Evaluation: the secret sauce in your ATE proposal

This webinar will begin at 1 p.m. ET

www.atecentral.net

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Advancing excellence through evaluation

Webinars

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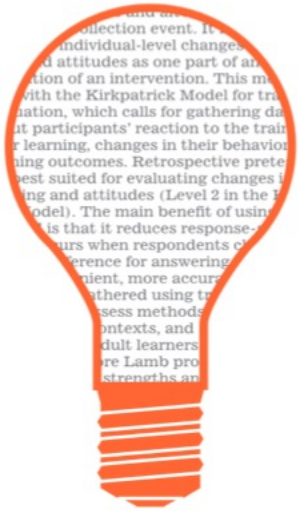

Blog

ATE Survey Data

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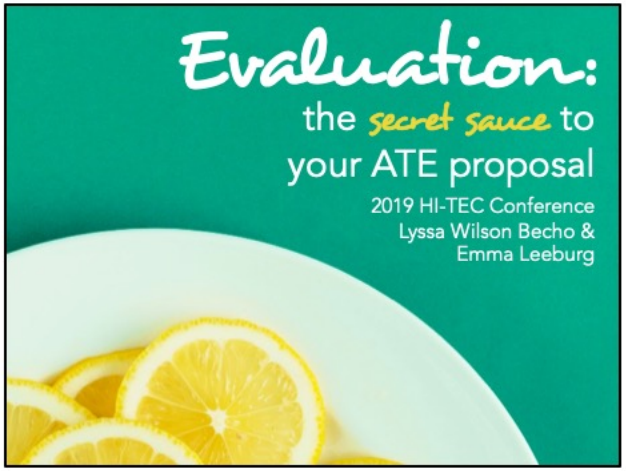
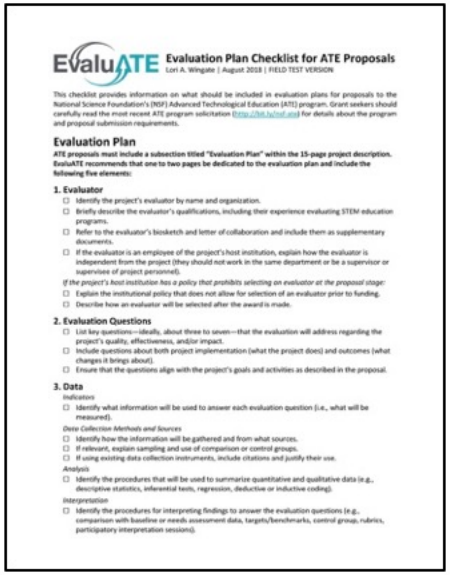
Materials



Slides



EvaluATE Evaluation Plan Checklist for ATE Proposals

Lori A. Wingate | August 2018 | FIELD TEST VERSION

This checklist provides information on what should be included in evaluation plans for proposals to the National Science Foundation's (NSF) Advanced Technological Education (ATE) program. Grant seekers should carefully read the most recent ATE program solicitation (http://bit.ly/nsf-ate) for details about the program and proposal submission requirements.

Evaluation Plan

ATE proposals must include a subsection titled "Evaluation Plan" within the 15-page project description. EvaluATE recommends that one to two pages be dedicated to the evaluation plan and include the following five elements:

1. Evaluator

- ☐ Identify the project's evaluator by name and organization.
- ☐ Briefly describe the evaluator's qualifications, including their experience evaluating STEM education programs.
- ☐ Refer to the evaluator's biosketch and letter of collaboration and include them as supplementary documents.
- ☐ If the evaluator is an employee of the project's host institution, explain how the evaluator is independent from the project (they should not work in the same department or be a supervisor or supervisee of project personnel).

If the project's host institution has a policy that prohibits selecting an evaluator at the proposal stage:

- ☐ Explain the institutional policy that does not allow for selection of an evaluator prior to funding.
- ☐ Describe how an evaluator will be selected after the award is made.

2. Evaluation Questions

- ☐ List key questions—ideally, about three to seven—that the evaluation will address regarding the project's quality, effectiveness, and/or impact.
- ☐ Include questions about both project implementation (what the project does) and outcomes (what changes it brings about).
- ☐ Ensure that the questions align with the project's goals and activities as described in the proposal.

3. Data

Indicators

- ☐ Identify what information will be used to answer each evaluation question (i.e., what will be measured).

Data Collection Methods and Sources

- ☐ Identify how the information will be gathered and from what sources.
- ☐ If relevant, explain sampling and use of comparison or control groups.
- ☐ If using existing data collection instruments, include citations and justify their use.

Analysis

- ☐ Identify the procedures that will be used to summarize quantitative and qualitative data (e.g., descriptive statistics, inferential tests, regression, deductive or inductive coding).

Interpretation

- ☐ Identify the procedures for interpreting findings to answer the evaluation questions (e.g., comparison with baseline or needs assessment data, targets/benchmarks, control group, rubrics, participatory interpretation sessions).

Evaluation Plan Checklist and Other Resources

Recording

Introductions

Mike Lesiecki

Lyssa Wilson Becho

Emma Leeburg

Luka Partners

EvaluATE

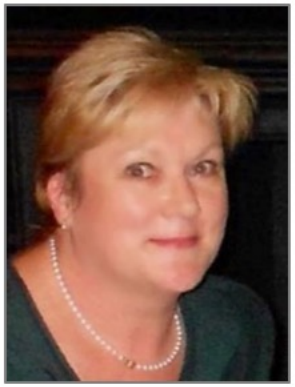
Behind the Scenes

Lori Wingate

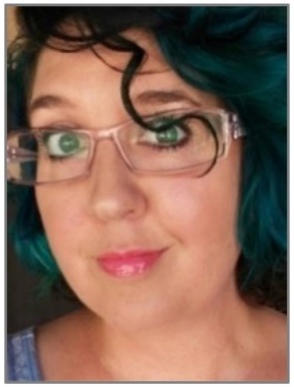
Kelly Robertson

Marilyn Barger

Cynthia Williams



Janet Pinhorn



Shannon Payne

EvaluATE

WESTERN MICHIGAN UNIVERSITY

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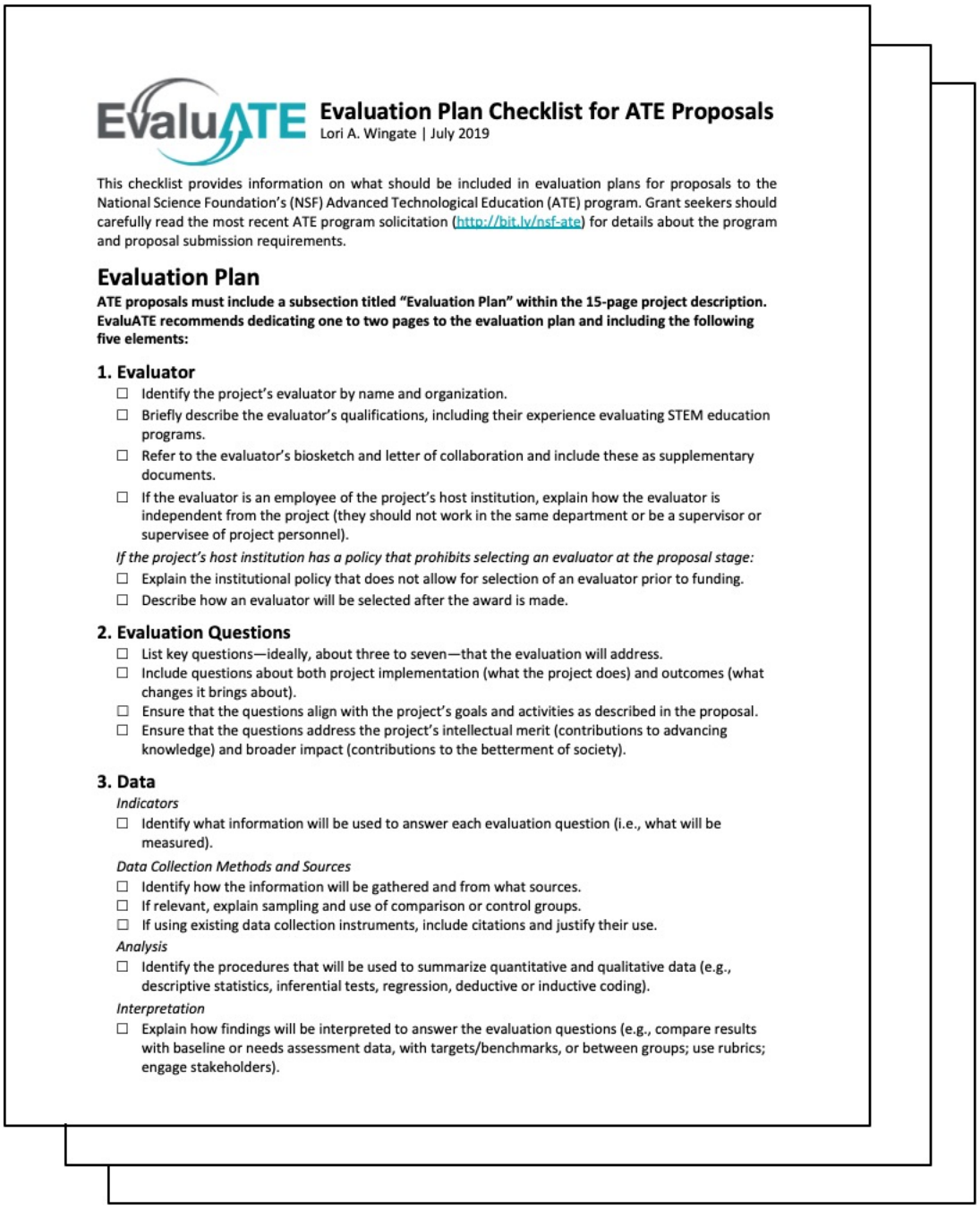
Any opinions, findings, and conclusions or recommendations expressed in this material are those of the presenters and do not necessarily reflect the views of NSF.

Emma

POLLS

Webinar Overview

1. essential elements of an ATE proposal evaluation plan
2. integrating evaluation throughout a proposal
3. question and answer panel



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- ☐ Include questions about both project implementation (what the project does) and outcomes (what changes it brings about).
- ☐ Ensure that the questions align with the project's goals and activities as described in the proposal.
- ☐ Ensure that the questions address the project's intellectual merit (contributions to advancing knowledge) and broader impact (contributions to the betterment of society).

3. Data

Indicators

- ☐ Identify what information will be used to answer each evaluation question (i.e., what will be measured).

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- ☐ Identify the procedures that will be used to summarize quantitative and qualitative data (e.g., descriptive statistics, inferential tests, regression, deductive or inductive coding).

Interpretation

- ☐ Explain how findings will be interpreted to answer the evaluation questions (e.g., compare results with baseline or needs assessment data, with targets/benchmarks, or between groups; use rubrics; engage stakeholders).

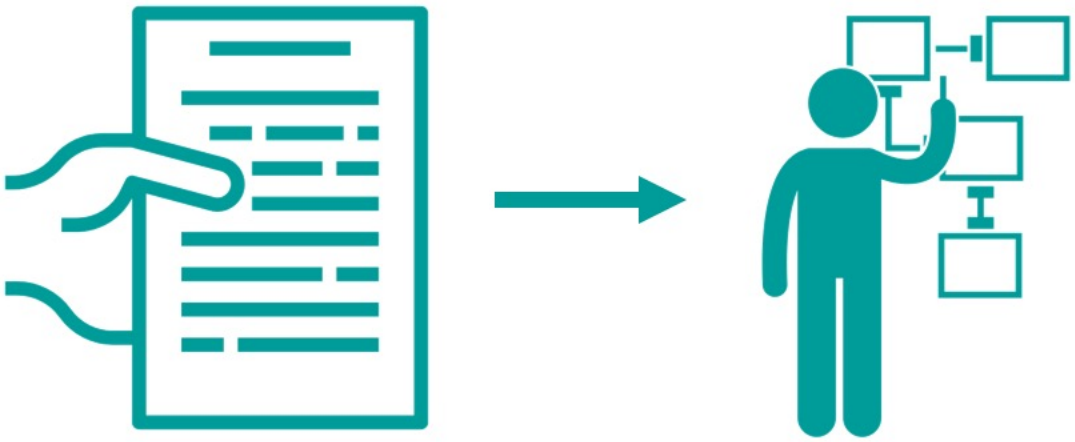
RESOURCE

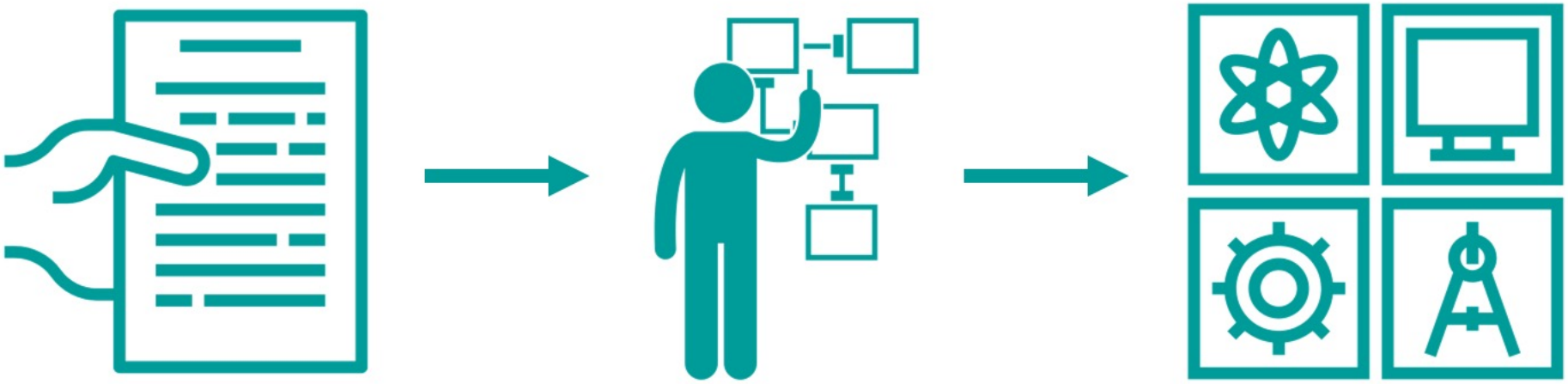
Evaluation Plan Checklist for ATE Proposals

Evaluation

Evaluation

A systematic determination of a project's quality and effectiveness.





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Celeste Carter
ATE Program Director

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Essential Elements

of an ATE Proposal Evaluation Plan

Project Description (15 pages)





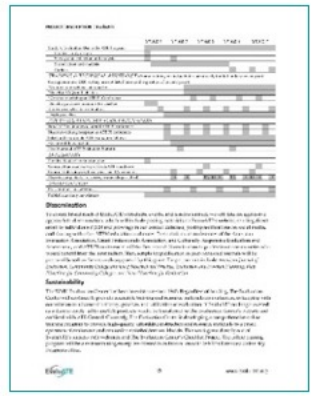




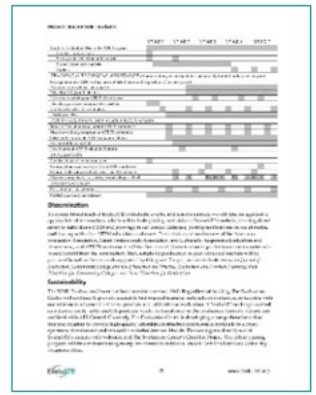








Evaluation Plan (1-2 pages)



Evaluation Plan (1-2 pages)

BROADER IMPACTS OF THE PROPOSED PROJECT

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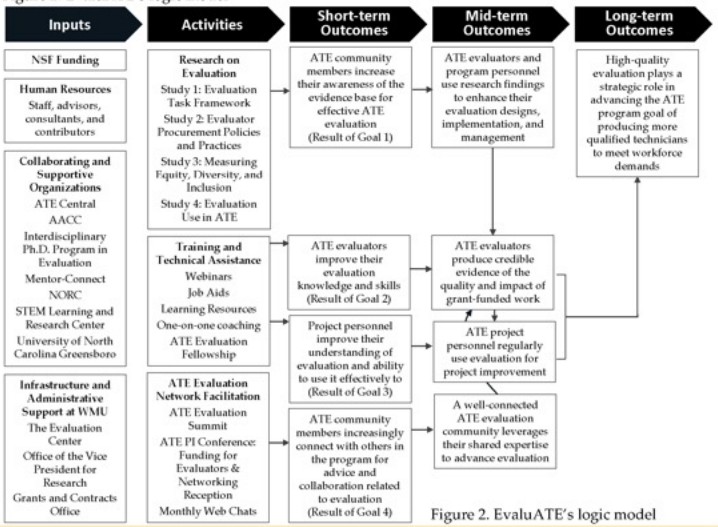
Logic Model

As shown in our logic model (Figure 2), EvaluATE's research on evaluation, training and technical assistance, and evaluation network facilitation activities are oriented toward enhancing the capacity of ATE program community members to conduct and use high-quality evaluation in the interest of advancing the goals of the ATE program.

Figure 2. EvaluATE's logic model



Evaluation Plan

EvaluATE's outcomes and implementation will be assessed through a combination of external and internal evaluation. The internal component primarily serves accountability and formative evaluation purposes—documenting our processes and outputs and answering questions regarding user engagement, satisfaction, and immediate learning. The external component is more outcome-oriented, addressing questions regarding sustained learning, use, and impact. The external portion of the evaluation will be led by Dr. Lana Rucks of The Rucks Group.

EvaluATE's evaluation is driven by six overarching evaluation questions. Table 2 presents these questions, along with the key indicators that will be used to answer each question, data sources and methods, and whether responsibility for data collection and analysis lies with the internal (I) or external (E) evaluation teams. The indicators are based on a body of research on evaluation capacity building (Labin, 2014; Labin, Duffy, Meyers, Wandersman & Lesesne, 2014; Leviton, 2013; Preskill & Boyle, 2008) and evaluation of training and communities of practice (Guskey, 1999; Kirkpatrick & Kirkpatrick, 2016; Wenger, Trayner, & de Laat, 2011), which conveys the importance of measuring not only individual changes in attitude, knowledge, and practice, but also organizational changes, such as the degree to which evaluation is reflected in an organization's culture and the daily work of personnel.

