

Can a Web Site Be Used as a Vehicle for Organizational Learning about Evaluation?

Nancy Ellen Kiernan and Theodore R. Alter

Abstract

This article reports the findings of a study of the Penn State Cooperative Extension program evaluation Web site. The study was performed to investigate whether a Web site could be used as a vehicle for organizational learning in evaluation, and, if learning does take place, what aspects of the site make learning possible. Our research suggests that a Web site can indeed make such learning possible, a result leading to an emerging culture of evaluation in an organization. To accomplish these ends, however, the creation of a Web site should be approached as an intentional scholarly activity that is informed by theory and driven by organizational leadership.

Introduction

In an era of heightened competition for scarce public and private resources and increased accountability, public universities must demonstrate the impact of their work. Legislators, stakeholders, and funders are interested in the difference university programs can make for citizens, businesses, and communities. To achieve a significant competitive advantage in this environment, it is necessary for a university to develop the organizational capacity to conduct practical program evaluations, to document program impact, and to gain insight as to how the programs should be improved, or even discontinued, to free scarce resources. Yet organizational capacity to carry out practical, cost-effective program evaluation grounded in evaluation theory with appropriate methods is relatively underdeveloped (*Stockdill, Baizerman, and Compton 2002*).

Program evaluation has been important in Penn State Cooperative Extension, that part of the land-grant university that conducts research-based educational programs in sixty-seven counties. Penn State Cooperative Extension has developed the capacity of many educators (faculty at the university and field-based in the counties) to evaluate educational programs, but some educators still lack the commitment. Many extension administrators

(state, regional, and county) perceive the value of evaluation and encourage it, but some administrators do not actively encourage it, perceiving evaluation as a drain on scarce resources and staff time.

To expand organizational capacity in evaluation, the Penn State Cooperative Extension leadership and the state program evaluator created a Web site in 2001 with different expectations for

“For extension educators, the Web site would provide practical information on evaluation strategies appropriate for extension, thereby supporting the organizational commitment to evaluation.”

educators, administrators, and the program evaluator. For extension administrators, the Web site would convey the same cultural message to everyone, that commitment to evaluation is important, and it would create opportunities for individual and collective learning, thus providing a mechanism to strengthen the value and culture of evaluation in the organization. For extension educators, the Web site would provide practical information on evaluation strategies

appropriate for extension, thereby supporting the organizational commitment to evaluation. For the extension evaluator, the Web site would provide an efficient mechanism to motivate and educate almost four hundred extension educators and administrators at the same time with the same message.

This article reports the findings of a study that investigated whether this Web site could be used as a vehicle for organizational learning in evaluation. We first provide a description of the site and how it was marketed within the organization. We then describe the study in which we explored the experiences of the educators and administrators to find out what it is about the site that makes learning about evaluation possible. We conducted this study in the tradition of reflective practice to take stock of the Web site after a period of three years so it could be strengthened in light of the expectations outlined above (*Schon 1983*).

The Web site

Change in organizations is grounded in individual learning (*Smith 1996*) that requires organizational mechanisms that systematically allow learning to occur in a cumulative process over time

by individuals and across individuals (*Argyris and Schon 1996*). The Penn State Cooperative Extension program evaluation Web site is such a mechanism and can be found at <<http://www.extension.psu.edu/evaluation/>>.

The site is designed to enable educators and administrators in extension to achieve five specific objectives.

- Learn valid, scientific principles of current social science research
- Broaden use of data collection methods beyond surveys
- Draw on the practical examples of evaluation on the site as models, irrespective of the program used in an example
- Use evaluation data in diverse ways to demonstrate impact to stakeholders to improve a program, and to achieve professional advancement
- Develop an appreciation for the personal and organizational benefits of evaluation and for the ease of integrating evaluation into programming.

