Capacity Building Spillover: Uptake and Innovative Use of Systems Evaluation Protocol Tools and Skills

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The Cornell Office for Research on Evaluation (CORE) has developed a protocol for evaluation planning known as the "Systems Evaluation Protocol" (SEP)*. Since 2006, CORE has trained 200 individuals from 48 organizations in this approach to program modeling and evaluation planning. As part of the training, participants use an on-line tool called the "Netway" for completing certain steps of the Protocol. The research presented here analyses data from Netway logs and selected participant interviews to explore patterns of use of the SEP evaluation steps and the Netway tool outside of participants' training process. We refer to this further use as "spillover" from the training and capacity-building effort. We are particularly interested in learning about the purposes that motivated spillover use of the Netway system and about which parts of the Protocol and which components of the Netway have been most useful. Results of this pilot study point to durable uptake of several components of the SEP evaluation steps and to innovative adaptation of SEP tools, particularly the visual modeling process. Interestingly, many of the independent initiatives for using the SEP tools were not related to evaluation. It may behoove evaluation capacity-builders to be more systematic in promoting these kinds of innovative uses of the evaluation tools, as part of a leading edge strategy for embedding high quality evaluation practices and a positive culture of evaluation within organizations.

Background

Systems Evaluation Protocol

CORE's Systems Evaluation Protocol offers a practical, "systems approach" to evaluation planning, implementation, and use of evaluation results in organizations. The key features and innovations of the systems approach include attention to the full range of program stakeholders; analysis of the program as an embedded "part" in a collection of programmatic, organizational and cultural "wholes"; very comprehensive program modeling with attention to program boundaries; and recognition of where a program is in its "lifecycle" and the implications for evaluation.

The Systems Evaluation Protocol was developed in 2006 by Professor William Trochim and a team at Cornell University, working in collaboration with the Cornell Cooperative Extension (CCE) system in New York State. Beginning in 2007, CORE offered trainings to science outreach programs in the CCE system and NSF's Materials Research Science and Engineering Centers (MRSECs). These capacity-building efforts were undertaken in the form of "Evaluation Partnerships" with cohorts of outreach programs from the respective systems.

Evaluation Partnerships Using the SEP

proach to evaluation

The research reported here covers activity in the four cohorts that completed the evaluation planning phase of the SEP between 2007 and 2012. The goals of the Evaluation Partnerships using the SEP are to:

develop and implement high-quality evaluation plans

improve evaluation practices and utilization of results improve programs through evaluation

- build evaluation capacity, promote evaluative thinking and develop a
- culture of evaluation within participating organizations · develop networks of individual and organizational users using this ap-

Members of the Evaluation Partnerships in Cohorts 1 thru 4 participated in a mix of in-person and web-based trainings. Trainings in the evaluation plannin phase cover stakeholder analysis, program lifecycle analysis, program modeling, evaluation concepts and tools, and plan development – all with a unique systems approach to evaluation. Participating staff and programs are also expected to complete various assessment tools over the course of the Partnership, to contribute to CORE's on-going research on this approach to evaluatio capacity-building. CORE offers support and training for evaluation implement

THE SYSTEMS EVALUATION PROTOCOL PHASE I: PLANNING

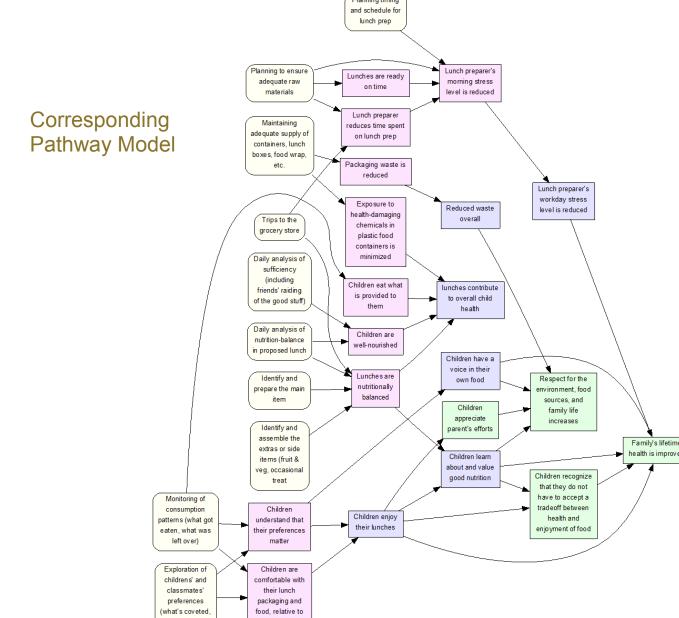
Evaluation Partnership Participants Data as of 10/10/2012

