A GUIDE FOR PLANNING AND IMPLEMENTING SITE VISITS

by

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March 2002

Acknowledgements

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We also gratefully acknowledge the staff members of the 13 Advanced Technological Education (ATE) projects/centers visited during the ATE evaluation in 2000 and 2001 for their cooperation, assistance, and valuable information.

We would also like to recognize other contributions to this guide. The information contained herein was developed through our prior experience with site visits, the existing literature, our recent experience with the evaluation of the National Science Foundation's ATE program, and the comments of our metaevaluators. The protocols in Appendix B were developed for the ATE evaluation, and a description of the ATE evaluation is provided at http://ate.wmich.edu.

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INTRODUCTION

Welcome to the wonderful world of site visits. Site visits are, quite literally, visits to sites, and everyone has experienced them in some form or another. For example, a trip to Rome could be considered a site visit, especially if a "site visit report" were written in the guise of a letter to a friend about the trip. The goal of a site visit is to gather firsthand, eyewitness, descriptive information about an entity. Site visits are used in three general ways: to provide descriptive information about a project, to answer questions about its merit or worth, and/or to verify data collected through other means. Robert Stake, an accomplished evaluator, states site visits are an eminent method of evaluation, since they make use of the "most sensitive instruments available—experienced and insightful people" (1970, p.193).

The purpose of this guide is to help you plan site visits in a way that will produce information pertinent to important decision-making efforts. The guide was developed with three audiences in mind.

1. **Individuals affiliated with the Advanced Technological Education (ATE) program who plan site visits (primary audience).** These individuals include principal investigators, advisory committee chairs, ATE funders, ATE evaluators, and administrative staff. The guide is designed to help them conceptualize the visits, include all the important pieces, and align all the parts with the purposes of the visit. Following are examples of what these individuals might use site visits to accomplish:

    - determining where best to locate a project or one of its components
    - determining the worth of a particular effort
    - describing how ideas, curricula, or materials are being implemented
    - presenting different views on the success or failure of a project or one of its components

2. **Individuals who will be conducting ATE site visits (secondary audience).** These individuals may include evaluators, advisory committee members, visitors selected by funders, educators, business people, scientists, etc. Although the guide is focused on the individual planning the visits, there is some advice on being a good site visitor, conducting visits, using protocols, and writing reports.

3. **Individuals planning site visits for non-ATE projects (third audience).** Although the protocols and examples in this guide are specific to ATE, the materials can be adapted for use in non-ATE settings.

How to Use This Guide

Site visits can be made much more effective through careful planning of the visits and preparation of the site visitors. Therefore, this guide will lead you through five steps necessary to carefully plan, conduct, and ultimately use the information from site visits as shown in Figure 1.

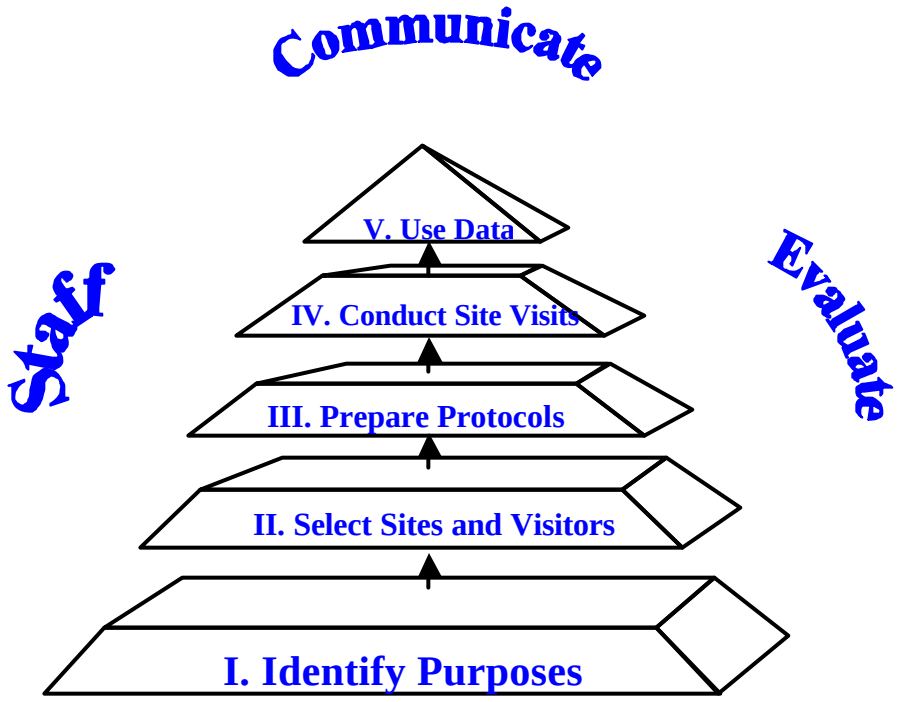


Figure 1. Plan and Implement Steps. The supporting site visit processes of Staff, Communicate, and Evaluate are intermeshed with and essential to the five Plan and Implement steps. These processes and steps are integrated and do not occur in a linear fashion, but concurrently and repeatedly. The first step, Identify Purposes, is the foundation upon which all other steps are laid. At the pinnacle is Use Data, which is the ultimate purpose for conducting the visits.

Use **Part I, Identify Purposes**, to determine what decisions you need to make, decide if site visits would help you make these decisions, and to specify the site visit purposes. This section is most helpful for the person conceptualizing the site visits.

Use **Part II, Select Sites and Visitors**, to learn how to select sites and site visitors that will allow you to gather the most useful information for your needs. The site visit coordinator tracking the details of the process and the person conceptualizing the site visits will find this section useful.

Use **Part III, Prepare Protocols**, to help you decide what to do on your site visits and what types of instruments to use for data collection. This section will also help guide you through preparing your site visitors to use your protocols. Everyone involved in the site visit process, including those conducting the visits, will find something of relevance.

Use **Part IV, Conduct the Site Visits**, for hints on what to do during the site visits, including a list of characteristics of effective site visitors. Site visitors will find this part especially useful, although it also contains hints for site visit coordinators tracking the details.

Use **Part V, Use the Data**, after you have conducted a site visit or during the planning process to ensure you present relevant data to those involved in the project in a way that they can understand and put to use. This part is helpful to everyone involved in the site visit process.

Use **Appendix B** to help draft your own observation forms and interview protocols by adapting these examples from actual site visits in a step-by-step manner. **Appendix A** contains a "to-do" checklist for the entire site visit process.

Visit our **Web site** at http://ate.wmich.edu to find more information about evaluation and site visits, including an annotated list of evaluation references.

Tips and Examples

In order to better represent the complex nature of site visits and to help you carry out your site visit process more effectively, two additional types of information are provided: tips and examples.

Tips, presented in sidebars and designated by the icons below, appear throughout the guide. The tips highlight the Communicate, Staff, and Evaluate processes. They are located throughout the discussion of the Plan and Implement steps to show that they are essential to and intermeshed with these steps.

The telephone icon emphasizes tips for the Communicate process. Good communication is necessary in all aspects of the Plan and Implement steps to ensure success. These tips track communication that is needed with the sites and site visitors during the Plan and Implement steps.

The person icon indicates tips for the Staff process. Naturally, nothing can occur unless someone is responsible for doing the work, making staffing critically important. These tips suggest who should be responsible for various tasks during the Plan and Implement steps.

The book icon denotes tips for the Evaluate Process. Evaluation is important because it allows for reflection on the quality and usefulness of the site visit processes, protocols, and reports. These tips will help you improve the quality of your site visits.

To illustrate to the reader how to apply the Plan and Implement steps, two examples, one simple and one complex, are included. These examples represent the different ends of the continuum of complexity possible for site visits. You will find serial installments of the simple example (green text) at the end of each part of the guide, beginning below. The complex example, which depicts the full range of possibilities that could be part of planning and implementing site visits, is included in **Appendix C**.

Simple Example: This project is called Environmental Sciences for Technicians (EST). The principal investigator (PI) for the project is a community college biology instructor. The community college has a program that produces environmental technic ians. The goal of the project is to improve the quality of instruction and therefore the student understanding of basic environmental science at the community

college and at the surrounding four high school districts. The grant provided funds for the purchase of sophisticated technology for measuring quality of the water and soil housed at the community college.

The project also includes funds for professional development of high school and community college instructors for two years. As part of the professional development, the participants will be modifying existing curricular materials as well as creating new ones. The project sponsored a professional development session the past summer for local high school and community college environmental science teachers where a nationally known figure in environmental science gave several lectures and the participants learned how to use the new equipment. As part of the workshop, the teachers discussed how to incorporate this new knowledge into their classes and developed plans for implementation.

The project has an advisory committee made up of three businesspeople whom employ environmental technicians, three scientists from the companies, two environmental science instructors from other community colleges, and a high school science teacher. The advisory committee is scheduled to meet soon. The PI wants to plan site visits for the committee members so that they will be better informed and better able to provide relevant advice about improving the project.

PART I: IDENTIFY PURPOSES

- ☐ Involve Key Stakeholders
- ☐ Determine the Purposes of the Site Visits
- ☐ Align Planning With Site Visit Purposes

Identifying purposes for a site visit is much like laying the cornerstone of a new building. It must be done with care in order to provide a sound foundation on which to build the remaining site visit steps and processes and to maximize the usefulness of the data. Just as buildings can be large or small, identifying the purposes of a site visit can be straightforward or intricate. One person or several could be determining the purposes, and the purposes could be singular or multifaceted. What is important is to determine the purposes carefully and to follow them throughout the entire site visit process.

Involve Key Stakeholders

Achieving the consensus of the stakeholders on the purposes for the site visits will help to ensure that all information needs are identified and that the data collected are usable. Stakeholders are those with direct or indirect interest in the project such as those who conduct, participate in, are affected by, fund, or manage a project. Some typical key stakeholders are listed below:

Involving the primary intended users of the evaluation, the project stakeholders, in planning and implementing the site visits will increase the likelihood that the data from the visits will be used.

- NSF (funder, evaluation-sponsoring agency)
- Congress (funder)
- Project PI, Co-PI (project managers)
- Administrators of the institution(s) housing a project
- Project faculty and other staff (project staff)
- Students in a project (project beneficiaries)
- Business/industry hiring students and/or collaborating (project beneficiaries)
- Community in which the institutions housing a project are located (project beneficiaries)

Determine the Purposes of the Site Visits

The purposes of the site visit emerge from the project's needs and/or funder. Therefore, the first step in determining the specific purposes of a site visit is to determine what sort of information the project and/or funder needs. Once the information needs have been determined, it has to be decided if this is the type of information that can be obtained from a site visit or if some other data collection method should be used. As described in the introduction, site visits provide "eyewitness accounts" and in-depth interview information. Therefore, if the information need is for data that are quantitative or survey oriented, site visits are not the appropriate method to use. The three general purposes for site visits can also provide guidance for determining the specific purpose for a site visit. Once the potential purposes are determined they can be prioritized and considered in light of the resources available to commit to the site visits.

1. Describe the Project

Does the project need to have descriptions of what is being accomplished? Providing descriptive information is the sine qua non of the site visit process. It allows for in-depth understanding of a project and the complex interactions of its various components. It also allows for the identification of unanticipated effects and for gathering powerful "human" stories from the "natural settings" of the project, which encapsulate the rich effects of a project. This anecdotal information can provide powerful statements of a project's worth.

2. Answer Evaluative Questions

Does the project need to have questions of merit or worth answered? The answers to these questions can be used formatively to help the project improve or summatively to judge the project. These could be asked about the project as a whole or about any aspect of a project such as collaborations, standards development, materials development, professional development, recruitment and retention, or sustainability. Typical evaluation questions include those listed below:

- What are we actually doing (e.g., what is the nature of our collaborations)?
- Are we doing what we said we would do (e.g., are our instructional materials and strategies matched to standards)?
- How effective is what we are doing (e.g., are our students performing well on the job)?

- How will we be able to maintain what we have accomplished (e.g., what aspects of the project have been institutionalized)?
- Did what we want to have happen, happen (e.g., were the materials implemented in classrooms)?
- What do people involved think of what we did (e.g., what were the teachers' opinions of the professional development)?
- What are strengths and weaknesses (e.g., what are the most effective parts of our retention programs)?
- What should we do next (e.g., how can we improve the standards)?

3. Verify Data

Does the project have quantitative data that need to be better understood? The in-depth nature of the information gathered during a site visit can be used to verify or explain information collected through other less intensive methods, such as surveys.

Align Planning With Site Visit Purposes

Since the purposes form the foundation for the site visits, they should always be considered throughout the other Plan and Implement steps. A mismatch between the purposes and these steps can lead to wasted effort and resources and, worst of all, potentially unusable information. As with any components of a plan, the purposes need to be somewhat flexible as information and other needs may change over time.