The site is based on principles of empowerment evaluation, adult learning theories, and Web design, each of which suggested different features. Principles of empowerment evaluation foster self-determination, which suggested a need to create a Web site where learners felt free to reflect, learn, experiment, and improve themselves and their programs (*Fetterman, Kaftarian, and Wandersman 1996*). Principles of adult learning theory suggested a need for a range of teaching devices to appeal to an array of learners and to sustain attention (*Kolb 1984*). One such theory, constructionism, advocates active participation in the learning process so that learners do not simply acquire information but reconfigure it into some other way of conceiving of phenomena (*Hawkins and Pea 1987*). Constructionism suggested the need to take scientific principles and apply them in actual evaluation examples. Principles of Web design suggested a need to establish a site that offered quick access and sustainability—that is, a site unencumbered by elaborate design that required excessive computer memory (*Nielsen 2000*).

The Web site provides information in three categories: tip-sheets, PA examples (Pennsylvania examples), and other resources. Tip-sheets demonstrate the social science principles of evaluation, in contrast to Web sites that present social science principles like sections of a textbook without illustration. Each

social science principle is presented in the form of a question that extension educators would pose as they design a valid evaluation, reflecting the perspective of the learner (Kolb 1984). The question is answered by weaving the principle into an extension illustration so the learner is engaged in applying the principle to an extension program, reflecting constructionism (Hawkins and Pea 1987). Positive and negative aspects of the illustration are often given so the learner becomes aware of the various biases associated with social science methodology (Fetterman, Kaftarian, and Wandersman 1996). To encourage the reading of tipsheets, they are short, graphically interesting, and informal (Fetterman, Kaftarian, and Wandersman 1996; Nielsen 2000). Over seventy tipsheets are now on the Web site, and a new one is added every other month.

“Each social science principle is presented in the form of a question that extension educators would pose as they design a valid evaluation, reflecting the perspective of the learner.”

The second category of information in the Web site, PA examples, provides actual program evaluations designed by educators in Pennsylvania and reflects the perspective of the learner (Kolb 1984). Each PA example gives the program’s objectives, delivery method, and evaluation strategy; one type of example is an invitation letter and questions for a focus group. PA examples are designed to encourage a broader use of different data collection methods, especially underused methods like observation and experiential evaluation, which can reduce respondent burden but are not well known. To continue the instruction of social science principles, the strengths and limitations of the research design and data collection method are interwoven into the PA example, so the learner knows the biases associated with social science methodology (Fetterman, Kaftarian, and Wandersman 1996; Hawkins and Pea 1987). Over twenty PA examples are now on the Web site, and a new one is added every other month.

The third category of information in the Web site, other resources, provides links to over sixty other evaluation Web sites across the United States, offering another opportunity to expand skills (Kolb 1984). Some Web sites concentrate on the evaluation of programs, while others present social science principles.

The Web site is continually updated to respond to ongoing evaluation needs; it thus remains a work in progress rather than a complete academic compendium on evaluation.

Marketing the Web site

To accomplish the short-term goal of establishing interest in the Web site, we first demonstrated the site online to administrators, indicating how it could help in their role of advocating evaluation. We promoted the site to educators through e-mail, sending a hot link to the site. In both demonstration and promotion, we described the categories of information in the site, asked participants to bookmark it, and emphasized that it would be updated regularly. Additionally, we conducted thirty-minute workshops statewide to demonstrate the Web site's breadth of information and simple navigation, and distributed business cards with the site's URL.

To accomplish the long-term goal of sustaining use of the Web site, we currently conduct a hands-on workshop at new staff orientation two to three times a year; e-mail an announcement of newly posted tipsheets or PA examples to everyone in cooperative extension; have a feature of the month on the home page that connects learners to the latest posting; and distribute tipsheets and PA examples as handouts at evaluation workshops and in consulting on specific projects.

Methodology

The purpose of this study was to investigate whether a Web site could be used as a vehicle for organizational learning in evaluation and to find out from educators and administrators what aspects of the site make learning about evaluation possible.