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Questions	*Key Indicators*	*Methods and Sources*
1. To what extent has EvaluATE engaged its intended and other audiences? (Engagement)	- Webinar attendance and participant characteristics - Users' reports of sharing information from EvaluATE with others	- Participation records (I) - Biannual external evaluation surveys (E)
2. To what extent are EvaluATE's users satisfied with EvaluATE's activities and resources? (Satisfaction)	- Users' ratings and descriptions of satisfaction with EvaluATE activities and resources	- Event feedback surveys (I)
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5. To what extent has EvaluATE contributed to improvements in evaluation quality? (Impact)	- Users' ratings and descriptions of changes in the quality of their evaluations attributable to EvaluATE's influence	- Event feedback surveys (I) - Biannual external evaluation surveys (E) - Interviews with TA recipients, including review of pre- and post-TA evaluation materials (E)
6. How is EvaluATE influencing the program's overall evaluation capacity? (Impact)	- Changes in organizational processes and practices related to evaluation - Diffusion and uptake of EvaluATE's research findings	- Biannual external evaluation surveys (E) - Key informant interviews (E) - Environmental scan, plus all data sources (I, E)

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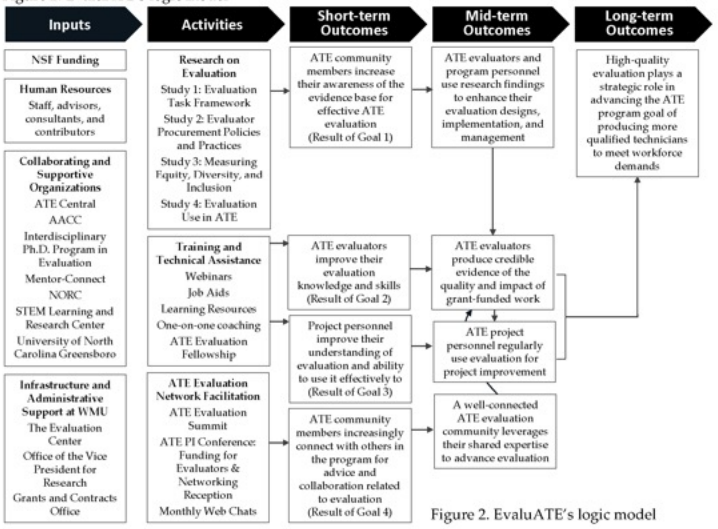

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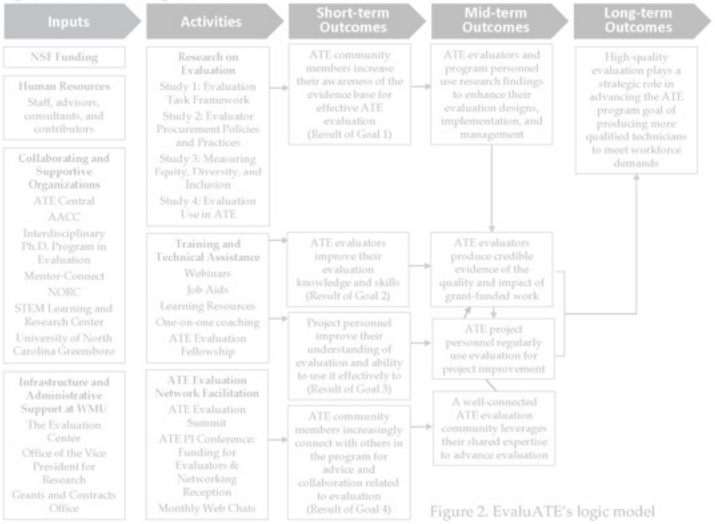

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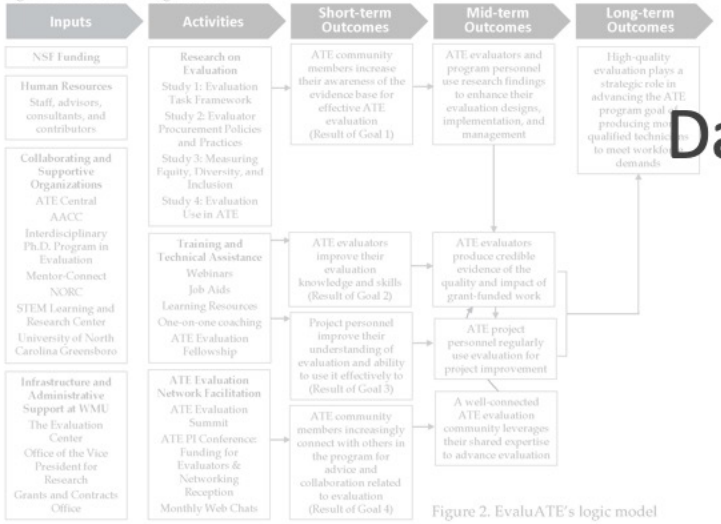

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5. To what extent has EvaluATE contributed to improvements in evaluation quality? (Impact)	- Users' ratings and descriptions of changes in the quality of their evaluations attributable to EvaluATE's influence	- Event feedback surveys (I) - Biannual external evaluation surveys (E) - Interviews with TA recipients, including review of pre- and post-TA evaluation materials (E)
6. How is EvaluATE influencing the program's overall evaluation capacity? (Impact)	- Changes in organizational processes and practices related to evaluation - Diffusion and uptake of EvaluATE's research findings	- Biannual external evaluation surveys (E) - Key informant interviews (E) - Environmental scan, plus all data sources (I, E)

Qualitative data will be analyzed by a two-member team working collaboratively to identify themes. Quantitative survey data will be analyzed using mainly descriptive; inferential tests will be performed to compare results for different types of EvaluATE users (e.g., evaluators, project staff). Biannual external evaluation survey findings will be compared against baseline results and interpretive rubrics developed jointly by The Rucks Group and EvaluATE. Because of the extensive dataset across multiple years, biannual external evaluation survey results can be compared against previous iterations. To augment self-reported data, the external evaluation team will compare TA recipients' evaluation materials pre- and post-technical assistance to assess the degree of improvement. Conference calls between the external evaluators and EvaluATE staff will keep all parties apprised of the evaluation's progress and results. Reports will be prepared in accordance with the schedule indicated in the project timeline (Table 3). Results will be shared with the broader evaluation community via conferences and publications.

Evaluation Plan (1-2 pages)

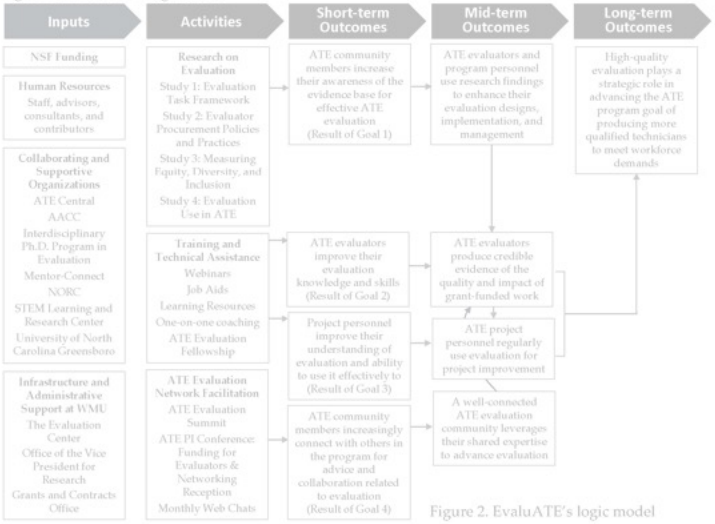
BROADER IMPACTS OF THE PROPOSED PROJECT

The ATE program is focused on tangible broader impacts in terms of making the United States more globally competitive through improved technological education. EvaluATE's purpose is to support ATE program grantees to conduct high-quality evaluation that can be used to improve individual projects and the program overall. EvaluATE's expanded work will directly contribute to developing the capacity of institutions to conduct evaluation—within ATE and beyond. Our research on measuring equity, diversity, and inclusion will generate actionable findings that can be applied at institutions to assess progress toward broadening participation in STEM, an NSF priority (NSF, 2018a).

Logic Model

As shown in our logic model (Figure 2), EvaluATE's research on evaluation, training and technical assistance, and evaluation network facilitation activities are oriented toward enhancing the capacity of ATE program community members to conduct and use high-quality evaluation in the interest of advancing the goals of the ATE program.

Figure 2. EvaluATE's logic model



Evaluation Plan

EvaluATE's outcomes and implementation will be assessed through a combination of external and internal evaluation. The internal component primarily serves accountability and formative evaluation purposes—documenting our processes and outputs and answering questions regarding user engagement, [illegible] addressing [illegible] evaluation will be led by Dr. Lana Rucks of The Rucks Group.

Communication and Use 4

EvaluATE's evaluation is driven by six overarching evaluation questions. Table 2 presents these questions, along with the key indicators that will be used to answer each question, data sources and methods, and whether responsibility for data collection and analysis lies with the internal (I) or external (E) evaluation teams. The indicators are based on a body of research on evaluation capacity building (Labin, 2014; Labin, Duffy, Meyers, Wandersman & Lesesne, 2014; Leviton, 2013; Preskill & Boyle, 2008) and evaluation of training and communities of practice (Guskey, 1999; Kirkpatrick & Kirkpatrick, 2016; Wenger, Trayner, & de Laat, 2011), which conveys the importance of measuring not only individual changes in attitude, knowledge, and practice, but also organizational changes, such as the degree to which evaluation is reflected in an organization's culture and the daily work of personnel.

Table 2. Evaluation Plan Overview

Questions	*Key Indicators*	*Methods and Sources*
1. To what extent has EvaluATE engaged its intended and other audiences? (Engagement)	- Webinar attendance and participant characteristics - Users' reports of sharing information from EvaluATE with others	- Participation records (I) - Biannual external evaluation surveys (E)
2. To what extent are EvaluATE's users satisfied with EvaluATE's activities and resources? (Satisfaction)	- Users' ratings and descriptions of satisfaction with EvaluATE activities and resources	- Event feedback surveys (I)
3. To what extent has EvaluATE's work led to improvements in users' knowledge of and attitudes toward evaluation? (Learning)	- Users' ratings and descriptions of how much they learned from EvaluATE - Users' attitudes toward evaluation	- Event feedback surveys (I) - Biannual external evaluation surveys (E)
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Evaluation Plan (1-2 pages)

Timeline

The timing of key tasks and deliverables is shown in Table 3.

Table 3. Project Timeline (shown in quarter-year increments)

RESEARCH	*YEAR 1*	*YEAR 2*	*YEAR 3*	*YEAR 4*	*YEAR 5*
Study 1: Evaluation Task Framework Validation					
Finalize design and recruit study participants					
Data collection and analysis					
Publish					
Study 2: Evaluator Procurement					
Finalize design and recruit committee members					
Data collection and analysis					
Publish					
Study 3: Strategies for Measuring E/D/I in ATE					
Finalize design and recruit participants					
Data collection and analysis					
Publish					
Study 4: Evaluation Use in the ATE Program					
Finalize study design					
Survey data collection and analysis					
Site selection and analysis					
Publish					
TRAINING & TECHNICAL ASSISTANCE (*Some training-related activities are already funded under current grant through summer 2020, so they are not listed here until expiration of current grant)					
*Conduct one webinar per quarter					
*Develop FAQs and job aids					
*Conduct workshop at ATE PI Conference					
Develop guidance materials for coaches					
Convene coaches for orientation					
Deploy coaches					
ATE EVALUATION NETWORK FACILITATION					
Fund ATE evaluators to attend ATE PI conference					
Host networking reception at ATE PI conference					
Select and coordinate ATE evaluation fellows					
Host monthly web chats					
Host biannual ATE Evaluation Summit					
EVALUATION					
Finalize detailed evaluation plan					
Conduct biannual survey of EvaluATE's audience					
Conduct interviews with coaches and TA recipients					
Reports completed (TA, survey, research impact, final)		TA S	TA RI S	TA	S RI TA F
DISSEMINATION					
Presentations at conferences					
Publish quarterly newsletters					

5 Timeline

Evaluator

Evaluation Plan → ❶ Evaluator

- ☐ Identify the project's evaluator

Evaluation Plan → ❶ Evaluator

- ☐ Identify the project's evaluator
- ☐ Describe the evaluator's qualifications

Evaluation Plan → ❶ Evaluator

- ☐ Identify the project's evaluator
- ☐ Describe the evaluator's qualifications
- ☐ Refer to the evaluator's biosketch and letter of collaboration

Evaluators qualifications

Evaluators qualifications

- Experience evaluating STEM education projects

Evaluators qualifications

- Experience evaluating STEM education projects
- Strong research and evaluation skills

Evaluators qualifications

- Experience evaluating STEM education projects
- Strong research and evaluation skills
- Strong communication skills and a service orientation

Evaluators qualifications

- Experience evaluating STEM education projects
- Strong research and evaluation skills
- Strong communication skills and a service orientation
- Understanding of NSF and 2-year-college contexts

The funds to support an evaluator independent of the project or center must be requested …

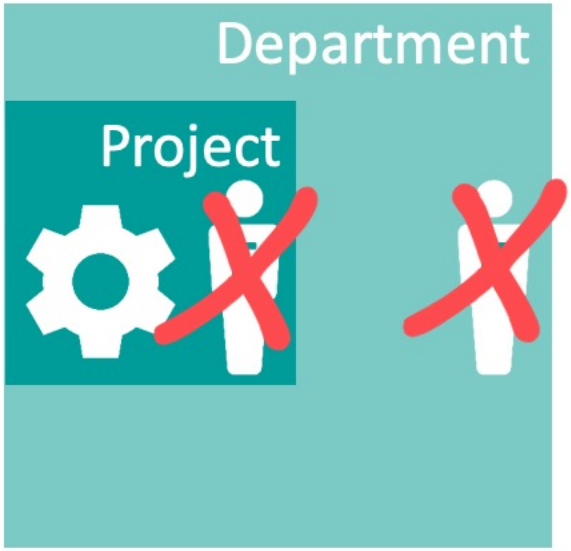
What counts as independent?

What counts as independent?

What counts as independent?

What counts as independent?

What counts as independent?



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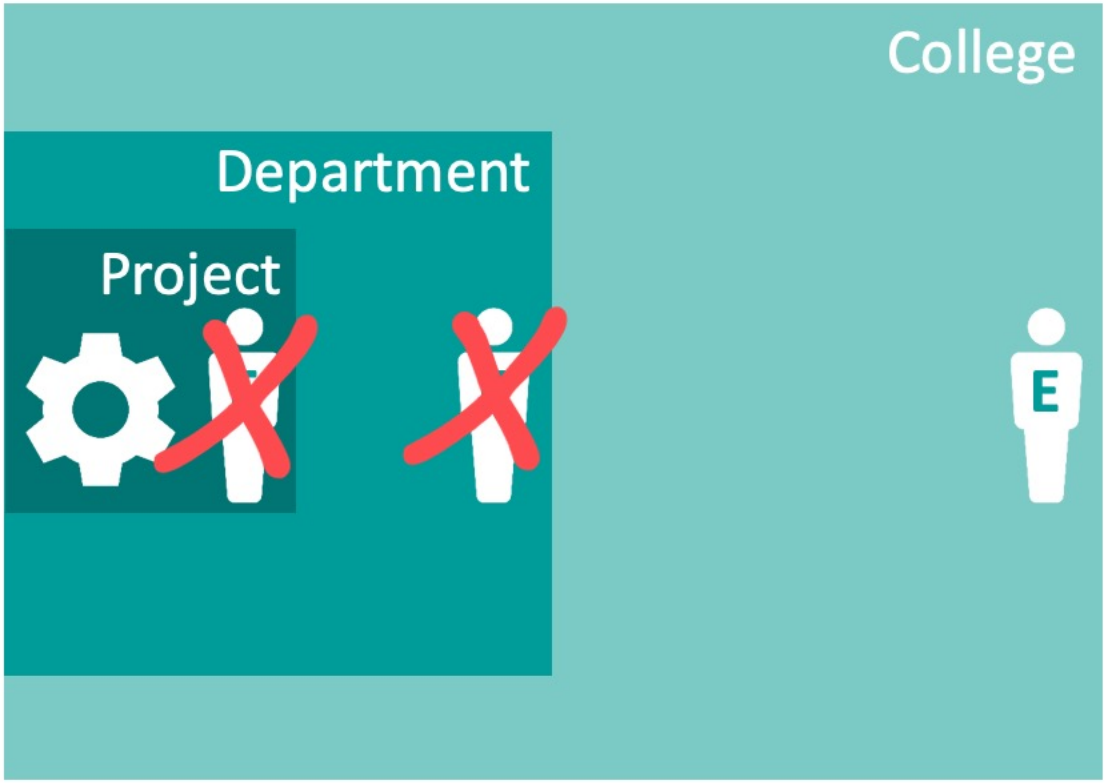

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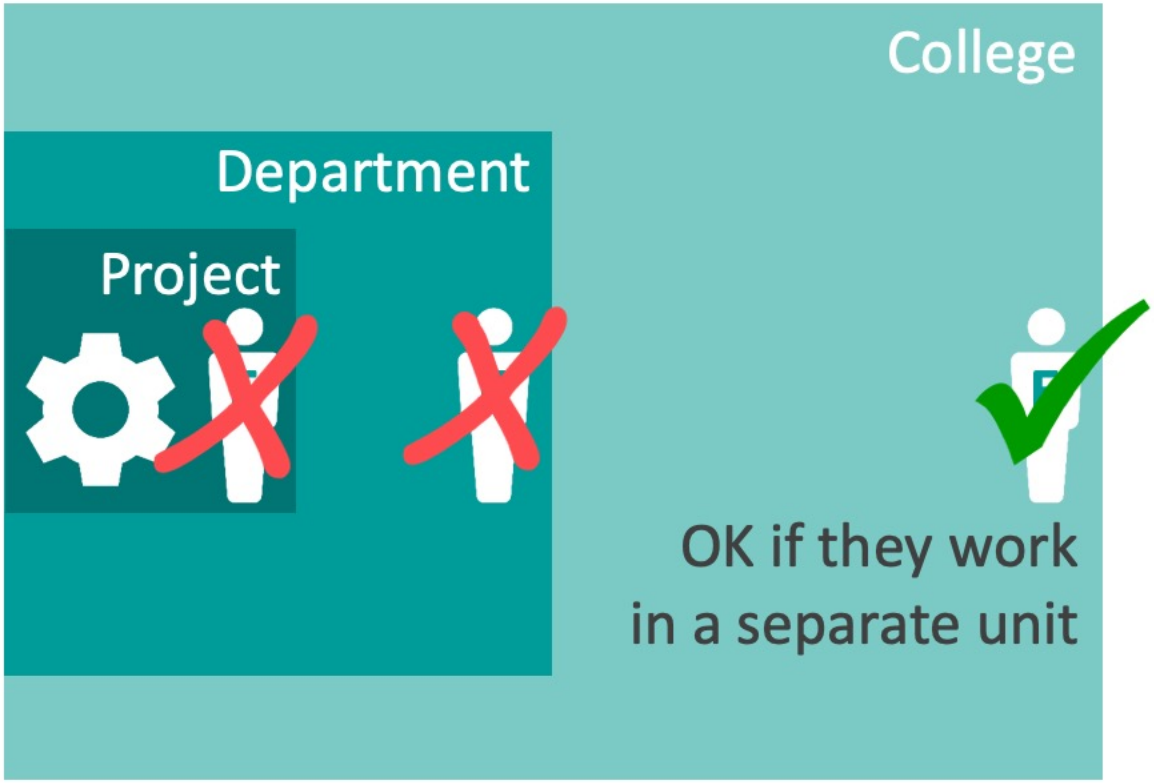