Simple Example: The PI began to plan the site visits in conjunction with his stakeholders, the project evaluator, the advisory committee members, and the teachers. They all had information needs they thought could be obtained through site visits. In particular, they decided the purposes of the site visits were to find out if the plans made in the summer were being implemented, what barriers to implementation there were, how the new materials fit into the existing structures, if classes were being well taught, if content were addressed correctly and in depth, how teachers and students interacted, what the teachers thought about the professional development they had obtained and what the teachers thought would be of most benefit in the upcoming summer professional development. The subsequent planning of the site visits was aligned with these purposes.

PART II: SELECT SITES AND VISITORS

- ☐ Define a Site
- ☐ Establish Site Selection Criteria
- ☐ Select Sites that Meet the Criteria
- ☐ Gain Access to the Sites
- ☐ Select Site Visitors and Finalize Site Visit Dates

The ultimate goal of this step is to visit sites that can provide the appropriate information and to send visitors who will be able to gather it. The complexity continuum ranges from having only a few sites and one visitor to having to select sites from a large set based on intersecting criteria and having site visit teams composed of individuals with different but complementary expertise.

Define a Site

The first step in selecting sites is to determine just what a site is. What entity or "thing" will provide the information needed to fulfill the site visit purposes? Potential sites could be classes, instructors, departments, institutions, etc. The project's stakeholders and its evaluator will need to determine this based on the site visit purposes and available resources. The budgetary demands often constrain what types of site visits can be conducted. For example, longer visits are more expensive than shorter ones; visits to distant sites are more expensive than visits to closer ones; visits by a team are more expensive than a single site visitor. The cost-effectiveness of the various approaches needs to be balanced with the purposes.

Establish Site Selection Criteria

Once a site has been defined, the next step is to establish site selection criteria. Selection criteria are most often designed to ensure that the sites selected are representative of the project. Typical criteria include geographical location, type of location, maturity, type of site, outcomes addressed, or level of success. Sometimes other data (e.g., surveys) are used as a basis for selection.


It is crucial to involve the stakeholders in establishing these criteria so that they do not question the validity of the data collected from the sites.

Select Sites that Meet the Criteria


Because of their familiarity with the project, key stakeholders, especially senior project staff, are in the best position to assist with this selection.

Once the site criteria are established, the next step is to select sites that meet the criteria. If the selection is complex, a grid or spreadsheet program of all possible sites, showing how they match the criteria, can be useful. Potential sites can be prioritized by best fit with the criteria. It is best to oversample, e.g., if you need 15, select 20, in case some sites decline to participate or cannot accommodate a visit.


Project staff can prepare a grid of all possible sites, showing how they match the criteria, and then request feedback from other stakeholders.

Gain Access to the Sites

The next step is to gain access to the sites by making the initial contact and explaining the goals of the visit. This will be the first of many contacts with the sites. To facilitate gaining access, it is helpful to enlist the assistance of individuals or organizations with influence with the proposed sites (e.g., funder). After the initial introduction provided by the influential individual, the site visit coordinator should call (or email) and set up a time for an extended conversation about the site visit requirements and benefits, such as use of the data collected and receipt of a report for use only by the site.

The site visit coordinator is the person who coordinates the site visits from a central location. This individual may be the project evaluator, the project PI, or someone who works for one of these people. It is helpful to have a site visit coordinator who is knowledgeable about the purposes of the site visits work with the sites and visitors during all phases of the site visit process—from selecting sites to disseminating findings. The site visit coordinator will also be better able to answer questions from the sites if s/he conducts some of the site visits.

The site visit coordinator can negotiate many other aspects of the site visit process during this call. It is helpful to set dates for the visits based on the sites' availability and time needed to conduct the visits. It is important to balance the competing requirements of not overburdening the sites and spending enough time to get the information necessary to accomplish the purposes of the visits. It is also important to negotiate the use of the visit data with the sites before the visits take place. This negotiation also applies to determining if the report can be disseminated, and if so, what parts and to whom. The site participants should be assured that draft reports will be shared with them and that they will have the opportunity to clarify inaccuracies.

The site visit coordinator should have a primary contact person at each site who approves all the aspects of the site visit process. The on-site coordinator also needs to agree to organize the visit by setting up appointments for interviews and observations (see Part III).

Communication forms used (i.e., face to face, telephone, and email) should be appropriate to the task. For example, phone calls are more appropriate than email when discussing items like the schedule for the site visit because some give-and-take discussions are needed. Gaining initial access is usually done by phone or by email followed by a phone appointment. Emails should be personalized (name and other relevant information for the individual being contacted are included).

Suggested Schedule of Contacts with the On-Site Coordinators

Ask individuals with influence with the project (e.g., funder) to make the initial contacts to the proposed sites, requesting their participation. This individual makes reference to the site visit coordinator who will make the follow-up contact. The site visit coordinator will:

- Call the proposed sites to obtain participation and to begin establishing one-on-one relationships
- Make face-to-face contact(s) with the sites prior to the site visits when opportunities present themselves (e.g., annual meeting)
- Work with the on-site coordinators to finalize the site visit dates and set the site visit schedules
- Obtain site information for the site visitors (may involve regular mail)
- Finalize and remind the on-site coordinators of the arrangements one week and then two days before the site visits, including information about the site visitors
- Thank the sites immediately after the site visits, usually within 1-2 days
- Report data as they become available and include sites' feedback in the report (and thank again) (provide with hardcopy and electronic copy)
- Provide other follow-up as needed
- Negotiate how the site visit data will be used and disseminated (e.g., provided with an individual site report, aggregated across sites)

Select Site Visitors and Finalize Site Visit Dates

Site visitors can be selected at any time after the purposes for the visits have been identified, since their selection is directly tied to these purposes. However, it is often prudent to wait until actual sites and potential times have been established, since the visitors will have to be willing to fit the visits into their schedules. These visitors will conduct interviews, tour facilities, observe activities, review documents, and write reports. The use of teams ensures multiple perspectives, and the use of site visitors who are not involved in a project provides an outside perspective and objectivity.

Once the visitors have been selected and slotted into the site visit schedule, they should be engaged through formal contracts. Many visitors will expect to be paid for their time to prepare (including training), travel to and from sites, conduct visits, and write reports. Expenses for travel, meals, and related incidentals will also need to be covered.

Ideally, team members should be made up of a mix of content and/or process experts and evaluators. The sites and site visitors should be matched based on the visit purposes and the expertise of the visitors. Potential sources of visitors for ATE projects include evaluators and staff members from other projects, local content experts from business/industry not presently working with the ATE project under evaluation, members of national visiting committees for other projects, possible exchange programs of evaluators, and/or content/process experts among projects with similar work.

Suggested Schedule of Site Visit Coordinator Contacts with the Site Visitors

- Engage a site visitor through a letter of agreement and then a formal contract (phone call, regular mail for letter and contract)
- Prepare the site visitors to use the protocols
- Provide visitor with the team packet, including project information and site visit protocols, at least 2-4 weeks prior to the site visits (may involve regular mail)
- Send a reminder for travel arrangements if not coordinated through a travel office
- Send a reminder with driving directions, key site personnel contact information, site arrangements, and coordination with other site visit team members at least 1 week prior to the site visit
- Thank the site visitors immediately after the visits, usually within 1-2 days
- Provide a reminder of any report due dates
- Provide with copies (electronic and hardcopy) of final report(s)
- Pay promptly after receiving the site visitor's report

If the site visits are complex, it is helpful to have an information management system in place that will allow someone to track which site visits were conducted, by whom, when these were completed, when the reports were written, etc. Project management software or other tracking software (e.g., Excel or email) can assist with this and with tracking contacts with the sites and visitors. It also helps to keep current contact information for everyone involved.

Simple Example: The PI defined a site as a school with at least one teacher who had participated in the professional development. Ten high schools and two community colleges had at least one teacher who had participated. All the schools were within driving distance. The advisory committee members were being paid for two days of committee work, and it was decided that the site visits would use one day of that time. The committee was split into teams of three each with an educator, a scientist, and a businessperson. Each team was to visit one school. Schools were selected to be representative and included one community college, one high school with more than one teacher who had participated in the professional development, and one school with one teacher who had participated. The PI was designated as the site visit coordinator and therefore was the person who made all the contacts with the sites prior to the visits.

To gain access to the sites, the PI called the teachers who had participated in the professional development. Because he had good rapport with them, they agreed to act as on-site coordinators. They also agreed to set up interviews and observations and to obtain necessary approvals from their administrators. The PI discussed with the teachers how the data would be used and what should happen during the site visit. The teachers were assured that the purpose of the visit was to inform committee members and to plan for the next summer, not to "evaluate" their teaching. Once the sites were selected, he determined which teams to send to which schools based on the expertise and interests of the committee members/site visitors.

PART III: PREPARE PROTOCOLS

- ☐ Involve Stakeholders and Site Visitors in Protocol Development
- ☐ Develop Protocol Content
- ☐ Test and Revise the Protocols Before the Visits
- ☐ Prepare the Site Visitors to Use the Protocols

Protocols are the sets of processes and instruments used by site visitors to ensure they gather the necessary data. In other words, protocols are advance preparation in terms of the specific information needed and how to obtain this information. Protocols can be developed as soon as the purposes for the site visits have been determined, and should be tried out to ensure their effectiveness and usability. All site visitors should understand how to effectively use protocols in order to meet the information needs of the project.

Involve Stakeholders and Site Visitors in Protocol Development

Involving key stakeholders in the initial development of protocols helps keep the information gathered aligned with the purposes of the site visit. They know what they want to find out and what type of information will be most useful. It is also helpful to involve the site visitors themselves, since they have expertise in the areas related to the purposes of the site visit and they will be asking the questions. Involving them also ensures shared understanding of what the protocols are supposed to accomplish.

Involving stakeholders and site visitors assists in ensuring the validity and practicality of the protocols.

Develop Protocol Content

Several different types of protocols are possible depending on the visit purposes. In more complex situations, the protocols help guarantee that different site visitors do the same general sorts of activities at each of the different sites.

The overall schedule for the visit could be considered a protocol. This schedule includes descriptions of what should be accomplished, who should be interviewed, and what sort of artifacts should be collected. The schedule should include sufficient time for all the proposed site visit activities such as time to observe classes, time to interview students, etc.

The site visit coordinator should work with the on-site coordinator to set up the schedule to guarantee that the right activities are observed and the right interviews take place. Care should be taken to allow input from individuals at the site about what will occur—after all, they are the experts about what is happening at their site.

Sample Schedule for a Site Visit		
Time	**Team Member**	**Activity**
7:30- 8:00 a.m.	Site visit team (Les & Gail)	Breakfast meeting to review site visit purposes and assign roles (this may occur over dinner the night before)
8:30- 9:00 a.m.	Team	Meet with on-site coordinator and PI
9:00- 9:30 a.m.	Team	Project presentation
9:30-10:00 a.m.	Les	PI Interview (may need an hour)
9:30-10:00 a.m.	Gail	Faculty interview with Dr. Jones
10:00-11:00 a.m.	Gail	Faculty interview/tour with Dr. Smith
10:00-11:00 a.m.	Les	Phone interviews with some industrialists
11:00- 1:00 p.m.	Team	Student focus group & lunch
1:00- 3:00 p.m.	Team	Observations of 4 classes (each person observes 2 classes)
3:00- 3:30 p.m.	Team	Meet with on-site coordinator to be sure purposes of site visit were accomplished
3:30- 4:30 p.m.		Time for additional data collection, if needed
Throughout visit	Team	Collect curriculum materials
5:30- 6:30 p.m.	Team	Dinner debriefing meeting to share impressions and assign report writing roles

Protocols can also be developed to help guide observations, such as classroom observations, tours of industrial sites, visits to campuses, etc. These protocols can be on a continuum from very open ended, where the observer is just asked to make field notes of what s/he notices to the very controlled, where the observer is asked to record specific types of information perhaps even at specified intervals (e.g., code which class activities are occurring at each five minute interval of a class). Sets of interview questions are another type of protocol. Again, these questions can range from open ended (e.g., "tell me how you feel about your class") to closed (e.g., "how useful do you think the textbook is?"). Generally, interview protocols are developed for each type of individual that will be interviewed (e.g., traditional students, nontraditional students, instructors, PIs, administrators). The details in the protocols, such as the specific items to look for in a classroom observation, are based on the site visit purposes.

Typical Types of Protocols

- Site visit schedule
- Field notes for recording a description of a project's setting
- Interview and/or focus group forms for use with information sources such as:
  - PIs, Co-PIs
  - Faculty members
  - Administrators
  - Collaborators or Industrialists
  - Students
- Classroom or internship site observation forms

Appendix B contains examples of a classroom observation, interview, focus group, and field notes protocols that can be easily adapted.