	Data as 01 10/10/2012							
a	Cohort	People	Programs	Org's	Launch Date CCE; MRSEC	Planning completed		
0 -	1	65	29	8	1/2007; 1/2007	12/2007		
	2	75	22	22	2/2009; 12/2008	12/2009		
a ing	3	24	10	6	3/2010; 2/2010	12/2010		
: -	4	16	12	7	11/2010; 2/2011	12/2011		
ie K-	5	31	16	12	3/2012; 2/2012	Expected 12/2012		
` _	Totals	200*	89	48**				
ion	* Particip	oants in m	nore than on	e cohort w	ere only counted on	ce		
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Sample Logic Model: School Lunch and Family Well-Being

tation following the initial evaluation planning year.

Input:	Activities:	Outputs:	Short-Term Outcomes:	Mid-Term Outcomes:	Long-Term Out- comes:
Fuel for car Household food budget Time (for shopping, food prep, lunch assembly, conversations, cleaning of containers, etc.)	Planning to ensure adequate raw materials Trips to the grocery store Maintaining adequate supply of containers, lunch boxes, food wrap, etc. Planning timing and schedule for lunch prep Identify and prepare the main item Identify and assemble the "extras" or side items (fruit & veg, occasional treat Daily analysis of nutrition-balance in proposed lunch Daily analysis of "sufficiency" (including friends' raiding of the good stuff) Monitoring of consumption patterns (what got eaten, what was left over) Exploration of children's and classmates' preferences (what's "coveted")	array of lunch packag- ing containers number of lunches prepared shopping lists	Children are comfortable with their lunch packaging and food, relative to their peer groups Children are well-nourished Children eat what is provided to them Children understand that their preferences matter Exposure to health-damaging chemicals in plastic food containers is minimized Lunch preparer reduces time spent on lunch prep Lunch preparer's morning stress level is reduced Lunches are nutritionally balanced Lunches are ready on time Packaging waste is reduced	Children enjoy their lunches Children have a "voice" in their own food Children learn about and value good nutrition Lunch preparer's workday stress level is reduced lunches contribute to overall child health Reduced waste overall	Children appreciate parent's efforts Children recognize that they do not have to accept a tradeoff between health and enjoyment of food Family's lifetime health is improved Respect for the environment, food sources, and family life increases
Assumptions Context:	The lunch preparer has adequate knowledge of childhood nutrition. Children are hungry by lunch time, but not usually so hungry that they will eat "anything" that is, they are picky. Home-prepared lunches are better for the children than school-prepared lunches. Lunch is an important part of the children's school day, contributing to their nutrition, hunger abatement, ability to concentrate in class, and pleasure in interactions with schoolmates. The participants in this program include two children, in grades 4 and 7 respectively, and one parent who prepares their lunches. The elder child has lunch in a large cafeteria with access to vending maching the school cafeteria. She has about 20 minutes in which to eat lunch and very little space in which to store lunch containers after use. The younger child is in a small school with no cafeteria so he only has to the prepared lunch. He has a snack at morning recess, which has to be provided as part of his home-prepared lunch. The parent in this household is vegetarian, but the children are not. The parent has a full-time job and is pressed for time in the mornings and on weekends.				



