National 4-H Learning Priorities

Evaluating for Impact
Educational Content for Professional Development

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HEAD, HEART, HANDS, HEALTH

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# National 4-H Learning Priorities: Program Evaluation

Introduction

The Need for Building Evaluation Capacity in 4-H Educators

Over the past 10 years there has been a significant increase in the need to document the results and impacts of 4-H programming. Many extension programs have moved toward investing in evaluation expertise in the form of evaluation specialists or other faculty members assigned to facilitating program evaluation. However, the role and responsibilities of these specialists vary greatly, with the majority of Extension evaluators practicing across all program areas (Guion, Boyd, & Rennekamp, 2007). As we look at 4-H programs across the country we find only a handful of evaluation specialists dedicated to evaluation just within 4-H programs. As such, if we are to meet the evaluation needs of the 4-H organization, it is critical that we begin to build capacity within the ranks of 4-H educators.

With that being said, it is important that we also keep in mind that the primary role of a 4-H educator is to plan and deliver quality youth development programs. As such, it is also critical that we find an appropriate balance for educators in regard to level of proficiency in program evaluation. Extension evaluation specialists Douglah, Boyd, and Gundermann (2003) proposed that the ideal picture of evaluation capacity in public agencies should have the highest number of individuals who are "practitioners" of evaluation - those who have and use the level of evaluation skills expected and needed by the organization (Figure 1).

Figure 1
Ideal Distribution of Evaluation Capacity in Public Service Organizations
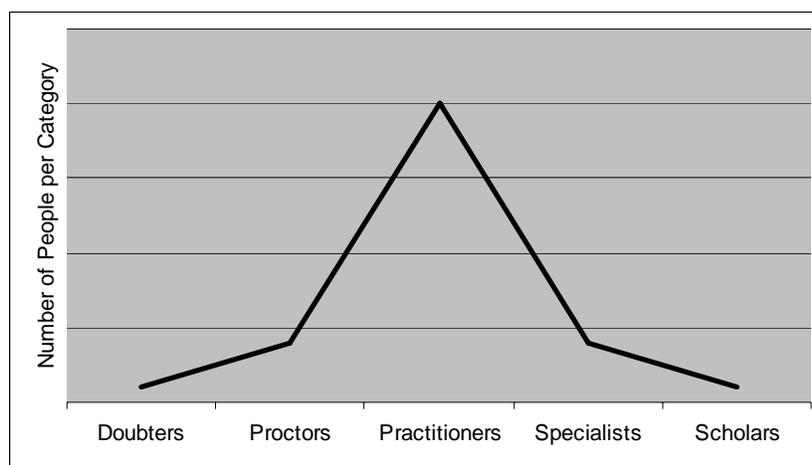
At the same time, there should be very few people who are "doubters" of doing program evaluation at all, or "proctors" who feel that evaluation is best done by other people. On the other end of the spectrum, the organization has some need for evaluators who are "specialists" who

can teach about and coordinate program evaluations and a little need for evaluation "scholars" who contribute to the advancement of the evaluation field. Recent research on building evaluation capacity among 4-H field educators has revealed it is possible to develop an evaluation culture within a state 4-H program that mirrors the ideal model proposed in this model (Arnold, 2006).

The goal of the Program Evaluation National Learning Priority team was to develop a teaching and learning resource that meets several important needs of the national 4-H system:
- Provide learning and practice opportunities to develop educators to the practitioner level
- Provide coordinated education in program evaluation that is consistent in scope and depth across the country
- Provide opportunities for learning and practice through the use of evaluation learning circle and collaborative learning environments- both on-line and on-site
- Provide customized content that is useful for 4-H educators, thus facilitating the application of what is learned

Program Evaluation Professional Development Content: Scope and Sequence

1. Program Planning for Effective Evaluations

This module introduces tools for understanding and using program development logic models to plan and implement programs. Particular emphasis is placed on identifying short, medium and long term outcomes and their importance in setting the stage for effective evaluation of the program. Participants will also learn to identify other areas of a logic model that can also provide important evaluation information.

2. Focusing an Evaluation

This module covers the different purposes for and types of program evaluation, and helps participants identify various levels of evaluation outcomes. A special emphasis is placed on developing evaluation questions that are linked to the program's theory or framework. Developing indicators and identifying data sources are also covered. Developing and following an evaluation protocol, timeline, and project management plan is also emphasized.

3. Evaluation Design

This module focuses on developing evaluation questions that appropriate to quantitative and qualitative methods and their relation to outcome indicators and results. A special emphasis will be placed on types of evaluation questions, and matching questions to indicators and outcomes,

4. Evaluation Methods

This module introduces different types of methods typically used in program evaluation. Participants will learn about quantitative and qualitative methods, and their appropriate use. In addition, the relationship between evaluation questions and evaluation methods is covered.

5. Collecting and Handling Data

This module focuses on understanding how to collect and manage quantitative and qualitative data. Content covered includes the ethics and procedures for the collection, storage and

processing of data; developing a quantitative data set; data collection methods; developing a data collection methods protocol; and matching data collection methods to evaluation questions.

6. Analyzing and Interpreting Data
This module introduces participants to basic analytic procedures available for both quantitative and qualitative data. Using statistical or qualitative software (such as SPSS or NVivo), participants will learn how to perform descriptive and inferential analyses and will learn how to interpret the results.

7. Communicating Evaluation Results
This module prepares participants to convert evaluation results into forms of communication that are useful to various stakeholders. Participants will learn about the purposes of reporting, the content and types of evaluation products, how to identify stakeholders, and how to present the results that matter most to different stakeholder groups.

Suggested Learning Methods

Much of the evaluation content contained in this document is the same for *Novice*, *Advanced Beginner*, and *Practitioner* levels. However, students at different levels will require different teaching and learning approaches. Students at the *Novice* level are learning the basics of evaluation, and for some this will be a first foray into the subject area. As such, the most suitable teaching methods are workshops, seminars, on-line courses or tutorials, web casts, or other on-line learning collaborative environments. The *Advanced Beginner* level requires students to begin applying what they have learned in real settings, which also provide the opportunity for additional learning. As such, teaching methods at the *Advance Beginner* level include in-depth workshops that focus on application, evaluation learning circles, on-line learning communities focused on application, and mentoring. Finally, students at the *Practitioner* level should be able to demonstrate evaluation knowledge and skill through independent work. As such, teaching at this level should take the form of careful mentoring, advanced internships, and/or peer review.

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Module 1: Program Planning for Effective Program Evaluation

Description of Content:

This module introduces tools for understanding and using program development logic models to plan and implement programs. Particular emphasis is placed on identifying short, medium and long term outcomes and their importance in setting the stage for effective evaluation of the program. Participants will also learn to identify the program development and contextual components of a logic model and the important evaluation information they can provide. This module will introduce other models for program plannig in the readings and resouces, but will primarily focus on the logic model as it is currently the model most endorsed in Extension.

Professional Research, Knowledge and Competencies (PRKC)

> 1) Understands and subscribes to a framework for program planning (logic modeling, TOP, etc.)
> 2) Facilitates program development using planning framework.
> 3) Communicates program plans to relevant stakeholders.
> 4) Periodically reassesses program plans.

Novice	Adv. Beginner	Practitioner
Learner will become familiar with terminology and reasoning of one or more logic models.	Leaner will become skilled in generating, explaining, and assessing the results of a logic model.	Learner will become skilled in interpreting a logic model and engaging stakeholders in using the model to improve programs.

