Practical Guidelines for Planning Grant Evaluation:

"a Brief Introduction"
Participants will learn how the benefits and essential questions of evaluation are important components of grant planning, especially when considering institutionalization of grant activities.
Participants will increase their understanding of types of evaluation and what methods should be considered to ensure that evaluation goes beyond accountability and compliance.
Faculty and administrators will develop a clear concept of expectations with regard to evaluation before hiring an external evaluator.
TOPICS

- What are Grant/Project Evaluations?
- Why Use them?
- Types of Evaluation
- Evaluation vs. Research
- Who to Involve in the Process
What are Grant/Project Evaluations?

Not just compliance!
Grant/Project Evaluations are...

- Essentially the process of determining the worth or merit of an activity, program, staffing, or product
A framework to:

- Structure dialogue about grant goals and objectives
  - Determine grant model:
    - Situation, environment, assumptions
    - Target populations, interventions, short-term/intermediate/final outcomes

- Understand or verify the impact of activities and services on the institution

- Confirm whether projects/activities are operating as intended (positively or negatively)

- Improve delivery mechanisms and efficiency
Evaluating Grant Projects

- Important to view the work of the grant from the evaluation aspect, in particular the evaluation of (1) process, (2) outcomes, and (3) impact (cost/benefit).

(1) Process: was the project implemented as intended? Were there unintended consequences? Have the appropriate staff been hired? Are eligible participants being recruited/served?
(2) **Outcomes**: Is the program effective? Is it achieving its objectives? *Can any changes we observe in outcome be attributed to the program rather than other factors and conditions?*

(3) **Impact** (cost/benefit): How many students/faculty were affected and how much effort/cost was required? Can the project be scaled up with ongoing college resources?
Evaluation Provides a Structure

- **Situation or Problem**: conditions that give rise to the program

- **Assumptions**: beliefs about the program and the way we think it will work
  - Who is the intended group?
  - Why will the activities influence the group?

- **Environment**: the context and external conditions in which the program exists that influence the success of the program
Goals: broad and general outcome measures

Objectives: specific outcome statements
  ◦ Several measurable objectives for each goal

Outputs: products and tangible results of activities intended to achieve objectives

Activities: projects to generate outputs in order to accomplish objectives
Logic Model Template for ATE Projects & Centers

Slightly Modified

Inputs
What resources will be used to support the project?

Activities
What are the main things the project will do/provide?

Outputs (Also Called Process Objectives)
How many and what sort of observable/tangible results will be achieved?

Short-Term Outcomes
What will occur as a direct result of the activities & outputs? (typically, changes in knowledge, skills, attitudes)

Mid-Term Outcomes (Outcome Objectives)
What results should follow from the initial outcomes? (typically, changes in behavior, policies, practice)

Long-Term Outcomes (Goals)
What results should follow from the initial outcomes (typically, changes in broader conditions)

Examples:
- NSF funding
- Faculty
- Advisory panel
- Industry partners
- In-kind contributions
- ATE resource centers
- Establish regional partnerships
- Develop curriculum
- Conduct workshops
- Provide research/field experiences
- Hold conference
- Establish articulation agreement
- People engaged (students, faculty, industry partners)
- Curriculum materials developed
- Policies created
- Publications issued
- Certification standards established
- High school students have increased awareness of technical career opportunities
- Faculty improve their pedagogical skills
- More students enter workforce with 21st century skills
- Improved retention
- More effective classroom instruction
- Increased number of job placements in technical fields
- Increased employer satisfaction
- Increased regional economic vitality
- Increased diversity in the technical workforce
- A more highly skilled and adaptable workforce
Program Theory Example

- **The problem**: low math scores

- **Causes**: lack of culturally sensitive pedagogy; lack of teacher training; outdated methods

- **The intervention** (program/activity): teacher training; new technology (computer mediated learning); peer tutoring.

- **Evaluation** of program/activity: experimental design; quasi-experimental design (non-equivalent control groups; interrupted time series; statistical controls)
Source of Goals and Objectives

- Where do they originate?
  - **Request For Proposals (RFP)**
    - Purpose of the Initiative
    - Program Summary
    - Absolute and Competitive Preference Priorities
    - Program Performance Measures
  
  - **Local Strategic Plans**
    - Program Review priorities
  
  - **Other?**
Writing Goals and Objectives

- Review RFP for language to use
  - Match your goals and objectives to those in the RFP
    - Although RFP might not use the terms G and O

- What are the program outcomes?

- What are the results and how will you accomplish them?
Why Use Grant/Project Evaluation

Feedback during life of grant and at closure
The RFP requires an Evaluation Plan in the proposal, *for example*

The HSI STEM asked for…

- What types of data will be collected
- When this data will be collected
- What methods will be used
- What instruments will be developed and when
- How the data will be analyzed
- When reports and outcomes will be available
- How the applicant will use the information collected
The applicant recognizes that several methods of evaluation are needed to determine what types of impact the project has on the target audience.

The evaluation process includes accountability, effectiveness, impact, organizational factors, and unanticipated outcomes.

The project has chosen the data elements, collection methods and timing for the evaluation. Its structure includes both quantitative and qualitative methods of evaluation.
The NSF S–STEM Program Announcement asked for...

- A clear, specific plan for assessment and evaluation of student progress and the overall S–STEM project that reflects the simplicity of the project design and the limited resources available for evaluation

- Participation in NSF–led data collection activities to track the students

- Evidence of impact on departments and disciplines involved beyond simple student input and output
Reviews’ Comments

- A detailed assessment and evaluation plan is described that clearly states the goals.
- More details needed when percentages are given; actual numbers will be more useful.
- A 5% increase seems rather modest.
- The assessment plan will be able to give the college good feedback.
- Generally a good proposal, but enthusiasm was muted due to modest goals and lack of detail in some areas.
Other Reasons...