The "Netway"

As part of the Evaluation Partnerships, participants are given access to and training on a web-based system

called the "Netway", created initially for use within CCE and then expanded and refined as part of the NSF-funded research. The Netway is a web-based system designed to support the work of the Systems Evaluation Protocol. It facilitates stakeholder analysis, logic modeling, pathway modeling, lifecycle analysis, evaluation planning, networking, and resource-sharing

Population of Netway Users Data as of 10/10/2012

	People	Programs	Org's	
Cornell Cooperative Extension system (CCE)	316	245	49	
Materials Research, Science and Engineering Centers (MRSECs)	42	52	21	
Other	100	69	22	

Through user activity, the Netway becomes a database of information organized around "programs", including program name, description, mission, and contact information; stakeholder maps; program lifecycle; columnar logic models; graphical pathway models; and evaluation plans. Users can view all programs and models in the Netway. The system is designed, in fact, to promote idea- and resource-sharing. The Netway has built-in search capabilities for finding programs, outcomes, measures, users, and organizations within the system. Netway "logs" are visible only to Netway system administrators and provide records of user actions within the system.

The Netway is currently only available to programs and staff from partner organizations and for CORE's research projects. The results of this research project, together with other evaluation data from CORE's Evaluation Partnerships, will be used to strengthen the Netway tool as it progresses toward wider use and access.

Research Questions for "Spillover Project"

- 1. What has motivated spillover users to use the Netway or other EP tools for their work outside the EP? (What were their purposes?)
- 2. What are their patterns of Netway usage?

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- A. Which components of the Netway were used for the spillover programs and to what extent were they used?
- B. What was the pattern of spillover creation relative to treatment time?
- 3. How successful or useful was the Netway for their work (including anticipated and unanticipated outcomes)? 4. How could the EP training process or the Netway tool be improved from the perspective of these users?

The research questions have been addressed through quantitative analysis of Netway log data for the full sample of Spillover Programs in the Netway, and through qualitative research in the form of interviews with a subset of spillover users who are associated with one of the organizations with the most evidence of spillover activity.

Methodology for Quantitative Analysis

- "Spillover Program": A program developed in the Netway by or for participants or organizations in CORE's Evaluation Partnerships as part of their professional work outside of the original Evaluation Partnership (EP) training process.
- "Individual Spillover" refers to the creation of a spillover program by one of the 200 individual participants in the EP, as part of their individual work goals "Organizational spillover" refers to the creation of a spillover program in the Netway for the furtherance of organizational goals for one of the 48 organizations
- in the EP. In this case, the individual creator might or might not have been a participant in the EP.

Identification of Current Spillover Programs

The definition above was applied to a master list of all 366 programs in the Netway as of 10/10/2012 in the following steps.

- Since the Netway is also used for purposes outside the Evaluation Partnerships, we excluded the following from the master list:
- programs created by CORE staff for our research or teaching purposes • programs created by collaborators who are in the role of system administrators, for purposes outside the Evaluation Partnerships
- programs created by members of Cohort 5, which has not yet completed the EP Planning phase
- programs created by "guest users" individuals who had not been members of the Evaluation Partnerships and who did not work for organizations that had been members of the Evaluation Partnerships.

The remaining list of 203 programs was then screened to exclude the 89 EP programs themselves – that is, the specific programs that had been modeled as part of the EP

training process. The remaining list of 114 programs constitutes the current set of "Spillover Programs".

Assignment and Categorization of Spillover Programs

Each of these programs was "assigned" to an individual or organization based on who created the program, or on which person's or organization's behalf the program was created. Each program was then categorized as "individual" or "organizational" spillover according to the definitions above. In cases where the distinction between individual and organizational spillover was not clear, assignment was made on the basis of the program's Netway location (whether it was entered under an individual's home organization or another organization, or under the individual's own program area or another program area within the home organization).