Knowledge Assessment
0- I know nothing about this
1- I understand the basic concept
2- I can implement this concept with assistance
3- I can implement this concept independently and/or teach it to others

Program Planning for Program Evaluation				
Know the terms or components of a logic model	0	1	2	3
Develop a logic model or other theory of change for program planning	0	1	2	3
Create evaluations that match a program logic model or program theory	0	1	2	3

Suggested Readings and Learning Resources

American Evaluation Association. (2008). Guiding Principles for Evaluators. Retrieved
June 9, 2008 from http://www.eval.org/Publications/GuidingPrinciplesPrintable.asp

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from http://www.ojp.usdoj.gov/BJA/evaluation/links/WK-Kellogg-Foundation.pdf

Suggested Content Outline

Novice Level

Specific Learning Outcome	Reading and Learning Activities
Explain the need for program evaluation.	Interview 3-4 different stakeholders on what they want to know about a program; reflect with a learning circle on reasons for and value of evaluation. Reading Assignment: SAMMIE Module 1.
Understand the stages for evaluation and know how to prepare for program evaluation.	Consult with a mentor to discuss a logic model and process of a successful example; consult with supervisor to discuss application of logic models in plans of work.. Reading Assignment: SAMMIE Module 1.
Define and give examples of each level of the Targeting Outcomes of Programs (TOP) model or UWEX Logic Model.	Learning module and/or video on Internet or download to iPod; discussion board or Facebook-type social interaction site to process learning. Reading Assignment: TOP, UWEX web site, SAMMIE Module 4.
Explain logic model steps used in an established program (e.g., talk through a planned program).	Review interpretative case studies on Internet or download to iPod or one-on-one with mentor; discussion board or Facebook-type social interaction site to process learning. Reading Assignment: SAMMIE Module 4.
Describe the role of the logic model in the larger process of program development (e.g., note context of assessment, implementation, evaluation).	Review interpretative case studies on Internet or download to iPod; discussion board or Facebook-type social interaction site to process learning. Reading Assignment: Boone, Safrit, & Jones, 2002; UWEX Program Evaluation guide.

Advanced Beginner Level

Specific Learning Outcome	Reading and Learning Activities
Develop a small-scale logic model (with assistance).	On-line design template (such as UT Extension, UGA FCS, CYFAR Parenting), or CD-Rom with evaluation scenarios. Facebook interactive or in-person classroom evaluation groups. Reading Assignment: TOP; UWEX; SAMMIE Module 4.
Engage stakeholders in the evaluation process and explain program/logic model to immediate stakeholders (e.g., those directly involved in the program).	Review case study PPTs of logic model descriptions; work with online or on-site mentor or group (e.g,, learning circle). Reading Assignment: SAMMIE Module 3.

Explain role of program/logic model in the larger county (state) plan-of-work (in the case of integrated programming, link a specific program to larger goals).	Lecture with video examples of programming tiers/integration on Internet or download to iPod; application exercise(s); opportunities to process learning—e.g., through learning circles, in-person classroom situations, etc.
Describe the roles and responsibilities of evaluators to program participants and organizational systems.	Reflect on responsibilities of evaluators with mentor(s) and a panel of clients (youth and/or adult); conduct a panel of youth professionals and administrators to discuss client and organizational expectations for evaluation. Reading Assignment: AEA Guidelines, 2008.

Practitioner Level

Specific Learning Outcome	Reading and Learning Activities
Guide a stakeholder group in development of a logic model for a program.	Develop own plan with help from learning circle, support group or mentor. Reading Assignment: TOP; UWEX; SAMMIE Module 4.
Explain program and logic model to a broad group of stakeholders.	Prepare a marketing message for target audiences and general community. Reading Assignment: SAMMIE Module 2.
Lead or contribute to development of a logic model (POW, integrated program) for a larger system.	Interview experienced Extension program planner for tips on developing an integrated model.
Explain (at planning and/or reassessment) the link between specific program outcomes and strategies used to accomplish those outcomes.	Review research/evaluation literature in the target area; develop a process rationale to explain how proposed strategies will produce specified outcomes; interact online or on-site (learning circle) with partners and/or colleagues regarding the rationale.
Explain the importance of rigor in evaluation as a standard for designing a program logic model.	Review Clark Foundation Self-Assessment Tool (2006) and analyze whether and how your two best programs meet these standards; discuss strategies for improvement of program rigor and documentation with administrative and/or academic mentors.
Explain the relevance and importance of standards for a specific program logic model, with examples from practice.	Re-read evaluation standards and select one item in each standard and explain its relevance and importance for a specific model; interact online or on-site (learning circle) with partners and/or colleagues regarding the rationale.

Explain specific processes and products of a program evident in the evaluation of a specific program.	Review CIPP Checklist (2002); select 1-2 activities from Process or Product checklist, identify evaluation criteria for a specific program; interact online or on-site (learning circle) with partners and/or colleagues regarding the rationale.
Apply all of the elements of a logic model to address the complexity of programs and understand the limitations of a logic model for evaluating complex programs.	Examine a logic model which currently exists for a program you are engaged in. Generate discussion with peers working toward the identified outcomes regarding the evaluation of the outcomes and information that can be gained by reviewing the accomplishments of the outputs, changes in assumptions, environmental factors and inputs.

Discuss strategies for illustrating program impact and limitations for illustrating impact, what facets of the success are not able to be captured. Review resources at UWEX to guide such discussion. |

Module 2: Focusing an Evaluation

Description of Content:

When faced with conducting a program evaluation many people are not sure how to begin. Often times, this uncertaintly results in an evaluation that has not been sufficiently planned and focused. Careful evaluation planning is directly connected to the quality of the evaluation results, and is a critical first step in the evaluation process.This module covers the different purposes for and types of program evaluation, and helps participants identify various levels of evaluation outcomes. A special emphasis is placed on developing evaluation questions that are linked to the program's theory or framework. Developing indicators and identifying data sources are also covered. Developing and following an evaluation protocol, timeline, and project management plan is also emphasized.

PRKC Competencies

1) Incorporates evaluation planning into program design

Novice	Adv. Beginner	Practitioner
Understands the role of evaluation at each phase of program design.	Implements evaluation process designed by or with others at each phase of program design.	Creates or adapts evaluation processes to capture outputs and outcomes for each of the stages of program design and implementation.

Knowledge Assessment
0- I know nothing about this
1- I understand the basic concept
2- I can implement this concept with assistance
3- I can implement this concept independently and/or teach it to others

Focusing an Evaluation				
Determine program whether a program is a good candidate for evaluation (interest, resources, expertise, capacity)	0	1	2	3
Determine the purpose of evaluation (stakeholders, audience, etc)	0	1	2	3
Know when to use different types of evaluation (process, outcome, etc.)	0	1	2	3
Develop evaluation questions from a logic model	0	1	2	3
Develop an evaluation plan (indicators, data sources, etc.)	0	1	2	3
Manage an evaluation (conduct, budget, create timeline, monitor, critique)	0	1	2	3

Suggested Readings and Learning Resources:

Baumberger, M., Rugh, J., & Mabry, L. (2006). First Clarify the Purpose: Scoping the Evaluation. *Real world evaluation.* Thousand Oaks, CA: Sage.

Davidson, E. J. (2005). What is Evaluation, Defining the Purpose of the Evaluation, Identifying Evaluation Criteria, Organizing the Criteria and Identifying Potential Sources of Evidence. In *Evaluation methodology basics: The nuts and bolts of sound evaluation*. Thousand Oaks, CA: Sage.

Henderson, K. A., & Bialeschki, M. D. (2002). *Evaluating leisure services: making enlightened decisions*. State College, PA: Venture Publishing.

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Preskill, H., & Russ-Eft, D. (2005). Focusing the Evaluation. In *Building evaluation capacity: 72 activities for teaching and training*. Thousand Oaks, CA: Sage.

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Suggested Content Outline

Novice Level

Specific Learning Outcome	Reading and Learning Activities
Understand the purposes of evaluation.	Presentation overview of different purposes of evaluation (PowerPoint w/Examples). *Includes: Importance of stakeholders and audiences: Who Cares? And the role this plays in determining the purpose of the evaluation;* participants identify purpose of evaluation based on program logic model they bring to the session, share examples; stakeholder discussion SAMMIE Module 3.
Understand the role and significance of program evaluation standards of utility, feasibility, propriety, and accuracy.	Lecture to view on Internet or download to iPod; discussion board or Facebook-type social interaction site to process learning. Reading Assignment: Evaluation Center summary on standards www.wmich.edu/evalctr/jc/PGMSTNDS-SUM.htm
Understand process and outcome evaluation.	Presentation overview of process and outcome evaluation definitions and purposes (PowerPoint w/examples); using prepared case examples, have small groups/individuals identify whether the example is a process or outcome evaluation or combination of both. Reading Assignment: SAMMIE Module 2

Develop evaluation questions.	Using participants' logic models, have participants develop questions that match each of the following descriptions:
	   • Question related to program implementation (process) for two different evaluation purposes.
	   • Question related to program outcome for two different evaluation purposes.
	