There are several books on how to phrase interview questions and/or to construct observation protocols. However, in general, the goal is to design them to address the purpose(s) of the visit. It is particularly important to ask questions that encourage the respondents to provide their own opinions—not questions that lead them to answer in one way or another. The other rule of thumb

is to phrase the questions so that they encourage people to talk—in other words, no single word or phrase answers or yes-no questions.

Redundancy is common in site visit protocols in order to capture multiple perspectives. In the simple example, the PI would ask the instructors and students similar questions about the class to get both sides of the story (e.g., "How often do you have hands-on activities?"). Additionally, the classroom observation protocol would have items on it related to the questions, "What percent of the time you spent observing were the students engaged in hands-on activities?"

Sometimes there just isn't enough time in site visits to cover all areas of interest that are included on the developed protocols. In this case, it is helpful to have a short list of critical questions directly related to the purpose(s) of the site visit that must be answered. That way, if something happens to interfere with complete data collection, information on at least the core questions will be available.

Test and Revise the Protocols Before the Visits

If time permits and especially if the site visits are complex, it is valuable to try out the protocols by asking the questions of real respondents and observing real situations (e.g., classes). Sitting across from someone and asking a question brings to the forefront many problems not encountered when the question was developed in print. Another way to obtain relevant feedback is to conduct focus groups of respondents who can tell you whether or not they think what you are asking is really what you meant to ask. Another good check is to take the information gathered from these "pilot tests" and see if the data actually address the site visit purposes. One cost-effective way of conducting pilot tests is to use the first visit in a series of visits as a pilot, then revise the protocols based on what was learned at this visit. Implementing this procedure implies having experienced site visitors conduct the first visit so that their own expertise can compensate for limitations in the draft protocols.

Prepare the Site Visitors to Use the Protocols

Because protocols are unique for every set of site visits and depend on the specific purposes of the visits, site visitors, even experienced ones, need to learn how to effectively use these new tools. Additionally, when several visitors are involved in the visit process, it is important to prepare them to ensure similar interpretations of the questions and the collection of similar data. Preparation can be provided through several mechanisms including written procedures, workshops, videos, and on-the-site training.

The site visit coordinator should be responsible for organizing site visitor preparation and making sure that they complete it. S/he should also have an in-depth understanding of the protocols so that she can answer questions from site visitors.

A site visit team packet should be given to site visitors in advance. The packet should include

- Purposes of the site visits, in general
- Site selection process
- Outline for site visit report and a sample report
- Protocols (procedures, interview questions, site visit schedule)
- Site visit contacts and arrangements
- Helpful hints for conducting the site visit(s)
- Goals of the site visit(s) to be shared with the sites
- A list of critical questions (i.e., if time runs out, what are the top 10 questions that need to be asked of everyone interviewed—aligned with the site visit purposes and report)
- Site-specific information (list of key personnel, project description, background materials)

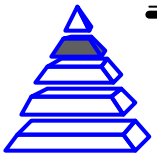
The choice of which mechanisms to use is dictated by the time and fiscal resources allotted to the site visits and the proximity, expertise, and numbers of site visitors. Written procedures are always useful. Workshops are valuable if the visits are complex and the visitors are nearby. Videos can be used to counteract the need for travel and specific times to obtain preparation, as well as provide more "authentic" information than written procedures. On-the-site training works well, if teams of visitors conduct the visits. In this case, an experienced (trained) visitor can be paired with a novice (untrained) visitor and "training" can take place as the two (or more) of them conduct the visit. If there are several site visitors, this on-the-site training may be conducted in a rolling forward fashion with the newly trained visitor going on to help the next novice and so on. It is often valuable to have the team meet (actually or virtually) and plan strategies before the visit.

How comprehensive this site visitor preparation needs to be depends on the expertise and experiences of the visitors. There needs to be a balance between sculpting visitors into a single mold and tapping into the visitors' unique perspectives. The more the data need to be aggregated and generalized to meet the site visit purposes, the more preparation is necessary.

Simple Example: In order to help the advisory committee members conduct their site visits, the PI developed protocols for them to use during the visits. He drafted them with the help of the evaluator and then shared them with the committee members to obtain their input. In order to address the major site visit purposes, he developed sets of questions for interviewing teachers and students and for observing classes. To consider barriers to implementation and fit within the existing structure, he also developed interview questions for administrators and teachers who had not been directly involved in the professional development. The interview protocols showed what questions to ask, how to phrase the questions, and what sort of probing or additional prompting might be used to help the respondent fully answer the questions. The observation guide included all the important components hoped for in a high quality class

as had been discussed during the summer. The PI tried out the protocols with his students and colleagues. This resulted in some modifications. He provided the protocols to the site visitors and explained how to use them. Any comments and questions were shared with all the site visitors so that they would be prepared to use the protocols consistently.

With feedback from the teachers at the sites, the PI outlined a typical day-long site visit as arriving at the school, talking with the administrator, touring the school, interviewing the teacher, observing a class, interviewing students, and then perhaps observing after school activities related to the class.



Part IV: Conduct the Site Visits

- ☐ Contact Sites Prior to the Visits
- ☐ Prepare the Site Visitors
- ☐ Carry out the Visits

Conducting the visit is the most important part of the site visit process. Both the sites and the visitors need to be prepared for the visits to be successful. The sites need to have the activities arranged for the visitors, and the visitors should have done their homework about the sites and about what is supposed to occur during the visits. With teams of visitors at multiple sites, different sets of activities for different visitors are possible; effective communication is critical.

Contact Sites Prior to the Visits

The schedule for the visit should be negotiated in advance, ideally once the sources of information and types of protocols have been determined (see Part III). This ensures understanding about what should occur and a match of visit activities with the visit purposes and the sites' wishes.

Visits sometimes have to be rescheduled or cancelled because of unforeseen difficulties. Advance planning should take into account this possibility by allowing sufficient time for alternate plans.

The site visit coordinator should confirm the visit and the site visitors one or two days before the visit.

The site visit coordinator or someone else very familiar with the site visit process should be available via email or phone during regular office hours and some hours in the evenings and on weekends (if visitors are traveling or on-site during those times) to handle last minute emergencies while visits are being conducted.

Constant and consistent communication among the sites, the site visitors, and the site visit coordinator is important prior to, during, and after the visits to guarantee understanding of what should take place, to share information, and to deal with any emergencies or difficulties that may arise. By the time the actual visit takes place, the site should be ready to receive the visitors.

Prepare the Site Visitors

The site visit coordinator is responsible for organizing any preparation site visitors need to help them become effective site visitors.

The site visitors should also be prepared for the visit in terms of being knowledgeable about conducting effective site visits. Preparing visitors to conduct such visits is different than training them to use protocols (see Part III), since protocols are unique to the purposes of a specific site visit, while conducting effective site visits is a general set of skills used during any site visit. Visitors always need to be trained to use the protocols, regardless of their level of experience, but only need to be prepared to conduct effective site visits if this process is new to them.

Effective site visitors should be able to do the following:

- Notice things
- Make decisions on the spot
- Determine when there is a second message being delivered in an answer
- Probe to find out more, but not make people uncomfortable
- Listen carefully and encourage people to talk
- Manage group conversations so that all viewpoints are heard
- See a variety of perspectives and present those as well as their own perspectives
- Recognize that there are many ways for a project to be successful
- Be interested in describing things
- Write good, unbiased descriptions
- Truly and fairly understand a complex entity in a short time
- Be conscientious and well prepared for the visit
- Know when to stop asking questions
- Know how to get answers from general conversations
- Be polite and respectful to everyone at the site

In addition to developing the personal characteristics listed above, site visitors should be comfortable altering the site visit schedule as needed. It is most important to gather all the information needed based on the visit purposes. This may require changing the amount of time spent on each activity, depending on how much information it can provide. Sometimes it may be important to break off from the schedule in order to pursue better understanding of important issues. Additional people may need to be interviewed, or different activities may need to be observed. If people were unable to attend their scheduled interview, the site visitors should follow up with these people by phone. Other times, site visitors will have to be firm about sticking to the predetermined schedule in order to collect the necessary data from the appropriate people. The PI may need to be reminded not to participate in an interview with other project staff members. Clear understanding of the site visit purposes is critical in these situations.

Site visitors can refer to the team packet distributed during the site visitor preparation phase to use the protocols. This packet contains the protocols, logistical information about the visit, and other project background information that visitors will need to use during the visits.

Carry Out the Visits

What occurs in the actual visit is predicated on the visit purpose(s). It is important that sufficient time is allocated to conduct all the observations and interviews necessary and also to allow for anything additional that might arise. It helps with the reporting process later if you make quick notes of insights and ideas you have as you carry out the visit. Generally, the site visitors meet first with the individual(s) who organized the visit. This also includes observations of the site and its general facilities. Often, the initial greeting and walk around are followed by some sort of formal presentation about what is going on at the site. This presentation can provide answers to many of the questions on the protocols. More specific activities take place as scheduled, such as individual interviews, field trips, or classroom observations. After these more individualized activities, there is usually a meeting with the on-site coordinator to make sure all the goals of the site visit were accomplished, and if not, the scheduling of more activities. Finally, the site visitor(s) meet again with the on-site coordinator and thanks him/her for his/her assistance and obtains contact information for any follow-up questions that may need to be answered.

If there is a team of visitors, a team leader should be assigned to make sure all the parts of the visit occur and that all the site visit goals are accomplished.

Thanking the site personnel in writing immediately after the visit and informing them when the report will be available will let them know that their time and efforts are valued. Thanking the site visitors immediately after a visit also provides an opportunity to remind them of the report due dates.

On-site coordinators should:

- Offer suggestions about what would be the most informative ways to learn about the site as the initial schedule is being planned
- Schedule all the events requested
- Schedule interviews for approximate times, if possible, so they could begin a little earlier or later
- Make sure everyone who will be interviewed or observed knows the purpose(s) of the visit
- Allow time to move between interviews or observations
- Confirm the schedule with the site visitors at the beginning of the visit
- Be flexible about scheduling and willing to change it if needs arise
- Remember that site visitors need to be alone with the individuals they are interviewing
- Be ready to provide additional materials or documentation as needed

Simple Example: A week before the visit, the PI (site visit coordinator) checked with the teacher at the school (on-site coordinator) and with the site visit team to make sure everything was set up. He asked the site visitors to become familiar with the protocols and the materials about each of the schools he had sent them. After the visits, the PI sent a thank you letter to the teachers. He also reminded the site visitors that they were to have a brief report on their impressions ready for the upcoming advisory committee meeting.

The site visitors took the protocols with them on the visits. In this way they all asked the same questions and were reminded about what to examine. The visitors took notes on all the answers and their observations. They also made notes of interesting things they noticed or insights they had about relationships or issues relevant to the project.

PART V: USE THE DATA

- ☐ Outline the Report
- ☐ Analyze the Data
- ☐ Write the Report
- ☐ Disseminate the Findings

It is important to use the data collected during site visits as effectively as possible to justify the time, money, and other resources invested. The best way to ensure use is to align the data gathering with the project's information needs. Assuming this has taken place, the information then needs to be analyzed and presented in formats that allow stakeholders to use it effectively.

Outline the Report

After the visit has been conducted, a site visit report is usually prepared. An outline for this report should be developed prior to the visits and provided to the site visitors. Naturally, this needs to be directly tied to the site visit purpose(s). The report outline needs to allow for both consistency across visits and the uniqueness of each site. One way to do this is to have specific required sections and sections that ask the visitors to comment on the sites' uniqueness. These open-ended sections should encourage the sharing of human stories and anecdotes the visitors gathered—narratives that allow the report readers to vicariously experience the essence of the sites.

The outline for the report depends on what purpose the report is to serve. Site visit data are generally used in three types of reports. One is to provide a complete description of the site itself, which is often shared with the site and others who want to know what is happening. Another is to aggregate the data across several sites to provide a composite report of a larger entity represented by the sites or to point out similarities and differences in the set. A third is to use the site visit data, either

In ensure the information contained in the report is appropriate for the stakeholders who will use it, you may want to ask the stakeholders to critique your report outline.

in aggregate or individual format, to supplement other types of data (e.g., statistics, in a larger, comprehensive report such as an evaluation).

Most often the reports are descriptions of the site in a story-like format. The story generally has specific parts covering the important aspects of the site, such as students, classes, etc., tied to the visit purpose(s). Reports may also have sections that describe aspects of the project such as collaborations, standards development, materials development, professional development, recruitment and retention, or sustainability.