Timing of Spillover Activity

Each individual or organizational participant in the EP was a member of a particular cohort or sequence of cohorts. Each cohort has a "Launch date", defined as the date of the initial cohort training session. Each Spillover Program has a creation date, obtainable from Netway logs. By calculating the time interval between an individual's or organizations entry into the EP and the subsequent creation of the Spillover Program, we obtain a measure of the time-span between "treatment" (EP training) and "activity" associated with each spillover program.

Coding of Usage and Completion

The Netway has multiple components. We focused on the extent to which spillover programs used the Program Mission, Lifecycle, Program Description, Logic Modeling Pathway Modeling, and Evaluation Planning features of the Netway. Extent of use was coded as indicated below. Note that there was no assessment of comprehensiveness or quality, simply presence or absence of data by these criteria:

Program Mission/Lifecycle/Program Description fields, respectively:

0 if the field is empty

1 if the field has text in it (no assessment of quality or quantity)

Logic Model (LM):

- 0 = nothing in any of the LM fields
- 1 = some LM columns or text fields have entries, but not all

2 = all LM columns have entries 3 = all LM columns have entries and some Context or Assumption information has been entered

- Pathway Model (PM):
- 0 = no pathway model links created 1 = some pathway model links created, but only partial coverage of LM

2 = all LM elements are incorporated into pathway model

- 0 = nothing in any of the Evaluation Plan creation fields 1 = some Evaluation Plan fields have entries, but not all
- 2 = all the core Evaluation Plan fields have entries (some evaluation plan fields were added in the course of Netway development and were not available to earlier users so these were excluded from the criterion)

Based on Netway Program Information, Logic Model Reports, Pathway Model Reports, and Evaluation Plan Reports, all Spillover Programs were coded according to these completion criteria.

Methodology for Qualitative Research – Interviews with Key Users

We selected a subsample of Spillover Program creators who work for the organization that has the largest number of Spillover Programs associated with it or its staff members. Institutional Review Board approval and permission of the organization's Executive Director were obtained for conducting a 15-30 minute interview with the 8 individuals involved with this organization's Spillover Programs. Five of the 8 candidates were available and were interviewed in October 2012. Interviews were conducted by phone and all interviewees gave permission for their interviews to be recorded.

Interview Questions:

Part 1: Review, and Motivations/Purpose

For each spillover program describe your motivation for using the Netway? What <u>purposes</u> did you have in mind? (How did you expect the Netway to be useful? If the use of the Netway was prompted by a supervisor or an organizational initiative, who or what group made that decision, and who should we talk to to get insights on the factors behind that person's or group's decision?

Part 2: Usage

Which parts of the Netway did you use? (Which components or features?)

How comfortable were you in navigating and using the Netway?

Did you work with other colleagues on your spillover programs in the Netway? (If so, who? Would it be useful for us to contact them for their comments and in-

(For those who were not directly trained through the EP) How did you learn how to use the Netway? (Who taught you, or what guidance resources did you use?) Do you have any suggestions for how we could do to make it easier for newcomers to learn and use the Netway? (For EP trainees only) Are there any other ideas or tools you got from the EP process (besides the Netway) that you have found helpful in your work since the EP?

Part 3: Reflection

For each spillover program please describe how well or poorly the Netway served your purposes? (Was it useful or not, as you went forward with your work?) Were there any unanticipated benefits or downsides to using the Netway?

What did you find most useful or most valuable for your work? Why?

What did you find <u>least useful</u>, or least successful? Why? Do you have suggestions for how the Netway could be made more useful for your work?

Part 4: Looking ahead

Are you anticipating further use of the Netway for the purposes you've described? Please explain.

Do you have in mind any new ways that you may choose to use the Netway? (New purposes?) Please describe.