- Evaluations provide information that can be used to chart future course
  - Grant projects catalyze formation of new partnerships and/or ability to attract new funding

- Evaluations offer insights into the grant program’s impact based on factors such as sustainability, feasibility, innovation, replicability, and reporting compliance
Evaluations provide additional insight into the impact of grant projects, barriers and supporting factors, lessons learned.

Evaluation provides information for communicating to a variety of stakeholders:
- Legislature
- Funding agency
- College administration
- Project participants
- College community

Evaluations need not be conducted in an adversarial mode. Current view of evaluation integrates its role with planning and program implementation.
EVALUATION versus RESEARCH

What’s the difference?
A distinguishing characteristic of evaluation is that, unlike traditional forms of academic research, evaluation is grounded in the everyday realities of organizations.

Evaluations can be conducted of programs, processes, products, systems, organizations, personnel, and policies.

(Building Evaluation Capacity: 72 Activities for Teaching and Training; Hallie Preskill and Darlene Russ-Eft.)
Evaluation involves collecting data regarding questions or issues about society in general and organizations and programs in particular.

Evaluation is a process for enhancing knowledge and decision making, whether the decisions are for improving or refining a program, process, product, system, or organization or for determining whether or not to continue or expand a program.
In each of these decisions, there is some aspect of judgment about the merit, worth, or value of the evaluand (that which is being evaluated).

Evaluation includes appropriate and rigorous research within the context of the environment (institution, rules, politics); but evaluation also includes process, monitoring, and implementation analysis in addition to analysis of quantitative and qualitative data.
• Judges merit or worth
• Policy & program interests of stakeholders paramount
• Provides information for decision-making on specific program
• Conducted within setting of changing actors, priorities, resources, & timelines
• Produces generalizable knowledge
• Scientific inquiry based on intellectual curiosity
• Advances broad knowledge and theory
• Controlled setting
Types of Evaluation

- Process and Outcomes
- Data and Methods
Formative and Summative Evaluations

“When the cook tastes the soup, that’s formative;
When the guests taste the soup, that’s summative.”

– Bob Stake
Formative Evaluation

- Sometimes known as process, implementation, or monitoring evaluations
- Use for improvement and development of ongoing activities (program, staffing, product)
- Focus on content and design
- Targets appropriate areas of change
Implementation (Process) Evaluation

- Assess whether project/activities conducted as planned
  - May occur once or several times
- Were appropriate students selected?
  - Consistent with intent of grant or funding agency
- Were appropriate outreach and recruitment strategies employed?
- Was the management plan followed?
- Were there unintended consequences?
Progress Evaluation

- Assess progress in meeting goals and objectives
- Determine if progress is being made toward stated objectives
- Avoids risk of waiting too long to determine outcomes
Summative Evaluation

- Assess whether a mature project reaches its stated goals
- Use for accountability, certification, selection, continuation
- Focus on value and worth (benefit/cost analysis)
- Key Questions:
  - Were the results worth the program’s cost?
  - Can the program be sustained?
  - Is the program replicable and transportable?
Evaluation

1. **Formative** (process, implementation)
   - Does the program exist?
   - Is it operating as it is supposed to?
   - Are the appropriate students participating and in the levels expected?

2. **Summative** (outcome)
   - Is the program effective?
   - Are objectives being met?
   - Intended results?
   - Causal inference if outcomes show improvement?
Types of Data

- Focus groups
- Interviews
- Surveys
- SWOT analysis
- Review of portfolios
- Review of documentation
- Nominal scales

- Test scores
- Student performance
- Surveys
- Ordinal, interval, or ratio data
Comparison of Methods

- **Qualitative methods** permit the evaluator to study selected issues, cases, or events in depth and detail.
  - Data collection is not constrained by predetermined categories of analysis, allowing for a level of depth and detail that quantitative strategies can't provide.

- **Quantitative approaches** allow for large scale measurement of ideas, beliefs, and attitudes.
  - Generally the set of questions is limited, facilitating comparison and statistical aggregation of the data.
  - This allows for development of a generalizable set of findings.

Mixed methods include both qualitative and quantitative data gathering

- enriches the evaluation
- open-ended comments provide a way to elaborate and contextualize statistical "facts."
Evaluating an Objective

*Increase by 20% the number of Hispanic and low-income students in STEM disciplines who complete a degree, become transfer ready, or transfer within three years of enrollment at ABC College.* (Absolute Priority 1) (Performance Measure 4)

**Discussion:**
1. Would this objective be evaluated using formative or summative evaluation?
2. What data collection methods would you use?
Evaluating an Activity

Math Academy. Entering freshman who test into developmental math (lower than highest level completed in high school) will be provided intensive review and practice for two weeks, then re-test in hopes that they place higher.

Discussion:
1. What data would you use?
2. How will you determine effectiveness?
3. Research design?
WHO is INVOLVED in EVALUATION?

And why?
Who are the Key Players?

- **Grants Office**
  - Do you have a grants office at your college?
    - If not, who has grants management and writing knowledge?
  - If yes, what is their function?
    - Writing?
    - Post grant management?
    - Research and evaluation?
    - Compliance?
Institutional Research Office

- Is there an IR office at your college?
  - If not, who provides data for establishing objectives and measuring performance?
  - If yes, what is their role?
    - Writing grants?
    - Provide benchmark and follow up data?
    - Assistance with evaluation plan?
    - Evaluation?
External Evaluator

- Required component of many grants (% of budget)
- When do you hire?
  - Ideally up front to assist with evaluation plan (ATE expects)
  - How do you write evaluation plans without the evaluator on contract?