Typical Site Report Outline

- Site Visit Purposes and How Data Were Collected
- Site Description
  - Setting or Context
  - Goals
  - Staff
  - Resources
  - Activities
  - Outcomes
- Perceptions of People at the Site (Including Anecdotes and Quotes)
- Site Visitor Impressions
- Unanticipated Outcomes and Additional Insights
- Conclusions and Recommendations
  - Implications for the Site
  - Implications for the Project

Analyze the Data

The first step in analyzing the data is to collect it all in one place and read it carefully. This will include the results of the interviews, any artifacts gathered, observation and field notes, and any personal notes about insights or ideas you had while conducting the visit. This careful consideration of the data will result in more insights and ideas about what is really the story of the site and how this story relates to the site visit purpose(s). What are some of the big ideas, the surprises, the difficulties, etc.? Does everyone at the site tell a consistent story? Why? Then you begin to write the story following the predetermined report outline. As you write, you check and cross-check what you are saying with the data. Once you have all of the descriptive information down on paper, you read it to see if what you said accurately represents what you saw during your visit. This read-through also gives rise to the important insights and recommendations that you want to make based on the information you gathered.

If data are to be aggregated, a good starting point is to look for similarities. This is usually done by examining the field notes, interview transcripts, videotapes, etc. for patterns and themes and then categorizing them into recurring topics that are relevant to the site visit purposes. If different site visitors conducted the visits and produced separate reports, aggregation can be based on the reports themselves. If these reports follow a similar outline, locating similar issues is easier. Software programs such as Microsoft Excel, Access, Nudist, or NVIVO can help organize the

data across sites and tag pieces of data with topic or theme identifiers. Special attention may be paid to the evaluation questions at this point. Contextual factors inhibiting and/or enhancing a project's success, key activities, outcome attainment, and unintended outcomes common across sites are usually of interest to various stakeholders.

Write the Report

It is most important that the report provide an accurate description of the site through both the eyes of the personnel at the site and the site visitor(s). Generally, it is best if the data are analyzed and the site visit report written soon after conducting the visit. This helps to ensure that the information is fresh in the visitors' minds, lowering the possibility of distortions and lost information. The report is also then available to share with the site in a timely manner.

Who should write a site visit report depends on how the visit took place. If one person conducted the visit, that person should write the report. If a team of people conducted the visit, different patterns of sharing the responsibility for writing the report are possible. For example, a team leader could write the whole report and then share that draft with the other members for comments and suggestions. Another example would be to have different visitors write different sections of the report. A third example would be to have each visitor write a separate report and then combine them to emphasize the different perspectives.

The site visit team leader should be responsible for making sure the report gets written in whatever format the team decides.

The next step is to verify your interpretation of the data with site participants by sharing draft reports with them. This provides an opportunity to clarify misperceptions on the part of the site visitors and to point out any inaccuracies. Inaccuracies should be corrected. If the site personnel and the site visitors disagree about a value question (e.g., the quality of a lesson), the final report could mention that site personnel disagreed with the visitor(s), both the differing opinions could be presented, or it could be made clear that the opinions in the report were those of the site visitor(s), not necessarily the opinions of the site personnel. It is important to negotiate the use of the site visit data with the site before the visit takes place. This negotiation also applies to determining if the report can be disseminated, and if so, which parts and to whom.

The team leader should coordinate communication about site visitors' roles and to share draft reports for comments and approval.

If the data are to be used in a comprehensive evaluation report, all the advice about producing useful evaluation reports comes into play. An annotated bibliography with resources for providing advice about evaluation is provided on our Web site at http://ate.wmich.edu.

Disseminate the Findings

Once the individual, aggregated, or comprehensive report is finished, the findings need to be shared, in order to be used. Report findings may be disseminated to various stakeholders and other interested audiences. Sites may share their individual reports with their own stakeholders. The overall project may decide to share the entire report or excerpts from it with various groups.

Often better than a written report is a feedback meeting where the evaluator can discuss results and provide additional information at the request of the stakeholders.

There are many forums for dissemination in addition to written reports. For example, reports may be made available on the Web, through teleconferences, PowerPoint presentations, or as brochures with key findings and recommendations. Methods of dissemination should fit with the purposes of the site visits, the needs of the audience, and the costs involved.

Final reports should be shared with site personnel and site visitors to show them the result of their time and efforts.

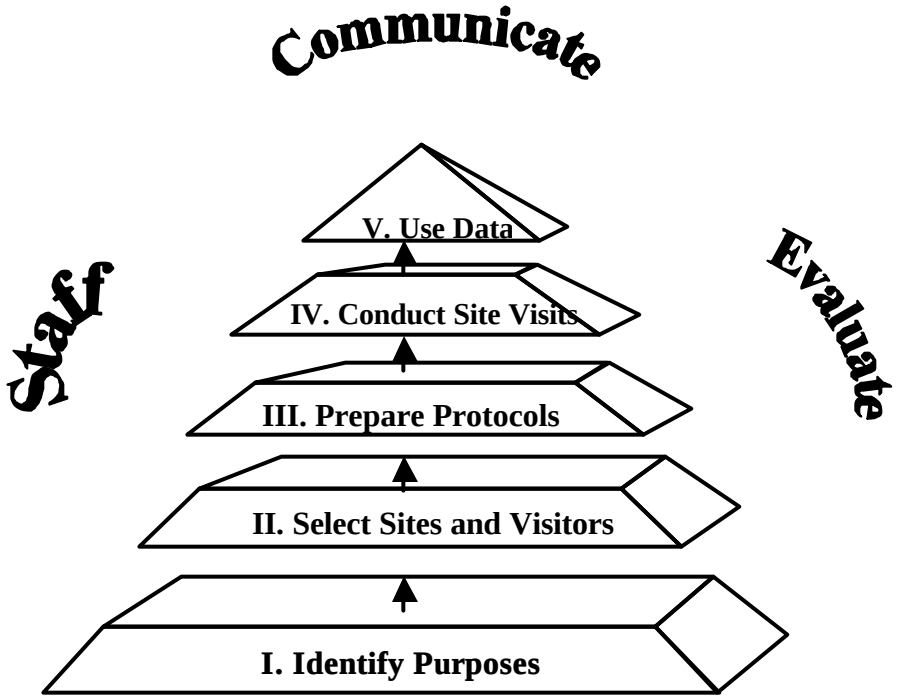
If you intend to conduct the same type of site visits in subsequent years, your site visit process and protocols could benefit from a metaevaluation. In a metaevaluation, an evaluator formally examines your site visit processes, protocols, and results, and then makes recommendations about how to improve them. Implementing these recommendations helps ensure that the data you collect from your site visits in the future will be as useful as possible to you and the project's stakeholders.

Simple Example: The outline for the report aligned with the purposes of the site visits: describe the implementation including content, instruction, and interactions; the barriers to implementation; opinions on the professional development; and additional things that need to be done. The final section of the report outline asked for insights and impressions. To prepare their reports, each site visitor carefully went through his/her notes and wrote up his/her impressions. They shared these within their teams and came up with one report that represented the site. The PI shared these reports with the teacher(s) at the sites to verify accuracy. At the advisory committee meeting, these site reports were discussed and recommendations for the upcoming summer were made. The evaluator was given the individual site reports and the resulting recommendations to use for the annual project report. The PI also presented the findings at one of the professional development sessions with all the participating teachers to obtain their feedback on the recommendations. The advisory committee made suggestions on how to improve the site visit process for the next year.

Appendix A

Checklist for Effective Site Visits

A Checklist for Effective Site Visits

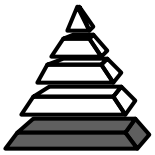


The checklist is organized around four processes we believe are conducive to effective site visits—(1) Plan and Implement (Steps I-V), (2) Staff, (3) Communicate, and (4) Evaluate. As illustrated in the figure above, these processes are integrated and do not occur in a linear fashion, but concurrently and repeatedly. The Staff, Communicate, and Evaluate processes play strong support roles to the Plan and Implement steps.

This checklist includes the lessons learned from conducting and managing several site visit processes and is intended for use as a "to do" list by individuals embarking on these processes. Details on various checklist items are provided in Parts I-V of this guide.

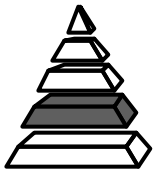
Please refer questions to Dr. Nanette Keiser, Senior Research Associate/Project Manager, The Evaluation Center, Western Michigan University, nanette.keiser@wmich.edu.

Plan and Implement



I. Identify Purposes

- ☐ Involve key stakeholders (e.g., funder(s), project staff, project beneficiaries)
- ☐ Determine the site visit purposes (link the purposes to the evaluative questions when applicable)
- ☐ Align planning with the site visit purposes



II. Select Sites and Visitors

- ☐ Identify the sites to visit
  - ☐ Define a site
  - ☐ Establish site selection criteria
    - ☐ Involve key stakeholders in establishing the criteria
    - ☐ Decide on a sampling technique (e.g., purposive sampling)
  - ☐ Select the sites
    - ☐ Apply the selection criteria
    - ☐ Initially select more sites than needed (i.e., oversample)
    - ☐ Ask for feedback from key stakeholders on the sites selected
- ☐ Gain access by
  - ☐ involving an individual with influence with the sites in asking for their participation
  - ☐ providing a stipend to the sites to cover some of their time and costs preparing for the visits
  - ☐ developing a report (or similar method) for use only by the site
  - ☐ providing assurances on how the data will be used (e.g., will be kept confidential, only aggregated across sites)
- ☐ Make initial contacts with the sites
  - ☐ Have the individual with influence with the sites make the initial contact and mention the site visit coordinator (usually an external evaluator) in this contact
  - ☐ Have the site visit coordinator make contact, optimally by phone
- ☐ Select site visitors
  - ☐ Have a mix of evaluators and content experts
  - ☐ Align the sites and the site visitors based on the expertise of the visitors whenever possible
  - ☐ Engage the site visitors (letters of agreement, contracts)

- ☐ Finalize the site visit dates
  - ☐ Work with the sites' schedules first–let them propose dates convenient for them. This minimizes intrusion.
  - ☐ Work next with the site visitors' schedules
  - ☐ Develop an optimal schedule (i.e., does not overburden the sites or the site visitors)
  - ☐ Allow enough time in your schedule planning for site information to be collected and then dispersed to the site visitors, the site visitors to review this information, preparation of the site visitors, and the visits

III. Prepare Protocols

- ☐ Involve stakeholders and site visitors in protocol development
  - ☐ Develop first drafts of protocols (Note: May need to begin this as soon as the site visitors are selected)
  - ☐ Align with the purposes
  - ☐ Involve key stakeholders
- ☐ Develop protocol content
  - ☐ Set the schedule ensuring that activities appropriate for the site visit purposes are provided. These may include
    - ☐ Interviews
    - ☐ Facility tours
    - ☐ Classroom observations
    - ☐ Demonstrations
    - ☐ Document reviews
  - ☐ Determine the types of instruments you will use and with whom
  - ☐ Use Appendix B to adapt instruments for your needs
- ☐ Test and revise the protocols before the visits
  - ☐ Test with focus groups of key stakeholders
  - ☐ Pilot at the first site, make revisions as appropriate (assumes protocols were tested with focus groups)
  - ☐ Field test at the second site with the site visit coordinator(s) and another site visitor, make revisions
- ☐ Prepare the site visitors to use the protocols
  - ☐ Obtain background information for the site visitors
  - ☐ Provide them with written procedures (team packet) prior to the visit (usually 2 weeks in advance). This includes
    - ☐ Site visit logistics (contacts and arrangements)
    - ☐ Helpful hints for conducting site visit(s)
    - ☐ Goals of the site visit(s)

- ☐ A list of critical questions (i.e., if time runs out, what are the top 10 questions that need to be asked of everyone interviewed)
- ☐ Definitions pertinent to the visits
- ☐ Purposes of the site visits, in general
- ☐ Site selection process
- ☐ Site visit process/report guidelines and a sample report
- ☐ Protocols (procedures, interview questions, site visit schedule)
- ☐ Site-specific information (list of key personnel, project description, background materials)

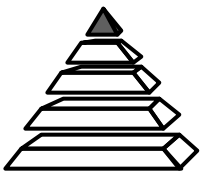
☐ Provide site visitors with some type of preparation; for on-the-site training, pair with an evaluator and/or with another experienced site visitor for the first visit

IV. Conduct the Site Visits

☐ Contact the sites prior to the visits
- ☐ Finalize and remind the site personnel regarding arrangements
- ☐ Confirm the names of the site visitors
- ☐ Thank the sites

☐ Prepare the site visitors
- ☐ Verify that visitors have received the team packet
- ☐ Provide visitors with characteristics of effective site visitors (p. 16)

☐ Carry out the visits
- ☐ Work with the sites to follow the schedules, but be flexible
- ☐ Plan for contingencies
  - ☐ Cancellations (e.g., weather, by sites, by visitors, other)
  - ☐ Changes in the agenda and activities

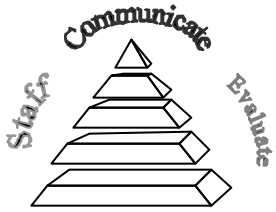


V. Use the Data

☐ Outline the report
- ☐ Involve key stakeholders
- ☐ Match to site visit purposes
- ☐ Provide outline to visitors prior to visits