Findings from the Quantitative Analysis of Netway Log Data Spillover usage varies considerably across the small number of cohorts in the study, and does not appear to be systematically related to the original size of the cohorts in terms of individuals or EP programs. There is also considerable variation in the proportion of individual versus organizational spillover use. In both Cohort 1 and 4 there

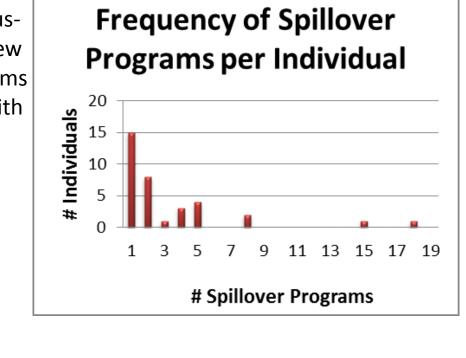
Breakdown of Spillover Programs by Cohort and by Type Cohort | Original Cohort | Original Cohort | Original Cohort | Total Spillover | Individual Spill- | Organizational

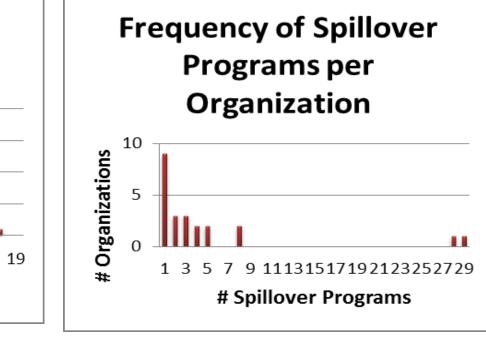
was one organization that adopted the EP approach and tools strongly, accounting for a significant portion of the organizational and total spillover activity.

Conort	size: # programs	size: # people	size: # org's	Programs	over	Spillover
1	29	65	8	39	13 (33%)	26
2	22	75	22	35	18 (51%)	17
3	10	24	6	0	NA	NA
4	12	16	7	40	11 (27%)	29
Total	73	169	46	114	42 (37%)	72

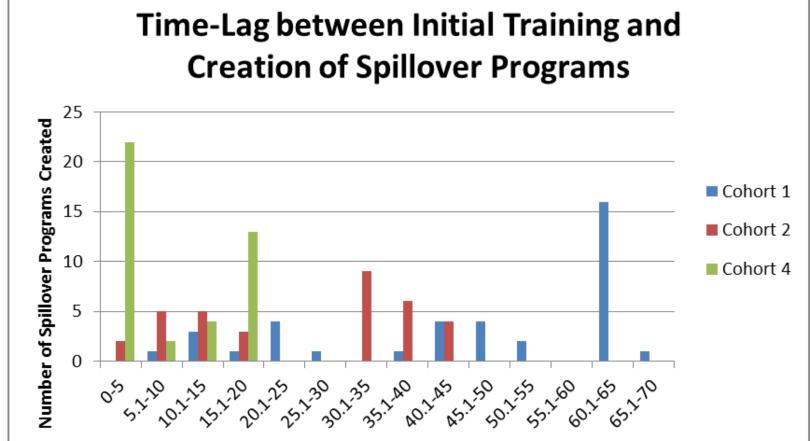
The 114 spillover programs were created by 35 distinct individuals, from 22 organizations. The charts on the right show the patterns of us-

age per individual, and per organization. Most users created only a few spillover programs, although 4 heavy users created 8 or more programs (the most being 18). Similarly, most organizations were associated with 5 or fewer spillover programs, but the two most active organizations accounted for 28 and 29 spillover programs respectively.





Timing of Spillover Activity ... Do EP effects "last"?



The Netway log data alone do not allow us to draw strong inferences from the timing of spillover creation relative to initial EP training. Cohort 4 stands out, for example, for

*Note: Cohorts started in successive years, so their potential time-lags are

Netway data provide a "point-in-time" snapshot of usage patterns among spillover programs. It is important to keep in mind that the "stopping points" we identify in the current data are not necessarily the intended stopping points, because some programs are still be-

ing worked on. (Some programs in the Spillover list, for example, only have program title information at this point). Nevertheless, and particularly since some of these programs are well-aged

in the Netway, the patterns are informative. In the chart, a program's "Stopping Point" is defined as the component of the Netway that a program used or completed, but beyond which it did not go. So, for example, a program that had a

partially or fully developed logic model, but no pathway model activity would have a stopping point in Logic Modeling. Since the Systems Evaluation Protocol builds program data in the left to right sequence on the horizontal axis, the successive stopping points can be interpreted as potential stages of progress "through" the SEP.

