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## Professional Development for Service-Learning Practitioners

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Source: Shelley H. Billig, RMC Research Corporation, September 2010.

Like people in all fields, service-learning practitioners need to acquire the knowledge and skills needed to be effective in implementing activities. The value of professional development has been shown repeatedly in education and other fields in helping practitioners learn how to implement innovations. The [National Staff Development Council](#) [1] has developed standards for effective professional development for educators that include standards for context (when, where, and why), process (how), and content (what). These have been adopted by the [Service-Learning Providers' Network](#) [2] and elaborated for service-learning.

There are few published studies on service-learning and professional development, though there are many “how-to” guides and descriptions of various types of professional development that are available. The few service-learning studies on professional development are very specific to a particular program or person, and so are not included here. Rather, this fact sheet provides a summary of research on various aspects of professional development, followed by web and print resources that are more closely connected to service-learning.

- Hattie (2009) conducted a meta-analysis of studies on professional development and found that the most effective professional development, in terms of teachers' acquisition of knowledge and behaviors, were observation and feedback on teachers' classroom behaviors; microteaching (conducting mini-lessons and then receiving individual feedback on performance); audio/visual feedback; and practice. Lowest effects were for discussion, lectures, games, and guided field trips. He also cited studies that showed that the highest impact of professional development on student outcomes occurred when: professional development was offered over an extended period of time, external experts offered the sessions rather than within-school staff, teachers were highly engaged in the learning process, professional development challenged preconceived notions (such as presenting information that all students can learn at high standards), teachers worked collaboratively with the assistance of outside expertise, when learning was grounded in student artifacts, and school leaders supported both the professional learning and the implementation of what was learned.
- In 2005, the Urban Institute synthesized 18 experimental and quasi-experimental studies of the effects of professional development on middle and high school teachers' success in increasing student achievement as measured by test scores. Their analysis revealed that teachers' participation in professional development was significantly related to increasing student achievement, particularly when the professional development was tied to curriculum, to knowledge of subject matter, and/or to how students learn the subject rather than being linked only to teacher behaviors. The amount of professional development provided was an important factor in influencing both change in teaching behaviors and change in the classroom environment.
- Using an experimental design, Porter, Blank, Smithson, and Osthoff (2005) studied the effects of a relatively complex set of professional development activities called Data on Enacted Curriculum (DEC). Several findings are pertinent to the service-learning field. First, researchers discovered five factors that affected the extent and quality of school participation in the treatment: time for school leadership teams, stability of school leadership teams, schoolwide use of the DEC treatment (indirect delivery), principal participation, and district priorities and policies. The DEC schools that moved

furthest and fastest to integrate DEC methods into school improvement were the ones that have kept the core group involved in DEC professional development and technical assistance. The impact of principal participation was high. The authors identified several possible reasons for the impact, which included the ideas that principals who invest their own time and energy into an activity send a signal to staff that the activity is important and teachers' own participation is consequential; principal participation enabled school leadership teams to work with greater confidence and dispatch because teams received instant feedback; principals who attended sessions had more opportunities to see how the DEC treatment could be linked with existing school improvement goals.

