phoenix, AZ: Oryx Press.

Eyler, J., & Giles, D. E. (1999). *Where's the learning in service-learning?* San Francisco: Jossey-Bass.

Gelmon, S. B., Holland, B. A., Driscoll, A., Spring, A., & Kerrigan, S. (2001). *Assessing the impact of service-learning and civic engagement: Principles and methods*. Providence, RI: Campus Compact.

Giles Jr., D. E., & Eyler, J. (1994). The theoretical roots of service-learning in John Dewey: Towards a theory of service-learning. *Michigan Journal of Community Service Learning*, *1*, 77-85.

Glassick, C. E. (1999). Ernest L. Boyer: Colleges and universities as citizens. In R. G. Bringle, R. Games, & E. A. Malloy (Eds.), *Colleges and universities as citizens* (pp. 17-30). Boston: Allyn and Bacon.

Heffernan, K. (2001). *Fundamentals of service-learning course construction*. Providence, RI: Campus Compact.

Hesser, G. (1995). Faculty assessment of student learning: Outcomes attributed to service-learning and evidence of changes in faculty attitudes about experiential education. *Michigan Journal of Community Service Learning*, *2*, 33-42.

Jacoby, B. (1996). Service-learning in today's higher education. In B. Jacoby & Associates (Eds.), *Service-learning in higher education: Concepts and practices* (pp. 3-25). San Francisco: Jossey-Bass.

Jacoby, B., & Associates (Eds). (2003). *Building partnerships for service-learning*. San Francisco: Jossey-Bass.

Kendall, J. C. (1990). Combining service and learning: An introduction. In J. C. Kendall & Associates (Eds.), *Combining service and learning: A resource book for community and public service, Vol. I.* Raleigh, NC: National Society for Internships and Experiential Education.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development.* Englewood Cliffs, NJ: Prentice-Hall.

Leeds, J. (1999). Rationales for service-learning: A critical examination. *Michigan Journal of Community Service Learning*, *6*, 112-122.

Markus, G., Howard, J., & King, D. (1993). Integrating community service and classroom instruction enhances learning: Results from an experiment. Educational *Evaluation and Policy Analysis*, *15*(4), 410-419.

McEwen, M. K. (1996). Enhancing student learning and development through service learning. In B. Jacoby & Associates (Eds.), *Service-learning in higher education: Concepts and practices* (pp. 53-91). San Francisco: Jossey-Bass.

Mohatt, G. V., Hazel, K. L., Allen, J., Stachelrodt, M., Hensel, C., & Fath, R. (2004). Unheard Alaska: Culturally anchored participatory action research on sobriety with Alaskan natives. *American Journal of Community Psychology*, *33*, 263-273.

Payne, C. A. (2000). Changes in involvement preferences as measured by the community service involvement preference inventory. *Michigan Journal of Community Service Learning*, *7*, 41-45.

Pompa, L. (2002). Service-learning as crucible: Reflections on immersion, context, power, and transformation. *Michigan Journal of Community Service Learning*, *9*(1), 67-76.

Ramaley, J. A. (2000). The perspective of a comprehensive university. In T. Ehrlich (Ed.), *Civic responsibility and higher education* (pp. 227-248). Phoenix, AZ: Oryx Press.

Reardon, K. M. (1998). Participatory action research as service-learning. In R. A. Rhoads & J.P.F. Howard (Eds.), *Academic service-learning: A pedagogy of action and reflection* (pp. 57-64). San Francisco: Jossey-Bass.

Reese, D. J., Ahern, R. E., O'Faire, N. S., & Warren, C. (1999). Hospice access and use by African-Americans: Addressing cultural and institutional barriers through participatory action research. *Social Work*, *44*, 549-559.

Rhoads, R. A. (1997). *Community service and higher learning: Explorations of the caring self.* Albany, NY: State University of New York Press.

Schön, D. A. (1989). *Educationg the reflective practitioner.* San Francisco: Jossey-Bass.

Schön, D. A. (1994). Generative metaphor: A perspective on problem-setting in social policy. In A. Ortony (Ed.), *Metaphor and thought* (2nd ed., pp. 137-163). New York: Cambridge University Press.

Sigmon, R. L. (1979). Service-learning: Three principles. *Synergist*, *8*, 9-11.

Sigmon, R. L. (1994). *Linking service to learning.* Washington, DC: Council of Independent Colleges.

Stanton, T. K. (1990). Service learning and leadership development: Learning to be effective while learning what to be effective about. In J. C. Kendall & Associates (Eds.), *Combining service and learning: A resource book for community and public service, Vol. I* (pp. 336-352). Raleigh, NC: National Society for Internships and Experiential Education.

Stanton, T. K., Giles, Jr. D. E., & Cruz, N. I. (1999). *Service-learning: A movement's pioneers reflect on its origins, practice, and future.* San Francisco: Jossey-Bass.

Stevens, C. S. (2003). Unrecognized roots of service-learning in African-American social thought and action, 1890-1930. *Michigan Journal of Community Service Learning*, *9*(2), 25-34.

Stoecker, R. (2003). Community-based research: From practice to theory and back again. *Michigan Journal of Community Service Learning*, *9*(2), 35-46.

Stringer, E. T. (1999). *Action research: A handbook for practitioners.* Newbury Park, CA: Sage.

United Way of America. (1996). *Measuring program outcomes: A practical approach.* Alexandria, VA: Author.

Wholey, J. S., Hatry, H. P., & Newcomer, K. E. (1994). *Handbook of practical program evaluation.* San Francisco: Jossey-Bass.

Authors

The authors served as the Indiana Campus Compact Faculty Fellows Class of 2003-2004.

DANIEL LOWERY is an associate professor and holds the James L. Fattore Chair in Management at Calumet College of St. Joseph (IN). His primary areas of academic interest include research methods and the role of values in professional work.

DEBORAH L. MAY is an associate professor of Nursing at Ball State University (IN). Her area of specialization is psychiatric nursing and she incorporates service-learning in nursing practicum courses.

KIM A. DUCHANE is an associate professor of Health and Physical Education at Manchester College (IN). His primary areas of teaching and research involve physical activity pedagogy for individuals with disabilities. He infuses service-learning experiences in all of his teacher preparation courses.

RUSSELL COULTER-KERN is an associate professor in the Department of Psychology at Manchester College (IN). He teaches psychology and involves psychology students in a variety of community-based research projects.

DE' BRYANT is an associate professor of Psychology at Indiana University South Bend. Her

primary research objectives are to develop and replicate models for community building and empowerment; to create psychological assessment tools sensitive to differences caused by race, gender, and class inequities; and to establish a university-community partnership to bring about social change.

PAMALA V. MORRIS is an associate professor in the Department of Youth Development and Agricultural Education at Purdue University (IN). Her primary area of interest includes informing youth and adults about the changing faces of a global society and increasing their understanding and appreciation of cultural differences and similarities within, among, and between groups.

JOHN G. POMERY is associate professor of Economics at the Krannert School of Management, Purdue University (IN), and served as Senior Faculty Fellow for 2003-04.

MAC BELLNER is a Service-Learning Consultant and former Assistant Director for Faculty Development with the Indiana Campus Compact.