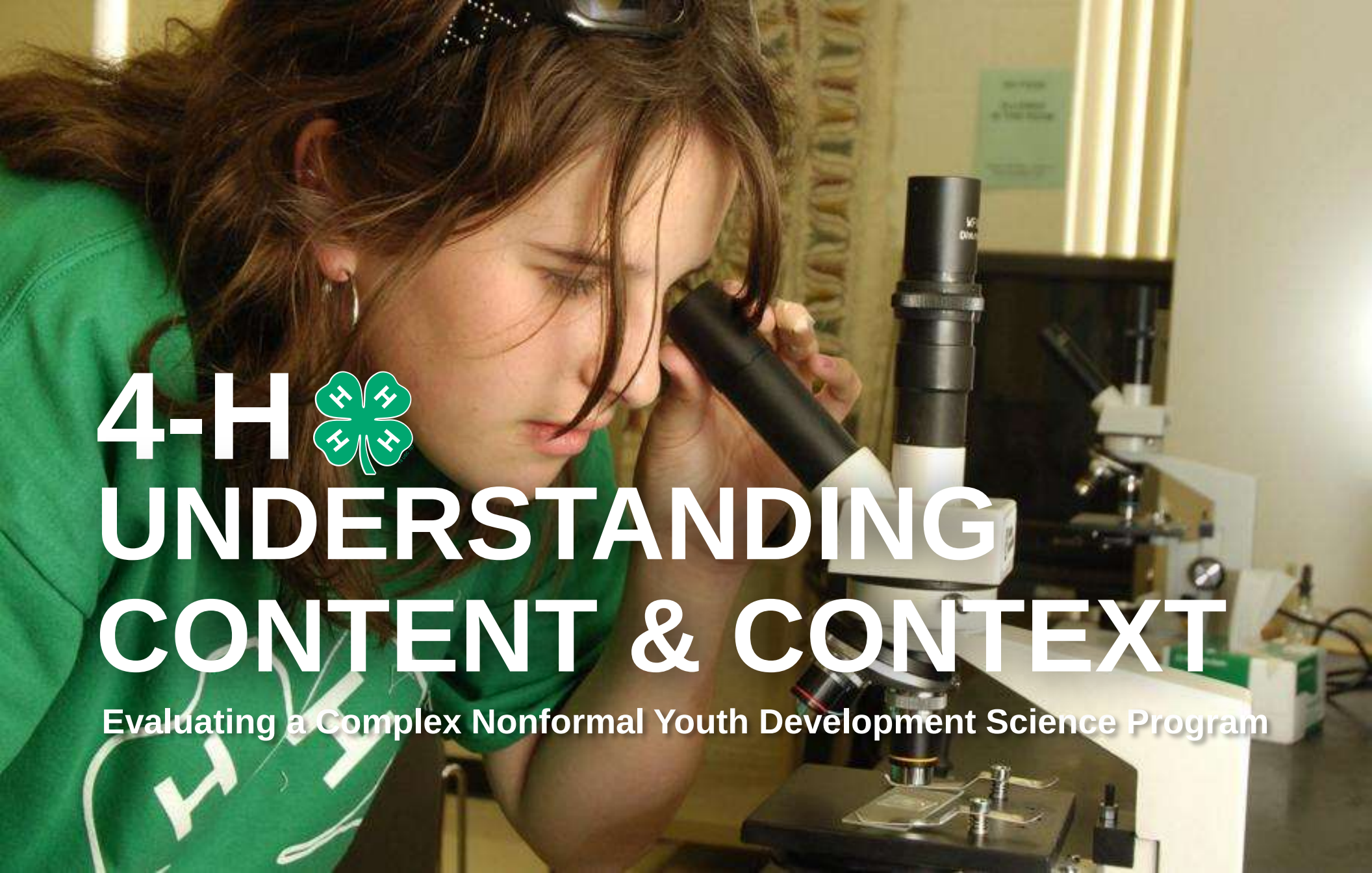


4-H UNDERSTANDING CONTENT & CONTEXT

Evaluating a Complex Nonformal Youth Development Science Program

Overview

- Establishing what works
- Designing an evaluation to understand content and context
- Methods for evaluating content and context
- Results of an evaluation to understand content and context
- Lessons learned