	Share/discuss/refine questions in small groups.
	
	Reading Assignment: SAMMIE Module 5; present types of evaluation questions (c.f. page 5 of *Planning a program evaluation.*).
	UWEX LOGIC Model Tutorial: Module 1, Section 7
	http://www.uwex.edu/ces/lmcourse/#

Identify indicators of change.	Present basics of indicator development (c.f. page 8-9 of *Planning a program evaluation.*). *Includes: Importance of stakeholders and audiences: Who Cares? And the role this plays in determining what indicators are most valuable.* UWEX LOGIC Model Tutorial: Module 1, Section 7 http://www.uwex.edu/ces/lmcourse/# Develop multiple indicators for each of the questions developed above (c.f. page 9 of "*Focusing*"- UWEX CE); share indicators with group; *in-depth exploration*: Presentation on outcome indicators. Demonstrate with examples how indicators change depending on the level of outcome (unit of analysis, time, etc.). Discuss difference between measuring outcomes directly and relying on existing research to connect indicators theoretically to desired program outcomes.
Identify data sources.	Presentation of the basics of types of data sources (c.f. page 11 *Planning a program evaluation.*). *Includes: the importance of stakeholders and audience, who Cares? And the role this plays in determining what types and sources of data are most valuable.* UWEX LOGIC Model Tutorial: Module 1, Section 7 http://www.uwex.edu/ces/lmcourse/# Identify possible data sources for each indicator; group discussion: How feasible are these indicators based on the data sources you see available? Can all indicators be measured? Do we have to choose indicators based on resources, ease, and timeline? IRB Requirements/restrictions. Ethics of data collection.
Manage an evaluation.	Evaluation Roles, Responsibilities, Timeline, Budget, and Management - Technical expertise - Available resources - Current capacity for doing the evaluation - Be sure to include all phases of the evaluation- data collection, analysis, reporting, etc. - Summary PowerPoint?

Advanced Beginner Level

Specific Learning Outcome	Learning Activities
Create an evaluation plan.	Learners will create an evaluation plan for a program they wish to evaluate. The plan will be created with support and feedback through mentoring, learning circle or other collaborative format.
Conduct the program evaluation.	Learners will conduct the planned evaluation with support and feedback.
Monitor the evaluation.	Learners will participate in ongoing reporting of the progress of the evaluation with collaborative learning group.
Evaluate the evaluation.	Learners will prepare a brief presentation about the evaluation project, including critical reflection on each aspect of the evaluation process.

Practitioner Level

Specific Learning Outcome	Reading and Learning Activities
Plan and conduct a complete evaluation with minimal guidance.	Learners will plan and conduct a program evaluation independently and have the process and results submitted for peer review.

Module 3: Evaluation Questions and Design

Description of Content:

Evaluations are only as good as the questions that drive them, so developing effective questions and strategies for each level of impact is a critical skill in program development. This module focuses on evaluation questions appropriate to quantitative and qualitative methods and their relation to outcome indicators and results. This module will also introduce evaluation design and explain the process for matching questions and indicators to appropriate design.

PRKC Competencies

1) Develops meaningful evaluation questions (varying levels of expertise depending on role of person)
2) Specifies appropriate indicators of change
3) Selects evaluation methods appropriate for evaluation questions and indicators
4) Develops a timeline for evaluation activities

Novice	Adv. Beginner	Practitioner
Learner will become familiar with key concepts of design: evaluation questions, indicators and design selection.	Learner will become skilled in generating, explaining, and assessing questions and indicators and matching them to appropriate design.	Learner will become skilled in preparing questions and selecting designs to effectively assess and improve programs.

Knowledge Assessment
0- I know nothing about this
1- I understand the basic concept
2- I can implement this concept with assistance
3- I can implement this concept independently and/or teach it to others

Evaluation Questions and Designs				
Develop evaluation questions that match the goals of the evaluation	0	1	2	3
Match evaluation questions to levels of logic model (inputs, outputs, outcomes)	0	1	2	3
Define and distinguish indicators for success	0	1	2	3
Generate appropriate evaluation questions based on audience, culture, program context, purpose, stakeholders	0	1	2	3
Knows different types of evaluation designs (pre-post, longitudinal, retrospective)	0	1	2	3
Match evaluation design to evaluation questions (what needs to be known)	0	1	2	3
Adapt designs to limitations (funding, time, resources, expertise)	0	1	2	3

Suggested Readings and Learning Resources

Bamberger, M., Rugh, J., & Mabry, L. (2006). *Real world evaluation*. Thousand
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Bradburn, N., Sudman, S., & Wansink, B. (2004). *Asking questions*. SanFrancisco, CA: Jossey-
     Bass.

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     School-age, and Teens*. Retrieved August 27, 2008 at
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Suggested Content Outline

Novice Level

Specific Learning Outcome	Reading and Learning Activities
Understand types of evaluation Qs (open-ended, close-ended; content, process).	Consult CYFAR Evaluation site; online training module with knowledge and application questions. Reading Assignment: SAMMIE Module 5; Bradburn et al., 2004. consult CYFAR Evaluation site; online training module with knowledge and application questions.
Understand evaluation questions linked to standards.	Use online objectives and questions linked to appropriate standards. Reading Assignment: Bradburn, et al., 2004; SAMMIE Modules 5, 11.
Understand how to refine and test questions.	Develop and test several different scales and reflect on feedback with clients and mentor. Reading Assignment: SAMMIE Module 5.

Distinguish short-, mid-, and long-term outcome questions.	Participate in learning circle or state Plan-of-Work team that is developing ST, MT, and LT outcome questions. Rockwell, K., & Bennett, C. (1995). Targeting outcomes of programs. http://citnews.unl.edu/TOP/index.html Hewitt, B. (2007). Business with CSREES, FY 2007-2011 POW Planning. Module 3: The Planned Programs Section
Link indicators to framework stages.	Read additional examples of indicator frameworks including:Silliman, B. (2007). Critical indicators of youth development outcomes. CYFERNet. (2008). Evaluation: Evaluating Outcomes for Early Childhood, School-age, and Teens.
Explain and follow an external timeline.	Uses Extension template to set timeline on one or more projects; mentor reviews timeline for one or more project logic models.

Advanced Beginner Level

Specific Learning Outcome	Reading and Learning Activities
Understand design approaches (before-and-after, after-only, after-reflecting on before; program fidelity).	Complete online training with knowledge and application quiz. Reading Assignment: SAMMIE Module 7; Bamberger et al., 2006; CYFAR/Univ. of AZ Module II: Selected Design Concepts,;
Understand random assignment	Online mastery module; mentor and/or POW group feedback on evaluation design. Reading Assignment: SAMMIE Module 7.
Understand sampling (sampling frame, random sampling)	Complete online test on mastery; Mentor feedback on one or more programs—selection of appropriate indicators. Reading Assignment: SAMMIE Module 8.
Understand comparison groups	Online mastery test on definitions and examples of 4-5 most widely used quantitative and qualitative methods. Reading Assignment: SAMMIE Module 8.
Select and use at least one quantitative and one qualitative indicator in consultation with mentor.	Consult and review at least two sources on quant/qual methods at CYFAR Evaluation web site Evaluation: Evaluation Design and Methods. experiment with protocol for one or more quantitative and qualitative methods. Gain mentor feedback on protocol practice.
Create qualitative questions	Read SAMMIE Modules16-18; develop and practice interview, focus group, observations; reflect with clients, mentors on shared meaning, value of experience.

Explain and follow external timeline.	Complete tutorial on Gantt Chart at: Durfee, W., & Chase, T. (2003). Brief tutorial on Gantt charts. Retrieved August 27, 2008 at http://www.me.umn.edu/courses/me4054/assignments/gantt.html read material on factors that influence delivery/delinquency on timetable schedules; identify potential factors in one project and share in learning circle.