- Huffman (2003) studied the effects of various types of professional development in mathematics and science for about 200 middle schools teachers. The results suggest that two types of professional development—examining practice and curriculum development—were most strongly related to the use of standards-based instructional practice than other types of professional development, most likely because these two types encouraged greater teacher ownership in applying what was learned.
- Snow-Renner & Lauer (2005) synthesized 37 major studies of professional development and concluded that standards-based professional development can have a positive effect on classroom practice and student achievement, but that results are mixed, both due to the quality of the professional development being offered and the low rigor in the quality of the research. Their discussion noted that it takes time to learn and implement “best” practices with fidelity and there may be a transition time before impacts are realized. Generally, more professional development was associated with higher student achievement, and professional development that focused on instruction had a higher yield than other types of professional development. The findings suggested that, for classroom practice to change, professional learning opportunities should be grounded in the curriculum that students study, embedded within an aligned system and connected to several elements of instruction (e.g., assessments, curriculum), and extended in time, with time built in for practice, coaching, and follow ups. Other important qualities of professional development associated with teacher instructional change and student achievement were: collective participation in professional development; coherent approaches to improving student learning, with policies and materials aligning with the professional development focus; and aspects of active learning, in which teachers participate in the same types of sense-making activities that their students would, in a reform-oriented standards-based classroom. Effects were further intensified when: (1) professional development took the form of teacher study groups or coaching rather than workshop or conference participation; (2) professional development was consistent with teachers' goals and aligned with existing instructional materials, student assessments, and policies; and (3) when teachers participated in groups, particularly when they were from the same subject, grade, or school.
- Owston (2007) studied 59 schools that sustained an innovation beyond 2 years to determine the underlying factors that led to teachers being able to sustain their classroom innovations. He found two sets of essential variables (those that appeared in at least half of the cases) that he deemed necessary but not sufficient to sustain innovation. These variables included professional development that was ongoing and viewed as part of a teacher's professional responsibility, guided by an analysis of the gap between student learning expectations and students' actual performance. Consistent with adult learning principles, professional learning must involve teachers in decisions about their own learning, which increases teacher motivation and decreases cynicism and detachment; be job-embedded (i.e., part of a teachers' everyday job); networked, meaning that many teachers are involved and can share information and experiences; regularly assessed for effectiveness; and focused on the subject matter that teachers will address in their classrooms that year. Information about general instructional strategies (e.g., cooperative learning) or unrelated content enrichment is not effective.

## Resources

Billig, S. H. (1998). *Building support for service-learning*. Denver, CO: RMC Research Corporation.  
<http://www.servicelearning.org/library/resource/1695> [3]

This resource by can be found in the National Service-Learning Clearinghouse lending library and has a

chapter on professional development research.

Hassel, E. (1999). *Professional development: Learning from the best. A toolkit for schools and districts based on the National Awards Program for Model Professional Development*. Retrieved from <http://www.learningpt.org/pdfs/pd/lftb.pdf> [4]

This toolkit provides a step-by-step planner to use for designing, implementing, evaluating and improving professional development and sharing professional learning. Fourteen planning tools are presented.

National Staff Development Council

[www.nsd.org](http://www.nsd.org) [5]

The National Staff Development Council is the premier education site for information about effective professional development. The site lists standards for both in-person and online professional development, along with articles and links to many resources.

Service-Learning Ideas and Curricular Examples (SLICE)

<http://www.servicelearning.org/service-learning-ideas-and-curricular-examples-slice> [6]

This lesson plan bank provides lots of good ideas and materials to use as the basis for professional development.

Service-Learning Professional Development Modules CD

[http://www.service-learningpartnership.org/site/PageServer?pagename=pub\\_toolecd](http://www.service-learningpartnership.org/site/PageServer?pagename=pub_toolecd) [7]

This CD is downloadable and contains modules that address adoption, implementation, and sustainability of service-learning in three different formats. The CD was created by James Toole of Compass Institute and the University of Minnesota, and adapted from the W.K. Kellogg Foundation retrospective study of 18 service-learning projects.

Service-Learning Providers' Network

<http://www.slprovidersnetwork.org> [8]

This site provides guidelines for professional development tailored to service-learning. The site is replete with guidelines, PowerPoint presentations, handouts, and other resources that will help anyone interested in providing professional development to administrators, teachers, community partners, and others involved in service-learning.

Loucks-Horsley, Stiles, and Hewson (1996) wrote about the principles of effective professional development for mathematics and science education, most of which are in use today and can inform professional development in for those using service-learning to implement science, technology, engineering, and mathematics (STEM)-related projects. According to these researchers, effective professional development for science and mathematics educators:

1. Are driven by a clear, well-defined image of effective classroom teaching and learning, which includes (a) commitment to the idea that all children can and should learn math and science; (b) recognition that students have diverse learning needs based on background and experience; (c) instruction that emphasizes problem solving, inquiry-based learning, student investigation and discovery, and application of knowledge; (d) provision of experiences that extend and challenge what they already know; (e) teachers should promote an in-depth understanding of science and math and that depth is more important than breadth of knowledge or coverage of topics; (f) provision of collaborative work; and (g) clear outcomes and assessment of progress that accurately reflects meaningful achievement.
2. Help teachers develop knowledge and skills to broaden their teaching approaches, providing effective learning opportunities for students, and include processes that (a) provide teachers with experiences that help them develop deep, thorough understandings of science and mathematics concepts and pedagogies; (b) strengthen their knowledge of how students learn, including listening well to students'