- ☐ Manage information to effectively "mine the data"
  - ☐ Have one central coordination point for
    - ☐ Site visit schedule to sites and site visitors
    - ☐ Site information for site visitors
    - ☐ Draft reports from site visitors
    - ☐ Draft reports, after editing, to sites
    - ☐ Sites' comments on draft reports
    - ☐ Final site reports from teams
    - ☐ Final site reports, after editing, to sites
    - ☐ Findings aggregated across sites
    - ☐ Site visit logistics, processes, and procedures
    - ☐ Site visit protocols
  - ☐ Have one central file (hardcopy)
    - ☐ Maintain a project file for documenting processes and procedures
    - ☐ Keep a file by site and include
      - ☐ Communications
      - ☐ Draft report(s) and site comments on draft report
      - ☐ Final report(s)
      - ☐ Site information
    - ☐ Maintain a file by site visitor and include
      - ☐ Communications
      - ☐ Contracts
      - ☐ Work products
  - ☐ Maintain an electronic file (and backups) and include
    - ☐ Communications
    - ☐ Draft reports
    - ☐ Final reports
    - ☐ Findings aggregated across sites
    - ☐ Site visit processes and procedures
    - ☐ Site visit protocols
    - ☐ Database(s) for managing site visits
- ☐ Analyze the data
    - ☐ Organize notes from site visit
    - ☐ Identify themes and impressions
    - ☐ Aggregate data across sites if needed
- ☐ Write the report
  - ☐ Divide report sections among team members
  - ☐ Ensure timeliness when working with a team
  - ☐ Provide quality control (one editor)
  - ☐ Verify draft report with site personnel and include their comments
  - ☐ Reconcile differences (e.g., minority opinions)

☐ Disseminate findings
  ☐ Provide data to sites via various reporting methods (usually a site report for its uses)
  ☐ Encourage use (i.e., produce and disseminate) of findings based on the site visits
    ☐ Ensure confidentiality
    ☐ Use a variety of methods appropriate for your key stakeholder audiences (e.g., reports, Web, feedback workshops)



Communicate

☐ Develop and use mechanisms for obtaining and keeping current email and other contact information for sites and site visitors

☐ Use face to face, telephone, and email as appropriate (e.g., use telephone calls for obtaining access to the sites, email for reminders)

Communicate with the Sites

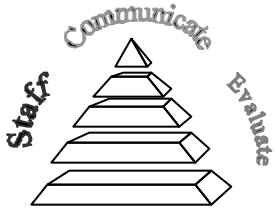
☐ Use the following suggested schedule of contacts. (Note: Making this number of contacts is dependent on available resources. All contacts are by email except where indicated. Emails are personalized [name and other relevant information for the individual being contacted are included]):
  ☐ Individual(s) with influence at a site make the initial email contacts to the proposed sites, asking for their participation. This individual makes reference to the site visit coordinator, who will make the follow-up contact
  ☐ Site visit coordinator(s):
    ☐ Call the proposed sites to obtain participation and to begin establishing a one-on-one relationship with the sites (one primary contact at the sites, the on-site coordinator(s), and one primary contact through the site visit coordinator(s)—at similar levels in the organization)
    ☐ Make face-to-face contact(s) with the sites prior to the site visits when opportunities present themselves (e.g., annual conference)
    ☐ Work with the sites to finalize the site visit dates and set the schedules
    ☐ Obtain site information (e.g., project description, work samples) for the site visitors (may involve regular mail)

- ☐ Finalize and remind the sites of the arrangements one week and then two days before the visits, including information about the site visitors
- ☐ Thank the sites immediately after the site visits
- ☐ Report findings as these become available (and thank again) (provide with hardcopy and electronic copy)
- ☐ Provide other follow-up as needed
- ☐ Negotiate how the site visit data will be used (e.g., reported in an individual site report, aggregated across sites)

Communicate with Site Visitors

☐ Use the following suggested schedule of contacts (Note: Making this number of contacts is dependent on available resources. All contacts are by email except where indicated. Emails are personalized [name and other relevant information for the individual being contacted are included]). These are done by the site visit coordinator (e.g., external evaluator):

- ☐ Engage a site visitor through a letter of agreement and then a formal contract (phone call, regular mail for letter and contract)
- ☐ Provide project information and site visit procedures at least 2 weeks prior to the site visits (may involve regular mail)
- ☐ Send a reminder for travel arrangements if not coordinated through a travel office
- ☐ Send a reminder with driving directions, site key personnel contact information, site arrangements, and coordination with other site visit team members at least 1 week prior to the site visit
- ☐ Thank the site visitors immediately after the site visits
- ☐ Provide a reminder of the report due date
- ☐ Provide with copies (electronic and hardcopy) of final report(s)
- ☐ Pay promptly



Staff

☐ Have individual(s) coordinating the site visit phase and knowledgeable of the goals of the evaluation and the site visit purposes work with the sites and site visitors during all phases of the site visit process from the development of the protocols and selection of the sites through dissemination of findings.

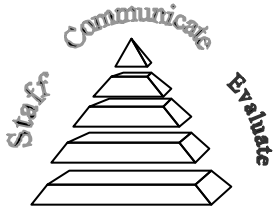
☐ Engage a judicious mix of evaluators and content experts as site visitors and whenever possible, match their experiences/expertise with the sites

☐ Involve key stakeholders (users of the evaluation) at appropriate points (e.g., identifying the site visit purposes, developing the protocols)

When the Site Visits Are Conducted

☐ Provide staff during regular office hours and some hours on the weekends (e.g., check email once a day and respond to emergencies) to provide adequate customer service to the sites and site visitors when the site visits are being conducted

☐ Have a primary contact coordinating the site visit phase (i.e., site visit coordinator) and also at the site (i.e., on-site coordinator). The site visit coordinator should thoroughly know the site visit purposes and procedures. Ideally, the site visit coordinator should conduct some of the site visits.



Evaluate

☐ Provide for feedback mechanisms by sites and site visitors before, during, and after the site visits

☐ Use the feedback gathered through these mechanisms for updating/revising protocols, planning, and updating site visit procedures

☐ Consider a metaevaluation of the site visit process

Appendix B

How to Modify the Sample Protocols for Your Use/Sample Protocols

How to Modify the Sample Protocols for Your Use

This appendix contains specific examples of instruments used during the evaluation of the ATE program. These instruments need to be modified for use in new settings, and the next few pages will outline a process to help you modify them for your purposes. The instruments are organized by instrument type and respondent and can be found in the following order:

Getting Started

Before you can modify the protocols in this appendix for your use, you should decide what types of protocols (i.e., interviews, observations, focus groups, field notes) will be necessary for your site visits, as described in **Part III, Develop Protocols**. Then select a protocol you plan to use and follow the steps below. You can repeat these steps for each protocol. These protocols are available in an editable format at http://ate.wmich.edu to assist in any customization that may be needed.

Step 1. Decide with whom or where you will use the protocol.

As you worked through **Part III, Develop Protocols**, you decided what to observe and whom to talk with, and in **Getting Started** you picked a type of protocol. For this step, you should select one group of people or one setting. For example, if in **Getting Started** you picked interviews, you now need to decide on a respondent, e.g., faculty. Other examples would be focus groups with students or observations of internship sites.

Step 2. Find the appropriate example protocol in this appendix.

Once you have selected both the type of protocol and the respondent or setting, select the protocol that corresponds most closely to these needs. If you plan to conduct a student focus group or classroom observation, you will find corresponding examples. There are no examples for some combinations, such as student interviews or internship site observations. In these cases, look for similar instruments such as student focus groups or classroom observations. The descriptions below can help you choose the best examples to use.

The **Faculty Person Interview** is designed for someone teaching a project class or using project materials and is not necessarily designed for a faculty member who participated in a project professional development experience. For a faculty member who participated in professional

development, you may want to adapt the **Student or Faculty Professional Development Focus Group** protocol and possibly include questions from the **Faculty Person Interview** as well. The **Collaborator or Industrialist Interview** is designed for people outside of education institutions who might participate in your project in some way. These interview and focus group protocols can also be adapted for other project participants or staff members including students and materials developers.

The **Student or Faculty Professional Development Focus Group** protocol is designed for use with people who have been involved in a learning experience, such as students or faculty who attended professional development sessions. It demonstrates that focus groups center around only a few overall questions and are meant to stimulate discussion among a group of participants. You can, however, adapt the questions on this protocol for one-on-one interviews with students or faculty.

The **Classroom Observation Protocol** can be used to observe many types of classrooms if it is adapted to the setting. It can also be adapted for observations of field experiences or internship work sites.

The **Field Notes Protocol** shows you what types of environmental information to look for as you conduct your site visits and can be easily adapted for settings other than education institutions.

Step 3. Modify the protocol.

As you look at the selected protocol, you will see that only some of the questions apply to your specific purposes. Most sample protocols are organized by topic, and it is helpful to decide which of these topics pertain to your needs first. Then you can eliminate topics and the corresponding questions. For a PI interview about a project with no outside funder, you would eliminate the funding question. Similarly, you would eliminate standards development questions for a faculty interview about a project without standards development goals. As you adapt the **Classroom Observation Protocol** for an internship setting, you might remove the section rating the overall quality of the lesson.

Step 4. Add needed topics to the protocol.

Your modified protocol still may not contain everything you need. Based on the purposes of your site visits and on the information the setting or respondent is capable of providing, add topics and corresponding questions to the protocol. For example, in a specialized class, such as a biotech lab course, you might add observation items about students' use of sterile technique and microscopes. As another example, you could ask a collaborating employer who teaches classes at the community college for the project about the materials and instructional strategies he uses.

Step 5. Additional advice on modifying protocols.

You should keep in mind that any protocol should allow you to gather as much information as possible. For interviews and focus groups, this means keeping the participants comfortable and talking. One useful technique is to ask the participants to tell you what they can about the project

at the beginning of an interview, before beginning your list of questions. This allows you to collect the information the participant thinks is most important, information that the questions might not elicit. Focus groups that start with very general, nonthreatening questions, such as asking students about how many courses they have taken in the project, facilitate participation. Questions for both interviews and focus groups should be open-ended, beginning with words like "what", "how", and "describe".

Another way to ensure that you gather appropriate information is to adapt the language to fit your audience. For example, the person you interview might not understand what unintended outcomes are but could answer a question about unexpected things that happened as a result of the project. To adapt a faculty person interview into a student interview, you could ask about the strengths of a class instead of a project.

Principal Investigator (PI) Interview

Date: _____ Name of Interviewer: _____

Interview Location: _____ Name of Interviewee: _____

Affiliation of Interviewee: _____

ATE Project: _____

Contact Information (name, phone, email): _____

<u>Directions for the Interviewer</u>: Please interview AT LEAST ONE of the principal investigators. It is likely that the site visitors will have several opportunities to interact with the PI where information will be shared, so a formal interview may only be 30 minutes or so. It may be helpful to have this interview at the end of the visit to clear up any remaining questions. There are four interview sections: (1) Characterization, (2) Project/Center Components, (3) Sustainability/Transportability/Dissemination, and (4) Relationships with NSF/ATE Evaluation. All four sections of the interview should be completed, but parts of Section 2:* Project/*Center Components may be omitted if they do not pertain to your ATE* project/*center site (more directions follow in Section 2). Probes are in italics after some of the numbered questions. If the respondent does not offer the information that would be gained from the probes after you ask the numbered question, please ask the probing questions.

Section 1: Characterization

1. What do you consider to be the most important goals and outcomes of your project? What did the grant allow you to do that wouldn't have happened without it? What evidence do you have?
Probe to find out if the goals/outcomes fit into the following areas and check the areas in which the project is involved:

☐ Collaboration
☐ Course, Curriculum, and Materials Development
☐ Professional Development
☐ Student Services
☐ Standards Development
☐ Program Development
☐ Recruitment

2. What are your project's strongest components/outcomes? What evidence do you have that they are strong? (How do you know?)
3. What about your project should be improved?
4. What role does evaluation play in your project?

Section 2: Project Components

<u>Directions for the Interviewer</u>: Please refer to the answer(s) to question 1 in Section 1: Characterization. Please ask questions pertaining to the areas you checked only.

Collaboration
See question 1, Section 1: Characterization.
Is collaboration an important project goal (check one)?
☐ ***Yes*** ☐ ***No*** Þ *If no, skip questions 5-9.*

5. With whom do you collaborate?
6. What are the purpose(s) of your collaborations?
7. How does your project develop and support collaborations? What role has the grant played in this process?
8. What is the quality of your collaborations? What evidence do you have?
9. What outcomes do you think have been achieved through the collaborations? What evidence do you have?

