Overview of Evaluation Approaches

AUCD The Council on Research and Evaluation Webinar
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Webinar Objectives

- To understand:

(1) Definition of evaluation

(1) Why a funding agency requires evaluation

(1) Internal vs. external evaluations

(1) Formative vs. summative evaluations

(1) Evaluation models/approaches

What Is Evaluation?

- Systematic investigation of the worth or merit of an object (Joint Committee on Standards for Educational Evaluation, 1994)

(1) Determining standards for judging quality and deciding whether those standards should be relative or absolute;

(1) Collecting relevant information; and

(1) Applying the standards to determine value, quality, utility, effectiveness, or significance.

(Fitzpatrick, Sanders, & Worthen, 2004)

Why does a funding agency require evaluation?

"*The project description should include a plan for an independent formative and summative project evaluation including measures of project and project evaluation goals, objectives and outcomes.*"
(NSF rfp)

(1) Provide information to help improve a project

(1) Provide information for communicating to a variety of stakeholders (incl. GPRA)

(NSF, 2002)

Internal vs. External Evaluation

- Internal Evaluation: Evaluation carried out by someone from the actual project team.
- External Evaluation: Evaluation carried out by someone who is or was not directly involved in the development or operation of the project being evaluated.

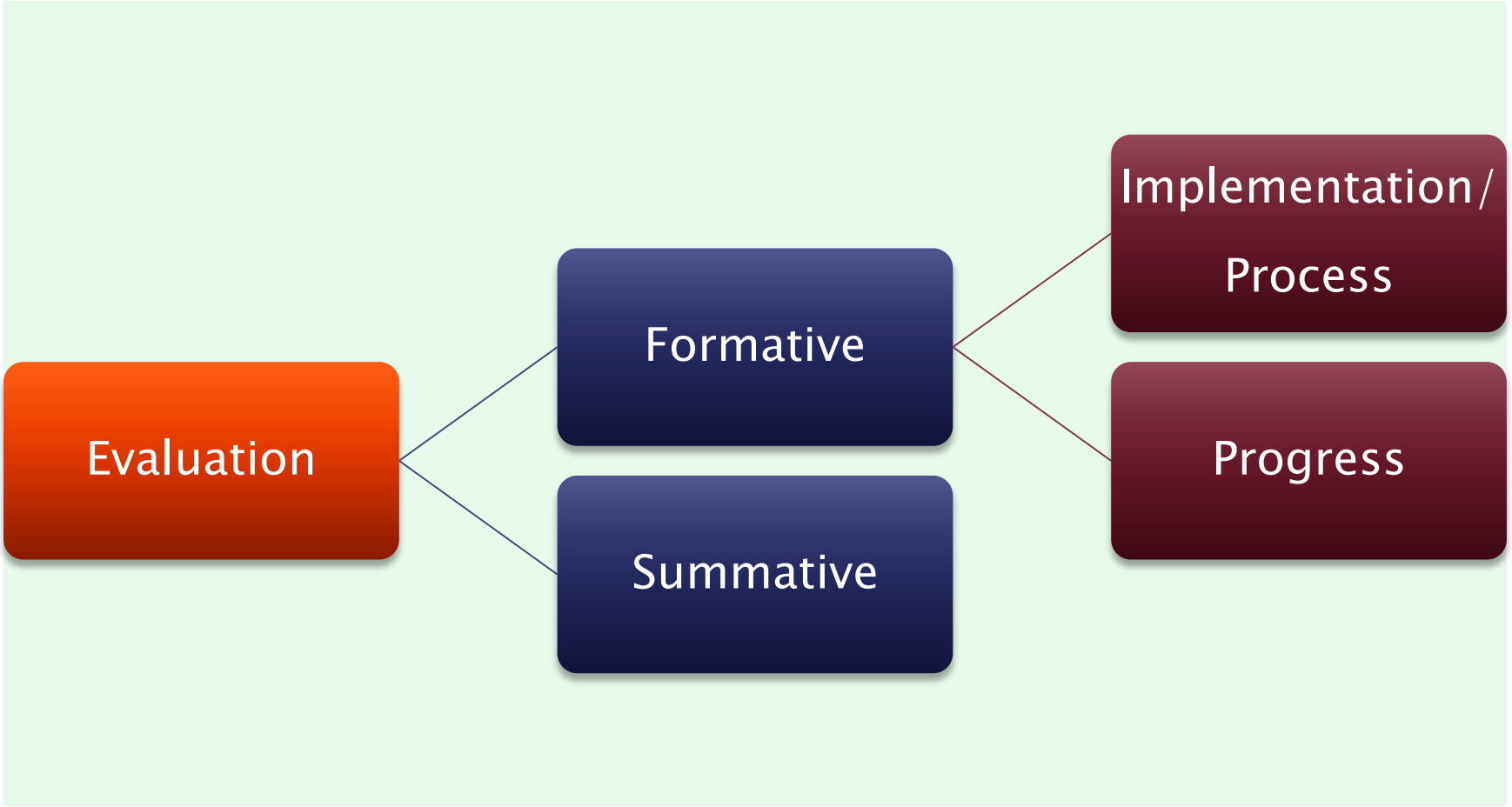
Comparison of Advantages

(Fitzpatrick, Sanders, & Worthen, 2004)