Practitioner Level

Specific Learning Outcome	Reading and Learning Activities
Generate and edit questions on own, based on program objectives.	Review W. K. Kellogg Foundation. (2008). Evaluation Questions and apply to one project; play simulation game programmed to evaluate questions generated for a project; mentor feedback on quality and accuracy of refining.
Adapt questions to audience and approach .	Research developmental and cultural adaptations relevant to program needs; gain mentor feedback on adaptations; sample audience/representatives feedback.

Reading Assignment: Earthman, E., Richmond, L. S., Peterson, D. J., Marczek, M. S., & Betts, S. C. (1999). Adapting evaluation measures to hard to reach audiences. |
| Select and use more than one method on own. | Consult with POW or learning circle to develop and test tools in more than one method; reflect with Learning Circle on experience with different methods at different stages; mentor feedback on own efforts to mix quantitative and qualitative strategies.

Reading Assignment: Bamberger et al., 2006. |
| Adjust design to real-world constraints of time, money, and available data/opportunity. | Review selected sections of Bamberger, et al., 2006, Chapters 3, 4, or 5 and apply to ongoing projects; mentor feedback and POW group interaction on ways to apply evaluation designs in less-than-ideal conditions. |
| Explain and follow external timeline. | Read material on factors that influence delivery/delinquency on timetable schedules; identify potential factors in one project and share in learning circle. Reference Gantt Chart for a specific project and discuss with mentor feedback on conformity to stated POW or grant-related project timeline. |

Module 4: Evaluation Methods

Description of Content:
The purpose of this module is to introduce different types of methods typically used in program evaluation. Participants will learn about quantitative and qualitative methods, and their appropriate use. In addition, the relationship between evaluation questions and evaluation methods is covered.

PRKC Competencies

1) Skilled in the use of both qualitative and quantitative evaluation methods

Novice	Adv. Beginner	Practitioner
Explain the difference between qualitative and quantitative methods. Understands the relationship between evaluation questions and evaluation methods.	Choose appropriate methodology for given question. Know and use different methods of data collection. With assistance, select the appropriate method for the question to be answered.	Choose and use appropriate methodology for evaluation question. Use a broad range of methods to answer various questions.

Knowledge Assessment
0- I know nothing about this
1- I understand the basic concept
2- I can implement this concept with assistance
3- I can implement this concept independently and/or teach it to others

Evaluation Methods				
Understand when to use qualitative method	0	1	2	3
Understand when to use quantitative method	0	1	2	3
Describe the strengths and limitations of different qualitative methods	0	1	2	3
Describe the strengths and limitations of different quantitative methods	0	1	2	3
Apply appropriate methods to answer evaluation questions	0	1	2	3
Develop survey questions	0	1	2	3
Develop protocols for focus groups and interviews	0	1	2	3
Develop observation protocol	0	1	2	3
Write methods section for evaluation report and IRB	0	1	2	3

Suggested Readings and Learning Resources

American Psychological Association. (2001). *Publication Manual of the American Psychological Association* (5th Ed.). Washington, DC: Author.

Baugh, E. & Guion, L.A. (2006). Using culturally sensitive methodologies when researching diverse cultures. *Journal of Multi-disciplinary Evaluation, 4*. Retrieved from http://evaluation.wmich.edu/jmde/JMDE_Num004.html

Baumberger, M., Rugh, J., & Mabry, L. (2006). *Real world evaluation.* Thousand Oaks, CA: Sage.

Bouffard, S., & Little, P. (2004, August). *Detangling data collection: Methods for gathering data*. Cambridge, MA: Harvard Family Research Project, Harvard University.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed-method approaches* (2nd Ed.). Thousand Oaks, CA: Sage Publications.

Cohen, C. (2006). Evaluation learning circles: A sole proprietor's evaluation capacity-building strategy. *New Directions in Evaluation*, *111*, 85-93.

Diem, K. (2002). Using research methods to evaluate your extension program. *Journal of Extension, 40*(6). Retrieved from http://www.joe.org/joe/2002december/a1.shtml

Fitzpatrick, J., Sanders, J. & Worthen, B. (2003). *Program Evaluation: Alternative Approaches and Practical Guidelines* (3rd Ed.). New York: Allyn & Bacon.

Greene, J., & Caracelli, V. J. (1997). Advances in Mixed-Method Evaluation: The Challenges and Benefits of Integrating Diverse Paradigms. *New Directions for Evaluation, 74.*

Henderson, K. A. (2006). *Dimensions of choice: Qualitative approaches to parks, recreation, sport, and leisure research*. State College, PA: Venture Publishing.

Henderson, K. A., & Bialeschki, M. D. (2002). *Evaluating leisure services: Making enlightened decisions.* State College, PA: Venture Publishing.

Kane, M. & Trochim, W. M. K. (2006). *Concept Mapping for Planning and Evaluation.* Thousand Oaks, CA: Sage Publications.

Ohio State Extension. (2008). Successful Assessment Methods and Measurement In Evaluation (SAMMIE). Retrieved January 4, 2008 from http://sammie.osu.edu/

Patton, M. Q. (2001). *Qualitative research and evaluation methods, (3rd Ed.).* Thousand Oaks, CA: Sage Publications.

Patton, M. Q. (1987). An Introduction to Qualitative Methods, When to Use Qualitative Methods. In *How to use qualitative methods in evaluation*. Newbury Park, CA: Sage Publications.

Preskill, H., & Russ-Eft, D. (2005). *Building evaluation capacity: 72 activities for teaching and training*. Thousand Oaks, CA: Sage Publications.

Purdue University Writing Lab. (n.d.). *Sample research report*. Retrieved from:
http://owl.english.purdue.edu/media/pdf/20070515024844_669.pdf

Purdue University Writing Lab. (n.d.). *Writing your research project report*. Retrieved from:
http://owl.english.purdue.edu/handouts/WAC/CDFS/powerpoint/researchprojectreport.ppt#256

Stecher, B. M., & Davis, W. A. (1987). *How to focus an evaluation.* Newbury Park, CA: Sage Publications.

W.K. Kellogg Foundation. (1998). *W. K. Kellogg Foundation Evaluation Handbook.* Retrieved from http://www.ojp.usdoj.gov/BJA/evaluation/links/WK-Kellogg-Foundation.pdf

Suggested Content Outline

Novice Level

Specific Learning Outcome	Reading and Learning Activities
Explain the difference between qualitative and quantitative methods.	Lecture to view on Internet or download to iPod; discussion board or Facebook-type social interaction site to process learning. Reading Assignment: Diem, 2002; W. K. Kellogg Foundation Evaluation Handbook.
Identify appropriate qualitative methods for evaluation and understand strengths and limitations.	Lecture to view on Internet or download to iPod; discussion board or Facebook-type social interaction site to process learning. Reading Assignment: Patton, 2001; Patton, 1987, Chapters 1 and 2.
Identify appropriate quantitative methods for evaluation and understand strengths and limitations.	Lecture to view on Internet or download to iPod; discussion board or Facebook-type social interaction site to process learning. Reading Assignment Baumberger, Rugh, & Mabry, 2006; Patton, 2001.
Learns different data collection methods – survey, focus group, interview, & observation.	Reading Assignment: Bouffart & Little, 2004; SAMMIE Modules 9, 10, 11, 13, 16, 17, and 18.

Specific Learning Outcome	Reading and Learning Activities
Learns about the standard parts of a written methods section for an evaluation report or article.	Review of a sample paper with comments from editors. Reading Assignment: American Psychological Association, 2001; SAMMIE, Module 21; OWL at Purdue Writing Lab sample research report written for psychology with comments from editors: http://owl.english.purdue.edu/media/pdf/20070515024844_669.pdf; OWL at Purdue Writing Lab Powerpoint on how to write a research report (specifically in social sciences): http://owl.english.purdue.edu/handouts/WAC/CDFS/powerpoint/researchprojectreport.ppt#256,1,Writing Your Research Project Report.