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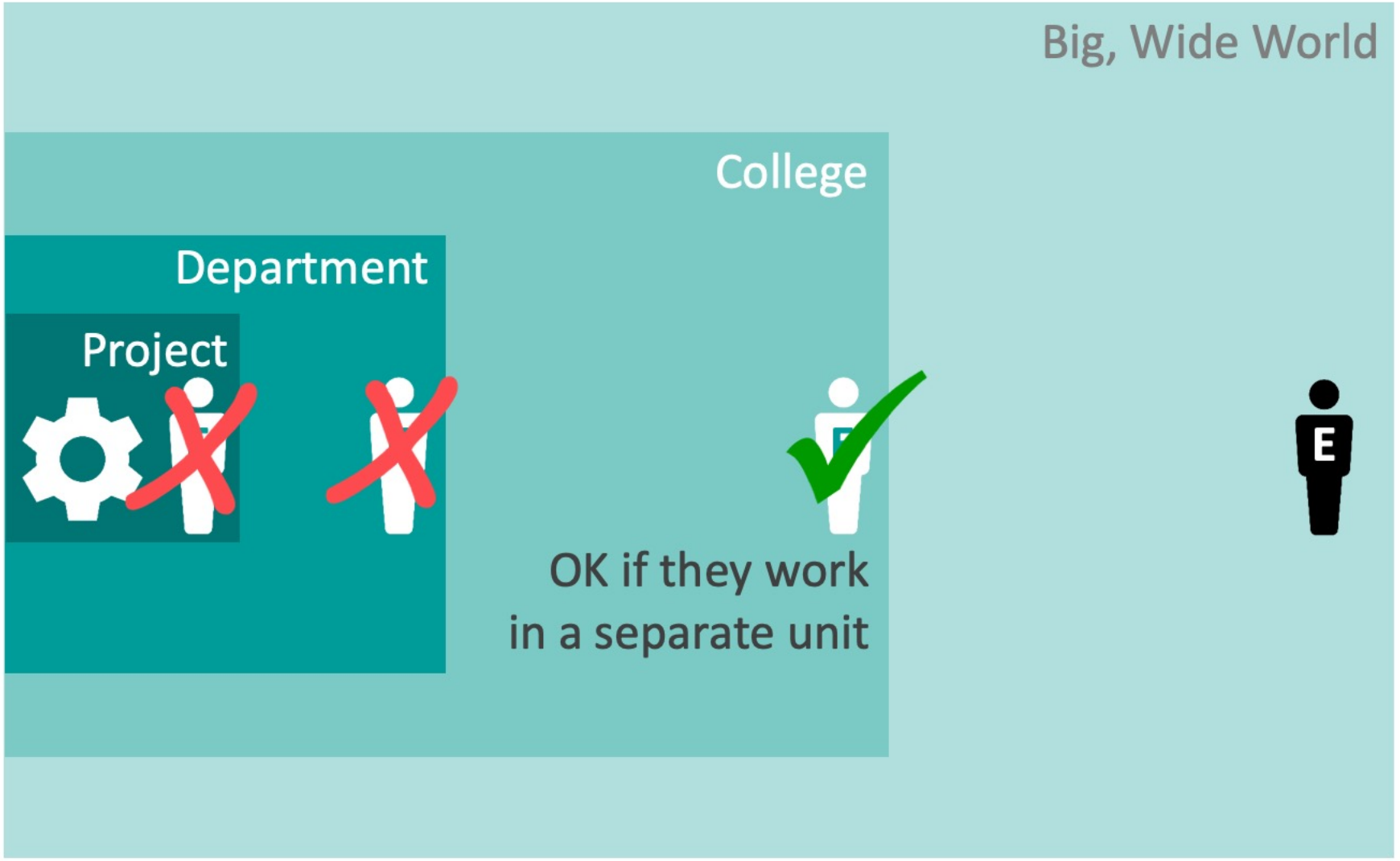

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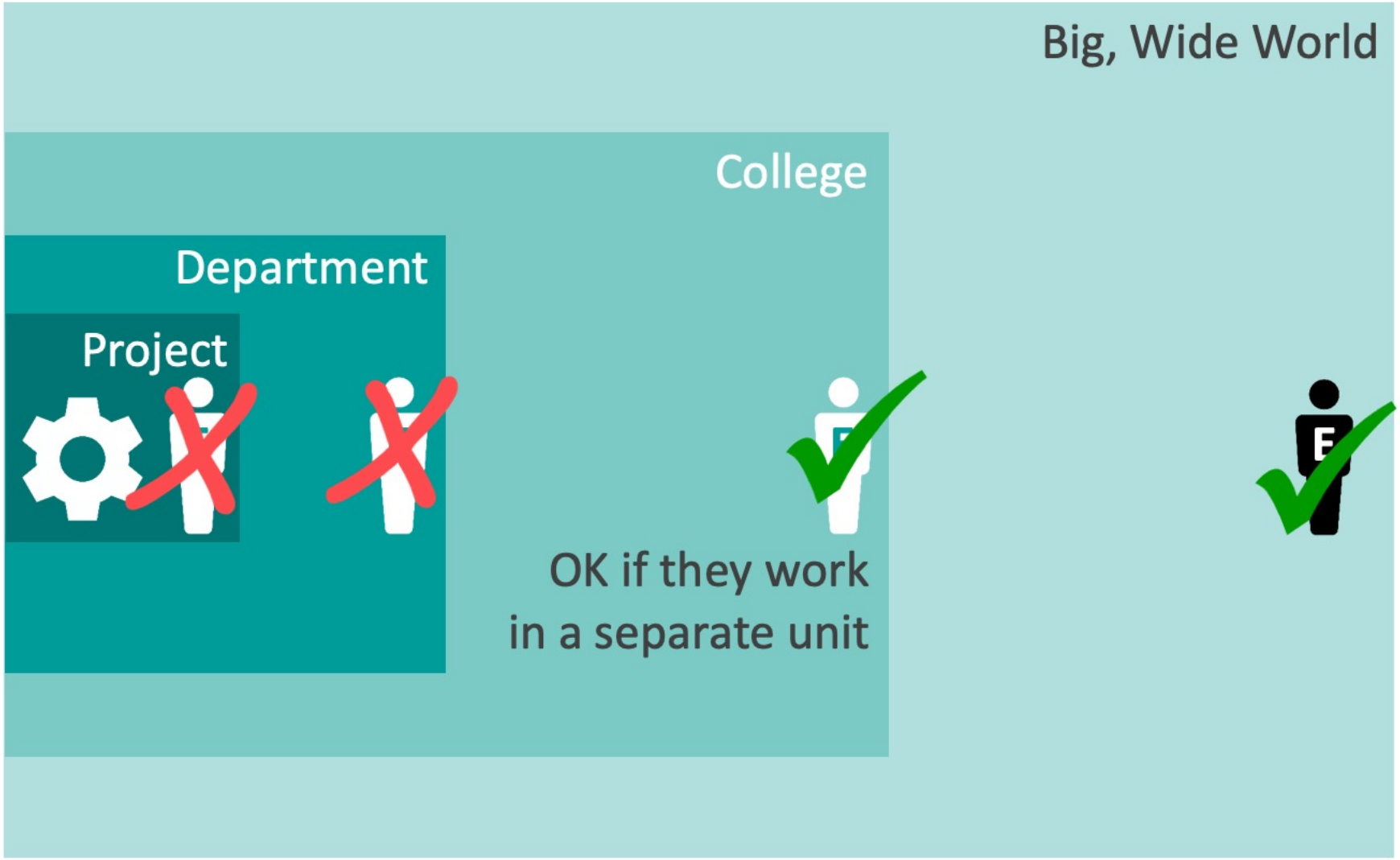

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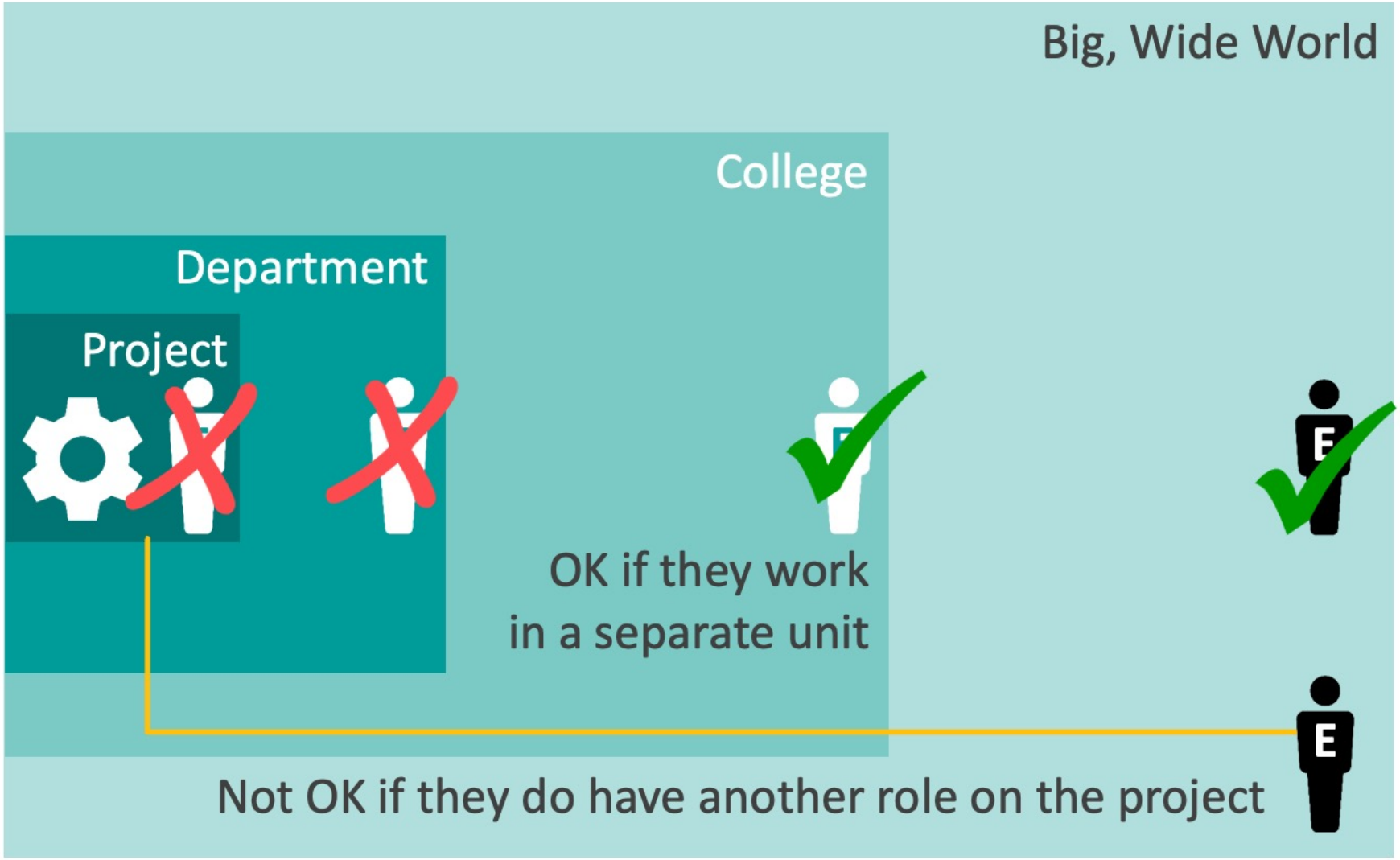

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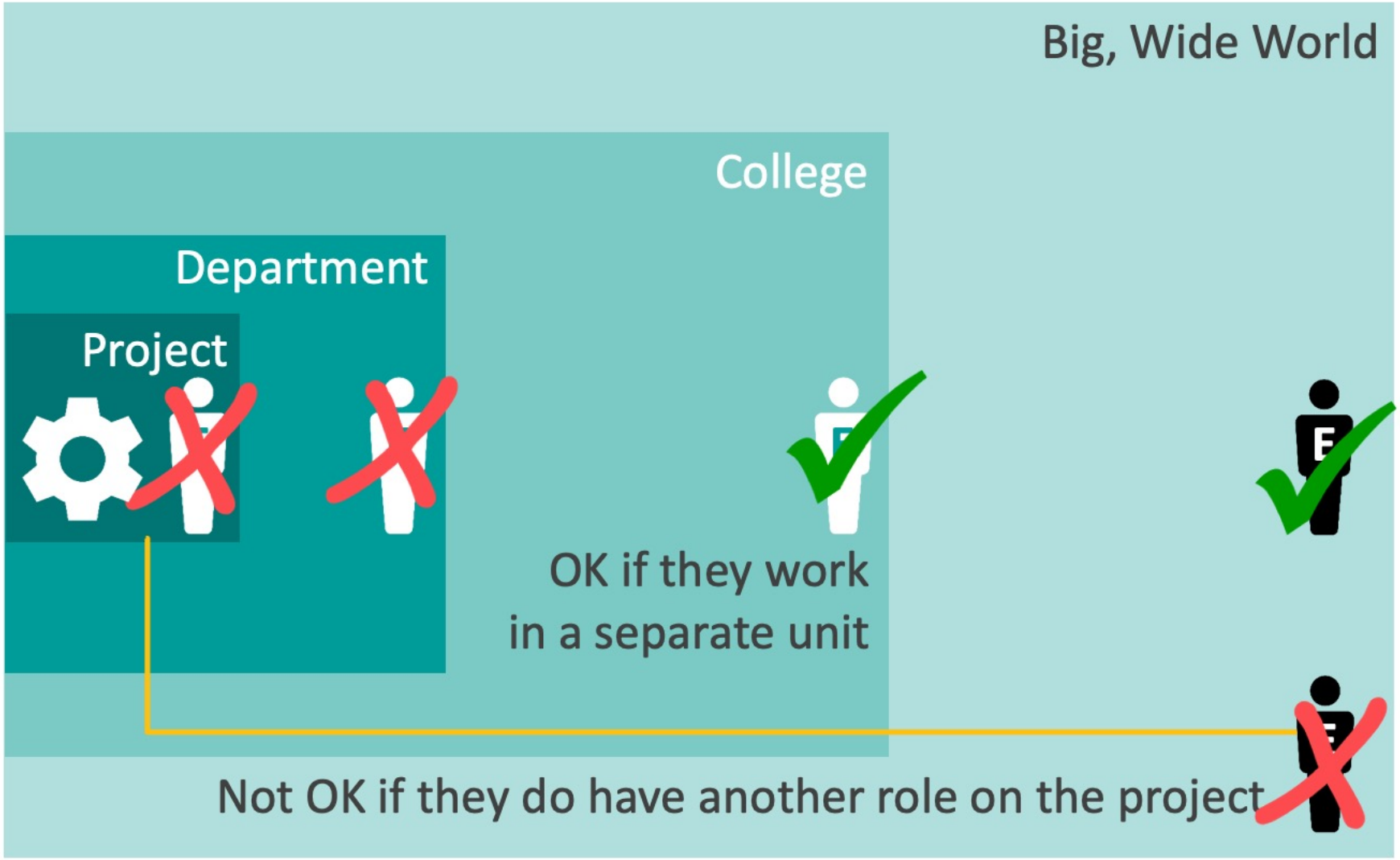


"How did you identify your ATE project's current external evaluator?"

How did you identify your ATE project's current external evaluator?

(n=236)

2019 ATE ANNUAL SURVEY

How did you identify your ATE project's current external evaluator?

(n=236)

2019 ATE ANNUAL SURVEY

How did you identify your ATE project's current external evaluator?

(n=236)

2019 ATE ANNUAL SURVEY

How did you identify your ATE project's current external evaluator?

(n=236)

How did you identify your ATE project's current external evaluator?

(n=236)

2019 ATE ANNUAL SURVEY

Over 70% of the respondents used a colleague or their grants office to identify their evaluator.

(n=236)

2019 ATE ANNUAL SURVEY

Evaluation Plan → ❶ Evaluator

- ☐ Identify the project's evaluator
- ☐ Describe the evaluator's qualifications
- ☐ Refer to the evaluator's biosketch and letter of collaboration

CHAT: Which proposal has the best description of the evaluator?

Proposal A

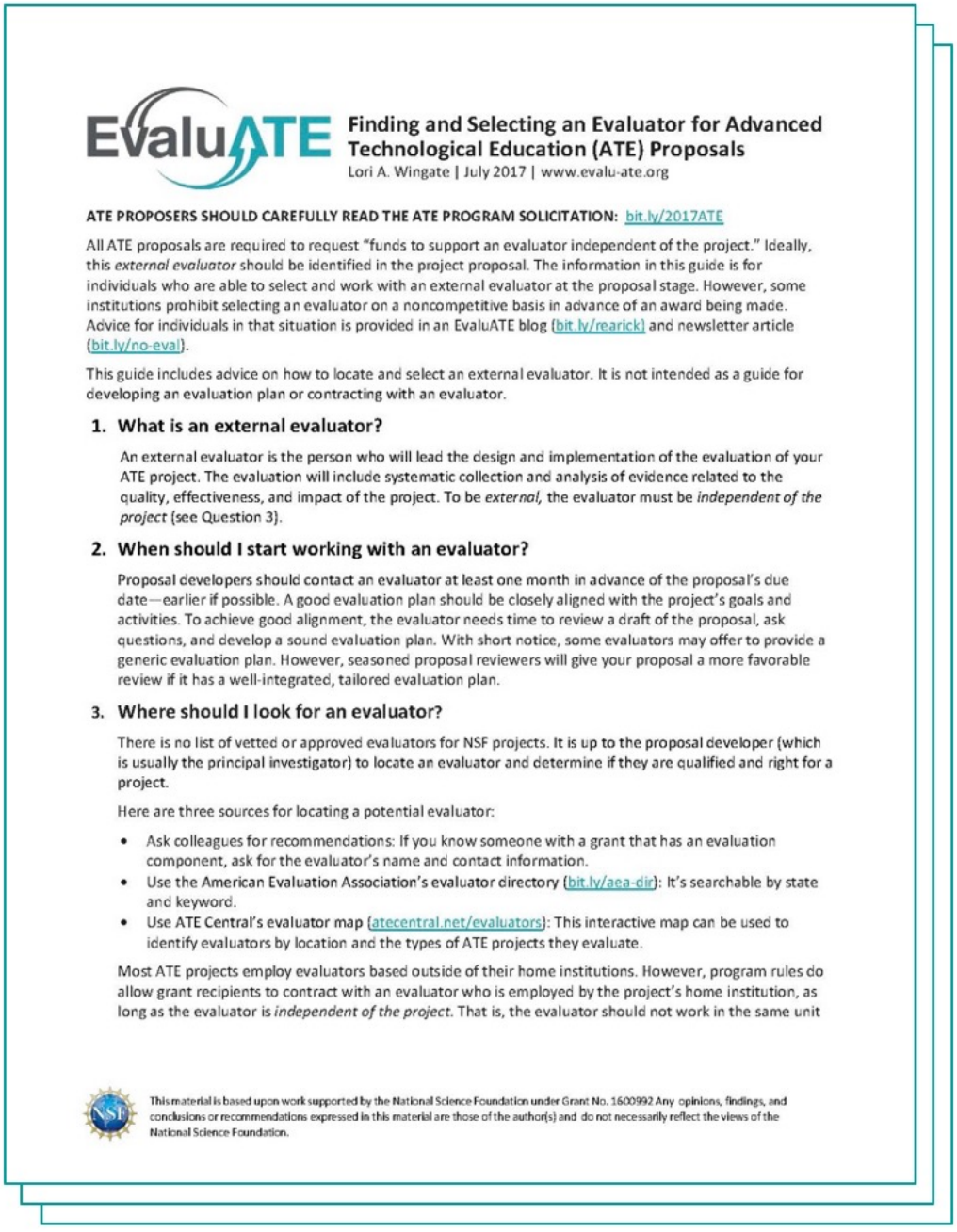
Delores Stormborn will lead the project's external evaluation. She is the CEO at The Stormborn Evaluation Group. She has conducted 20 STEM education evaluations, including several in the ATE program. Her biosketch and commitment letter are included in the supplementary documents section of this proposal which document her qualifications and experience.