Based on the Netway log data and our coding, the dominant use is clearly in the modeling portions of the Netway. Only 12 Spillover Programs used any of the evaluation planning features of the Netway. This may reflect any of a number of practical or motivational obstacles to evaluation planning. Further work will be required to understand this fully.

On the other hand, key building blocks of systems evaluation planning appear to attract a great

deal of voluntary update. That is, 30 of the 114 Spillover Programs undertook at least some logic modeling, and another 48 programs went further and began or completed work on pathway modeling. This pattern is strongly supported in the interview data, in which respondents cited the program modeling and especially the visual pathway modeling features of the Netway as their primary reason for undertaking the spillover programming in the Netway.

Findings from Qualitative Research—the Interviews

In order to gain deeper insights into the motivations for and usage of spillover programs, we interviewed a small group of individuals who have created spillover programs within and for the most active organization among the EP cohorts. This organization and its staff members are associated with 31 spillover programs (28 within this organization, plus 3 by a staff member with a joint appointment in another organization (which also participated in the EP)).

Of the 8 individuals involved, 4 had been trained as part of either Cohort 1 or 4; 1 had been involved in the EP from an organizational leadership point of view but had not done the EP trainings directly; and 3 had not received training through the EP at all.

The interviewees identified a number of reasons why they used and valued the Netway as a tool in their spillover programs. Consistent with the quantitative results reported above, many respondents cited the value of the logic modeling and particularly the pathway modeling as powerful tools for understanding their programs better, gaining clarity about how the various pieces of a program worked together to lead to the desired outcomes, and so on.

Indirectly, with Cohort 1 Cohort 4 Cohort 4

Cohort 1

Cohort 1

Spillover Programs in Interview Sample

"Stopping Points" for Spillover

Program Usage of the Netway

One of the key goals of the interview process was to identify the distinct purposes that had led users to adopt the Netway and EP tools for their non-EP work. Some cited multiple purposes, but among the full set of responses, the following distinct purposes emerged and pointed to some very innovative (and non-evaluation-related) usage.

Distinct Purposes identified in Interviews

Improving own understanding of a program

- Several respondents used the Netway program modeling features to sort out their thinking about a program
- "allows me to see what exactly what we're working towards"
- "One [purpose] is to help organize thinking. To develop a more logical framework, ... to get myself as well as others to think in terms of what are we really trying to achieve, and how might we go about doing that."

Helping others develop an understanding of a program Two respondents reported that they used the modeling features to help others "see" the program and build a shared under-

standing of it "People who have seen the [program models] have been, 'this is awesome, this really describes your program!"

"I had to figure out how to get [a summer intern] up to speed [on a program] as well as how to do some planning to move forward. It seemed like the Netway would be a good tool. ... It was a way for her to be challenged to try to make some sense of [a big mix of sources of program information, meeting minutes, etc.] but also for me to have that. And it was really a pretty incredible tool for us to work on together, as a way to think through what has the program done already and where do we want to go

with this, and for us to have a common language to work with. It was very effective." **Team formation**

A supervisor had a new staff team use logic and pathway modeling in order to develop a shared vision for their efforts, a common sense of purpose, and clarity about goals.

"I needed to get a staff group formed into a more cohesive team with a clearer sense of the direction they were supposed to be heading in. I decided to introduce them to logic models in the Netway for that purpose. ... It gave common format and common language, and it fit in with a larger process we did of doing a visionmission for the team."

Two people referred to annual work-planning efforts, in which the logic modeling was done how they relate to each other

go and how we would get there, what things were critical to include"

Develop coherent reporting structure for a team's diverse programs

As a follow-on to the item above, they also reported that the quarterly or annual reporting templates were developed from the logic-model based plans of work, creating more coherent and relevant report formats

Restructure the navigation of a website

"For getting the big picture of how the website would be organized, the Netway and the pathway models worked really well."