Given the purpose of the study, we used a telephone interview to collect information from educators and administrators. A telephone interview offered the opportunity to ask qualitative, open-ended questions to explore the respondents' use of the Web site; to probe for examples to validate the respondents' claims about their use of the site; and to collect data in a less burdensome way from busy respondents (*Salmen 1989; Patton 2002*).

The principal investigators conducted forty telephone interviews using a purposive sample of individuals who had a range of experience in program evaluation (*Patton 2002*). We asked extension's state administrators for potential participants, and their list correlated in all cases with ours. We interviewed twenty

educators (field-based and faculty). Because of the limited number of state and regional administrators and the potential significance of their leadership in evaluation, we also interviewed all ten of these administrators as well as ten county administrators.

The interview questions focused on how in the last three years the respondent may have used the Web site in the role of educator or administrator; how the site may have encouraged the

“Administrators confirmed that educators used a variety of information on the site, having seen it in recent promotion dossiers, grant proposals, and annual reports.”

use of evaluation; how the site could be changed to help the respondent; and how the site could be changed to encourage others to conduct evaluation.

The request to participate in the study was sent by e-mail with an implied consent form approved by the Penn State Institutional Review Board. The e-mail described the rationale for the study and selection of participants and provided two potential time slots for an interview.

Findings

In a qualitative study with a purposive sample, the findings comprise the range of ideas about central themes in the data rather than percentages representative of the sample (Patton 2002). In this study, three themes emerged from the interviews: how the respondents use the Web site, the factors that affected their use, and the future of the site.

Use of the Web site: Some educators and administrators turned to the Web site for capacity building in evaluation; others did not. Interviewees provided evidence for their use of the Web site when they discussed the kind of information they sought, their reasons for using the site, and the consequences.

KIND OF INFORMATION: Educators sought out a range of information on the site; they valued its scope and diversity because it led to learning about different evaluation approaches and methods. They used PA examples and tipsheets regularly and extensively. Administrators confirmed that educators used a variety of information on the site, having seen it in recent promotion dossiers, grant proposals, and annual reports. Administrators also found

that the educators who were most reluctant about evaluation found the PA examples helpful because they illustrated an entire evaluation strategy, making their work more efficient (e.g., a PA example makes evaluation “much easier” and “saves time—that’s huge”).

REASONS FOR USE: Educators’ and administrators’ responses reflected numerous and varied reasons for their use of the Web site.

Educators, despite differing levels of evaluation expertise, regularly used the Web site:

- to design and implement evaluations for their own extension programs;
- as a general learning resource to stimulate their thinking and to broaden their knowledge of evaluation approaches, methods, and techniques, even with no evaluation project immediately pending. Indeed, one field-based educator reported using the Web site home page as her personal home page, so that every time she logged on to her computer she was reminded of her need to increase her knowledge of evaluation;
- to design and implement evaluations to meet organizational expectations and values associated with promotion, annual performance review, and accountability reporting;
- to design valid evaluation questions to strengthen grant proposals and enhance the credibility of Penn State Cooperative Extension with government officials and other funders in the community;
- to refer evaluation approaches to their colleagues—peers, mentees, and interns.

Field-based educators in particular, used the site:

- in discussions about evaluation within groups of extension educators with a common programmatic interest, such as horticulture or family and consumer sciences. Reflecting collective learning, not just individual learning, these program groups used the site as a stimulus to do evaluation and as a technical resource;
- outside their jobs: for example, in graduate school to meet course requirements, conduct research projects, and provide a resource to classmates and teachers.

Administrators used the Web site for proactive efforts to socialize educators to the importance of evaluation and the overall content

and benefits of the site at group settings and on the individual level. Administrators also steered educators to specific content on the site to help them evaluate their programs more effectively.