- ideas and posing questions that help them develop better conceptual knowledge; (c) assist teachers in acquiring the types of knowledge and skills that help them make informed decisions about curricular content and implementation, including knowing how to devise an integrated set of learning experiences into a course of study and creating a culture of engaged learning in their classrooms.
3. Use instructional strategies to promote adult learning which mirror effective instruction for students, including (a) building on teachers' existing knowledge and skills; (b) immersing teachers in scientific and mathematical processes and providing experiences to build understandings; (c) providing teachers with collaboration opportunities to engage in dialogue about teaching and learning in science and math; (d) giving ample opportunity to practice and reflect upon new knowledge and skills; (e) designing and providing continuing, structured opportunities for follow up and ongoing support; and (f) unifying the set of learning experiences through a comprehensive plan with goals, strategies, and support over time.
  4. Build or strengthen the learning community so that teachers have opportunities (a) for collaborative exchange; (b) for experimentation and stretching their limits; and (c) for engaging in lifelong learning.
  5. Prepare and support teachers to become leaders so that teachers can (a) plan and implement professional development opportunities for themselves and others; (b) act as change agents for school reform; (c) promote a shared vision for STEM education; and (d) support other teachers,
  6. Provide links to other parts of the educational system by (a) linking professional development activities to other reform initiatives; (b) aligning all activities with curriculum frameworks, academic standards, and assessments; (c) establishing active support within the school, district, or community; and (d) helping administrators, parents, community members, and other educational stakeholders have clear channels for providing input and assistance to teachers.
  7. Include continuous assessment through routine reviews to determine participant satisfaction and engagement and to make necessary short-term adjustments and evaluate long-term impacts. (p.1-5)

*Evaluation of professional development* (pp. 4-1–4-16).

From: *Professional development resource guide for adult educators [and] Professional development resources supplement: Improving instruction, organization, and learner outcomes through professional development*. (1998, August 28). Washington, DC: Pelavin Research Institute.

- Provides guidance for conducting effective evaluations of professional development activities, linking participation to changing instructional behaviors and improving learner performance. Four stages of evaluation are discussed: reaction; learning; behavior; and results. Authors suggested that progressing through all four stages sequentially is important because if information/skills are not learned (second stage), then it is unlikely that instructors can change their instructional behaviors (third stage) or that the programs will change their procedures and learning gains will result.

## References

- Hassel, E. (1999). *Professional development: Learning from the best. A toolkit for schools and districts based on the National Awards Program for Model Professional Development*. Oak Brook, IL: North Central Regional Educational Laboratory.
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. New York, NY: Routledge.
- Huffman, D., Thomas, K., & Lawrenz, F. (2003, December). Relationship between professional development, teachers' instructional practices, and the achievement of students in science and mathematics. *School Science and Mathematics, 103*.
- Loucks-Horsley, S., Stiles, K., & Hewson, P. (1996). *Principles of effective professional development for mathematics and science education: A synthesis of standards*. Madison, WI: University of Wisconsin-Madison, National Institute for Science Education.

- Owston, R. (2007, October 16-17). *Teachers can make a difference: Professional development as a policy option for improving student learning with ICT*. Paper prepared for the CERI-KERIS International Expert Meeting on ICT and Educational Performance, Jeju Island, South Korea.
- Porter, A. C., Blank, R. K., Smithson, J., & Osthoff, E. (2005, April). *Place-based randomized trials to test the effects on instructional practices of a mathematics/science professional development program for teachers*. Paper presented at the annual conference of the National Council on Measurement in Education, Montreal, Canada.
- Snow-Renner, R., & Lauer, P. A. (2005). *MCREL insights: Professional development analysis*. Denver, CO: Mid-continent Research for Education and Learning.

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