Advanced Beginner Level

Specific Learning Outcome	Reading and Learning Activities
Learn the relationship between evaluation questions and evaluation methods.	Lecture to view on internet or download to iPod; application exercise(s): On-line computer game or CD-Rom with evaluation scenarios; in-person classroom situation—interactive case studies. Reading Assignment: Fitzpatrick, Sanders, & Worthen, 2003, Chapters 12 & 14; Preskill & Ross-Eft, 2005.
Apply appropriate methodology to specific evaluation questions.	Develop questions for an evaluation of a real program. Identify methods through which questions will be examined. Work with mentor or group (e.g.,, learning circle). Reading Assignment: Stecher & Davis, 1987; Bamberger, Rugh, & Mabry, 2006.
Develop data collection instruments with assistance – survey, focus group, interview, & observation.	Develop short data collection instrument(s) as part of a team project. Reading Assignments: Bouffard & Little, 2004; SAMMIE Modules 9, 10, 11, 13, 16, 17, and 18.

Specific Learning Outcome	Reading and Learning Activities
Apply knowledge of writing methods sections for evaluation reports or articles.	Learner prepares an evaluation report or journal article methods section as part of a team project. Instructor or facilitator provides essential pieces of study (e.g., results, brief overview of methods, etc.); critiques methods sections of published articles or reports. Reading Assignment: American Psychological Association, 2001; SAMMIE, Module 21 Reporting Your Results; OWL at Purdue Writing Lab sample research report written for psychology with comments from editors: http://owl.english.purdue.edu/media/pdf/20070515024844_669.pdf; OWL at Purdue Writing Lab PowerPoint on how to write a research report (specifically in social sciences): http://owl.english.purdue.edu/handouts/WAC/CDFS/powerpoint/researchprojectreport.ppt#256,1,Writing Your Research Project Report.

Practitioner Level

Specific Learning Outcome	Reading and Learning Activities
Choose and use appropriate methodology for evaluation question.	Opportunities for continued reflection with learning circle, support group or mentor. Reading Assignment: Bamberger, Rugh, & Mabry, 2006.
Apply appropriate methodology to specific evaluation questions.	Opportunities for continued reflection with learning circle, support group or mentor. Reading Assignment: Cohen, C. (2006). Evaluation learning circles: A sole proprietor's evaluation capacity-building strategy. *New Directions in Evaluation*, *111*, 85-93.
Learn advanced techniques for data collection.	Photolanguage; concept mapping; GIS/GPS. Reading Assignment: Kane & Trochim, 2006; Mixed-Method Evaluation**;** Greene & Caracelli, 1997.
Develop data collection instruments independently – survey, focus group, interview, & observation.	Develop data collection instrument(s) for own project. Reading Assignment: Bouffard & Little, 2004; SAMMIE Modules 9, 10, 11, 13, 16, 17, 18.

Specific Learning Outcome	Reading and Learning Activities
Apply knowledge of how to write an evaluation report.	Learner produces a real evaluation report for an external audience or prepares a real article for publication in a journal. Could be a learning circle/writing circle activity (in-person or on-line). Reading Assignment: American Psychological Association, 2001; SAMMIE Module 21; OWL at Purdue Writing Lab sample research report written for psychology with comments from editors: http://owl.english.purdue.edu/media/pdf/20070515024844_669.pdf; OWL at Purdue Writing Lab PowerPoint on how to write a research report (specifically in social sciences): http://owl.english.purdue.edu/handouts/WAC/CDFS/powerpoint/researchprojectreport.ppt#256,1,Writing Your Research Project Report.

Module 5: Collecting and Handling Data

Description of Content:

This module focuses on understanding how to collect and manage quantitative and qualitative data. Content covered includes the ethics and procedures for the collection, storage and processing of data; developing a quantitative data set; data collection methods; developing a data collection methods protocol; and matching data collection methods to evaluation questions.

PRKC Competencies

1) Knows protocols and procedures for collecting and handling data

Novice	Adv. Beginner	Practitioner
Aware of different data collection methods. Familiar with the basics of handling data (e.g. data code books, databases). Aware of the standard parts of a written "methods" section for an evaluation report or article.	With assistance, can develop a data codebook and data management protocol. Prepare a basic written methods section that contains the standard information found in an evaluation report or journal article.	Develop and follow appropriate evaluation protocols. Develop and follow detailed data codebooks and evaluation project notebooks. Prepare detailed methods sections for an evaluation report or journal article.

Knowledge Assessment
0- I know nothing about this
1- I understand the basic concept
2- I can implement this concept with assistance
3- I can implement this concept independently and/or teach it to others

Collecting and Handling Data				
Understand institutional requirements for collecting data with human subjects (IRB)	0	1	2	3
Conduct focus groups and interviews	0	1	2	3
Understand strategies for effective data collection (consent, timing, facilitation, setting, non disruptive, working with special populations)	0	1	2	3
Process, handle and store data (working with data sets, creating data code books, transcripts)	0	1	2	3
Critique tools and instruments (for reliability and validity)	0	1	2	3
Use technology (web-based surveys, photo techniques)	0	1	2	3

Suggested Readings and Learning Resources

American Evaluation Association. (2004). *Guiding Principles of Evaluators*. Fairhaven, MA:
Author. Retrieved from http://www.eval.org/Publications/GuidingPrinciples.asp

American Evaluation Association. (2004). *Guiding Principles Training*. Fairhaven, MA: Author.
Retrieved from http://www.eval.org/GPTraining/GPTrainingOverview.asp

American Psychological Association. (2001). *Publication Manual of the American
Psychological Association* (5th Ed.). Washington, DC: Author.

Bamberger, M., Rugh, J., & Mabry, L. (2006). *Real world evaluation: Working under budget,
time, data, and political constraints.* Thousand Oaks: Sage Publications.

Betts, S. C., Peterson, D. J., & McDonald, D. A. (2005). More tips: What if a Cooperative
Extension professional must work with two or more Institutional Review Boards?
Journal of Extension, 43(4). Retrieved from http://www.joe.org/joe/2005august/tt1.shtml

Bouffard, S., & Little, P. (2004). *Detangling Data Collection: Methods for Gathering Data.*
Cambridge, MA: Harvard Family Research Project. Retrieved from
http://www.gse.harvard.edu/hfrp/content/projects/afterschool/resources/snapshot5.pdf

Brown, R., Martin, S., & Weigel, D. (2004). What Cooperative Extension professionals need to
know about institutional review boards: Recruiting participants. *Journal of Extension,
42*(6). Available at: http://www.joe.org/joe/2004december/tt1.shtml

Conrad, F., & Schober, M. (2007). *Envisioning the survey interview of the future.* New York:
John Wiley & Sons, Inc.

Cooksy, L. (2005). The complexity of the IRB process: Some of the things you wanted to know
about IRBs but were afraid to ask. *American Journal of Evaluation, 26*(3), 352-361.

Dillman, D. A. (2007). *Mail and Internet surveys: The tailored design method* (2nd Ed.). New
York: John Wiley & Sons, Inc.

Fink, A. (2002). *How to Manage, Analyze, and Interpret Survey Data* (2nd Ed.). Thousand Oaks:
Sage Publications.

Fowler, F. J. (1995). *Improving survey questions: Design and evaluation*. Thousand Oaks: Sage
Publications.

Hillier, A. (2008). Childhood overweight and the built environment: Making technology part of
the solution rather than part of the problem. *The ANNALS of the American Academy of
Political and Social Science, 615*(1), 56-82.

Howell, J., Miller, P., Park, H., Sattler, D., Schack, T., Spery, E., Widhalm, S., & Palmquist, M. (2005). *Reliability and validity.* Writing@CSU. Colorado State University Department of English. Retrieved June 25, 2008 from http://writing.colostate.edu/guides/research/relval/

Litwin, M. (1995). *How to Measure Survey Reliability and Validity (Survey Kit, Vol 7).* Thousand Oaks: Sage Publications.