Both administrators and field-based educators used the Web site with external community partners to introduce them to the content and benefits of the site and to build their evaluation capacity. Some partners have become community leaders in evaluation, now teaching others in the community how to evaluate programs.

Consequences of use: Use of the Web site has had identifiable consequences. First, the educators indicated that the site had an effect on them personally (e.g., “The Web site has relieved apprehension and anxiety about doing program evaluation”). The administrators confirmed the effect on educators, noting increased self-confidence in conducting evaluation and an enhanced reputation when the educators have had their evaluation posted on the site as a PA example. Second, both educators and administrators indicated that the quality and standards of evaluation improved as a consequence of the site, pointing to better annual regional reports, promotion dossiers, and external grants. And third, both educators and administrators noted that the site contributed to a culture of evaluation that is emerging within Penn State Cooperative Extension. However, they also noted that other factors besides the Web site facilitated a culture of evaluation. Those factors include the organizational expectations about the number and quality of evaluations that extension educators need to conduct annually and for promotion; provision of organizational resources to support an evaluator to provide evaluation workshops and consultation in addition to the Web site; and finally, the inclusive philosophy of evaluation accepted within the organization. This philosophy accommodates diverse evaluation strategies and methods, and provides educators with many evaluation options and thus flexibility, making it possible for educators with diverse expertise and needs to participate in evaluation.

Factors that affected use of the Web site: Some factors encouraged use and others hindered it.

The first factor that educators and administrators identified that encouraged use was the site itself and, in particular, a number of specific features.

- Its user-friendliness and ease of navigation
- Its comprehensiveness (e.g., “The Web site has encouraged

me to use forms of evaluation I never would have thought of” and “The Web site has encouraged me to explore evaluation more than I would have.”)

- Its writing style (e.g., “It’s easily read.”)
- Its accessibility (e.g., “The Web site provides easy access to information that I could not have gotten otherwise” and “Prior to the Web site, I had no idea where to go for information in evaluation. I would not have been able to do evaluation without the Web site.”)
- Its message that it reflects organizational expectations and standards for evaluation (e.g., the site “has raised my view of evaluation as a value and norm in the organization” and “It has improved the quality of evaluation.”)
- Its content, which is considered both relevant (e.g., “timely,” “important,” “practical”) and intellectually accessible (e.g., “It is helpful for people who have not studied evaluation” and the information is “idiot proof.”)
- The tipsheets, which convey an “upbeat” message, and the PA examples (e.g., of the Master Gardener Program), which convey that “evaluation is doable.”

The second factor that encouraged use of the Web site came from outside the site, the stimulus and motivation that educators and administrators received at evaluation workshops and from the e-mail announcement of new postings on the site.

Educators noted some factors that hinder their use of the site: first, their lack of time to do evaluation; second, the belief some hold that evaluation is not important; third, their “programming,” which some say is a series of events, not a program; and fourth, their learning styles (e.g., some prefer to ask peers for ready-made evaluations in a program area, and others avoid the Web in general).

Future of the Web site

At the Web site level, educators and administrators recommended that we continue specific aspects of the site, such as the upbeat tone; the simple, succinct presentation style; the navigational ease of the site; and features on new evaluation issues and strategies (e.g., how the Internet can help in conducting program evaluation). They recommended we expand the type of programs in the PA examples and feature evaluation strategies pertinent for new organizational initiatives (e.g., collaborative partnerships; cost recovery; Internet delivery of educational materials and programs;

and grant and contract acquisition) and for ongoing programs (e.g., youth). At the organizational level, educators and administrators suggested we continue to market the site, making it even more visible within Penn State Cooperative Extension, in the university, and beyond.

Discussion

In this study we investigated whether a Web site could be used as a vehicle for organizational learning in evaluation, and, if learning occurred, what aspects of the Web site make learning evaluation possible.