Proposal B

Lannister University's Center for Evaluation will conduct the project's evaluation. This Center has been a leading evaluation service provider since 1975 and has several prominent evaluators on its staff, as well as a cadre of capable graduate students. When the project is funded, we will work with the evaluators there to further develop and implement the project's evaluation plan.

Proposal C

Julia Snow will serve as this project's external evaluator. She leads the college's faculty development center, providing guidance to instruction and assessment. She serves as chair of the college's Student Success Committee, and has coordinated data collection for several federal grants.



Finding and Selecting an Evaluator for Advanced Technological Education (ATE) Proposals

Lori A. Wingate | July 2017 | www.evalu-ate.org

ATE PROPOSERS SHOULD CAREFULLY READ THE ATE PROGRAM SOLICITATION: bit.ly/2017ATE

All ATE proposals are required to request "funds to support an evaluator independent of the project." Ideally, this *external evaluator* should be identified in the project proposal. The information in this guide is for individuals who are able to select and work with an external evaluator at the proposal stage. However, some institutions prohibit selecting an evaluator on a noncompetitive basis in advance of an award being made. Advice for individuals in that situation is provided in an EvaluATE blog (bit.ly/rearick) and newsletter article (bit.ly/no-eval).

This guide includes advice on how to locate and select an external evaluator. It is not intended as a guide for developing an evaluation plan or contracting with an evaluator.

1. What is an external evaluator?

An external evaluator is the person who will lead the design and implementation of the evaluation of your ATE project. The evaluation will include systematic collection and analysis of evidence related to the quality, effectiveness, and impact of the project. To be *external*, the evaluator must be *independent of the project* (see Question 3).

2. When should I start working with an evaluator?

Proposal developers should contact an evaluator at least one month in advance of the proposal's due date—earlier if possible. A good evaluation plan should be closely aligned with the project's goals and activities. To achieve good alignment, the evaluator needs time to review a draft of the proposal, ask questions, and develop a sound evaluation plan. With short notice, some evaluators may offer to provide a generic evaluation plan. However, seasoned proposal reviewers will give your proposal a more favorable review if it has a well-integrated, tailored evaluation plan.

3. Where should I look for an evaluator?

There is no list of vetted or approved evaluators for NSF projects. It is up to the proposal developer (which is usually the principal investigator) to locate an evaluator and determine if they are qualified and right for a project.

Here are three sources for locating a potential evaluator:

- Ask colleagues for recommendations: If you know someone with a grant that has an evaluation component, ask for the evaluator's name and contact information.
- Use the American Evaluation Association's evaluator directory (bit.ly/aea-dir): It's searchable by state and keyword.
- Use ATE Central's evaluator map (atecentral.net/evaluators): This interactive map can be used to identify evaluators by location and the types of ATE projects they evaluate.

Most ATE projects employ evaluators based outside of their home institutions. However, program rules do allow grant recipients to contract with an evaluator who is employed by the project's home institution, as long as the evaluator is *independent of the project*. That is, the evaluator should not work in the same unit

This material is based upon work supported by the National Science Foundation under Grant No. 1600992 Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

RESOURCE

Finding and Selecting an Evaluator for ATE Proposals

Evaluator Biographical Sketch Template for National Science Foundation (NSF) Proposals

This template was created by EvaluATE (evalu-ate.org). It is based on the National Science Foundation's guidelines for preparing biographical sketches for senior project personnel, which are available at bit.ly/bio-2017. The information about what evaluators should include in Products and Synergistic Activities sections are EvaluATE's suggestions, not NSF requirements. The biosketch must not exceed two pages.

Evaluator's Name

PROFESSIONAL PREPARATION

(List academic degrees and any pertinent certificates.)

Undergraduate Institution	Location	Major	Degree	Year
Graduate Institution	Location	Major	Degree	Year
Postdoctoral Institution	Location	Area		Years
Certificate-Granting Institution	Location	Area	Certificate	Year

APPOINTMENTS

(List employment history in reverse chronological order.)

Dates	Job Title	Employer

PRODUCTS

(List up to ten products that demonstrate your experience and competence in evaluation and knowledge of the proposed project's discipline. Examples may include publications, reports, and evaluation tools. All products must be citable and accessible. Include full reference information, including URL, if available).

SYNERGISTIC ACTIVITIES

(In paragraph form, list up to five examples that demonstrate your expertise in evaluation, especially as it pertains to the proposal. Examples may include ongoing or completed evaluations; development or adaptation of evaluation tools; leadership roles in the evaluation field; and invited lectures, presentations, or workshops on evaluation. If you have prior experience working in the proposal's discipline, describe that as well.)

RESOURCE

Evaluator Biographical Sketch Template for NSF Proposals

Questions?

Lyssa

Evaluation Questions

Evaluation Plan → ❷ Evaluation Questions

- ☐ List the key questions that the evaluation will address

Evaluation Plan → ❷ Evaluation Questions

- ☐ List the key questions that the evaluation will address
- ☐ Include questions about both project implementation and outcomes

Evaluation Plan → ❷ Evaluation Questions

- ☐ List the key questions that the evaluation will address
- ☐ Include questions about both project implementation and outcomes
- ☐ Ensure that questions align with the project's goals and activities

What makes a good evaluation question?

What makes a good evaluation question?

Evaluative

What makes a good evaluation question?

Evaluative

Non-evaluative:
How many students did the project serve?

What makes a good evaluation question?

Evaluative

Non-evaluative:
How many students did the project serve?

What makes a good evaluation question?

Evaluative

✗ **Non-evaluative:**
How many students did the project serve?

✓ **Evaluative:**
What was the project's impact on program enrollment?

What makes a good evaluation question?

Evaluative

Reasonable

What makes a good evaluation question?

Evaluative

Reasonable

Unreasonable:
Did the project increase manufacturing employment in the state?

What makes a good evaluation question?

Evaluative

Reasonable

Unreasonable:
Did the project increase manufacturing employment in the state?

What makes a good evaluation question?

Evaluative

Reasonable

✗ **Unreasonable:**
Did the project increase manufacturing employment in the state?

✓ **Reasonable:**
To what extent did students served by the project find employment in the manufacturing sector?

What makes a good evaluation question?

Evaluative

Reasonable

Specific

What makes a good evaluation question?

Evaluative

Reasonable

Specific

Vague:
Did the project increase instructor effectiveness?

What makes a good evaluation question?

Evaluative

Reasonable

Specific

Vague:
Did the project increase instructor effectiveness?

What makes a good evaluation question?

Evaluative

Reasonable

Specific

✗ **Vague:**
Did the project increase instructor effectiveness?

✓ **Specific:**
To what extent did participating instructors increase their knowledge about nanotechnology?

What makes a good evaluation question?

- Evaluative
- Reasonable
- Specific
- Answerable

What makes a good evaluation question?

Evaluative

Reasonable

Specific

Answerable

Unanswerable:
To what extent does the project affect long-term persistence in STEM careers?

What makes a good evaluation question?

- Evaluative
- Reasonable
- Specific
- Answerable

Unanswerable:
To what extent does the project affect long-term persistence in STEM careers?

What makes a good evaluation question?

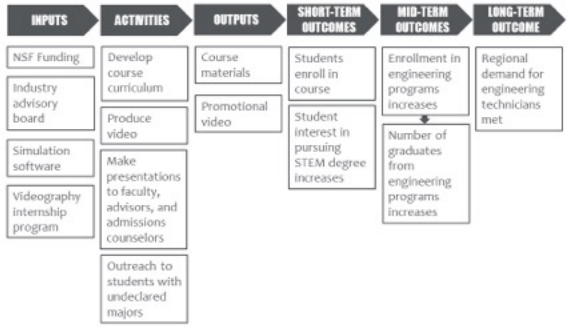
- Evaluative
- Reasonable
- Specific
- Answerable

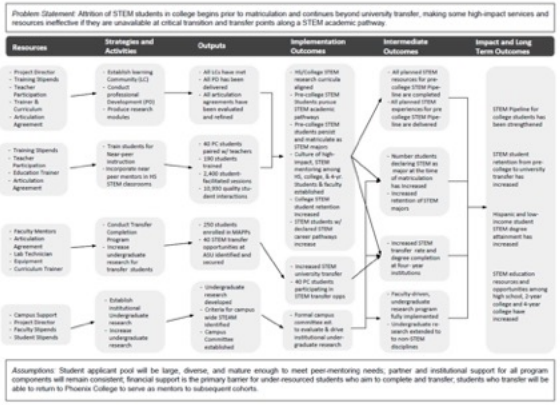
✗ **Unanswerable:**
To what extent does the project affect long-term persistence in STEM careers?

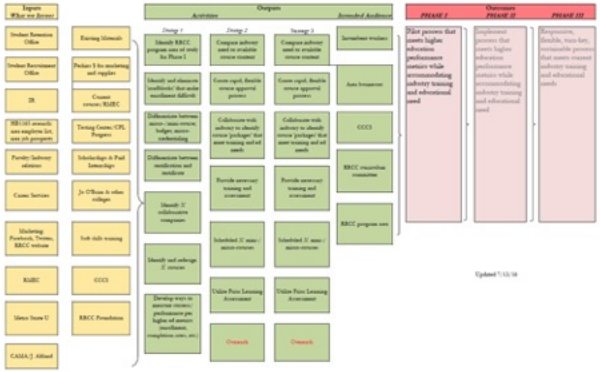
✓ **Answerable:**
To what extent does the project affect students interest in pursuing a future career in STEM?

What makes a good evaluation question?

- Evaluative
- Reasonable
- Specific
- Answerable
- Complete

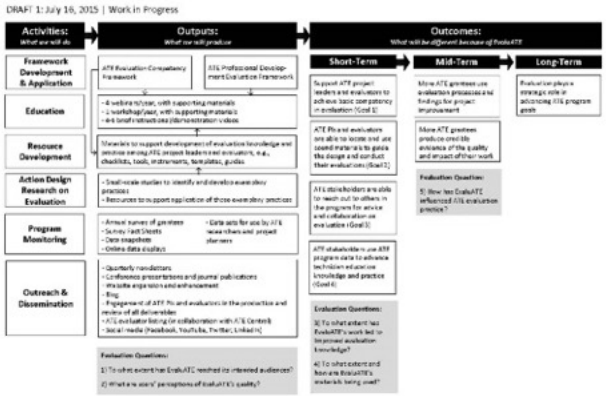




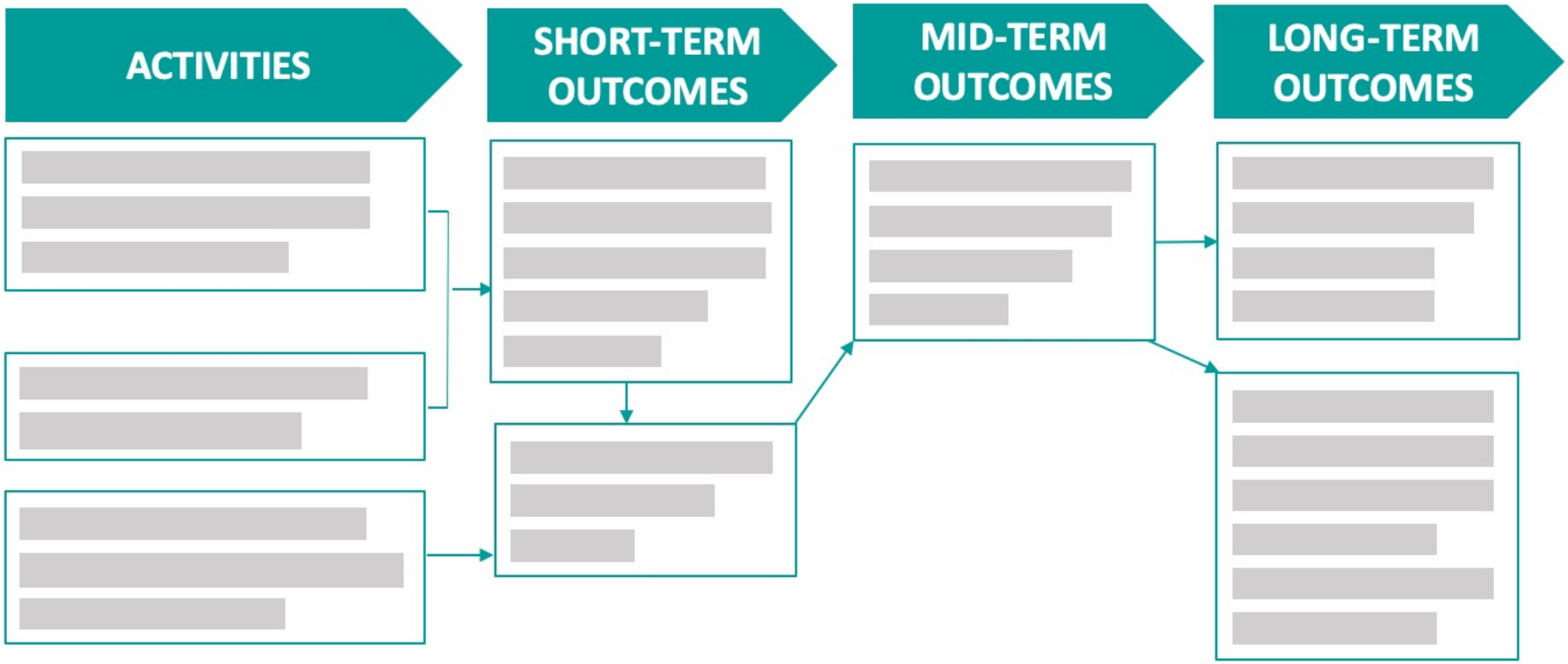


Logic Models

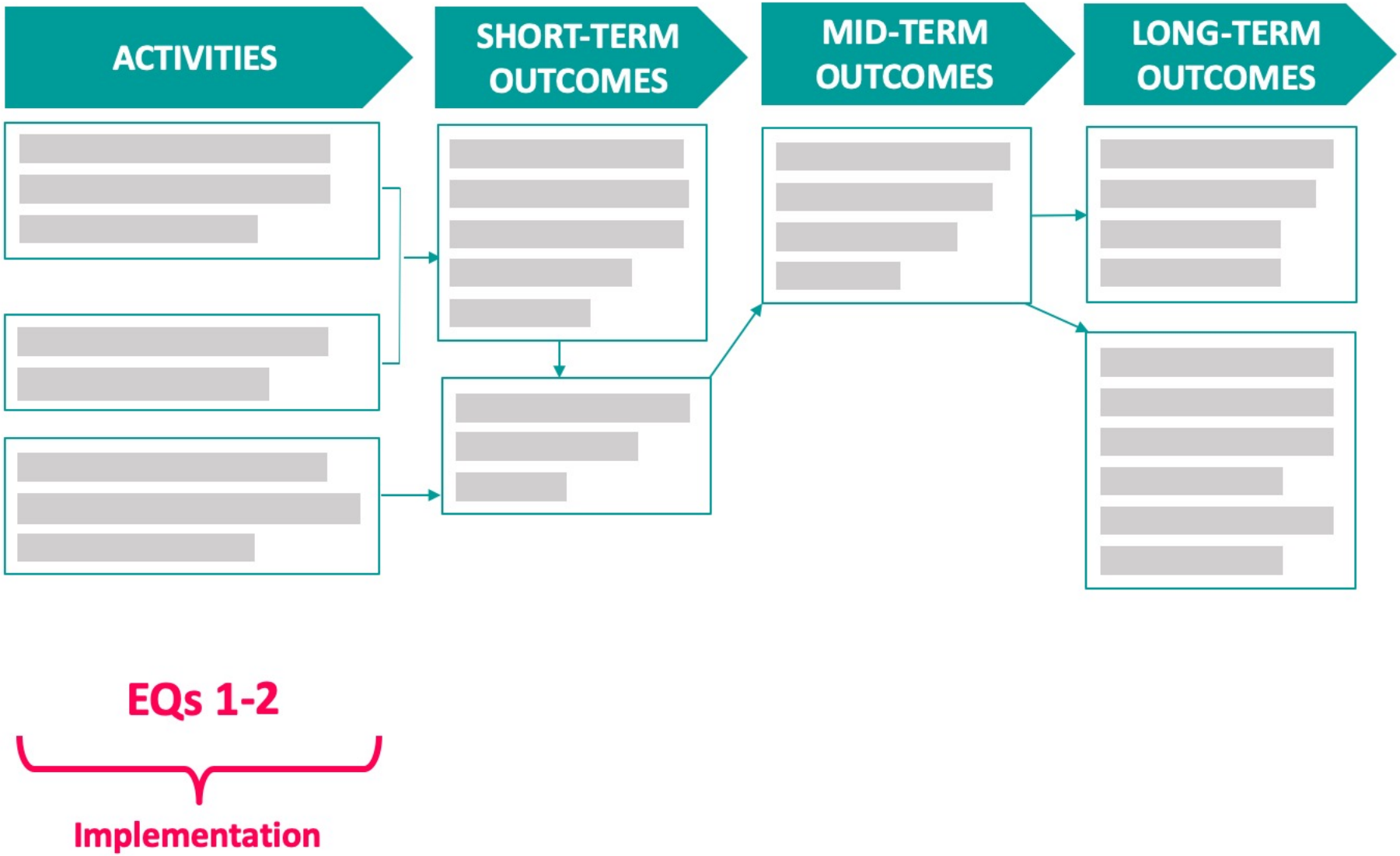
Inputs/ Resources	Activities /Tasks	Outputs / Deliverables	Short-Term Outcomes	Mid-Term Outcomes	Long-Term Outcomes
Needs Assessment & Networking Development •Survey tool •List of experts •Interview strategy	•Conduct Survey •Recruit faculty & students •Conduct interviews •Analyze Survey and interviews	•Prioritize curricula from findings •Publicize needs assessment on QCS/CCS website	•Establish a baseline for industry needs & standards with the survey and interview results	•Use data as the framework for the pilot QCS/CSS curricula design	•Needs assessment findings are accepted as industry standards •Researchers present and publish on the QCS/CSS model
Faculty Training •Teach-Flipped MOOC •QKD platform technology installed •QCS Learning Lab setup	•Revise Teach-Flipped MOOC for QCS faculty •Learning Lab used for training •All participating faculty complete training	•Completed Curricula •Complete MOOC & technical training •Collect/analyze training data	•Faculty are prepared to teach as a flipped format and know how to integrate the QKD platform	•Due to positive impact, more faculty interested & recruited •Faculty translate the flipped model and QKD platform to other courses	•Utah QCS/CSS coalition becomes a national / international model •Curricula are marketed as QCS professional development
Pilot Curricula •Students recruited for SLCC pilot •Piloted/revised Curricula •Class observations by CTLE & OdeLS	•Curricula built in LMS •Rubrics created •Complete pilot courses •Collect feedback, focus groups, interviews, and classroom observations	•Data analysis of pilot courses •Completed courses student evaluation •Revise courses based on pilots	•Successful implementation of pilot courses •Pilot data used to revise course •Successful course used to recruit students for next courses	•Word of mouth refereals increase students' interest and registration •Students taking SLCC courses continue on to University course	• Increase in post-NSF financial support • Increased QCS national recognition • Increase in other cross-discipline teaching
QCS Student Outcomes •Pre- & post-knowledge instrument •Student learning assessments ready	•Collected data from students, faculty, and course analytic system •Analyzed data from students, faculty, and course analytic system	•Courses successfully completed by students •Students move onto the next course in series	•Students report QCS increased knowledge and skills confidence •Students grades aligns to their perceived learning	•Increased # of QCS students in QCS Pathway •Higher retention rate of QCS/CSS students •Better academic performance for QCS students than non-QCS students	•Students are being hired and retained based on QCS knowledge, skills and dispositions as a result of participation in QCS program
Inter-institutional Collaboration •Participants in the study willing to be part of the interdiscipline collaboration research	•Compile formative data on collaboration •Conduct end-of-grant interviews for cross-institutional collaboration & synergy	•Data Analysis for K-12 with College collaboration •Cross-Institutional findings shared with stakeholders on QCS website	•Faculty and students are actively engaged across the 3 levels of QCS courses	•Establishment of a cross-institutional culture of collaboration •Increased number of presentations and publications across the 3 QCS course levels	•Other programs establish pathways from high school to college •Other successful K-12 – College pathway grants result from this QCS project