Internal Evaluator	External Evaluator
More familiar with organization & program history	Can bring greater credibility, perceived objectivity
Knows decision-making style of organization	Typically brings more breadth and depth of technical expertise
Is present to remind others of results now and in future	Has knowledge of how other similar organizations and programs work
Can communicate technical results more frequently and clearly	

Internal evaluator–Formative evaluation
External evaluator–Summative evaluation

Types of Evaluation



Formative vs. Summative

(Fitzpatrick, Sanders, & Worthen, 2004)

	Formative	Summative
Use	To improve the project	To make decisions about the project's future or adoption
Audience	Project managers and staff	Administrators, policy makers, potential consumer, funding agency
Purpose of Data Collection	Diagnostic	Judgmental

	Formative	Summative
Design Constraints	What information is needed?	What evidence is needed for major decisions?
Frequency of Data Collection	Frequent	Infrequent
Questions	What is working? What needs to be improved? How can it be improved?	What results occur? With whom? Under what conditions? With what training? At what cost?

Formative Evaluation (NSF, 2002)

(1) Implementation/Process Evaluation

- Purpose: To assess whether the project is being conducted as planned.
- Questions:
  - Were appropriate students selected?
  - Were appropriate recruitment strategies used?
  - Do the activities and strategies match those described in the plan?
  - Was a solid project management plan developed and followed?

(2) Progress Evaluation

- Purpose: To determine whether the benchmarks of participant progress were met and to point out unexpected developments.
- Don’t have to wait until the project ends.
- Questions:
  - Are the participants moving toward the anticipated goals of the project?
  - Are the numbers of students reached increasing?
  - Does student progress seem sufficient in light of the long range of goals of the project?

Evaluation Models/Approaches

(Fitzpatrick, Sanders, & Worthen, 2004)

- Objectives-oriented vs. Goal-free
- Management-oriented (e.g., CIPP, UCLA model)
- Consumer-oriented (e.g., Scriven's model)
- Expertise-oriented

(e.g., accreditation, funding agency review panel, blue-ribbon panel)

- Participant-oriented

(e.g., naturalistic, participatory, utilization-focused, empowerment)

"Under the Government Performance and Results Act of 1993 (GPRA) … Projects funded under this competition are required to submit data on these measures as directed by OSEP:

Program Performance Measure #1: The percentage of educational technology, media, and materials projects judged to be of high quality.

Program Performance Measure #2: The percentage of educational technology, media, and materials projects judged to be of high relevance to improving outcomes of infants, toddlers, children, and youth with disabilities….." (US DOE OSEP rfp)

Which evaluation approach is appropriate?

Objectives-Oriented Model

- Purpose: To determine the extent to which objectives are achieved
- Characteristics: Specifying measurable objectives; using objective instruments; looking for discrepancies between objectives and performance
- Uses: Project development, monitoring participant outcomes, needs assessment

- Criteria: Measurability of objectives; measurement reliability and validity
- Benefits: Ease of use; simplicity; focus on outcomes; high acceptability; forces objectives to be set
- Limitations: Oversimplification of evaluation and problems outcomes-only orientation; linear; overemphasis on outcomes

"The Advancing Informal STEM Learning (AISL) solicitation invites investigators to propose ideas, concepts, models, and other opportunities for learning and learning environments that will capture the creative and innovative potential of informal STEM learning for the future, and potentially forge new connections across all STEM learning communities …..

New interdisciplinary collaborations and partnerships for informal learning among academia, industry, and government can greatly advance our nation's goals to produce a scientifically and technologically literate population and workforce." (NSF AISL rfp)

Which evaluation approach is appropriate?

Participant-Oriented Model

- Purpose: To understand and portray the complexities of programmatic activity, responding to an audience's requirements for information
- Characteristics: Reflecting multiple realities; use of inductive reasoning and discovery; firsthand experience on site; involvement of intended users; training intended users
- Uses: Examination of innovations or change about which little is known; ethnographies of operating programs

- Criteria: Credibility, fit; auditability; confirmability
- Benefits: Focus on description and judgment; concern with context; openness to evolve evaluation plan; pluralistic; use of inductive reasoning; use of wide variety of information; emphasis on understanding
- Limitations: Nondirective; tendency to be attracted by the bizarre or atypical; potentially high labor-intensity and cost; potential for failure to reach closure

Thank You!