The findings suggest that the educators are using the Web site in ways that indicate it meets the five original objectives. They find the following objectives are met: scientific principles related to evaluation are intellectually accessible and applicable to their work (e.g., they say they are creating better questions); practical examples on the site are used as models; use of data collection methods (e.g., observation) is broader than the use of the survey; evaluation data are used in diverse ways, some expected and others unexpected (e.g., to enhance the credibility of Penn State with external community partners); and finally, perception that personal benefits (e.g., reducing anxiety about evaluation), as well as organizational benefits (e.g., improvement in the quality of evaluation and a change in the culture of evaluation), result from using the Web site.

The findings also suggest that the administrators on the state, regional, and county levels had a strong leadership role in augmenting the use of the Web by educators, reflecting the administrators' commitment to evaluation. Administrators not only advocated use of the Web site; they were intimately aware of the information on the site and directed educators to specific types of information relevant to their particular needs in program evaluation. Administrators were even aware of the site's features that helped educators who were most reluctant to evaluate programs. These findings suggest that the administrators' commitment to the Web site for capacity building in evaluation has contributed to the culture of evaluation.

The construction and design of this Web site were motivated by theories of empowerment evaluation, adult learning, and Web design. Educators and administrators identified features of the site that make learning evaluation possible, and these features are related to the theories. For example, educators found the site to

embody three concepts central to the theory of empowerment evaluation: it is useful for learning general principles even when no evaluation is pending; it presents choices for evaluation approaches and methods; and it builds evaluation capacity of community organizations (Fetterman, Kaftarian, and Wandersman 1996). Educators found the examples on the site useful, which accords with constructionism (Hawkins and Pea 1987; Kolb 1984). Educators also found the site easy to navigate, which accords with usability theory of Web design (Nielsen 2000). The theories predicted certain outcomes, and these have been realized in use of the Web site. These findings suggest that a Web site can be used as a vehicle for learning and applying evaluation skills, if the site is constructed with consideration of theoretical principles associated with empowerment evaluation, adult learning, and Web design.

“Administrators were even aware of the site’s features that helped educators who were most reluctant to evaluate programs.”

The findings also demonstrate that some educators fail to use the Web site due to their lack of interest in evaluation, their own learning styles, or the Web site’s lack of visibility within the organization. They did not, however, indicate that any deficiencies in the site accounted for their not using it. In response to the lack of use by some educators, we piloted a new marketing strategy for all new educators in the organization. At their orientation, we engaged these educators, each at a separate computer, in a thirty-minute interactive session on the Web site to find specific information about evaluation. This session stimulated interest not only in the site but also in evaluation. We plan to continue this marketing strategy.

Three aspects of the methodology could have created bias in responses. The first is that the interviewers knew the participants, which could have led to socially desirable answers. To minimize this bias, in our analysis we used only interview data from respondents who provided concrete details that backed up their opinions of the Web site. A second aspect of the methodology, the subject of evaluation, could also have produced socially desirable answers. The evidence from the interviews, however, demonstrated that the respondents provided a full range of views (e.g.,

on use and nonuse of the site and on their acceptance and their aversion to evaluation). A third aspect, the purposive sample in the study, could have biased the findings because the educators and administrators in the sample may not be representative of those in the extension organization as a whole. In this study, however, we were not concerned with the prevalence of the use of the Web site; that will be the focus of a future study. The concern for this study was the viability of the site as a vehicle for educators to learn and adopt evaluation skills and for organizational change, a scope of inquiry for which a purposive sample is appropriate (*Patton 2002*).

Despite the study limitations, this study has important strengths. It is one of the few studies of a Web site to use in-depth qualitative interviews. In using this methodology, we learned of the experiences of site users and nonusers that explain and validate their attitudes about the site (*Patton 2002*). We also learned about the experiences important to the participants, some unexpected. These experiences illuminate the strengths and weaknesses of the Web site, and our knowledge of them will facilitate future decisions intended to maximize its potential to affect capacity building in evaluation. We believe this study will initiate further research into the use of a Web site for capacity building to achieve organizational change.