PROJECT LOGIC MODEL



PROJECT LOGIC MODEL



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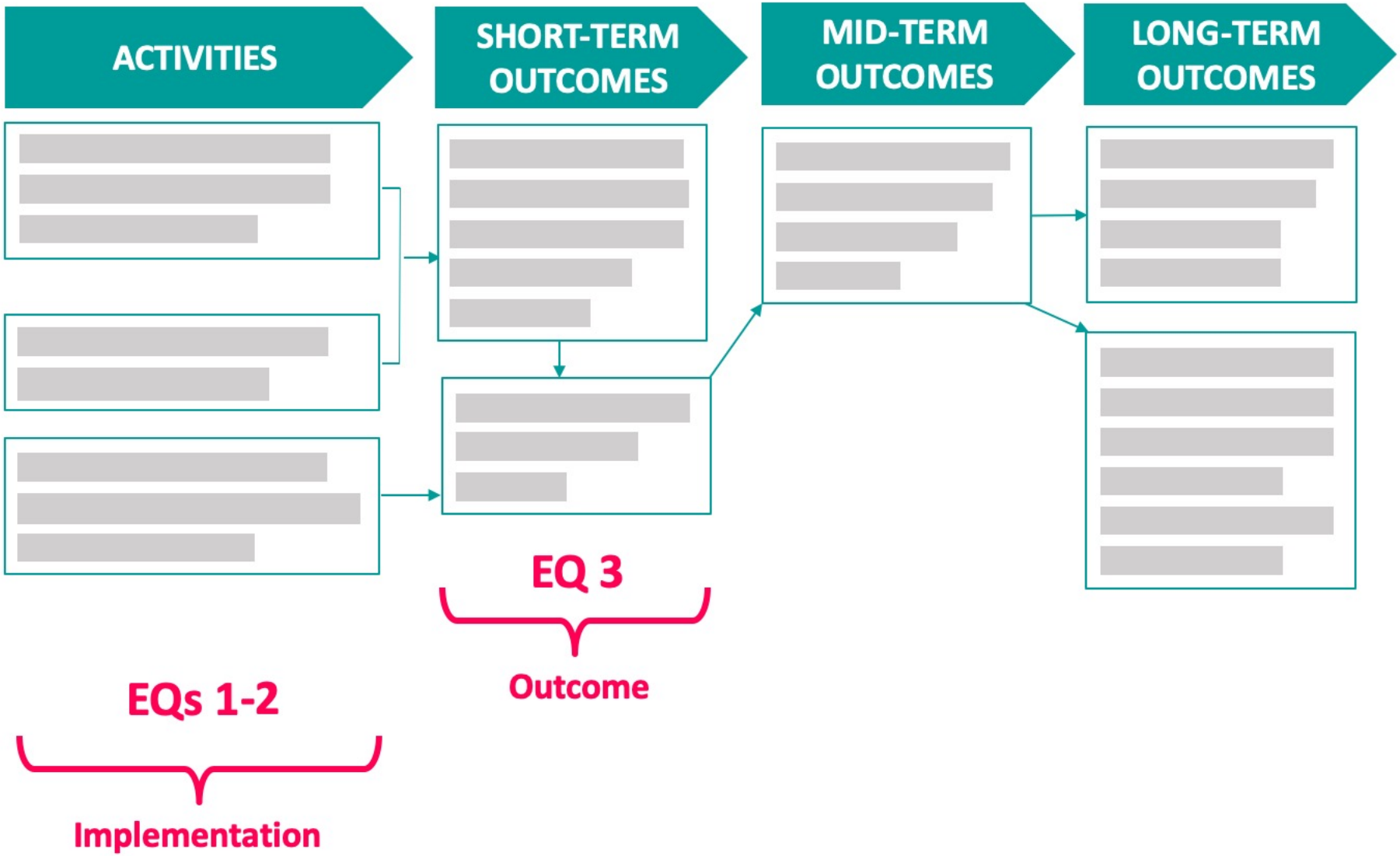

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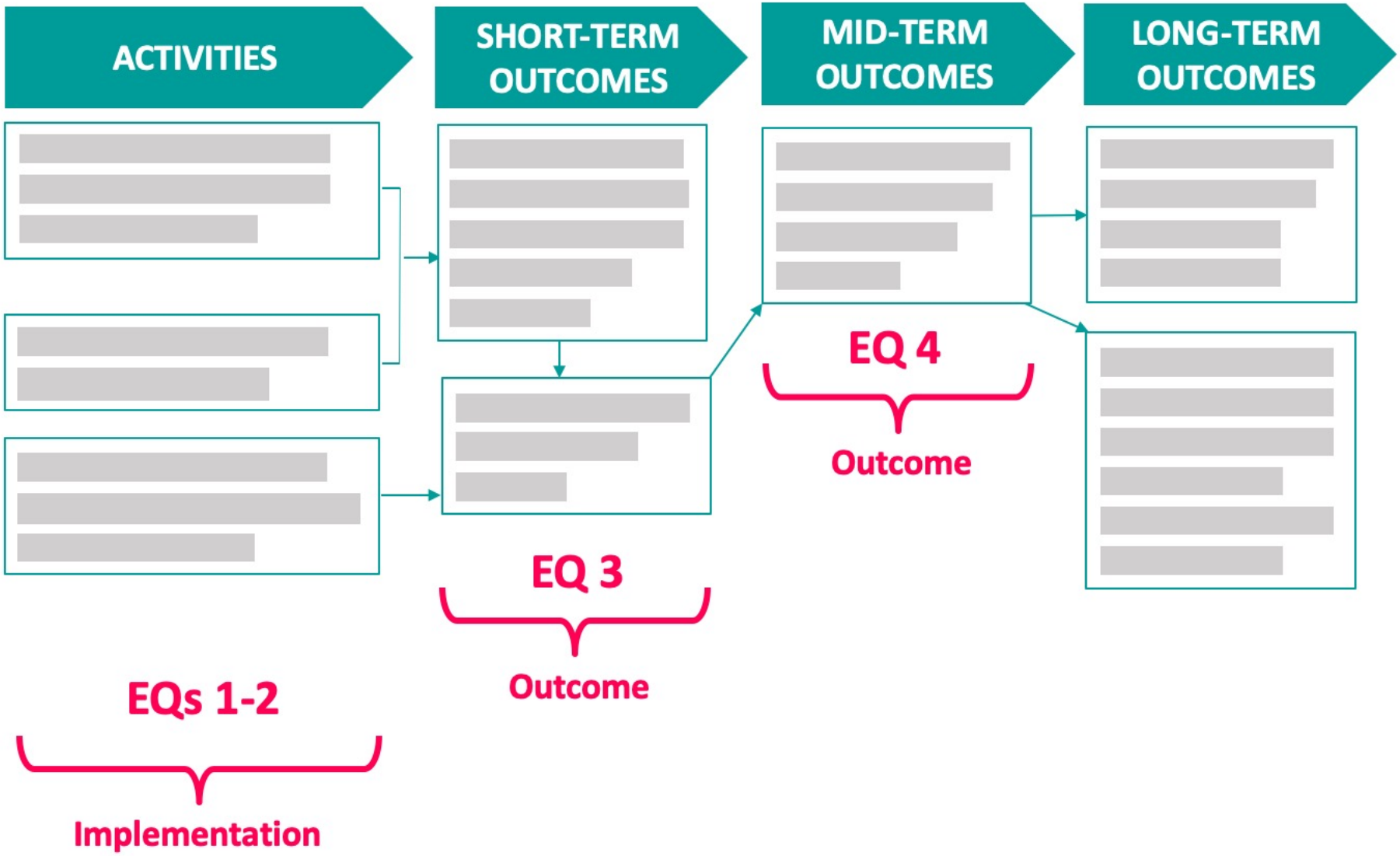
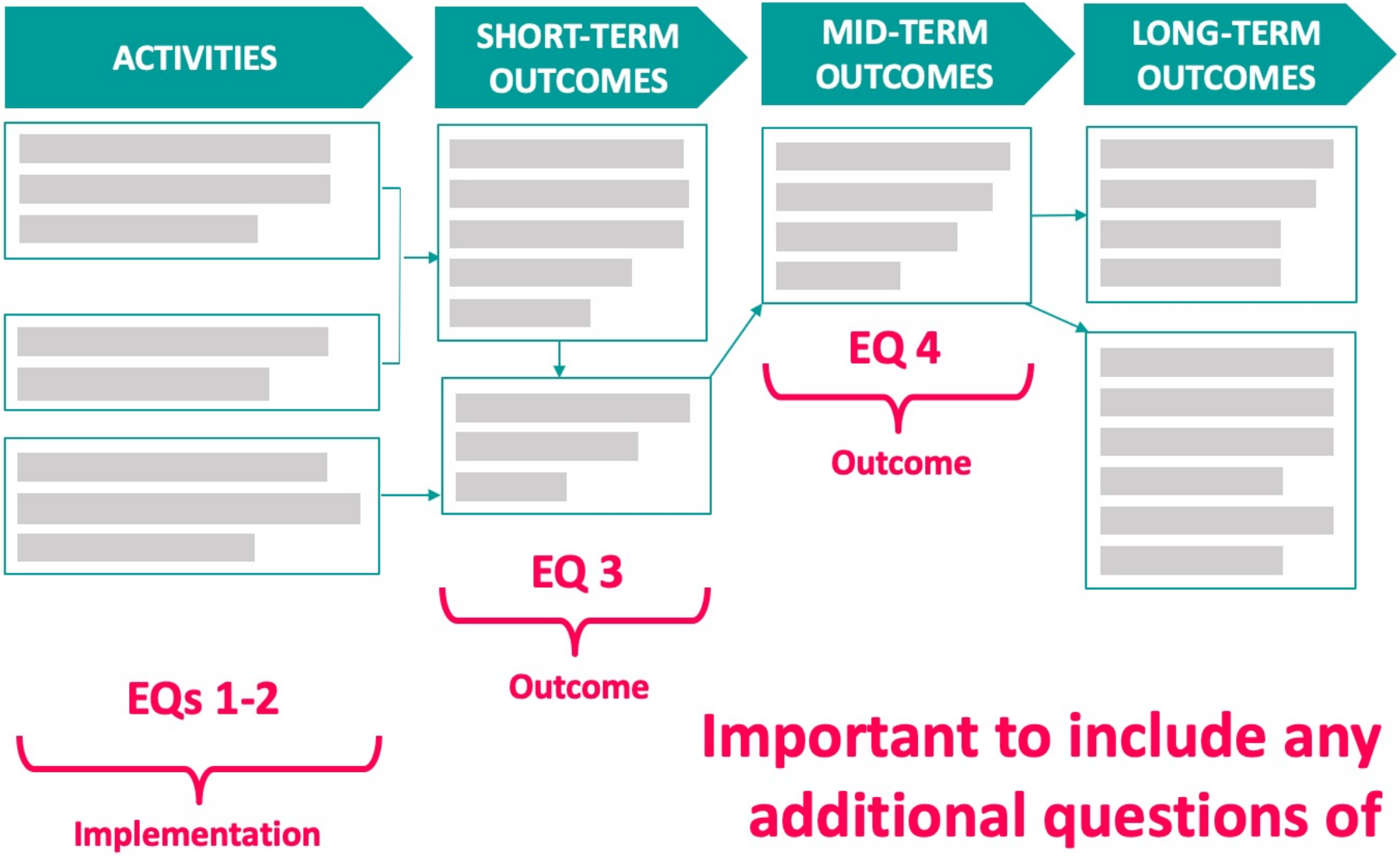
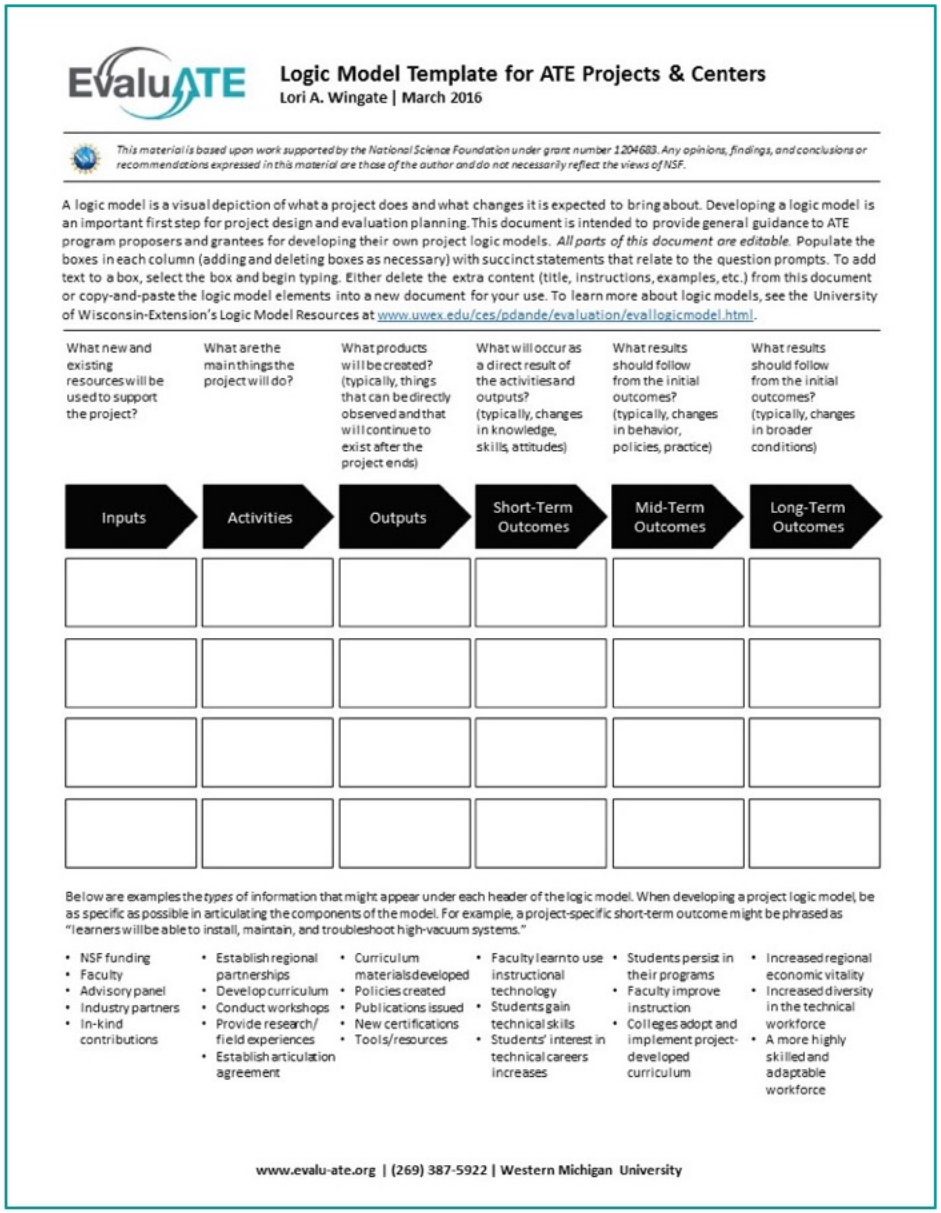


PROJECT LOGIC MODEL



Important to include any additional questions of interest to stakeholders!



EvaluATE

Logic Model Template for ATE Projects & Centers

Lori A. Wingate | March 2016

This material is based upon work supported by the National Science Foundation under grant number 1204683. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of NSF.

A logic model is a visual depiction of what a project does and what changes it is expected to bring about. Developing a logic model is an important first step for project design and evaluation planning. This document is intended to provide general guidance to ATE program proposers and grantees for developing their own project logic models. *All parts of this document are editable.* Populate the boxes in each column (adding and deleting boxes as necessary) with succinct statements that relate to the question prompts. To add text to a box, select the box and begin typing. Either delete the extra content (title, instructions, examples, etc.) from this document or copy-and-paste the logic model elements into a new document for your use. To learn more about logic models, see the University of Wisconsin-Extension's Logic Model Resources at www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html.