Leahy, J. (2004). *Using Excel for Analyzing Survey Questionnaires.* University of Wisconsin Extension Publication G3658-14. Retrieved from: http://learningstore.uwex.edu/pdf/G3658-14.pdf

Lopez, M. (2002). *Youth vote national youth survey June 2002 data codebook.* Retrieved from: http://www.civicyouth.org/PopUps/youthvote_national_survey_june_2002_codebook.pdf

Martin, S., Weigel, D., & Brown, R. (2005). What Cooperative Extension professionals need to know about institutional review boards: Obtaining consent. *Journal of Extension*, *43*(2), Article 2TOT1. Retrieved from http://www.joe.org/joe/2005april/tt1.shtml

McDonald, D. A., Peterson, D. J., & Betts, S. C. (2005). More tips: What if a Cooperative Extension professional must work with Native American Institutional Review Boards? *Journal of Extension*, *43*(5). Retrieved from http://www.joe.org/joe/2005october/tt1.shtml

Morgan, D. L., & Krueger, R. A. *The Focus group kit*. (1998). Thousand Oaks: Sage Publications.

National Cancer Institute. *Human Participant Protections Education for Research Teams*. Retrieved from http://cme.cancer.gov/c01/resources.php?file=%2F2%2Fmodules%2Fmodule06%2Eswf

National Cancer Institute. *Human Participants Protection Training*. Retrieved from http://cme.cancer.gov/clinicaltrials/learning/humanparticipant-protections.asp

National Institute of Health. Office of Human Subjects Research: http://ohsr.od.nih.gov:16080/info/

National Network of Libraries of Medicine. (2006). *Outreach activity data collection form*. Bethesda, MD: Author. Retrieved from: http://nnlm.gov/evaluation/tools/ActivityInfo.pdf

Newman, D. L., & Brown, R. D. (1996). *Applied ethics for program evaluation*. Thousand Oaks: Sage Publications.

North Carolina State University. (n.d.). Research with experimental subjects. Raleigh, NC: Author. Retrieved from: http://www.ncsu.edu/sparcs/tutorial/intro.php

Ohio State Extension. (2008). *Successful Assessment Methods and Measurement In Evaluation (SAMMIE)*. Retrieved January 4, 2008 from http://sammie.osu.edu/

O'Reilly, J., Hubbard, M., Lessler, J., Biemer, P., & Turner, C., (1994). Audio and video computer assisted self-interviewing: Preliminary tests of new technologies for data collection. *Journal of Official Statistics, 10*(2), 197-214.

Patton, M. (2001). *Qualitative research and evaluation methods,* (3rd Ed.). Thousand Oaks: Sage Publications.

Peterson, D. J., McDonald, D. A., & Betts, S. C. (2005). More tips: Communicating with Institutional Review Boards over the course of your project. *Journal of Extension*, *43*(6). Retrieved from http://www.joe.org/joe/2005december/tt1.shtml

Preskill, H., & Russ-Eft, D. (2005). *Building evaluation capacity: 72 activities for teaching and training*. Thousand Oaks, CA: Sage Publications.

Richards, L. (2005). *Handling qualitative data.* Thousand Oaks, CA: Sage Publications.

Rubin, H., & Rubin, I. (2005). *Qualitative interviewing: The art of hearing data*. Thousand Oaks, CA: Sage Publications.

Russ-Eft, D. F. (1980). *Validity and reliability in survey research* (Technical Report #15). Palo Alto, CA: Statistical Analysis Group in Education, American Institutes for Research in the Behavioral Sciences. (ERIC Document Reproduction Service No. ED279726).

Trochim, W. K. *Research Methods Knowledge Base: Data Preparation*. Retrieved from http://www.socialresearchmethods.net/kb/statprep.php

Trochim, W. K. *Research Methods Knowledge Base: Construct Validity.* Retrieved from http://www.socialresearchmethods.net/kb/constval.php

Trochim, W. K. *Research Methods Knowledge Base: Reliability.* Retrieved from http://www.socialresearchmethods.net/kb/reliable.php

W.K. Kellogg Foundation *Evaluation ToolKit: Data Analysis* (includes 2 case studies) Retrieved from http://wkkf.org/Default.aspx?tabid=90&CID=281&ItemID=2810017&NID=2820 017&LanguageID=0

Wholey, J. S.; Hatry, H. P. & Newcomer, K. E. (2004). *Handbook of practical program evaluation* (2nd Ed.). San Francisco: Jossey-Bass.

Weigel, D., Brown, R., & Martin, S. (2004). What Cooperative Extension professionals need to know about institutional review boards. *Journal of Extension, 42*(5). Retrieved from http://www.joe.org/joe/2004october/tt1.shtml

Weigel, D., Martin, S., & Brown, R. (2005). What Cooperative Extension professionals need to know about institutional review boards: Risks and benefits. *Journal of Extension*, *43*(1) Article 1TOT1. Retrieved from http://www.joe.org/joe/2005february/tt1.shtml

University of Wisconsin Extension Publication G3658-12 *Analyzing Qualitative Data*
http://learningstore.uwex.edu/pdf/G3658-12.PDF

University of Wisconsin Extension Publication G3658-06 *Analyzing Quantitative Data*
http://learningstore.uwex.edu/pdf/G3658-6.pdf

Suggested Content Outline

Novice Level

Specific Learning Outcome	Reading and Learning Activities
Learn ethics of data collection, processing, and storage.	Review American Evaluation Association guiding principles. Complete Human Subjects Protection Training. Reading Assignment: American Evaluation Association Guiding Principles Training. Required (online certificate from <u>one</u> of the following): - National Cancer Institute Human Participants Protection Training - NIH Office of Human Subjects Research - NCI Human Participant Protections Education for Research Teams - North Carolina State University On-line Tutorial
Learn strategies for effective data collection.	Review procedures for data collection. Reading Assignment: Bamberger, Rugh, & Mabry, 2006
Learn about processing and handling quantitative and qualitative data.	Review procedures for processing and handling data. Reading Assignment: Bamberger, Rugh, & Mabry, 2006; Trochim, Data Preparation; Wholey, Hatry, & Newcomer, 2004; W.K. Kellogg Foundation; University of Wisconsin, *Analyzing Quantitative Data;* University of Wisconsin, *Analyzing Qualitative Data*; Rubin & Rubin, 2005; Richards, 2005. On-line Example: National Network of Libraries of Medicine. (2006). Outreach activity data collection form. Bethesda, MD: Author. Retrieved from: http://nnlm.gov/evaluation/tools/ActivityInfo.pdf
Learn to critique existing data collection tools.	Review concepts of validity and reliability. Reading Assignment: Fowler, 1995; Howell et al., 2005; Litwin, 2005; Patton, 2001; Russ-Eft, 1980; Trochim, *Construct Validity, Reliability.*

Specific Learning Outcome	Reading and Learning Activities
Learn about application of technology to data collection.	Review options for incorporating technology into data collection. Reading Assignment: Dillman, 2007; O'Reilly, Hubbard, Lessler, Biemer, & Turner, 1994; Hillier, 2008; Conrad & Schober, 2007.