Successful strategies

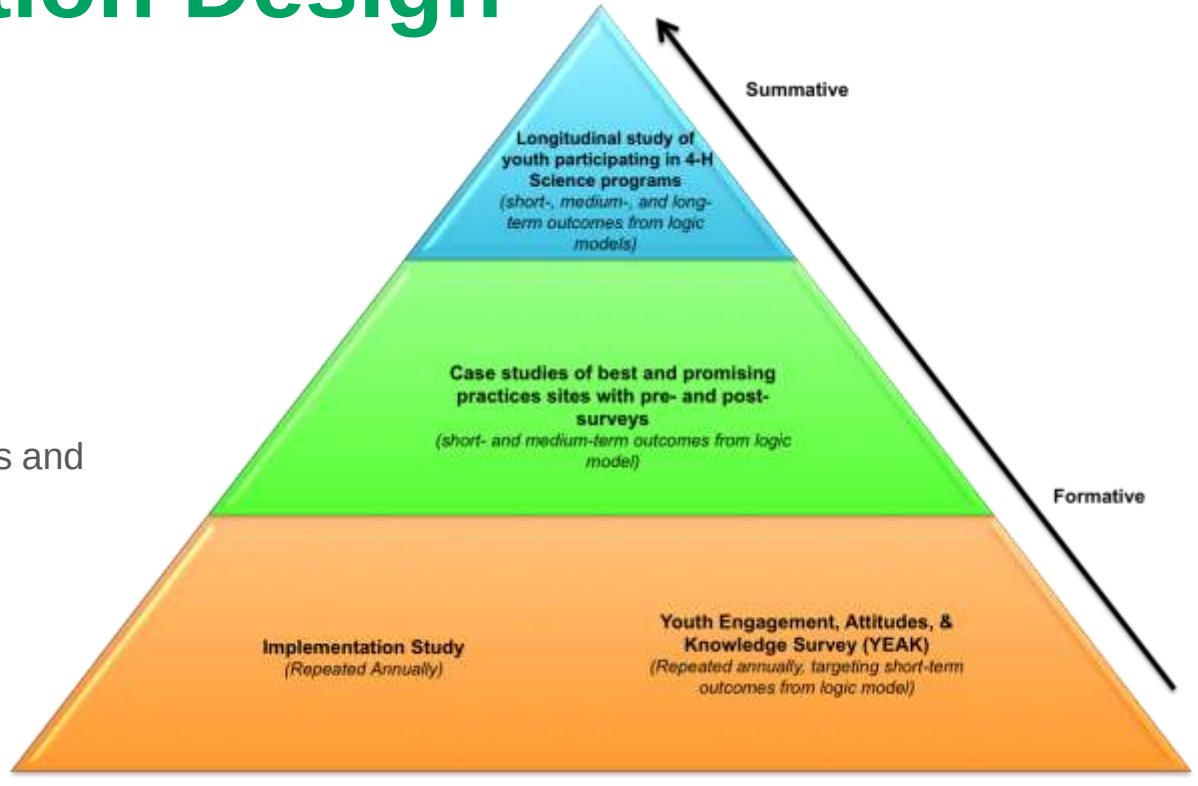
- Establishing a framework to introduce the initiative and to engage local programs
- Defining “Science Ready”
- An investment in professional development
- An investment in program opportunities
- Attention both to existing and new and underserved audiences
- Collaboration between program management teams

Evaluation Goals

- Track and monitor the implementation of 4-H Science efforts at the state level
- More fully understand the nature of promising and best program practices and how they can be replicated
- More fully understand the impact that 4-H Science efforts have on positive youth outcomes

Overview of the 4-H Science Evaluation Design

- **Tier 1:** Formative and Summative Process Evaluation, short-term outcomes
- **Tier 2:** Formative and Summative Best Practices and youth outcomes
- **Tier 3:** Summative youth outcomes



Three-Tiered Design

- Enrollment survey: Annual survey to track growth in youth participation
- Implementation study: Surveys and interviews of county and state-level 4-H staff
- Youth Engagement, Attitudes, and Knowledge Study: Annual survey of youth participating in 4-H Science programs
- Case Studies of Promising Practices: Case studies of 8 programs with strong implementation

A Partnership Model for Evaluation

- Internal Partners
- Peer Organization Partners
- External Partner
- Funder

4-H Science
Three Tiered-Design

Implementation Study-Methods

- Surveys and interviews with state-level leaders:
  - Big picture of implementation efforts and challenges
  - 2009: Survey of leaders at LGUs
  - 2010: Interviews with staff in nine states