In conclusion, our research suggests that a Web site can achieve individual and collective learning in evaluation, leading to an emerging culture of evaluation in an organization. To meet these expectations, however, the creation of a Web site should be approached as an intentional scholarly activity that is informed by theory and driven by organizational leadership.

Acknowledgments

We thank the educators, both faculty and field-based, and administrators on the state, regional, and county levels for generous participation in the interviews. We also thank Mary Ann Clark for assistance in implementing the study, Michele Marini for excellent editorial expertise, and Michaela Kiernan for exemplary evaluative criticism of an early draft.

References

- Argyris, C., and D. A. Schon. 1996. *Organizational learning II: Theory, method, and practice*. New York: Addison-Wesley.

- Fetterman, D. M., S. J. Kaftarian, and A. Wandersman, eds. 1996. *Empowerment evaluation: Knowledge and tools for self-assessment and accountability*. Thousand Oaks, Calif.: Sage Publications.
- Hawkins, J., and R. D. Pea. 1987. Tools for bridging the cultures of everyday and scientific thinking. *Journal of Research in Science Teaching* 24: 40, 291–307.
- Kiernan, N. E. Program evaluation. College of Agricultural Sciences at Penn State University. <http://www.extension.psu.edu/evaluation/> (accessed 5 May 2005).
- Kolb, D. A. 1984. *Experiential learning*. Englewood Cliffs, N.J.: Prentice Hall.
- Nielsen, J. 2000. *Designing Web usability*. Indianapolis, Ind.: New Riders.
- Patton, M. Q. 2002. *Qualitative research and evaluation methods*. 3rd ed. Thousand Oaks, Calif.: Sage.
- Salmen, L. F. 1989. *Listen to the people*. New York: Oxford University Press.
- Schon, D. A. 1983. *The reflective practitioner: How professionals think in action*. New York: Basic Books.
- Smith, D. K. 1996. *Taking charge of change*. Reading, Mass.: Addison-Wesley.
- Stockdill, S. H., M. Baizerman, and D. W. Compton. 2002. Toward a definition of the ECB [evaluation capacity building] process: A conversation with the ECB literature. In *The art, craft, and science of evaluation capacity building*, edited by D. W. Compton, M. Baizerman, and S. H. Stockdill, 7–25. San Francisco: Jossey-Bass.

About the Authors

- Nancy Ellen Kiernan, program evaluator, Office of Director of Penn State Cooperative Extension, works with field-based educators and faculty to implement program evaluations. Dr. Kiernan has evaluated a wide variety of extension programs as reflected in publications with field-based educators and faculty in *Evaluation Review*, *Evaluation and Program Planning*, *American Journal of Evaluation*, *Journal of Nutrition Education*, *Preventive Veterinary Medicine*, *Journal of Dairy Science*, *American Journal of Industrial Medicine*, *International Quarterly of Community Health Education*, *Journal of Natural Resources and Life Sciences Education*, and *Journal of Extension*. Awards recognizing Dr. Kiernan's work include the Program Excellence through Research Award from the National Association of Family and Consumer Sciences (NEAFCS); from the National Institute for Farm Safety, an award for research leading to prevention programs; from Penn State's Commission of Women, an Achieving Women Award for innovative evaluations; and the 2004 Sustained Excellence in Extension Evaluation Award from the Extension Education Evaluation Topical Interest Group (EEE-TIG) of the American Evaluation Association.

- Theodore R. Alter is professor of agricultural, environmental, and regional economics at Penn State University. He served as associate vice president for outreach, director of Penn State Cooperative Extension, and associate dean in the College of Agricultural Sciences from July 1997 through July 2004. His research and education programs have focused on leadership and organizational change, the scholarship of engagement in higher education, institutional and behavioral economics, public sector economics, development economics, and comparative rural development policy.