Standards Development
See question 1, Section 1: Characterization.
Is standards development an important project goal (check one)?
☐ Yes ☐ No Þ **If no, skip question 10.**

10. How has your project been involved in the development or use of workforce standards or guidelines? *Probes: Workforce needs assessment done? What outcomes? What evidence?*

Course, Curriculum, or Materials Development
See question 1, Section 1: Characterization.
Is course, curriculum, or materials development an important project goal (check one)?
☐ Yes ☐ No Þ **If no, skip questions 11-17.**

11. Please describe the materials you have developed.
12. What are the goals of your materials development? *Probe for goals that would include not only on-the-job type skills directly applicable to a job but also science and mathematics understanding and SCANS type skills, learning environments, teaching methods assessments.*
13. How has your project helped to guarantee the development of quality materials and processes for their use? *Probes: Pilot testing? Field-testing (on-site and off-site)? Assessment of students' performance in the workforce? Tie to workforce standards?*
14. What have been enablers in this process? Barriers? What role has the grant played?
15. How have the materials your project developed been used?
16. What evidence do you have for the effectiveness of the materials?
17. What evidence do you have for the use of world-class, workforce, industrial equipment/technology as part of your materials?

Program (as defined in the survey) Improvement
See question 1, Section 1: Characterization.
Is program improvement an important project goal (check one)?
☐ Yes ☐ No Þ **If no, skip questions 18-20.**

18. Describe your program. What are its components? What is new? How has the grant contributed to the program? *Probes: size and scope of program, level targeted by program, certifications/majors offered.*
19. How has your project helped to develop a quality program? What evidence do you have? *Probes: Achievement of program goals? Program (classroom, student, and unintended) outcomes?*
20. Is your program articulated or aligned with any others? If so, how does that alignment take place? *Probe: transfer of credits*

Professional Development

See question 1, Section 1: Characterization.
Is professional development an important project goal (check one)?
☐ Yes ☐ No Þ **If no, skip questions 21-27.**

21. What types of professional development opportunities are provided by your project? How has the grant contributed to professional development?
22. What were the goals of the professional development?
23. Who was involved?
24. How were these opportunities developed?
25. How does your institution support professional development? What support from other institutions is there? *Probes: administrative, monetary, equipment, materials, technical assistance for professional development experience itself or for implementation after the professional development session(s)*
26. What enablers have there been? Barriers?
27. How effective do you think the professional development opportunities were? What evidence do you have?

Recruitment
See question 1, Section 1: Characterization.
Is recruitment an important project goal (check one)?
☐ Yes ☐ No Þ **If no, skip questions 28-32.**

28. What processes are in place to recruit students into your project? What role has the grant played in the process?
29. Are any special procedures provided to recruit students from underrepresented groups?
30. What evidence do you have on how effective these services are in recruiting students?
31. What have been the trends in the applications to your project?
32. What have been the trends in course/program enrollment? Probe: *student characteristics*

Student Services
See question 1, Section 1: Characterization.
Is providing student services an important project goal (check one)?
☐ Yes ☐ No Þ **If no, skip questions 33-36.**

33. What services are provided to students once they are in your project? *Probe: job placement services*
34. Are any special services provided for students from underrepresented groups?
35. What evidence do you have on how effective these services are in retaining students?
36. What are the trends in your retention rates? Do they differ by type of student? What role has the grant played in the process?

Section 3: Sustainability/Transportability/Dissemination

37. Project yourself into the future and tell me what you think will be happening with your project.
38. What things are in place now that will support that vision? What barriers are there? *Probes: Funders? Other support? Institutionalization? Dissemination? Changing workforce?*
39. What is the potential for spreading the outcomes of the project to others?
40. How has the project addressed workforce needs? How are workforce needs changing in your field/geographic area?
41. What else should I know or learn about your project?

Section 4: Relationships with NSF/ATE Evaluation

42. How would you characterize your project's interactions with NSF? *Probes: frequency of contact? Type/quality of contact?*
43. What do you think about the NSF requirements placed on your project?
44. How well do you think NSF understands your project?
45. Please describe your experience filling out the survey. If you didn't fill it out, why not? Do you have suggestions for improving the survey or the survey process?

Faculty Person Interview

Date: _____ Name of Interviewer: _____

Interview Location: _____ Name of Interviewee: _____

Affiliation of Interviewee: _____

ATE Project: _____

Contact Information (name, phone, email): _____

Directions for the Interviewer: Please interview AT LEAST ONE of the faculty persons associated with the project (please see your site information sheet). In small projects all faculty may be PIs or closely related to PIs. If this is true, skip the faculty items which are redundant with PI items. It would be particularly nice if you could interview the faculty person who taught a class you observed. That way the interview would be an extension and clarification of what you saw in class. The questions generally assume that the faculty member is someone who is using the materials or teaching in a program but may not be intimately involved in the development process. In other words, the interview is an opportunity to check for consistency of implementation and consensus of vision. This interview should last 30 minutes. There are three interview sections: (1) Characterization, (2) Project Components, and (3) Sustainability/Transportability/ Dissemination. All three sections of the interview should be completed, but parts of Section 2: Project Components may be omitted if they do not pertain to your ATE project site (more directions follow in Section 2). Probes are in italics after some of the numbered questions. If the respondent does not offer the information that would be gained from the probes after you ask the numbered question, please ask the probing questions.

Section 1: Characterization

1. How have you been involved with the project?

Probe for and check the areas in which the person is involved:

☐ Collaboration
☐ Course, Curriculum, and Materials Development
☐ Professional Development
☐ Student Services
☐ Standards Development
☐ Program Development
☐ Recruitment

2. What are the project's goals and outcomes? What evidence do you have for the outcomes? What role did the grant play in achieving these outcomes?

3. What is its strongest influence on you? *What component has had the strongest influence?*

4. How do you think the project could be improved?

Section 2: Project Components

<u>Directions for the Interviewer</u>: Please refer to the answer(s) to question 1 in Section 1: Characterization. Please ask questions pertaining to the areas you checked only.

Collaboration
See question 1, Section 1: Characterization.
Is the person involved in collaboration (check one)?
☐ Yes ☐ No Þ **If no, skip questions 5-8.**

5. With whom have you collaborated?
6. What are the purpose(s) of your collaborations?
7. What do you think has resulted from the collaborations you have been involved with? *Probe: quality of collaborations*
8. What evidence do you have for these results?

Standards Development
See question 1, Section 1: Characterization.
Is the person involved in standards development (check one)?
☐ Yes ☐ No ⇒ **If no, skip question 9.**

9. How do you use workforce standards or guidelines? *Probe: In field- or pilot testing materials?*

Course, Curriculum, or Materials Development
See question 1, Section 1: Characterization.
Is the person involved in course, curriculum, or materials development (check one)?
☐ Yes ☐ No ⇒ **If no, skip questions 10-16.**

10. What materials are you using?
11. How effective are the courses and materials provided by the project? What evidence do you have? *Probe: Effective in terms of learning environments, teaching styles and assessments.*
12. What type of equipment/technology do you use in your classes? Is this related to the grant?
13. Are your classroom strategies tied to industry expectations? Is this related to the grant?
14. Have you made any changes in your courses since the project began? What sort of changes? Why did you make them? Have they been successful? What evidence do you have for success?
15. Is anything in place that particularly helps you conduct your courses in the manner you prefer? *Probe: How does the grant help?*
16. Are there any barriers to teaching your courses in the manner you prefer? *Probe: Does the grant hinder anything?*

Program (as defined in survey) Improvement
See question 1, Section 1: Characterization.
Is the person involved in program improvement (check one)?
☐ Yes ☐ No Þ **If no, skip questions 17-19.**

17. Describe your program.
18. What are its goals and outcomes? What evidence do you have?
19. How effective do you believe the program is? What evidence do you have? *Probes: Achievement of program goals? Program (classroom, student, and unintended) outcomes?*

Professional Development
See question 1, Section 1: Characterization.
Is the person involved in professional development (check one)?
☐ Yes ☐ No ⇒ **If no, skip questions 20-24.**

20. What professional development opportunities have you participated in?
21. How well attended/pervasive have these opportunities been?
22. How does your institution support professional development? *Probes: administrative, monetary, equipment, materials, technical assistance for PD experience itself or for implementation after the professional development session(s)*
23. How much were industry people included?
24. How effective do you think the professional development opportunities were? What have you done as a result of participating?

Recruitment
See question 1, Section 1: Characterization.
Is the person involved in recruitment (check one)?
☐ ***Yes*** ☐ ***No*** Þ *If no, skip questions 25-27.*

25. What processes are in place to recruit students into your project? What role has the grant played in these processes?
26. Are any special procedures provided to recruit students from underrepresented groups?
27. What evidence do you have about how effective these services are in recruiting students?

Student Services
See question 1, Section 1: Characterization.
Is the person involved in student services (check one)?
☐ Yes ☐ No ⇒ **If no, skip questions 28-30.**

28. What services are provided to students once they are in your project? What role has the grant played in these processes?
29. Are any special services provided for students from underrepresented groups?
30. What evidence do you have about how effective these services are in retaining students?

Section 3: Sustainability/Transportability/Dissemination

31. Have you spread the word about what you are doing? How? To whom? With what result?

Administrator Interview

Date: _____ Name of Interviewer: _____

Interview Location: _____ Name of Interviewee: _____

Affiliation of Interviewee: _____

ATE Project: _____

Contact Information (name, phone, email): _____

Directions for the Interviewer: Please interview at least ONE administrator. This interview should last about 30 minutes. (We would like to take as little of the administrator's time as possible.) Additional information may already have been obtained from other settings, e.g., social gathering. Probes are in italics after some of the numbered questions. If the respondent does not offer the information that would be gained from the probes after you ask the numbered question, please ask the probing questions.

Section 1: Characterization

1. What interactions do you have with the ATE project?
2. What do you see as its goals and outcomes? What evidence do you have for the outcomes? What role did the grant play in achieving these outcomes?
3. What do you think are its strongest components?
4. In what ways do you think it could be improved?

Section 2: Project Components

Collaboration

5. In what ways do you think collaborations have helped or hindered the success of the project? What evidence do you have for your opinions?

Standards Development

6. How has your institution been involved in the development or use of workforce standards or guidelines? How has the project been involved with workforce standards?

Course, Curriculum, and Materials Development and Program Improvement

7. How effective do you think the courses and materials or program provided by the project are? What evidence do you have?

Professional Development

8. What professional development opportunities have been provided by the project or to the project personnel? *Probe: Is industry involved? How does your institution support professional development—administrative, monetary, equipment, materials, technical assistance for professional development experience itself or for implementation after the professional development session(s)?* How effective do you think the professional development opportunities have been? What evidence do you have?
9. How do you view the quality of the faculty in the ATE project?

Student Services

10. How effective is the ATE program in recruiting and retaining students? Especially students from underrepresented groups? What role did the grant play?

Section 3: Sustainability/Transportability/Dissemination

11. How much of the ATE project will stay here at your institution?
12. What things are in place now that will support it? What barriers are there? *Probes: Funders? Other support? Institutionalization? Dissemination? Changing workforce?*
13. What is the potential for spread of the outcomes or ideas of the project to others? Upon what evidence do you base this opinion?

Collaborator or Industrialist Interview

Date: _____ Name of Interviewer: _____

Interview Location: _____ Name of Interviewee: _____

Affiliation of Interviewee: _____

ATE Project: _____

Contact Information (name, phone, email): _____

Directions for the Interviewer: Please interview AT LEAST ONE collaborator, preferably from the industry members involved in the project. This interview should last about 30 minutes. Probes are in italics after some of the numbered questions. If the respondent does not offer the information that would be gained from the probes after you ask the numbered question, please ask the probing questions.

1. How have you been involved with the ATE project? *Probes a-c follow. If the collaborator/industry person describes any of the involvement listed, more questions about the nature, extent, participants, and outcomes of that involvement should be asked.*

    a. *Management involvement—Probes: Collaboration opportunities? Development of standards? SCANS? Requirements for types/uses of high tech equipment? Using science or mathematics education standards? Course/materials development? Monetary support? Legitimization of the project? Dissemination/marketing of the project? Internships? Teaching? Supply equipment?*
    b. *Involvement with students—Probes: Recruitment? Teaching in the courses? Allowing or organizing field trips? Provision of field experiences? Internships for students? Mentoring students? Providing other support/encouragement for students? Recognizing student accomplishments? Awards? Sponsorships?*
    c. *Involvement with faculty—Probes: Teaching? Mentoring? Internships?*
2. What do you consider to be the most important goals/outcomes of the project? What evidence do you have for the achievement of these outcomes?
3. What do you think are the project's strongest components? Where do you think the project could be improved?
4. What about the project do you think will continue after NSF funding stops? What barriers and enablers do you see for the project? What would exist without the grant? *Probes: Funders? Other support? Institutionalization? Dissemination? Changing workforce? Collaborative relationships? Visibility of project? Community involvement? Professional development?*
5. Why would you hire/recommend graduates of this project?
6. How has the project addressed workforce needs? How are workforce needs changing in your field/geographic area? What else should I know, or what else would you like to tell me, or what else do you think I should know?