Inputs	Activities	Outputs	Short-Term Outcomes	Mid-Term Outcomes	Long-Term Outcomes
What new and existing resources will be used to support the project?	What are the main things the project will do?	What products will be created? (typically, things that can be directly observed and that will continue to exist after the project ends)	What will occur as a direct result of the activities and outputs? (typically, changes in knowledge, skills, attitudes)	What results should follow from the initial outcomes? (typically, changes in behavior, policies, practice)	What results should follow from the initial outcomes? (typically, changes in broader conditions)

Below are examples the *types* of information that might appear under each header of the logic model. When developing a project logic model, be as specific as possible in articulating the components of the model. For example, a project-specific short-term outcome might be phrased as "learners will be able to install, maintain, and troubleshoot high-vacuum systems."

- NSF funding
- Faculty
- Advisory panel
- Industry partners
- In-kind contributions

- Establish regional partnerships
- Develop curriculum
- Conduct workshops
- Provide research/ field experiences
- Establish articulation agreement

- Curriculum materials developed
- Policies created
- Publications issued
- New certifications
- Tools/resources

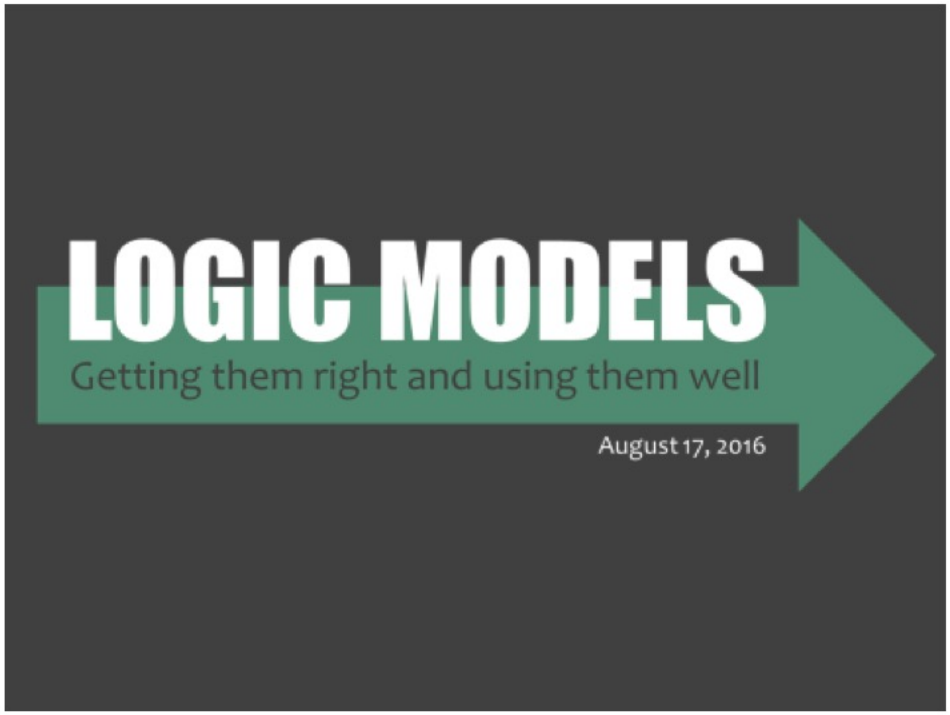
- Faculty learn to use instructional technology
- Students gain technical skills
- Students' interest in technical careers increases

- Students persist in their programs
- Faculty improve instruction
- Colleges adopt and implement project-developed curriculum

- Increased regional economic vitality
- Increased diversity in the technical workforce
- A more highly skilled and adaptable workforce

RESOURCE

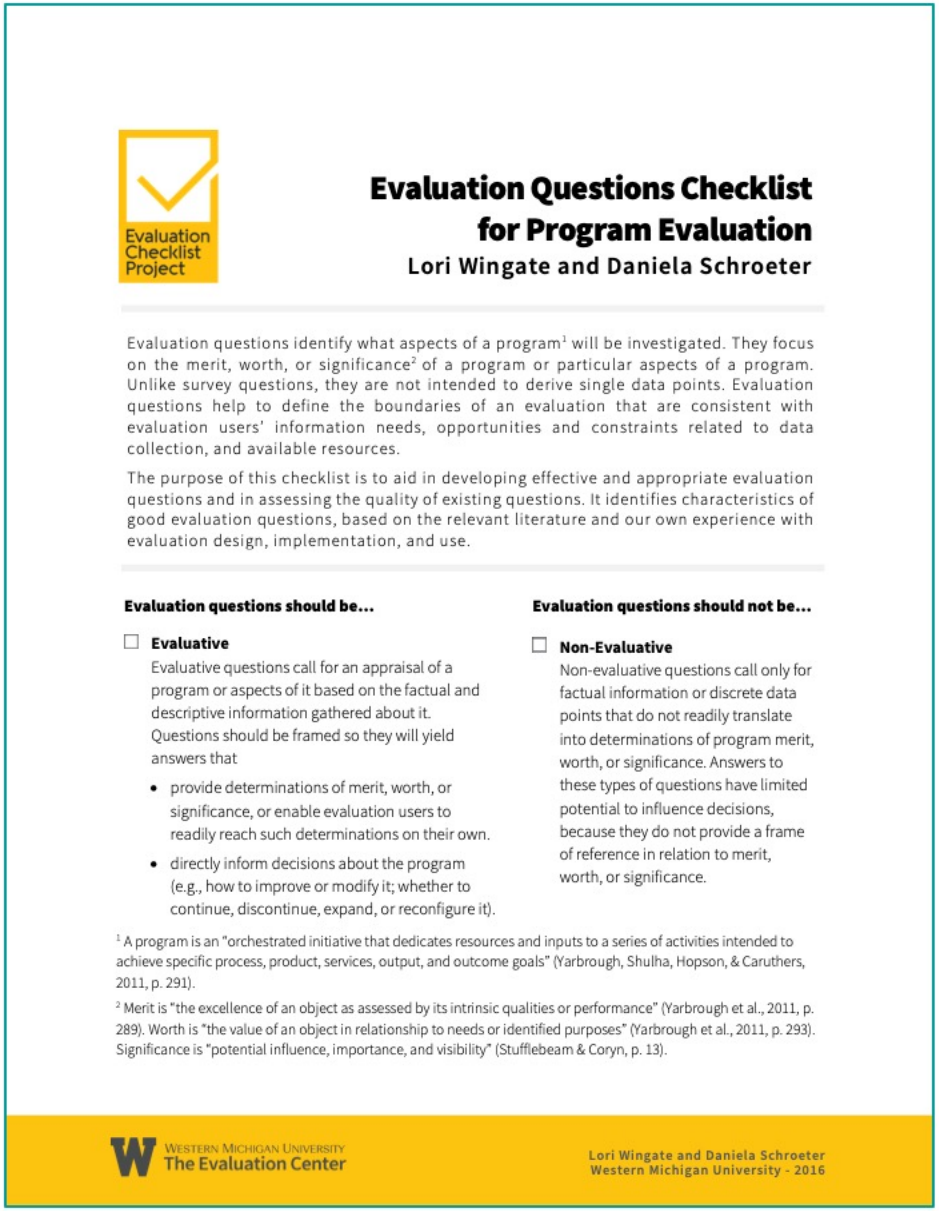
Logic Model Template for ATE Projects



RESOURCE

Logic Models: Getting Them Right and Using Them Well

(webinar recording and handouts)



Evaluation Checklist Project

Evaluation Questions Checklist for Program Evaluation

Lori Wingate and Daniela Schroeter

Evaluation questions identify what aspects of a program[1] will be investigated. They focus on the merit, worth, or significance[2] of a program or particular aspects of a program. Unlike survey questions, they are not intended to derive single data points. Evaluation questions help to define the boundaries of an evaluation that are consistent with evaluation users' information needs, opportunities and constraints related to data collection, and available resources.

The purpose of this checklist is to aid in developing effective and appropriate evaluation questions and in assessing the quality of existing questions. It identifies characteristics of good evaluation questions, based on the relevant literature and our own experience with evaluation design, implementation, and use.

Evaluation questions should be...

☐ **Evaluative**

Evaluative questions call for an appraisal of a program or aspects of it based on the factual and descriptive information gathered about it. Questions should be framed so they will yield answers that

- provide determinations of merit, worth, or significance, or enable evaluation users to readily reach such determinations on their own.
- directly inform decisions about the program (e.g., how to improve or modify it; whether to continue, discontinue, expand, or reconfigure it).

Evaluation questions should not be...

☐ **Non-Evaluative**

Non-evaluative questions call only for factual information or discrete data points that do not readily translate into determinations of program merit, worth, or significance. Answers to these types of questions have limited potential to influence decisions, because they do not provide a frame of reference in relation to merit, worth, or significance.

[1] A program is an "orchestrated initiative that dedicates resources and inputs to a series of activities intended to achieve specific process, product, services, output, and outcome goals" (Yarbrough, Shulha, Hopson, & Caruthers, 2011, p. 291).

[2] Merit is "the excellence of an object as assessed by its intrinsic qualities or performance" (Yarbrough et al., 2011, p. 289). Worth is "the value of an object in relationship to needs or identified purposes" (Yarbrough et al., 2011, p. 293). Significance is "potential influence, importance, and visibility" (Stufflebeam & Coryn, p. 13).

Western Michigan University
The Evaluation Center

Lori Wingate and Daniela Schroeter
Western Michigan University - 2016

RESOURCE

Evaluation Questions Checklist

Data

Evaluation Plan → ❸ Data

- ☐ What information will be used to answer the evaluation questions

Evaluation Plan → ❸ Data

- ☐ What information will be used to answer the evaluation questions
- ☐ How the information will be obtained and from what sources

Evaluation Plan → ❸ Data

- ☐ What information will be used to answer the evaluation questions
- ☐ How the information will be obtained and from what sources
- ☐ Procedures for summarizing quantitative and qualitative data

Evaluation Plan → ❸ Data

- ☐ What information will be used to answer the evaluation questions
- ☐ How the information will be obtained and from what sources
- ☐ Procedures for summarizing quantitative and qualitative data
- ☐ Procedures for interpreting findings to answer evaluation questions

Indicators

What will be measured in order to answer evaluation questions

Indicators

What will be measured in order to answer evaluation questions

Data Collection Methods

Obtaining information needed for the evaluation

Indicators

What will be measured in order to answer evaluation questions

Data Collection Methods

Obtaining information needed for the evaluation

Analysis

Transforming raw data into usable information

Indicators

What will be measured in order to answer evaluation questions

Data Collection Methods

Obtaining information needed for the evaluation

Analysis

Transforming raw data into usable information

Interpretation

Translating findings into conclusions that address the evaluation questions

Indicators

Data Collection Methods

Analysis

Interpretation

It's OK to sacrifice some detail

Must convey there is a CONCRETE PLAN for collecting and using evaluation data

CHAT: What's your opinion of this description of the data that will be used in an evaluation?

The evaluation will utilize a mixed-methods approach in which quantitative and qualitative measures of performance will be used in both formative and summative manner to gauge the merit and worth of the grant initiative. Methods will include surveys, interviews, and review of program records.

Data Matrix

Evaluation Question 3: To what extent and how are project activities impacting enrollment and persistence in the aviation program?

Indicators	Data Sources and Methods	Analysis	Interpretation
Number of students in program who attended summer camp	Camp and admission records	Counts	Compare with project target of 5 per year
Number of students enrolled in program	Program records	Counts	Compare with project target of 5 per year
Students' opinions about AV 100 course	Survey	Descriptive statistics Inductive coding of qualitative data	Compare results with rubric to judge degree of influence
Graduating students' perceptions of what influenced decisions about their program of study	Focus group with students	Thematic coding to determine factors that increase or suppress interest in aviation program	Identify which, if any, factors can be influenced by the program

Data Matrix

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RESOURCE

Evaluation Data Matrix

Evaluation Data Matrix Template

Lori Wingate | July 2017

This material is based upon work supported by the National Science Foundation under grant number 1600992. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of NSF.

An evaluation plan should include a clear description of what data will be collected, from what sources and how, by whom, and when, as well as how the data will be analyzed. Placing this information in a matrix helps ensure that there is a viable plan for collecting all the data necessary to answer each evaluation question and that all collected data will serve a specific, intended purpose. The table below may be copied into another document, such as a grant proposal, and edited/ expanded as needed. An example is provided on the next page.

Evaluation Question:					
Indicator	**Data Source and Methods**	**Responsible Party**	**Timing**	**Analysis Plan**	**Interpretation**

If space is limited, such as in a National Science Foundation proposal, fewer columns may be used. It is most critical to include the evaluation questions, indicators, data sources and methods, and timing.

DEFINITIONS

Evaluation Questions are overarching questions about a project's quality or impact. The number of evaluation questions depends on the scope and purpose of the evaluation; 3 to 7 questions is typical. Questions should address both project implementation and outcomes.

Indicators are specific pieces of information about an aspect of a project—basically, what will be measured in order to answer the evaluation questions. It is useful to use multiple indicators to address an evaluation question, including qualitative and quantitative data.

Data Sources are the entities from which data will be collected. Typical data sources for ATE evaluations include project personnel, students, graduates, faculty, project partners, business and industry representatives, institutional records, website usage statistics, and teaching and learning artifacts.

Data Collection Methods are the means by which information will be gathered. Typical methods include surveys, focus groups, interviews, observations, and institutional database queries.

Responsible Parties are the individuals or organizations tasked with collecting the needed information. In many cases, data collection requires cooperation among multiple entities. For example, an external evaluator may be responsible for an administering a survey, but a member of the project staff may need to supply the contact information.

Timing identifies when and how frequently data will be collected (e.g., at events, quarterly, annually). It is important to identify approximately when data collection will take place to ensure the information will be obtained when needed for reporting purposes and decision making and that the data collection schedule is conducive to other things taking place in project's context (e.g., other major data collection activities, semester schedules).

Analysis Plan how the quantitative and qualitative data will be summarized into meaningful, usable information.

Interpretation is how the analyzed data will be used to reach conclusions related to the evaluation questions.

Questions?

Communication and Use

Evaluation Plan → 4 Communication and Use

- ☐ Identify what evaluation reports will be prepared

Evaluation Plan → 4 Communication and Use

- ☐ Identify what evaluation reports will be prepared
- ☐ Identify the frequency with which the evaluator will communicate with project team

Evaluation Plan → 4 Communication and Use

- ☐ Identify what evaluation reports will be prepared
- ☐ Identify the frequency with which the evaluator will communicate with project team
- ☐ Describe how evaluation results will be shared with external audiences

ATE-Specific Review Criteria Related to Evaluation

Is the evaluation likely to provide useful information to the project and others?

Will the project evaluation inform others through the communication of results?

Planning for Evaluation Communication and Use

Planning for Evaluation Communication and Use

Formal reporting should occur at least annually

Planning for Evaluation Communication and Use

Formal reporting should occur at least annually

Project team should engage with evaluator regularly

Planning for Evaluation Communication and Use

Formal reporting should occur at least annually

Project team should engage with evaluator regularly

Show commitment to using results for improvement

CHAT: Which proposal has the best description of evaluation communication and use?

Proposal A

The evaluator will work with the project PI to prepare required annual reports submitted to NSF.

Proposal B

The evaluator will meet with the project team quarterly to share evaluation results and receive updates on the project. Interim evaluation reports will be used by project team to improve camps and courses. In the final year of the project, the project PI will collaborate with the evaluator to prepare a presentation about the project evaluation that the PI will present at national conferences.

Proposal C

The evaluator will submit annual reports to the project PI and assist the project team in preparing evaluation results for inclusion in the project's annual report to NSF. Evaluation reports will be shared with the project's advisory committee.

Timeline

Evaluation Plan → 5 Timeline

- ☐ Identify when key evaluation activities will occur in order to produce timely information

EVALUATION	YEAR 1				YEAR 2				YEAR 3			
	Fall	Win.	Spr.	Sum.	Fall	Win.	Spr.	Sum.	Fall	Win.	Spr.	Sum.
Finalize evaluation plan	■											
Draft and pilot surveys		■										
Survey camp participants and parents			■				■				■	
Follow-up survey of camp participants						■						
Survey AV 100 and AV 150 students					■		■		■		■	
Focus group with students							■				■	
Reports completed (Annual, Final)				■				■				■
Evaluation feedback session			■				■				■	

EVALUATION	YEAR 1				YEAR 2				YEAR 3			
	Fall	Win.	Spr.	Sum.	Fall	Win.	Spr.	Sum.	Fall	Win.	Spr.	Sum.
Finalize evaluation plan	■											
Draft and pilot surveys		■										
Survey camp participants and parents			■				■				■	
Follow-up survey of camp participants						■						
Survey AV 100 and AV 150 students					■		■		■		■	
Focus group with students							■				■	
Reports completed (Annual, Final)				■				■				■
Evaluation feedback session			■				■				■	

Major data collection events

EVALUATION	YEAR 1				YEAR 2				YEAR 3			
	Fall	Win.	Spr.	Sum.	Fall	Win.	Spr.	Sum.	Fall	Win.	Spr.	Sum.
Finalize evaluation plan	■											
Draft and pilot surveys		■										
Survey camp participants and parents			■				■				■	
Follow-up survey of camp participants						■						
Survey AV 100 and AV 150 students					■		■		■		■	
Focus group with students							■				■	
Reports completed (Annual, Final)				■				■				■
Evaluation feedback session			■				■				■	

Reporting

Major data collection events

EVALUATION	YEAR 1				YEAR 2				YEAR 3			
	Fall	Win.	Spr.	Sum.	Fall	Win.	Spr.	Sum.	Fall	Win.	Spr.	Sum.
Finalize evaluation plan	■											
Draft and pilot surveys		■										
Survey camp participants and parents			■				■				■	
Follow-up survey of camp participants						■						
Survey AV 100 and AV 150 students					■		■		■		■	
Focus group with students							■				■	
Reports completed (Annual, Final)				■				■				■
Evaluation feedback session			■				■				■	

Meetings with evaluator

Reporting

Major data collection events

EVALUATION	YEAR 1				YEAR 2				YEAR 3			
	Fall	Win.	Spr.	Sum.	Fall	Win.	Spr.	Sum.	Fall	Win.	Spr.	Sum.
Finalize evaluation plan	■											
Draft and pilot surveys		■										
Survey camp participants and parents			■				■				■	
Follow-up survey of camp participants						■						
Survey AV 100 and AV 150 students					■		■		■		■	
Focus group with students							■				■	
Reports completed (Annual, Final)				■				■				■
Evaluation feedback session			■				■				■	

Include in evaluation section

OR within overall project timeline

Timeline

The timing of key tasks and deliverables is shown in Table 3.