- County-level surveys and interviews
  - A look at the initiative's progress from perspective of staff who recruit volunteers and run programs
  - 2010: Interviews with county staff in the nine states
  - 2011: National survey of randomly sampled county staff

Youth Engagement, Attitudes, and Knowledge Study - Methods

- YEAK survey created for this evaluation, and for 4-H Science programs generally
  - Drew upon existing surveys from within and outside 4-H
  - Included items from NAEP survey for benchmarking
  - Part of Noyce/Harvard PEAR effort to develop common measures for informal science programs
- 4-H has made YEAK survey accessible online; website includes tools for data analysis
- Administered survey to clubs and programs

YEAK Survey Constructs

- Demographics and Career Variables
- 4-H Program Opportunities
- Program Environment
- Life Skills (Decision Making, Critical Thinking and Problem Solving)
- Science Interest and Engagement
- Attitudes and Aspirations
- Service/Applied Learning
- Science Skills and Abilities

Sample Findings From YEAK Survey

- Compared with a national sample of youth (NAEP), 4-H Science participants more often say that they like science, are good at it, and want careers in science
- Youth liked programs' positive social environments and hands-on activities
- A planned comparative longitudinal study will seek to isolate the effects of 4-H Science programming on youths' attitudes and knowledge towards science

4-H Science
Case Studies

Case Studies of Promising Practices-Methods

- National recruitment of sites
- Programs were self-nominated
- Minimum Criteria
  - Serve a minimum of 15 youth
  - Deliver programming a minimum of 6 hours
  - Involve teens/adults teaching Science
  - Provide a rich youth development context
- Seventy programs met this criteria

Eight 4-H Programs Selected

- 4-H clubs, summer camps, and school enrichment with 3-35 years in operation
- 10-250 participants, aged 8-20, from urban, suburban, rural
- Target youth: unspecified vs. highly defined
- Curriculum areas: narrow vs. broad variety
- 6 of 8 had 50+ program hours; varied frequency
- Programs involved partners, delivery by volunteer scientists, and field experiences

Three-Stage Data Collection

- Profiles for selection committee
  - Phone interviews and extant data
- Preliminary site visits
  - In-person interviews with staff
  - Semi-structured observations
- Targeted site visits to final sites
  - In-person interviews with staff, partners, parents, and youth

Sample Findings within Eight Domains of Practice (1 of 3)

- **Youth Outreach and Recruitment**
  - ***ex. "Design the application and acceptance process to get the right participants"***
- **Staff and Science Volunteers**
  - ***ex. "Cast a wide net when recruiting science experts, then tap the specific expertise needed"***
- **Professional Development**
  - ***ex. "Provide guidance to science experts on lesson planning, delivery, and youth development"***

Sample Findings within Eight Domains of Practice (2 of 3)

- **Science Curricula and Pedagogy**
  - ***ex. "Develop skills and knowledge through experiential learning and real-world applications"***
- **Youth Development and Attitudes Toward Science**
  - ***ex. "Provide opportunities to develop positive relationships in a science context"***
- **Partner Organizations and Resource Support**
  - ***ex. "Look for low-cost ways for organizations to partner and make substantive contributions"***

Sample Findings within Eight Domains of Practice (3 of 3)

- **Program Evaluation**
  - ***ex. "Design evaluation to provide data that are useful for securing additional funds, partners, and visibility, as well as for continuous improvement"***
- **Program Sustainability and Scale-Up**
  - ***ex. "Codify and institutionalize key program features related to procedures, content, training, and partnerships"***

Lessons Learned

Lessons Learned

- Begin with a logic model and strong evaluation design
- Collaboration and buy-in are essential
- An “outsider’s” perspective is invaluable
- Make adjustments to the design along the way; flexibility is key
- On-going communication and training
- Be purposeful about the application of the findings

Common Measures

Common Measures

- Launched a series of program evaluation tools developed to measures the impact of 4-H Programs
- Surveys were developed in the outcome areas of:
  - Science
  - Healthy Living
  - Citizenship
  - Positive Youth Development
  - Career Readiness
- YEAK Survey is included in the library of tools

4-H TODAY

THANK YOU

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