Student or Faculty Professional Development Focus Group

Date: _____ Name of Focus Group Facilitator: _____

Focus Group Location: _____ Number of Students/Faculty in Group: _____

Affiliation of Students/Faculty: _____

ATE Project: _____

Contact Information (name, phone, email): _____

Directions for the Facilitator: The focus group should last about an hour. These questions are designed as a few broad questions with probes if the participants don't volunteer the needed information. There are three general areas for questions: expectations, experiences, and outcomes. Please tape the session for verification.

At the beginning, you should introduce yourself, explaining the purpose and conduct of the focus group, asking permission to tape the session, asking the students how they are related to the ATE project—How long have they been involved? In what ways? Just taking courses? In a complete program of study? In internship experiences? Summer workshops? Distance education?

Expectations

1. What do you believe this course of study will provide for you? What do you think you will/have gained from it? *Probes: Why did you decide to apply/enroll? How did you find out about the program? Do you think this will give you the opportunity to earn more money? Ability to learn how to use world-class technology? Opportunities to interact with industry? Knowledge of industry based standards? Alignment with what industry wants? Employment opportunities? Gain world-class skills?*

Experiences

2. What is the program/series-of-courses like? *Probes a-e follow.*

a. What is the learning environment? Teaching styles? Types of content? Quality/types of materials used? Types of equipment available?

b. What sort of feedback do you get about your progress? What sort of assessments/grading opportunities?

c. Describe what industry connections there have been. Relationships to industry pointed out in coursework? Industry people teaching classes? Industry visits? Field experiences? Internships?

d. What science and mathematics concepts have you covered? How relevant are the concepts you learned to your future employment? Describe a laboratory or "hands-on" experiences you may have had.

e. *What have you done that you think supports workplace skills? (e.g., presentations, writing, etc.)*

3. What support services are/were available to students in the program? Do you think they contributed to student success? In what ways? *Probe: job placement services*

Outcomes

4. Compared to your peers, how do you think your experiences in this course/program differs? *Probes: Do you believe you are being as well prepared for future work? What differences are there in your learning?*

5. What do you think are the goals/outcomes of the program/series of courses goals? *Probe: What evidence do you have?*

6. What are the strengths and weaknesses of the program/series of courses?

Classroom Observation Protocol

Date: _____ Name of Observer: _____

Name of Instructor: _____ ATE Project: _____

Observation Location (classroom, laboratory, industrial site): _____

Contact Information (name, phone, email): _____

Directions to the Observer: Please try to observe the classroom/learning environment for at least 45 minutes.

1. Describe the general classroom setting—*teacher-student affect, adequacy of facility, length of class period, classroom layout, etc.*

2. Describe the participants—*numbers of students, types of students (faculty interns, faculty in professional development, 2-year college students, 10th grade students, etc.), numbers and types of teachers, other people (graduate student, professor, etc.), gender, ethnicity*

3. Describe the flow of activities and assumed purpose—*content covered, methods of presentation, class period timeline (e.g., 5 minute announcements, 15 minute lecture, 5 minute discussion, 20 min laboratory), apparent goals, equipment used, student responses (how often they respond, types of responses, quality of responses), etc.*

4. Estimate the balance of classroom activities.
_____% time spent on full class teacher talk
_____% time spent on full class student talk
_____% time spent with students in groups
_____% time spent with students working individually

5. Please answer the following (check one):

   a. Are computers available for use as learning and teaching tools?

      ☐ Yes ☐ No

   b. Do laboratory facilities contain up-to-date equipment that is in good repair for students to do appropriate laboratory activities?

      ☐ Yes ☐ No

c. Do laboratory facilities contain enough equipment for **all** students to do appropriate laboratory activities?

☐Yes ☐No

6. Please list the newly developed or revised ATE project/center materials (name of curriculum, lab exercises, assessments, etc.) that accompany the course you are observing.

7. Place a check in the appropriate box to rate each of the following items on a 5-point scale (1= No Use to 5= Great Deal of Use).

		1 No Use	2 Minimal Use	3 Moderate Use	4 Much Use	5 Great Deal of Use	Don't Know
a.	use of cutting edge industrial technology						
b.	new information related to industry/the workplace						
c.	use of newly developed or revised ATE project materials/curriculum						
Use of NCTM and NRC standards-based techniques for mathematics and science							
d.	students writing lengthy descriptions of their reasoning						
e.	laboratory activities that include data collection, analysis, and various types of representation						
f.	whole class discussion during which students talk more than the teacher						
g.	presentation of new information deliberately based on students' prior knowledge and conceptions						
h.	using computers to support deeper conceptual understanding						
i.	activities where students can pose questions and gather evidence						
j.	having students work in groups						
k.	using a variety of assessment techniques, e.g., multiple choice, portfolios, projects, etc.						

8. Please rate the quality of the class using the following 5-point scale (check one of the 5 levels). Each rating is described in detail below.

☐ Level 1: Ineffective Instruction
If you checked level 1, please choose one of these:
- ❍Passive Learning
- ❍Activity for Activity's Sake

☐ Level 2: Elements of Effective Instruction

☐ Level 3: Beginning Stages of Effective Instruction
If you checked level 3, please choose one of these:
- ❍Low
- ❍Solid
- ❍High

☐ Level 4: Accomplished, Effective Instruction

☐ Level 5: Exemplary Instruction

Descriptions of the Quality of the Lesson

Level 1: Ineffective Instruction

There is little or no evidence of student thinking or engagement with important ideas of mathematics/science. Instruction is *unlikely* to enhance students' understanding of the discipline or to develop their capacity to successfully "do" mathematics/science. Lesson was characterized by one of the following:

Passive "Learning"
Instruction is pedantic and uninspiring. Students are passive recipients of information from the teacher/instructor or textbook; material is presented in a way that is inaccessible to many of the students.

Activity for Activity's Sake
Students are involved in hands-on activities or other individual or group work, but it appears to be activity for activity's sake. Lesson lacks a clear sense of purpose and/or a clear link to conceptual development.

Level 2: Elements of Effective Instruction

Instruction contains some elements of effective practice, but there are *substantial problems* in the design, implementation, content, and/or appropriateness for many students in the class. For example, the content may lack importance and/or appropriateness; instruction may not successfully address the difficulties that many students are experiencing, etc. Overall, the lesson is *quite limited* in its likelihood to enhance students' understanding of the discipline or to develop their capacity to successfully "do" mathematics/science.

Level 3: Beginning Stages of Effective Instruction

This should be rated as a low 3, a solid 3, or a high 3.

Instruction is purposeful and characterized by quite a few elements of effective practice. Students are, at times, engaged in meaningful work, but there are *some weaknesses* in the design, implementation, or content of instruction. For example, the teacher/instructor may short-circuit a planned exploration by telling students what they "should have found"; instruction may not adequately address the needs of a number of students; or the classroom culture may limit the accessibility or effectiveness of the lesson. Overall, the lesson is *somewhat limited* in its likelihood to enhance students' understanding of the discipline or to develop their capacity to successfully "do" mathematics/science.

Level 4: Accomplished, Effective Instruction

Instruction is purposeful and engaging for most students. Students actively participate in meaningful work (e.g., investigations, teacher/instructor presentations, discussions with each other or the teacher/instructor, reading). The lesson is well designed and the teacher/instructor implements it well, but adaptation of content or pedagogy in response to student needs and interests is limited. Instruction is *quite likely* to enhance most students' understanding of the discipline and to develop their capacity to successfully "do" mathematics/science.

Level 5: Exemplary Instruction

Instruction is purposeful and all students are highly engaged most or all of the time in meaningful work (e.g., investigation, teacher/instructor presentations, discussions with each other or the teacher/instructor, reading). The lesson is well-designed and artfully implemented, with flexibility and responsiveness to students' needs and interests. Instruction is *highly likely* to enhance most students' understanding of the discipline and to develop their capacity to successfully "do" mathematics/science.

Field Notes Protocol

Date: _____ Name of Evaluator: _____

ATE Project: _____

<u>Directions for the Evaluator</u>: All members of the evaluation team should fill out a separate field notes form to share during the debriefing. Your notes should include perceptions of all things viewed during the visit.

1a. What is the whole site like in terms of where it is situated? As you drive to the site, please observe the community surrounding the ATE project site. Please describe the surrounding community *(e.g., approximate size/distances, types of businesses/industry present, socioeconomic status, urban/suburban/rural, ethnicities observed, types of buildings, level of repair, transportation available, etc.).*

1b. What is the ATE project site like? Please describe the institution where the ATE project is housed *(size, type of buildings, level of repair, laboratory facilities, industrial-like facilities, connections to actual industrial site (distance to, transportation).*

2. What is the area devoted to the project like? Are the physical facilities situated conveniently for the purposes of the project? How are the physical facilities connected space-wise to the rest of the college and their working areas? What is the level and quality of available resources in terms of space, people, supplies, and equipment for meeting the goals of the project?

3. What is the atmosphere/culture of the project? What is the feeling or tone expressed? What are interpersonal relations like? Is there evidence of respect, helpfulness, and professionalism among staff and between staff and others? Between staff and students?

4. What other salient characteristics strike you as you make observations?

Appendix C

Example of Site Visit Planning and Implementation for a Complex Project

A Fictionalized ATE Project (BFP)

Introduction

This example is provided to illustrate the use of site visits with a complex project that involves all four drivers—collaboration, materials development, program improvement, and professional development—and most of the processes outlined in the guide. Guide users will most likely have site visit needs closer to the simpler example presented. However, we thought it would be helpful to provide such an example with a realistic budget to fully assist users in their planning and implementation of more complex site visits.

The fictionalized project, the BioSciences for the Future Project (BFP), is located at a community college; its primary focus is on materials development for upper high school and community college physics classrooms, although the project works to establish many collaborative relationships and engages in professional development and program improvement. The project has been under way for 3 years and has produced 2 modules the first year and then 4 each of the next 2 years—a total of 10 modules for use in the field. These modules consist of materials for instructors, with accompanying instructor guides and student workbooks, and are intended to provide a semester's worth of material. One or two CDs of student activities are also included with each module.

The project's 40 high school and 20 community college partners in a 3-state area in the project's consortium largely use these materials. Additionally, 5 business/industry partners provide advice and assist in developing the materials and evaluating them for accuracy. On average, 2 faculty members from each high school and community college partner are using the materials on a regular basis in their classrooms. Professional development on how to use the materials is provided at no charge to faculty members.

The evaluation of this project began in its first year with the hiring of an evaluator external to the project. To date, it has consisted of examining the quality of the materials development process through review by content and process experts. It has also included evaluating the quality of the materials through the use of pre-and posttest scores of students whose instructors used the materials and collecting post-professional development session questionnaires. A site visit phase was also included in the evaluation design. Evaluative information is shared with NSF through the annual FastLane reports. An advisory committee representative of the partners also receives evaluation findings and recommendations at various points.

Part I – Identify Purposes

Involve Key Stakeholders

An advisory committee was formed for BFP when the overall project work, including the evaluation, was planned. This group of key stakeholders included the PI, the Co-PI, the project manager, an administrator with the community college where BFP is housed, several high school and community college faculty members using the modules, students who received instruction using these modules, and business/industry representatives involved in materials development

and/or hiring the students. This group worked closely with BFP's external evaluator (Site Visit Coordinator) who was guiding the group through the site visit phase of the evaluation.

Eleven months after the start of the project, the stakeholder group, along with the evaluator, met twice and then communicated via phone and email to plan the entire site visit phase of the evaluation (6 months). This group monitored the implementation of the site visit phase through the actual conducting of the site visits (16 months) and the receiving of reports (3 months).

Determine the Purposes of the Site Visits

The advisory committee's first step was to establish the site-visit purposes, keeping in mind what information they wanted this phase of the evaluation to provide. They also considered the overall evaluation design and budget when they identified the following purposes:

1. Illuminate BFP through the collection of the human stories (anecdotes) via students in the courses where the modules were used, faculty members using the modules, and business/industry employing students from the courses. These stories were to be used in conjunction with the statistics collected to date and to identify unintended outcomes.

2. Answer **general** questions drawn from the overall evaluation questions, including those listed below:

* What factors enhanced successful use of the developed materials? What factors inhibited their successful use?
* What resources were provided to the project? What resources contributed to project success?
* How were the developed materials typically used?
* What was the quality of the developed materials?
* To what extent were the developed materials meeting outcomes, both short and long term?

3. Cross-check/validate test scores and professional development questionnaires used in the other phase of the evaluation.