"To begin to identify where some of the critical pieces were in any particular program [similar to SEP evaluation planning] ... getting people to see where some of the

key links were in their actions, and making sure that those pieces then were done right, that those are critical pieces." Organizational strategic planning The organization adopted the Netway for its strategic planning effort, in order to provide a shared platform that multiple program areas and individuals could use

and within which to be able to see shared goals and contributions. Note: two observers of this process reported that it met with mixed success in this case, and attributed it to the absence of a person dedicated to the process who was familiar with the Netway tool and could promote its use. One person referred to this as the absence of a "champion" for this approach.

One user adopted the full EP process in order to develop program models and an evaluation plan Two additional purposes emerged slightly differently: the first was identified by an interviewee as an unexpected benefit, but was cited as something that would be used again; the second arose in informal conversations with a user outside this interview group. They are included in this list to illuminate additional novel uses of the Netway:

This user had adopted the logic and pathway modeling for the proposal development discussions within a group working on a funding proposal; when the original pathway model turned out to be too complex visually and needed to be broken into sub-programs it provided critical insights into how the proposal narrative would have to be structured for this complex program.

Strategic decision-making regarding retention or sale of an organizational asset

This organization owned a piece of property that was underutilized but some staff members felt that it had potential. The leadership team got all key staff members to participate in developing logic and pathway models showing how their department could best use this asset. The result made it possible to see where and how the different departments could make better use of the asset by working separately and collaboratively.

Conclusions

The presence of 114 Spillover Programs is a positive development following the Evaluation Partnership trainings. Much more work needs to be done in order to fully understand the patterns of usage and non-usage that we observe in the data collected to this point. Nevertheless, several elements of the pattern stand out at this point:

The number of organizational spillover cases considerably exceeded the number of individual spillover cases, though this was driven largely by the strong activity of a

The overwhelming majority of spillover use was for the program modeling functions, and particularly the visual pathway modeling. Evaluation planning did not appear to have the same inherently compelling "draw" that the Netway modeling components have.

There have been several really innovative applications of the Netway pathway modeling function for non-evaluation and even non-program development purposes. The basic algorithm within for pathway modeling that is built into the Netway fosters its use in other contexts in which connections or logical flow is an important

These voluntary non-evaluation uses of the Netway are interesting in their own right, but are also encouraging from the point of view of efforts to build evaluation capacity and evaluation culture within organizations. Since these program modeling and logic modeling activities are essential components of evaluation, a case can be made that evaluation planning processes have multiple valuable side-benefits. Highlighting and integrating these multiple payoffs should be a larger part of evaluation capacitybuilding efforts, to make the evaluation work both more palatable and more feasible in time-pressed organizations.

in order to articulate the main components of team members' work for the coming year and "[The Netway helped] put everyone on the same page with respect to where we wanted to

One user applied the visual pathway-modeling feature of the Netway to capture and then analyze the flow of navigation on a website that needed to be restructured

Understand inherent logic or strategy of a project

Evaluation planning

Organize the narrative portion of a complex grant proposal

few organizations. The role of organizational leadership and internal "champions" appears to be very important.

thing to understand of make visible.

having undertaken a large amount of additional Netway programming very early on after their initial EP training. But there are organization-specific factors that would need to be considered before any useful conclusions could be drawn. If nothing else, however, it is interesting to observe that there is at least some evidence that EP training has been durable for some organizations in the cohorts, leading to continued use of the Netway more than 5 years after the initial training.

different. The respective cohorts' maximum possible time-lags are Cohort 1: 69 months; Cohort 2: 47 months; Cohort 4: 23 months.

*The development and testing of the Systems Evaluation Protocol and the Netway web-based tool have been part of an NSF-funded research builds on earlier work also supported by the National Science Foundation and Cornell Cooperative Extension.