Table 3. Project Timeline (shown in quarter-year increments)

RESEARCH	*YEAR 1*	*YEAR 2*	*YEAR 3*	*YEAR 4*	*YEAR 5*
Study 1: Evaluation Task Framework Validation					
Finalize design and recruit study participants					
Data collection and analysis					
Publish					
Study 2: Evaluator Procurement					
Finalize design and recruit committee members					
Data collection and analysis					
Publish					
Study 3: Strategies for Measuring E/D/I in ATE					
Finalize design and recruit participants					
Data collection and analysis					
Publish					
Study 4: Evaluation Use in the ATE Program					
Finalize study design					
Survey data collection and analysis					
Site selection and analysis					
Publish					
TRAINING & TECHNICAL ASSISTANCE (*Some training-related activities are already funded under current grant through summer 2020, so they are not listed here until expiration of current grant)					
*Conduct one webinar per quarter					
*Develop FAQs and job aids					
*Conduct workshop at ATE PI Conference					
Develop guidance materials for coaches					
Convene coaches for orientation					
Deploy coaches					
ATE EVALUATION NETWORK FACILITATION					
Fund ATE evaluators to attend ATE PI conference					
Host networking reception at ATE PI conference					
Select and coordinate ATE evaluation fellows					
Host monthly web chats					
Host biannual ATE Evaluation Summit					
EVALUATION					
Finalize detailed evaluation plan					
Conduct biannual survey of EvaluATE's audience					
Conduct interviews with coaches and TA recipients					
Reports completed (TA, survey, research impact, final)		TA S	TA RI S	TA S	RI TA F
DISSEMINATION					
Presentations at conferences					
Publish quarterly newsletters					

Evaluation Plan (1-2 pages)

1. Evaluator
2. Evaluation Questions
3. Data
4. Communication and Use
5. Timeline

1-2 pages

RESOURCE

Evaluation Plan Template

ATE Proposal Evaluation Plan Template

Lori A. Wingate | July 2019

This template is for use in preparing evaluation plans for inclusion in proposals to the National Science Foundation's Advanced Technological Education (ATE) program. It is based the ATE Evaluation Planning Checklist (see bit.ly/checklist-evalplan), also developed by EvaluATE. It is aligned with the evaluation guidance included in the 2019 ATE Program Solicitation (see bit.ly/nsf-ate). All proposals and evaluators should read the solicitation in full.

How to use this template: Replace the descriptions of what should go in each section with relevant details about your proposed project's evaluation. Copy the text into your ATE proposal. The evaluation plan should comprise one to two pages of your 15-page Project Description.

This material is based upon work supported by the National Science Foundation under Grant No. 1600992 Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the National Science Foundation.

Evaluation

Identify by name the person(s) who will lead the external evaluation of the project. Briefly describe their academic training and professional experience that qualifies them to serve as external evaluator. Refer to the evaluator's biosketch and commitment letter and include those documents with the proposal's Supplementary Documents.

Evaluation Questions. Identify the focus of the evaluation by listing the evaluation questions. The questions should align with the projects' purpose and address both implementation and outcomes. Examples of outcomes of interest to the ATE program include, but are not limited to, changes related to student learning, persistence, retention, graduation, and employment; faculty knowledge and pedagogical skills; broadening participation in STEM; meeting workforce needs; enhancing institutional capacity; and advancing knowledge about technician education. If the project has a logic model, make sure the evaluation questions align with the logic model components.

Data Collection and Analysis. For each evaluation question, identify what will be measured, how the data will be collected and from what sources, and when. If specific published instruments will be used for data collection, describe and cite them (and include in References Cited section of proposal). Describe how data will be analyzed so that the evaluation questions can be answered. Placing this information in a table helps show linkages between the evaluation questions and the data, such as shown below (see also EvaluATE's Data Collection Planning Matrix):

Evaluation Question: [state evaluation question, add rows as needed for additional evaluation questions and related indicators]				
Indicator	Data Source & Collection Method	Timing	Analysis	Interpretation
[what will be measured – ideally there will be more than one indicator per evaluation question]	[where the data will come from and how it will be obtained]	[when the data will be collected]	[how the qualitative and quantitative data will be transformed and summarized into usable information]	[procedures for using findings to answer the evaluation questions and reach evaluative conclusions]

Reporting and Use. Identify the deliverables that will be produced by the evaluation after the project is funded, such as a detailed evaluation plan, data collection instruments, reports. Identify when reports will be provided to the project and how the results will be used to inform project improvement.

Questions?

Integrating Evaluation

Throughout a Proposal

Beyond the Evaluation Plan

Beyond the Evaluation Plan

Results from Prior NSF Support

Beyond the Evaluation Plan

Results from Prior NSF Support

Budget and Budget Justification

Beyond the Evaluation Plan

Results from Prior NSF Support

Budget and Budget Justification

Data Management Plan

Beyond the Evaluation Plan

Results from Prior NSF Support

Budget and Budget Justification

Data Management Plan

References

Beyond the Evaluation Plan

Results from Prior NSF Support

Beyond the Evaluation Plan

Results from Prior NSF Support

This subsection must contain **specific outcomes and results**, including metrics to demonstrate the impact of project activities.

Beyond the Evaluation Plan

Results from Prior NSF Support

This subsection must contain **specific outcomes and results**, including metrics to demonstrate the impact of project activities.

Intellectual Merit

Broader Impacts

Beyond the Evaluation Plan

Results from Prior NSF Support

This subsection must contain **specific outcomes and results**, including metrics to demonstrate the impact of project activities.

Intellectual Merit
advancement of knowledge

Broader Impacts

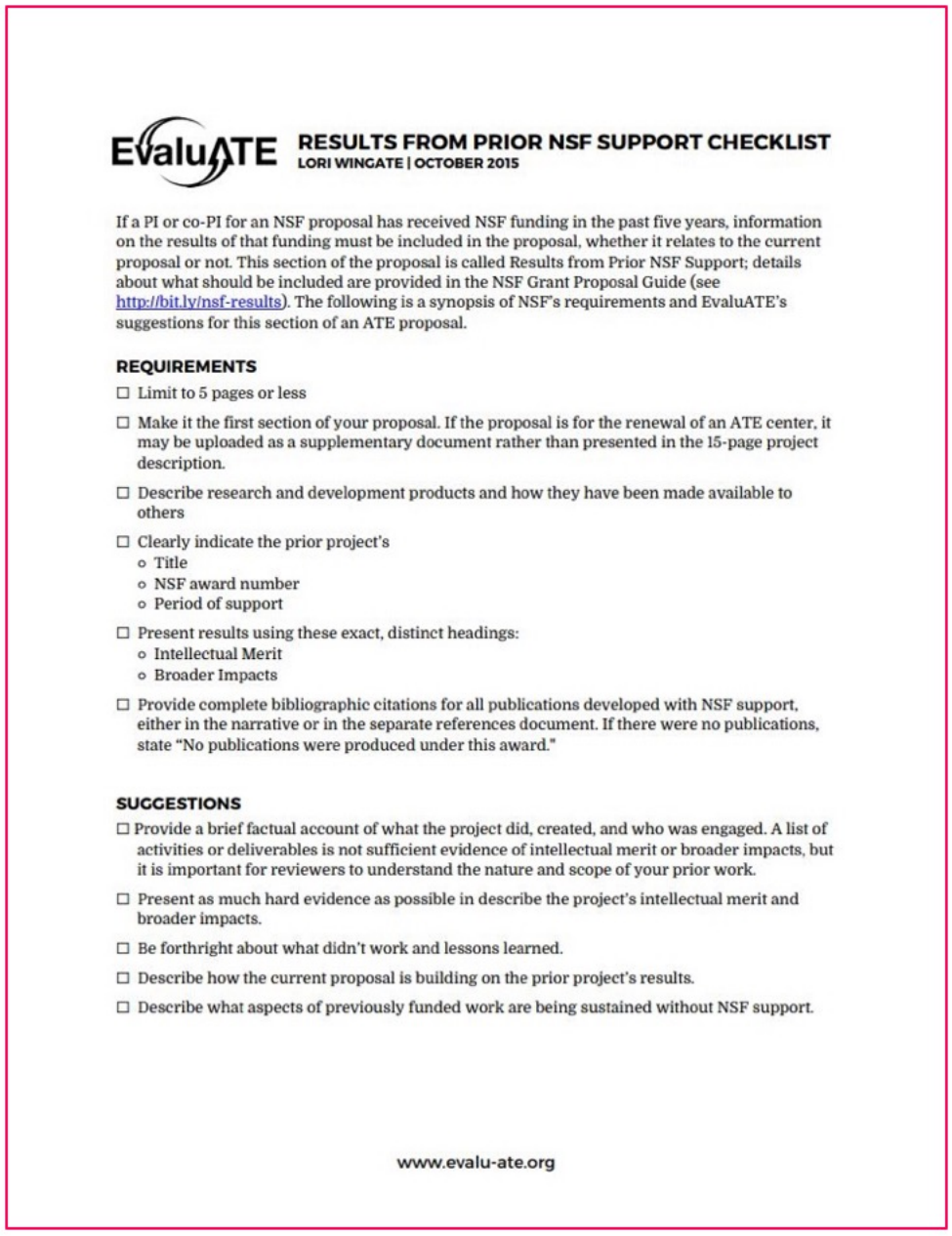
Beyond the Evaluation Plan

Results from Prior NSF Support

This subsection must contain **specific outcomes and results**, including metrics to demonstrate the impact of project activities.

Intellectual Merit
advancement of knowledge

Broader Impacts
benefit to society



EvaluATE **RESULTS FROM PRIOR NSF SUPPORT CHECKLIST**
LORI WINGATE | OCTOBER 2015

If a PI or co-PI for an NSF proposal has received NSF funding in the past five years, information on the results of that funding must be included in the proposal, whether it relates to the current proposal or not. This section of the proposal is called Results from Prior NSF Support; details about what should be included are provided in the NSF Grant Proposal Guide (see http://bit.ly/nsf-results). The following is a synopsis of NSF's requirements and EvaluATE's suggestions for this section of an ATE proposal.

REQUIREMENTS

- ☐ Limit to 5 pages or less
- ☐ Make it the first section of your proposal. If the proposal is for the renewal of an ATE center, it may be uploaded as a supplementary document rather than presented in the 15-page project description.
- ☐ Describe research and development products and how they have been made available to others
- ☐ Clearly indicate the prior project's
  - Title
  - NSF award number
  - Period of support
- ☐ Present results using these exact, distinct headings:
  - Intellectual Merit
  - Broader Impacts
- ☐ Provide complete bibliographic citations for all publications developed with NSF support, either in the narrative or in the separate references document. If there were no publications, state "No publications were produced under this award."

SUGGESTIONS

- ☐ Provide a brief factual account of what the project did, created, and who was engaged. A list of activities or deliverables is not sufficient evidence of intellectual merit or broader impacts, but it is important for reviewers to understand the nature and scope of your prior work.
- ☐ Present as much hard evidence as possible in describe the project's intellectual merit and broader impacts.
- ☐ Be forthright about what didn't work and lessons learned.
- ☐ Describe how the current proposal is building on the prior project's results.
- ☐ Describe what aspects of previously funded work are being sustained without NSF support.

www.evalu-ate.org

RESOURCE

NSF Prior Support Checklist

Beyond the Evaluation Plan

Budget and Budget Justification

Beyond the Evaluation Plan

Budget and Budget Justification

The **funds** to support an evaluator independent of the project or center must be requested.

Beyond the Evaluation Plan

Budget and Budget Justification

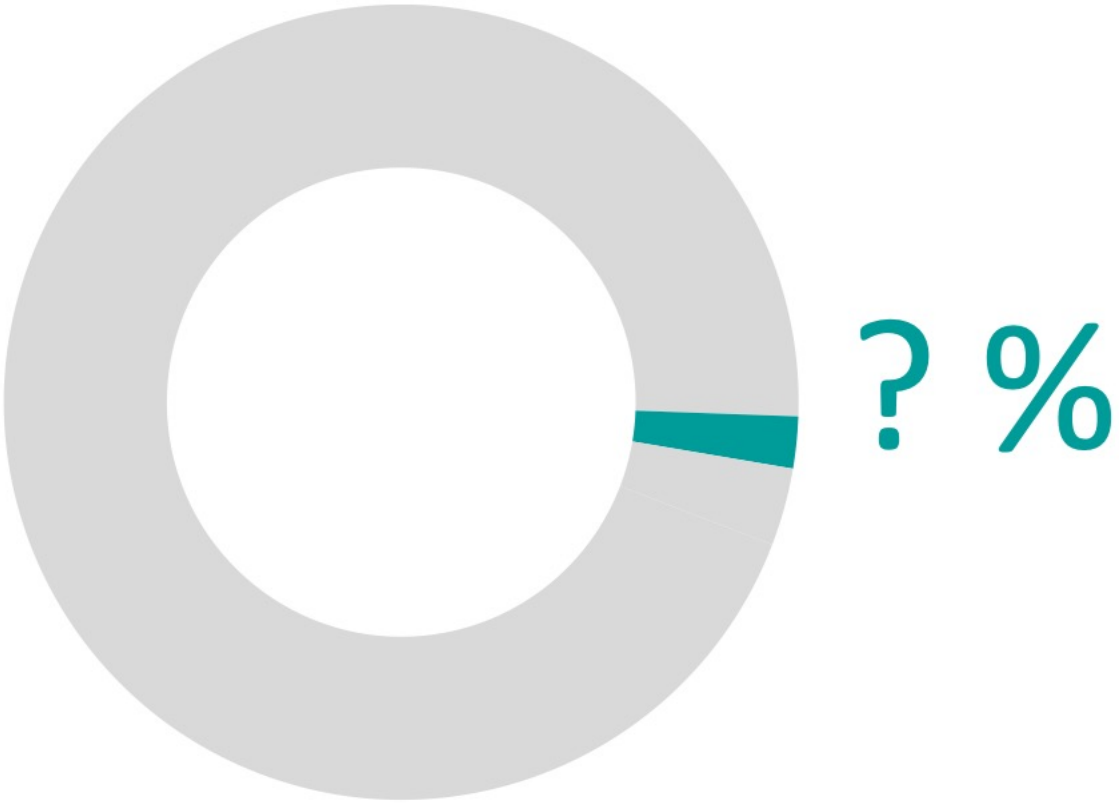
The **funds** to support an evaluator independent of the project or center must be requested. **The requested funds must match the scope** of the proposed evaluative activities.

Beyond the Evaluation Plan

Budget and Budget Justification

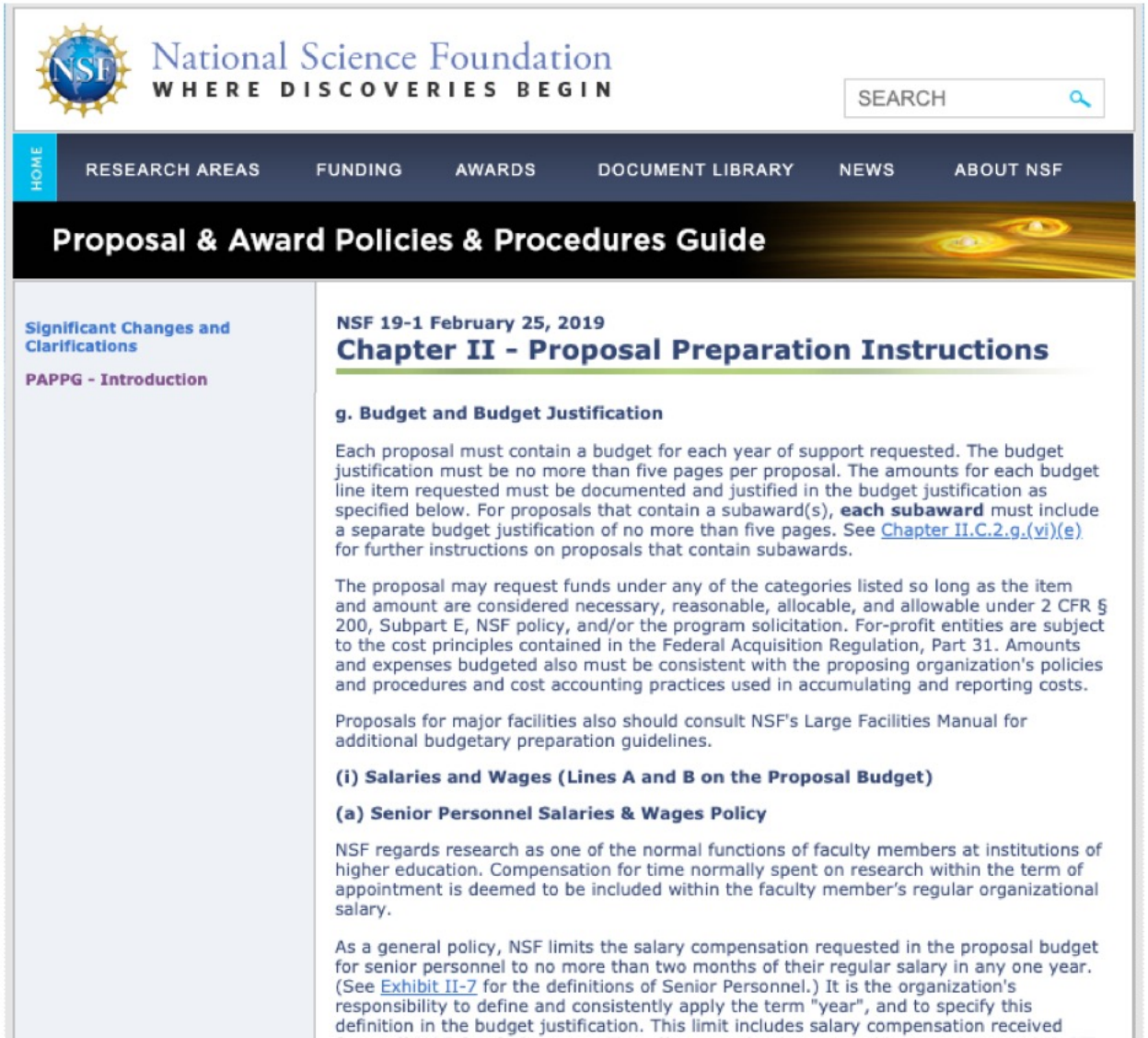
Beyond the Evaluation Plan

Budget and Budget Justification



Beyond the Evaluation Plan

Budget and Budget Justification



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Proposal & Award Policies & Procedures Guide

Significant Changes and Clarifications

PAPPG - Introduction

NSF 19-1 February 25, 2019

Chapter II - Proposal Preparation Instructions

g. Budget and Budget Justification

Each proposal must contain a budget for each year of support requested. The budget justification must be no more than five pages per proposal. The amounts for each budget line item requested must be documented and justified in the budget justification as specified below. For proposals that contain a subaward(s), **each subaward** must include a separate budget justification of no more than five pages. See Chapter II.C.2.g.(vi)(e) for further instructions on proposals that contain subawards.

The proposal may request funds under any of the categories listed so long as the item and amount are considered necessary, reasonable, allocable, and allowable under 2 CFR § 200, Subpart E, NSF policy, and/or the program solicitation. For-profit entities are subject to the cost principles contained in the Federal Acquisition Regulation, Part 31. Amounts and expenses budgeted also must be consistent with the proposing organization's policies and procedures and cost accounting practices used in accumulating and reporting costs.

Proposals for major facilities also should consult NSF's Large Facilities Manual for additional budgetary preparation guidelines.