Advanced Beginner Level

Specific Learning Outcome	Reading and Learning Activities
Gain skills in preparing IRB packages.	Participate in a team project to review an IRB package for a mock study; instructor provides learner with research proposal for review; learner identifies areas of concern and connects it to the ethical principle being violated. Northwest Association for Biomedical Research. (n.d.). Lesson 6: Culminating assessments. Seattle, WA: Author. Retrieved from: http://www.nwabr.org/education/pdfs/HIV_CURRICULUM_08/Assessment_0108.pdf
Learn strategies for effective data collection.	Participate in a team project to develop a data collection plan. Reading Assignment: Wholey, Hatry, & Newcomer, 2004.
Learn about processing and handling quantitative and qualitative data.	Participate in a team project to develop a plan for processing and handling data. Reading Assignment: Rubin & Rubin, 2005; Trochim, *Data Preparation;* Wholey, Hatry, & Newcomer, 2004; W.K. Kellogg Foundation; University of Wisconsin, *Analyzing Qualitative Data*; University of Wisconsin, *Analyzing Quantitative Data.* On-line Example: National Network of Libraries of Medicine: http://nnlm.gov/evaluation/tools/ActivityInfo.pdf

Specific Learning Outcome	Reading and Learning Activities
Apply the proper procedures for handling data using a mock quantitative data set.	Participate in a team project to develop a data codebook and data management protocol using a mock data set. Reading Assignment: Litwin, 1995; Fink, 2002 Lopez, M. (2002). Youth vote national youth survey June 2002 data codebook. Retrieved from: http://www.civicyouth.org/PopUps/youthvote_national_survey_june_2002_codebook.pdf Childern, Youth, and Families Education and Research Network. (n.d.). Session V: Using and reporting evaluation results. Retrieved from: http://**ag.arizona.edu**/fcs/cyfernet/**cyfar**/SessionV.pdf Leahy, J. (2004). *Using Excel for Analyzing Survey Questionnaires.* University of Wisconsin Extension Publication G3658-14. Retrieved from: http://learningstore.uwex.edu/pdf/G3658-14.pdf
Apply the proper procedures for collecting and handling qualitative data.	Work with team to conduct and transcribe short interviews. Reading Assignment: Rubin & Rubin, 2005; Richards, 2005.
Critique other existing data collection tools.	Participate in team project to critique journal articles reporting development of survey instruments. Participate in team project to critique focus group or interview questions. Reading Assignment: Fowler, 1995; Howell et al., 2005; Litwin, 1995*;* Patton, 2001; Russ-Eft, 1980; Trochim, *Construct Validity, Reliability.*
Use technology to collect data.	Learner participates in a team project in which he/she collects data using personal digital assistant (PDA), camera, GIS/GPS, web-based survey, iClicker, or audio computer-assisted self-interview. Reading Assignment: Dillman, 2007; O'Reilly, Hubbard, Lessler, Biemer, & Turner, 1994; Hillier, 2008; Conrad & Schober, 2007.

Practitioner Level

Specific Learning Outcome	Reading and Learning Activities
Apply skills in preparing IRB packages to real study.	Participate in a team project to prepare an IRB package for a real study; provide rubric and/or checklist to guide package development.
Learn strategies for effective data collection.	Prepare a data collection plan. Reading Assignment: Wholey, Hatry, & Newcomer, 2004.
Apply the proper procedures for handling quantitative data using a real data set.	Develop a data codebook and data management protocol using his/her own data set. Reading Assignment: Fink, 2002; Litwin, 1995; Trochim, *Data Preparation;* Wholey, Hatry, & Newcomer, 2004; W.K. Kellogg Foundation; University of Wisconsin, *Analyzing Quantitative Data.* On-line Example: National Network of Libraries of Medicine: http://nnlm.gov/evaluation/tools/ActivityInfo.pdf
Apply the proper procedures for collecting and handling qualitative data.	Conduct and transcribe an interview. Reading Assignment: University of Wisconsin, *Analyzing Qualitative Data;* Rubin & Rubin, 2005; Richards, 2005.
Apply knowledge of data collection methods to the creation of a simple data collection tool.	Develop a data collection tool, such as a survey, focus group, interview, or observation protocol, either independently or as part of a team. Reading Assignment: Preskill & Russ-Eft, 2005; Fowler, 1995; Dillman, 2007; Morgan & Krueger, 1998.
Critique other existing data collection tools.	Select appropriate data collection tools. Reading Assignment: Fowler, 1995; Howell et al., 2005; Litwin, 1995; Patton, 2001; Russ-Eft, 1980; Trochim *Construct Validity, Reliability.*
Use technology to collect data.	Collect data using PDA, cameras, GIS/GPS, web-based survey, iClickers, or audio computer-assisted self-interview. Reading Assignment: Dillman, 2007; O'Reilly, Hubbard, Lessler, Biemer, & Turner, 1994; Hillier, 2008.

Module 6: Analyzing and Interpreting Data

Description of Content:
This module introduces participants to basic analytic procedures available for both quantitative and qualitative data. Using statistical or qualitative software (such as SPSS or NVivo), participants will learn how to perform descriptive and inferential analyses and will learn how to interpret the results.

PRKC Competencies
1) Knows procedures for analyzing quantitative and qualitative data

Novice	Adv. Beginner	Practitioner
Explain the difference between inferential and descriptive statistics. Understand basic concepts involved in analyzing qualitative data. Identify appropriate procedures for analyzing data.	Understand basic descriptive statistics (e.g. means, range, N, SDs). With guidance apply appropriate procedures to conduct quantitative or qualitative data analysis.	Understand basic inferential statistics (e.g. t-tests; one-way ANOVA, dfs levels of significance). Select and conduct appropriate quantitative and qualitative analysis procedures.

2) Interpret findings and articulate reasonable conclusions

Novice	Adv. Beginner	Practitioner
Understand basic findings and can explain them to stakeholders.	With guidance interpret findings, construct conclusions, and develop formal methods to communicate them.	Appropriately interpret findings and develop conclusions from quantitative and qualitative analysis of program data.

Knowledge Assessment
0- I know nothing about this
1- I understand the basic concept
2- I can implement this concept with assistance
3- I can implement this concept independently and/or teach it to others

Analyzing and Interpreting Data				
Understand basic concepts in analyzing and interpreting qualitative data (e.g. triangulation, member checks)	0	1	2	3
Select and apply descriptive statistics (e.g. frequencies, means, standard deviation, range)	0	1	2	3
Understand assumptions, properties and limitations of inferential statistics (e.g. parametric/non-parametric data, data diagnostics)	0	1	2	3
Select and conduct appropriate procedures for data analysis (includes qualitative and quantitative software packages)	0	1	2	3
Interpret findings and construct conclusions	0	1	2	3
Identify limitations of results	0	1	2	3

Suggested Readings and Learning Resources

Beyond Basics: Evaluating Community-Based Programs Training Curriculum
http://ag.arizona.edu/fcs/cyfernet/cyfar/index5.htm

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http://www.socialresearchmethods.net/kb/statdesc.htm

http://www.socialresearchmethods.net/kb/statcorr.php

University of Kentucky College of Agriculture. *Program Development and Evaluation Resources* http://www.ca.uky.edu/agpsd/soregion.htm

University of Wisconsin Extension. Publication G3658-12 *Analyzing Qualitative Data.* Retrieved from http://learningstore.uwex.edu/pdf/G3658-12.PDF

University of Wisconsin Extension. Publication G3658-14 *Using Excel for Analyzing Survey Questionnaires.* Retrieved from http://learningstore.uwex.edu/pdf/G3658-14.pdf

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Suggested Content Outline

Novice Level

Specific Learning Outcome	Reading and Learning Activities
Learn the difference between inferential and descriptive statistics.	Lecture to view on Internet or download to iPod; discussion board or Facebook-type social interaction site to process learning. Reading Assignment: Taylor Fitz-Gibbon & Lyons Morris, 1987; Salkind, 2007.
Understand basic concepts involved in analyzing qualitative data such as focusing, categorizing, and identifying themes. Understand most commonly used techniques in qualitative analysis such as grounded theory.	Reading Assignment: Taylor-Powell & Renner, 2003; Miles & Huberman, 1994; Northcutt & McCoy, 2004.
Identify appropriate procedures for analyzing data.	Lecture to view on Internet or download to iPod; discussion board or Facebook-type social interaction site to process learning. Reading Assignment: SAMMIE – Modules 9,19,20.
Understand basic findings and can explain them to stakeholders.	Reading assignment; lecture to view on Internet or download to iPod; discussion board or Facebook-type social interaction site to process learning.