Part II – Select Sites and Visitors

Define a Site

The advisory committee considered the site-visit purposes and overall evaluation design and budget in its deliberations and agreed that visiting various institutions, rather than individual classrooms only, would provide the appropriate information for the site visit phase. Hence, the committee defined a "site" as an institution—high school or community college—in which the modules had been in use or were in use at the time of the site visit. As a result of this decision, there were 60 potential sites—40 high schools and 20 community colleges.

Determine the Site Visit Budget

Once BFP's key stakeholder committee defined what a site was and identified 60 potential ones, it worked on the site-visit budget before proceeding with additional steps. Committee members took into account that visits needed to occur in each of the 3 states served by BFP to obtain a representative sample and **used maximum numbers for site visitor fees and travel expenses when developing its budget**. The committee then reviewed the overall evaluation budget and concluded that, based on budget alone, 9-12 visits could be conducted. The committee decided to revisit the budget and the number of visits to be conducted throughout the site and visitor selection processes, always keeping the purposes in the forefront.

Number of Sites Visited					
Type of Expense	**6**	**9**	**12**	**15**	**Notes**
Site Visitor Fees Site Visitor Fee: 2 visitors per site x # of sites visited x 3.5 days per site x $450/day	18,900	28,350	37,800	47,250	Includes time for Preparation (.5) Travel and On-Site (2) Report Writing (1)
Travel/Per Diem Travel/Per Diem: 2 visitors per site x # of sites visited x $1,000 per site	12,000	18,000	24,000	30,000	Includes Airfare (if over 5 hours of driving) or mileage (if not) Hotel for 2 nights Food Rental car, if flying, Miscellaneous
Site Visit Stipend # of sites visited x $250 per site	1,500	2,250	3,000	3,750	Covers **some** of the preparation time and materials for the visit
Total Costs	32,400	48,600	64,800	81,000	

Establish Site Selection Criteria

The key stakeholder committee determined the selection criteria based on the site visit purposes, the importance of having a representative sample of the overall project, and the reality of the budget.

Institution Type: 1/3 community colleges, 2/3 high schools
Reflects 20/40 breakdown of 60 potential sites

Geographical Location: 1/2 in State A and 1/4 each in States B and C
Reflects geographic distribution of the 60 potential sites

Maturity:	1/3 each using (1) modules completed in the last year, (2) 2 years ago, (3) 3 years ago Reflects maturity by usage of the materials by the 60 potential sites
Type of Location:	1/2 in suburban setting, 1/4 each in urban and rural Reflects mix of type of locations
Success Level:	1/3 each challenged, moderately successful, and successful based on pre-posttest scores collected to date

Select Sites that Meet the Criteria

The key stakeholder committee, through a meeting and several emails, used the selection criteria to choose 20 sites—an oversample—to visit 12. This final number (12) was based on balancing the purposes and the budget. The PI and Co-PI prepared a grid of all 60 sites in Excel and then determined each site's match with the criteria. The committee, working with the evaluator, then prioritized this list by best fit and selected the top 20 as the starting point for the 12 visits.

Gain Access to the Sites

The key stakeholder committee recommended that the project staff members having the most contact with the top 12 of the 20 selected sites through the developed materials—usually the PI or Co-PI—email or call each site to discuss the possibility of a day-long site visit. A day was believed to be sufficient to gather the information detailed in the purposes, provide for a cost-effective site visit, and not be overly burdensome on the sites. All 12 sites contacted agreed to discuss the possibility and details of a visit.

BFP's evaluator (the Site Visit Coordinator-SVC) then called the 12 sites to set up phone appointments, all at the sites' convenience. The SVC then made these calls, since she would be coordinating and also participating in all the site visits. What the site visit would entail in preparation and time for the site, how the information collected would be used (aggregated across sites, draft report shared prior to finalization of report, final report kept confidential or negotiated), and the benefits to the site (brief report for its use, $250 stipend to cover **some** of the costs) were discussed. For the 11 that agreed to participate, the evaluator obtained several dates and times that would work for the sites for their visits.

A 12th site was selected from the remaining 8 on the initial list of 20. The committee chose this particular site because it fit the criteria and also complemented those already chosen. Using the above process, this site was contacted and agreed to participate.

Select Site Visitors and Finalize Site Visit Dates

At the same time as access was gained to the sites, the BFP's key stakeholder committee and SVC identified a pool of potential site visitors. Based on the site visit purposes, budget, and work to be done for the visits, the committee determined that 2 visitors per site would still provide multiple perspectives, but work within the budget constraints. BFP's SVC would visit all 12 sites and also manage the site visit phase. This would provide for consistency across sites and assist with preparing site visitors. The evaluator also had extensive background in materials development processes. The other visitor at each site was to be a content expert drawn from

business/industry using bioscience applications or from education institutions (e.g., high school, community college) with the same background. The ideal visitor would know the project and understand the field of study well enough to make sound judgments. Sources for the visitors included individuals from the 15 business/industry partners and surrounding educational institutions. When possible, these individuals were matched with sites where they weren't collaborating in order to provide a perspective from outside a particular site.

As a first step, the SVC developed an Excel spreadsheet matching the sites' met selection criteria and the potential site visitors' expertise/experience. Site visitor availability for the dates provided by the sites was a second criterion. The SVC asked for feedback on the list of site visitors from the key stakeholder committee once she completed the spreadsheet. She, the PI, and Co-PI then worked together to provide letters of agreement to the 6 site visitors identified.

To accommodate the various site and visitor schedules and to not overburden either, the evaluator, in consultation with the key stakeholders, concluded that one visit a month over 16 months was feasible with time off for the summer and an additional month for holiday closure. As mentioned above, a tentative match was made between the 12 sites' dates and site visitors' availability when selecting 6 site visitors based on their expertise. Each of the 6 visitors agreed to participate in 2 visits, while the SVC, as planned, would participate in all 12 visits.

The SVC, using the Excel spreadsheet developed for matching sites and their visitors, contacted each site to confirm dates via email. A few changes had to be made as a result. However, whenever possible, the SVC maintained the site visitor match based on expertise rather than visitor availability. The SVC then contacted the site visitors via email to confirm their availability for specific dates. This was all recorded in the Excel spreadsheet, and the SVC sent emails with final dates to the sites and visitors. Formal contracts were also drawn up and mailed to the visitors. The evaluator also contacted the sites to negotiate the visit agenda and obtain background information for the visitors. The promised stipends were then mailed to each site. This process took about a month.

Part III – Prepare Protocols

Several steps were involved in preparing protocols, part of which were begun prior to site visitor selection.

Develop Protocol Content

The SVC drafted several protocols, including questionnaires. She carefully aligned these with the site visit purposes (i.e., addressing questions from the overall evaluation, capturing the human stories, validating test scores and professional development evaluation form data). The SVC outlined what a typical site visit should entail (meeting to organize by team before the visit starts, typical activities in a visit needed to address the purposes, debriefing) and what basic elements the report by each visitor should include. Headings in this report were directly tied to the information needs required by the visit purposes. Visitors were also encouraged to record at least one human story per visit and to add other observations/ insights, based on their expertise/ experiences, outside the basic report elements.

The SVC developed forms for describing each visited site (field notes), observing classrooms where the materials were used, and for reviewing/rating the developed materials. Interview forms were drafted for three key stakeholder groups—the instructors using the materials at each site, students in their classes, and business/industry partners who had hired students from classes where the materials were used.

Involve Key Stakeholders and Site Visitors in Protocol Development

The key stakeholder committee and the 6 site visitors then provided feedback on these protocols to the SVC. Revisions were made to these first drafts.

Test and Revise the Protocols Before the Visits

The SVC and 2 site visitors conducted 3 focus groups—instructors, students, business/industry—using the protocols and questionnaires with these groups and then requesting feedback from them on the questions. These were videotaped. Data collected through this effort were reviewed to determine if data collected could be used as described in the report outline. Revisions were then made to the protocols. The SVC and a site visitor further tested and refined the protocols on the first and second visits. Revisions were made accordingly.

Prepare the Site Visitors to Use the Protocols and for the Visits

Three techniques were employed to prepare the site visitors—videotape, written procedures, and on-the-job-preparation—since it was difficult and too costly to convene the group for this preparation. The videotapes from the focus groups were edited and given to the site visitors as examples of how to conduct various interviews. Visitors were also provided with a team packet at least 3 weeks prior to a site visit. This packet included the site visit purposes and updated site visit processes, the report outline, procedures/ protocols, and forms for preparation purposes. The SVC called the site visitors at least a week in advance of their visits to discuss any questions they had regarding these materials. Additionally, site-specific information and logistics for the visits were provided in the packet to assist the visitors in becoming familiar with the sites.

As mentioned previously, the SVC participated in all 12 visits. The 6 other visitors conducted 2 visits each. To facilitate on-the-job preparation, on each of the visitors' first visits, the SVC acted as the team leader—responsible for organizing pre- and postvisit organizing/ debriefing meetings, the work during the visit, and the report writing. On each of the visitors' second visits, they became the team leaders.

Part IV – Conduct the Site Visits

Contact Sites Prior to the Visit

One week prior to each site visit, the SVC contacted the site by phone and reviewed the agenda to ensure that the agreed-to activities would occur. This was to make certain that the site visits would produce the information needed (i.e., aligned with the visit purposes). In a couple of cases, key personnel could not be available as planned for interviews. Arrangements were made to contact them by phone either on the day of the site visit or within a week after the site visit.

Carry Out the Visit

The SVC and other site visitor arrived the night before each day-long visit. Over dinner, they planned the next day's activities based on the agenda—deciding who would be primary on various activities such as faculty interviews, classroom observations, and materials review.

The team usually arrived on site around 8 a.m. and met with key personnel, usually the faculty members using the modules in their classrooms. The visitors outlined the goals for the day, how the information collected would be used (reported to the site, aggregated across the sites visited, kept confidential), and reviewed the agenda, asking for any last minute changes.

The team then usually split up, with one person conducting interviews or focus groups of faculty, students, and business/industry partners and another observing classroom activities in which the modules were used and walking through the modules. The visitors used protocols, including the questionnaires, as guides; when appropriate, they would ask additional questions to supplement them. When pressed for time, the visitors, asked at least a core set of questions, which were closely tied to the visit purposes and were asked of all those interviewed. The interviews and focus groups were tape-recorded or videotaped when participants gave permission.

At the end of the day, the team usually met with the key personnel again to quickly recap the day, thank them for their time and efforts, and let them know that they would have a draft report to review for accuracy and any misperceptions within 4 weeks. Usually over dinner that night, the team then met to debrief—deciding what parts of the report each would write.

The SVC, upon return to her office, sent an email, again thanking the site for a productive visit and describing the next steps. She also sent a thank-you email to the other visitor with reminders of report deadlines.

Part V – Use the Data

Prepare Draft and Final Site Reports

After each visit was completed, the SVC worked with the site visitors to finalize each site report. She verified that these reports followed the report outline tied to the site visit purposes developed and shared earlier with the visitors. These draft reports were emailed to the sites within 4 weeks of their visits, as promised, for their review and comment. The sites' comments on any inaccuracies or misperceptions were then incorporated into the final report by the SVC, in consultation with the visitors, when appropriate. Sites were assured that their individual data would not be shared when the evaluation report based in part on their reports was written.

Aggregate Data Across Site Reports and Prepare Draft and Final Report

Earlier in the planning phase of the overall evaluation, the SVC and key stakeholder committee developed an outline for the evaluation report based in part on the site visit data. Components of the report were to include: an executive summary, a description of the project, a model of an exemplary materials development process drawn from the research literature, statistical and site

visit-based findings compared with this model, and conclusions and recommendations for use by the key stakeholders to strengthen the project grounded in these data. The appendix was to include a detailed description of the methods used to collect the data.

After all the visits were concluded, the SVC aggregated findings across the site reports using Word, keeping site confidentiality, and capturing the human stories in the forefront. She also looked for common themes tied to the evaluative questions addressed by the site visits. She combined these data, especially the human stories, with the statistical (e.g., student scores) and other data gathered to date (review of materials development process by experts) to create a richer description of BFP and the findings. She then developed a preliminary set of conclusions and recommendations based on how the data compared and contrasted with the model. This process took about a month.

Upon completion of this draft, the SVC held a feedback workshop with the key stakeholder committee. Using PowerPoint, she presented the preliminary set of findings, conclusions, and recommendations. On an overall basis, key stakeholders were in agreement with what was presented and made suggestions for minor changes for some perceived inaccuracies.

Disseminate Findings and Recommendations and Implement Recommendations

The group then discussed dissemination methods for this final report. The business/industry partners suggested a brochure with some human success stories to accompany key findings and recommendations. The group was also comfortable with placing the executive summary on BFP's Web page and providing a copy to NSF. The group also decided to meet immediately after the report was finalized to begin implementing the report's recommendations.

Appendix D

Bibliography

Bibliography

The following list includes the general evaluation references that influenced the development of this guide

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