(i) Salaries and Wages (Lines A and B on the Proposal Budget)

(a) Senior Personnel Salaries & Wages Policy

NSF regards research as one of the normal functions of faculty members at institutions of higher education. Compensation for time normally spent on research within the term of appointment is deemed to be included within the faculty member's regular organizational salary.

As a general policy, NSF limits the salary compensation requested in the proposal budget for senior personnel to no more than two months of their regular salary in any one year. (See Exhibit II-7 for the definitions of Senior Personnel.) It is the organization's responsibility to define and consistently apply the term "year", and to specify this definition in the budget justification. This limit includes salary compensation received

Beyond the Evaluation Plan

Budget and Budget Justification

1. Identify hourly rate of pay for evaluator

Beyond the Evaluation Plan

Budget and Budget Justification

1. Identify hourly rate of pay for evaluator
2. Justify time required for evaluator

Beyond the Evaluation Plan

Budget and Budget Justification

1. Identify hourly rate of pay for evaluator
2. Justify time required for evaluator
3. Outline their main tasks and deliverables

Beyond the Evaluation Plan

Data Management Plan

Beyond the Evaluation Plan

Data Management Plan

Requirements

- ☐ Types of data and other materials to be produced
- ☐ Format of the data
- ☐ Policies for access and sharing data
- ☐ Policies for use of data by others
- ☐ Plans for archiving data for preserving access

Beyond the Evaluation Plan

Data Management Plan

Requirements

- ☐ Types of data and other materials to be produced
- ☐ Format of the data
- ☐ Policies for access and sharing data
- ☐ Policies for use of data by others
- ☐ Plans for archiving data for preserving access

Include evaluation data

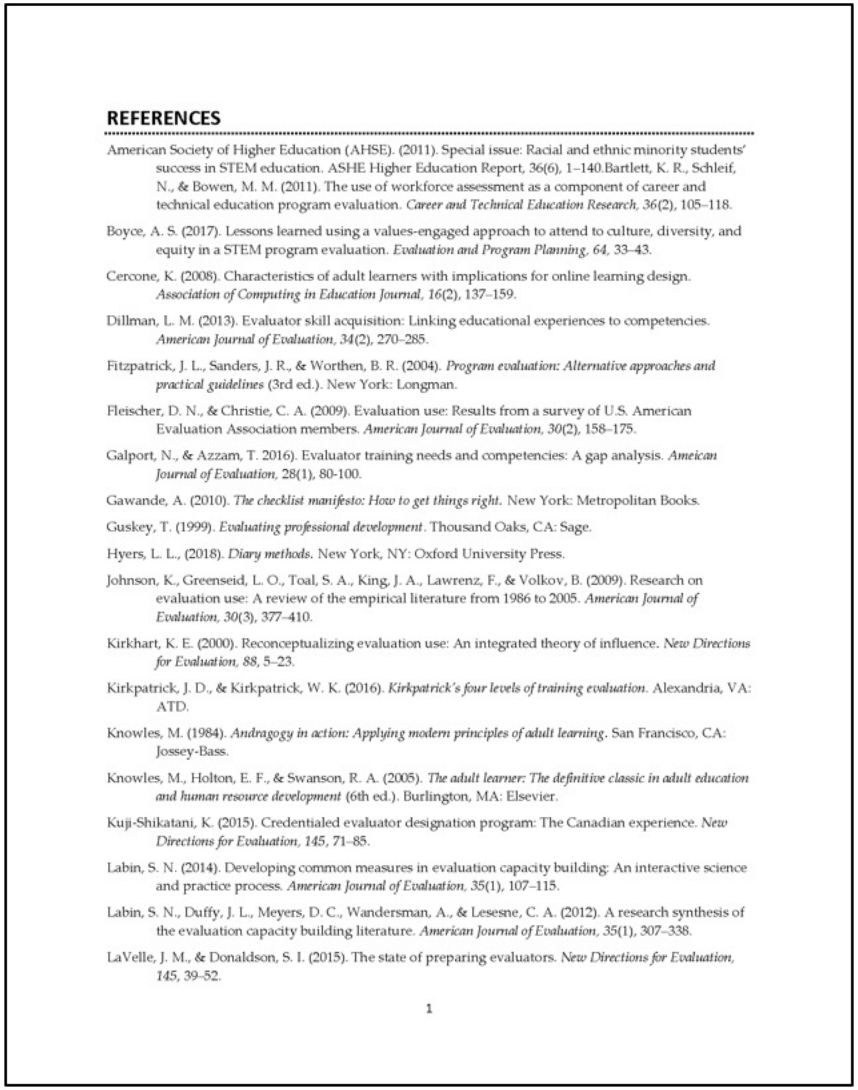
Beyond the Evaluation Plan

References Cited

Beyond the Evaluation Plan

References Cited

Include references to evaluation literature



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Beyond the Evaluation Plan

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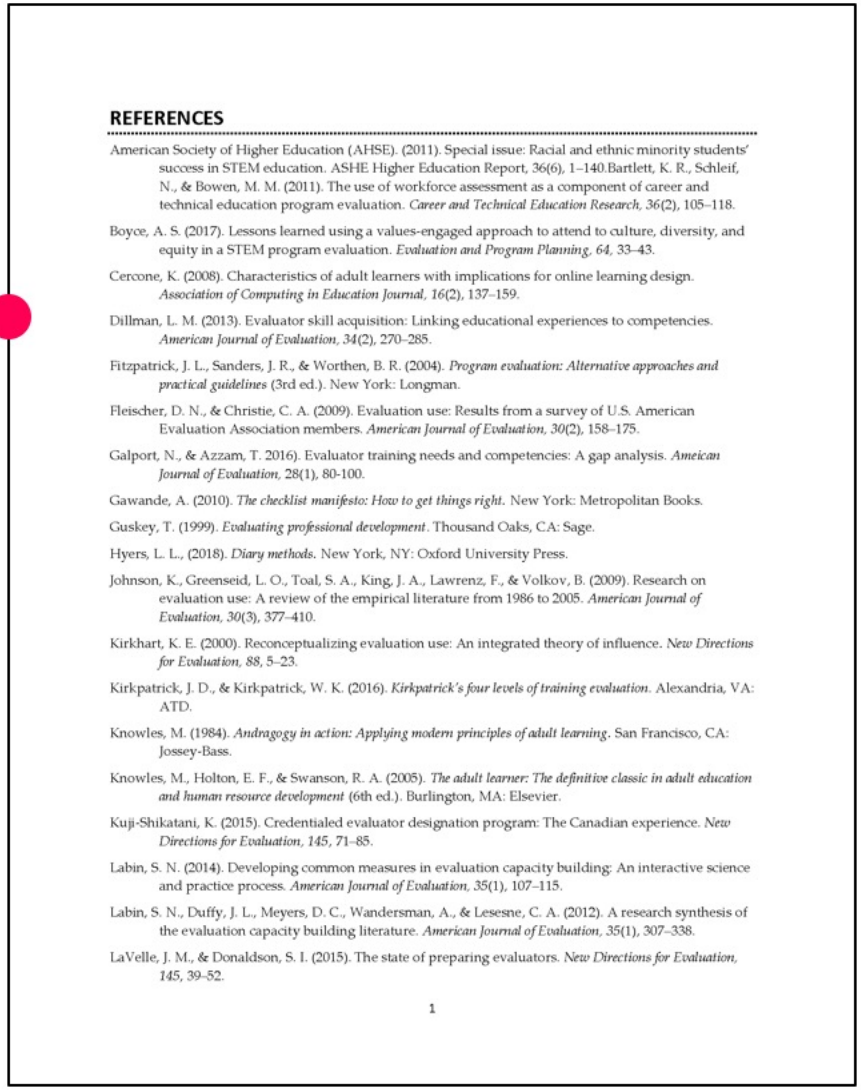
Justify evaluation approach



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Beyond the Evaluation Plan

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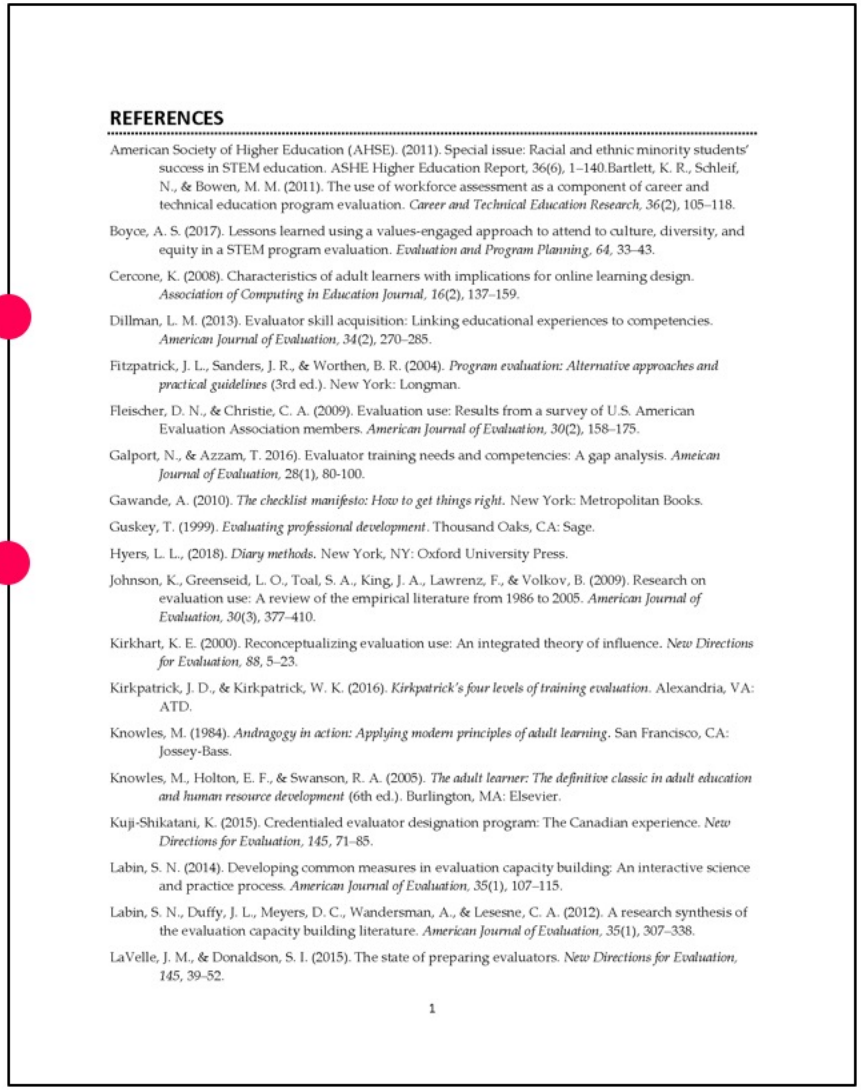
Justify evaluation approach

Justify use of instruments and methods



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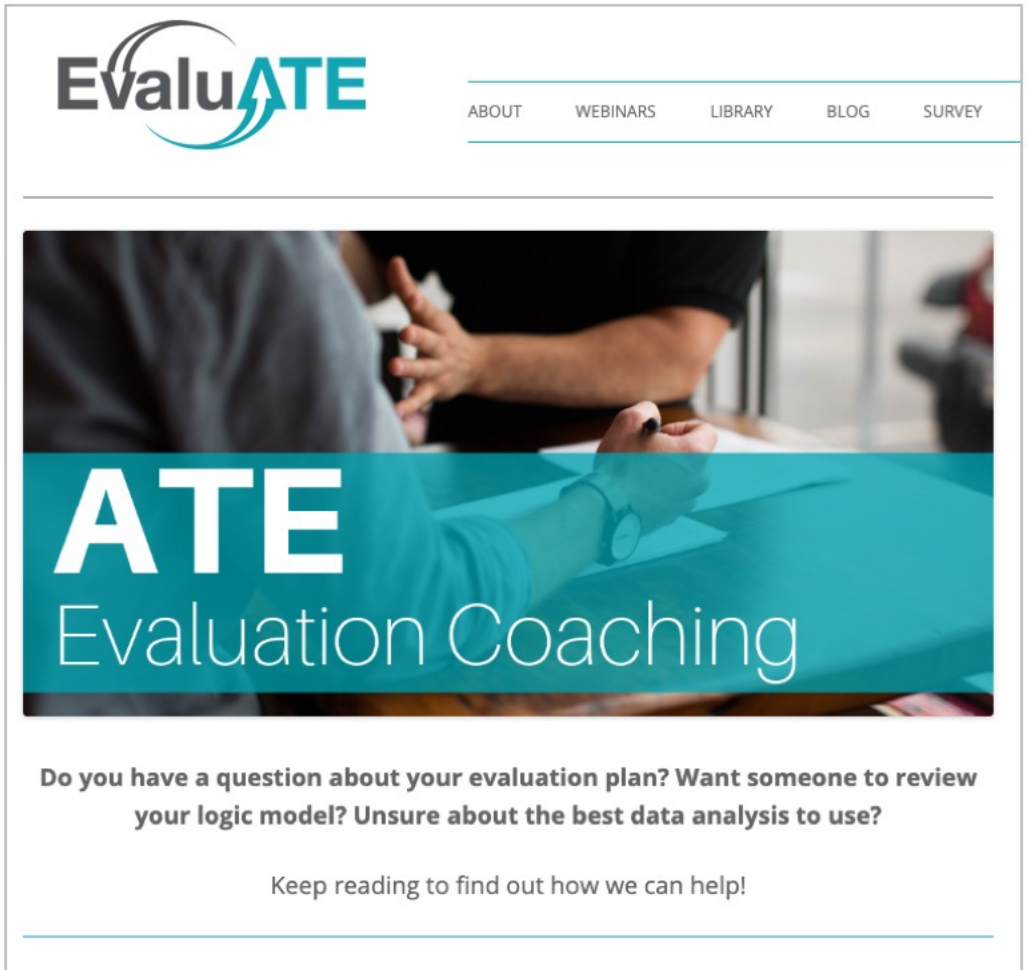

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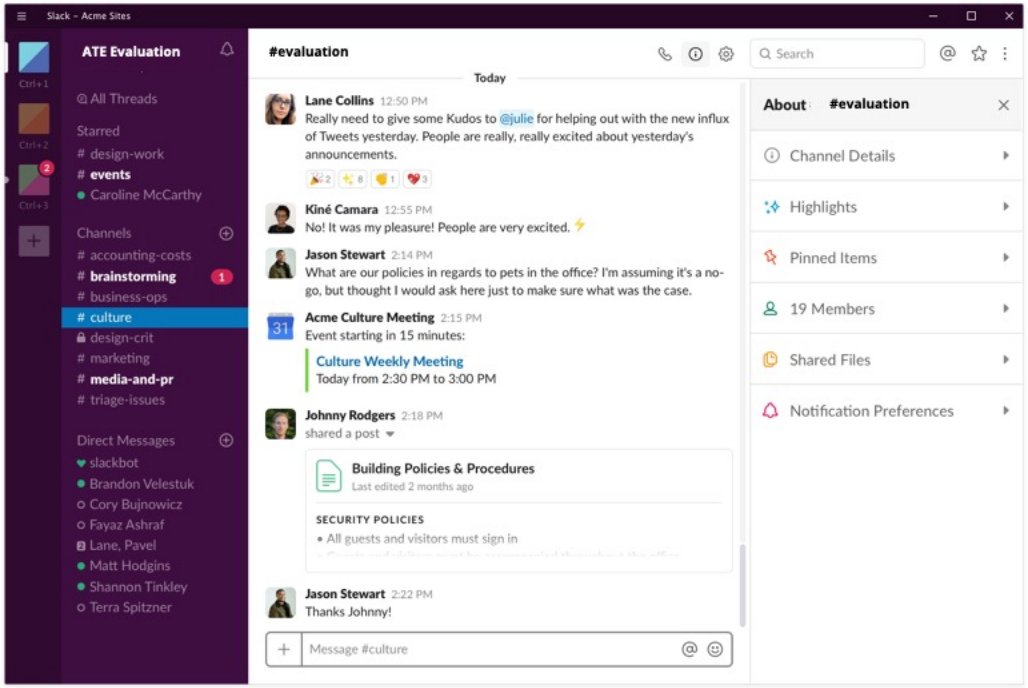

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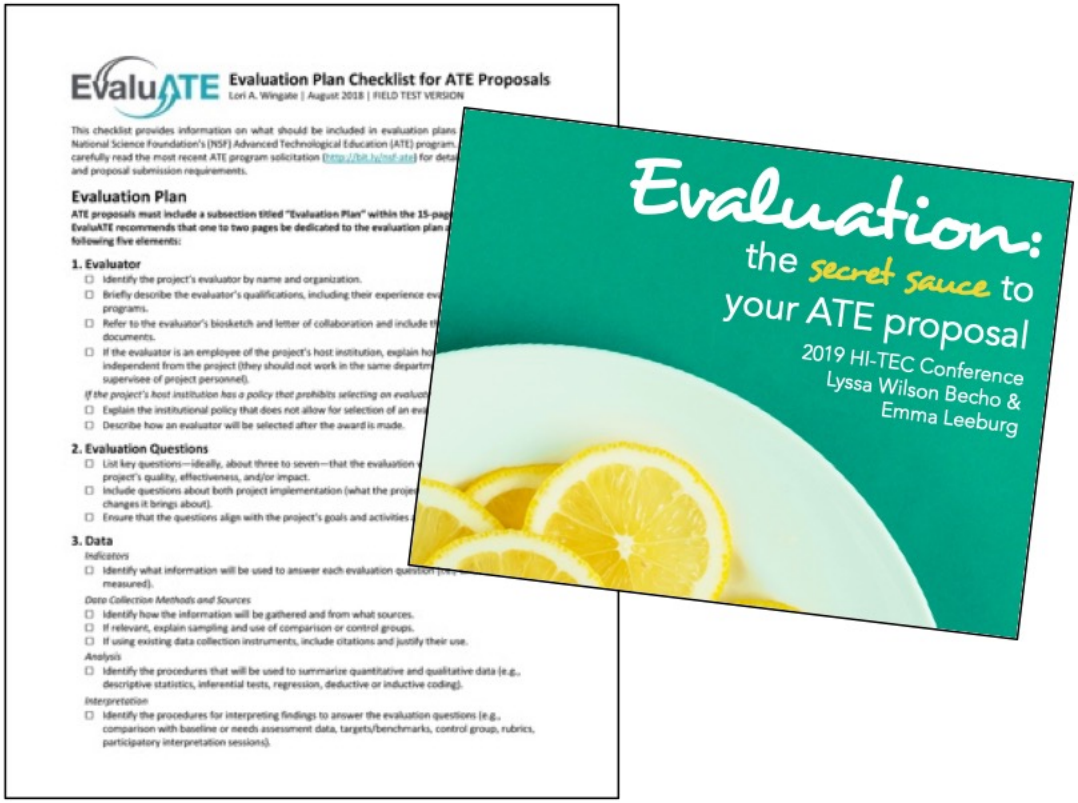

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