Advanced Beginner Level

Specific Learning Outcome	Reading and Learning Activities
Learn basic descriptive statistics (e.g., means, median, mode, range, SD, etc.).	Lecture to view on Internet or download to iPod; application exercise(s): Download mock data set or use real data set to analyze Learn how to use Excel to do simple analyses; in-person classroom situation; opportunities to process learning—e.g., through learning circles, in-person classroom situations, etc. Reading Assignment: Trochim; University of Wisconsin Extension Publication G3658-14; Fitzpatrick, Sanders, & Worthen, 2004; Preskill & Ross-Eft, 2005.
With guidance apply appropriate quantitative and qualitative procedures to conduct data analysis.	Lecture to view on Internet or download to iPod; application exercise(s): Download mock data set or use real data set to analyze. Learn how to use SPSS to do simple analyses; use a qualitative data set, such as an interview transcript and learn how to analyze using NVivo or similar qualitative software (e.g., Nudist, Atlas.ti), triangulation, member checks; in-person classroom situation—interactive case studies; opportunities to process learning—e.g., through learning circles, in-person classroom situations, etc. Reading Assignment: University of Wisconsin Extension Publication G3658-12.
With guidance interpret findings, construct conclusions, and identify limitations of results.	Reading assignment; lecture to view on Internet or download to iPod; application exercise(s): Develop reports based on data analysis; critique published research reports and discussions of findings; in-person classroom situation—interactive interpretations of case studies or research findings; opportunities to process learning—e.g., through learning circles, in-person classroom situations, etc.

Practitioner Level

| Learn basic inferential statistics (e.g., parametric/non-parametric, data diagnostics). | Lecture to view on Internet or download to iPod; application exercise(s): Download mock data set or use real data set to analyze. Learn how to use Excel to do simple analyses; in-person classroom situation; opportunities to process learning—e.g., through learning circles, in-person classroom situations, etc.

Reading Assignment: SAMMIE Module; Taylor Fitz-Gibbon & Lyons Morris, 1987. |

Learn basic inferential statistics (e.g., parametric/non-parametric, data diagnostics).	Statistical Resources on the Web: http://www.psychstat.missouristate.edu/scripts/dws148f/statisticsresourcesmain.asp Qualitative data analysis software. Reading Assignment: Salkind, 2007; Miles & Huberman, 1994
Select and conduct appropriate analysis procedures to program data.	Reading assignment; lecture to view on Internet or download to iPod; application exercise(s): Download mock data set or use real data set to analyze. Learn how to use SPSS to do appropriate analyses; use a qualitative data set, such as an interview transcript and learn how to analyze using NVivo or similar qualitative software (e.g., Nudist, Atlas.ti, triangulation, member checks); in-person classroom situation; opportunities to process learning—e.g., through learning circles, in-person classroom situations, etc.
Interpret findings, develop conclusions from analysis of program data and identify limitations of results.	Reading assignment; lecture to view on Internet or download to iPod; application exercise(s): Develop reports based on data analysis; critique published research reports and discussions of findings; in-person classroom situation—interactive interpretations of case studies or research findings; opportunities to process learning—e.g., through learning circles, in-person classroom situations, etc.

Module 7: Communicating Evaluation Results

Description of Content:

Content in this area prepares participants to convert evaluation results into forms of communication that are useful to various stakeholders. Participants will learn about the purposes of reporting, the content and types of evaluation products, how to identify stakeholders, and how to present the results that matter most to different stakeholder groups.

PRKC Competencies

1) Communicates evaluation results in a manner congruent with stakeholder needs

Novice	Adv. Beginner	Practitioner
Understand the purposes of planning and reporting. Identify different stakeholder audiences and what are important to each group. Know the different types of evaluation products (e.g. report, executive summary, impact statement, success story, journal article).	Develop basic evaluation reports that include all of the standard sections. Know the content of evaluation reports (e.g. review of literature, methods, data analysis, results, conclusions and implications) and the types of evaluation products (e.g. report, executive summary, impact statement, success story, journal article).	Develop complete evaluation products-adapted for specific audiences (e.g. report, executive summary, impact statement, success story, journal article).

Knowledge Assessment
0- I know nothing about this
1- I understand the basic concept
2- I can implement this concept with assistance
3- I can implement this concept independently and/or teach it to others

Communicating Evaluation Results				
Match content of evaluation report to audience needs	0	1	2	3
Know standard content of evaluation reports	0	1	2	3
Develop different types of evaluation reports (full report, executive summary, impact statement/success story, marketing materials, media strategies, scholarly dissemination)	0	1	2	3
Develop program recommendations and commendations	0	1	2	3

Suggested Readings and Learning Resources

Beyond the Basics: Evaluating Community-Based Programs, University of Arizona:
        http://ag.arizona.edu/fcs/cyfernet/cyfar/index5.htm

Callor, S., Betts, S., Carter, R., Marczack, M., Peterson, D., & Richmond, L. (2000).
        Community-Based Project Evaluation Guide, University of Arizona, Institute of Children,
        youth, and Family: http://ag.arizona.edu/fcs/cyfernet/cyfar/stst_guide.pdf

Fitzpatrick, J. L., Sanders, J. R., & Worthen, B. R. (2004). *Program evaluation: alternative*
        approaches and practical guidelines (3rd Ed.). Pearson Education.

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        (SAMMIE). Retrieved January 4, 2008 from http://sammie.osu.edu/

Patton, M. Q. (1997). Utilization-focused evaluation: The new century text (3rd Ed.) Thousand
        Oaks, CA: Sage. (Chapter 13).

Planning and Evaluation Resource Center, Tufts University: http://www.evaluationtools.org

Success Story Guidance, University of Wisconsin Extension:
        http://www.uwex.edu/ces/prs/success.cfm

Torres, R. T., Preskill, H., Piontek, M. E. (2005). *Evaluation strategies for communicating and*
        reporting (2nd Ed.). Thousand Oaks, CA: Sage.

University of Kentucky, College of Agriculture, Program Development and Evaluation
        Resources: http://www.ca.uky.edu/agpsd/soregion.htm

Wholey, J. S., Hatry, H. P., & Newcomer, K. E. (2004). *Handbook of practical program*
        evaluation (2nd Ed.) San Francisco: Jossey-Bass. (Part Three).

Suggested Content Outline

Novice Level

Specific Learning Outcome	Reading and Learning Activities
Understand the purpose of planning and reporting evaluation results.	Reading assignment: SAMMIE – Module 21, 22
Identify different stakeholder audiences and items of importance to each audience.	Reading assignment; on-line discussion
Understand the content and types of evaluation products	Reading assignment; review and critique evaluation reports/products. (on-line exercise)

Advanced Beginner Level

Specific Learning Outcome	Reading and Learning Activities
Develop basic evaluation reports which include all standard sections.	Application exercise–develop reports and peer evaluation (based on rubric) using on-line discussion.
Develop different types of evaluation products with help.	Reading exercise; on-line matching exercise with sample reports; review/critique of different types of evaluation products (e.g. reports, impact statements, etc.)

Practitioner Level

Specific Learning Outcome	Reading and Learning Activities
Develop complete evaluation products which are adapted for specific audiences.	Reading exercise; application – develop different evaluation products based stakeholder needs/purpose

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About the National Learning Priorities- Program Evaluation Working Group

The program evaluation working group of the National 4-H Learning Priorities project was charged with developing the educational content in the area program planning, evaluation, and impact. The group consisted of nine 4-H professionals with program evaluation expertise from around the country. The group began its work in February of 2007 and finished July 30, 2008. During the 16 month project the group met regularly by phone, and at three face to face meetings in Chicago, IL in May 2007, Washington DC in September 2007, and Portland, OR in June 2008. During the 16 month process the group worked to develop professional development content for proficiency in program evaluation through the following steps:

- Identifying competencies in the 4-H Professional Research, Knowledge, and Competencies (National Professional Development Task Force, 2004) related to program evaluation.
- Developing a matrix of appropriate levels of knowledge and skills for each competency. These included five difference levels as outlined by Senge (1990) that are useful for articulating organizational learning. The levels are: (1) Novice- a person who has little or no knowledge or skill of the subject; (2) Advanced Beginner- a person who has some knowledge, but needs assistance putting the knowledge to work; (3) Practitioner – a person who has sufficient knowledge and skill to work independently; (4) Mentor – a person who has developed significant knowledge and skill and is able to help others learn; and (5) Expert- a person who is advanced in knowledge and skill and contributes to the development of knowledge and learning at all levels.
- Developing rubrics for each section of the matrix that articulated what a person at each level should know or be able to do for each competency.
- Focusing the scope of this project on the first three levels (novice through practitioner).
- Developing a series of seven evaluation subjects that outline content for each of the program evaluation competencies.