HP Leadership Grant
Measuring Learning Mentor Guide

Since you are an experienced HP grant recipient, the HP/ISTE Conference Planning Team has requested your assistance during certain sections of the conference. During the conference participants will have a total of three workshops in order to become familiarized with the expectations HP has set forth concerning how to most effectively measure learning within the scope of the project. Of these three sessions, the later two will consist of break out sessions. During these sessions, we are asking you to facilitate the discussion at one table. Tables will be made up of similar disciplines. Your requested task is to help facilitate discussion among your table participants in order to review and add feedback to others' Measuring Learning Plans. Asking questions, using your experience as a past grantee in comparing and contrasting plans, as well as helping to facilitate positive interaction among the group will greatly assist the other participants in producing a solid Measuring Learning Plan. During these breakout sessions, experts in the field from ABET and ISTE will also be lending their support.

As a mentor, you will be asked to review the Measuring Learning plans of new grantees and provide them with constructive feedback which will enhance their overall understanding of the value-added in implementing technology in the teaching/learning environment. Attached is the matrix they will be asked to complete as well as an example Project Measuring Learning Planning Matrix. The following are things you may want to look for in reviewing their Measuring Learning matrix:

1. Anticipated change. This is the most critical part of the matrix. Faculty are wonderfully intuitive and those that are involved in this project "just know" that using technology in the classroom will enhance the overall teaching/learning environment. However, it is important that they clearly articulate what they believe will be the affect of their "experiment." If they anticipate an increase in knowledge, they might say, " students will perform better on _____ concepts." For anticipated improvement of skills, the statement might be, "students will be able to use technology as a tool for problem solving. In anticipation of a change in attitude, the faculty member might report, "students will indicate a more positive attitude toward the subject matter." If the target is to instill a value, then the statement might be something like, "students will freely choose technology as their tool of choice for problem solving. If the grantee does not have clear statements you might ask some of the following questions:
    - What do you think will change in terms of student learning? (This might include things like "learn better" (move from just "knowing" to being able to apply, analyze, etc.—depth) or "learn more" (cover more concepts—breadth).
    - Do you think what you are proposing will have any other impact on students?
    - What do you think will change about the strategies you currently use to engage student in the learning environment? (Try to get out what changes the grantee may experience. This is also an important outcome of the use of technology. Need to get them to think about themselves not only as a change agent but also the object of change. This needs to be documented as it is an important outcome of the project.)
    - Have any of your colleagues been involved in this project? What impact do you think this project will have on them? (These questions are designed to get the grantee to think outward and expand their view of potential change beyond just their own classroom.)

2. Baseline measures: For each anticipated change element, the grantee should indicate the data they already have that can be used as a baseline against which they can measure change. Encourage them to think creatively. For example if they have not collected any pre-implementation data, is someone else teaching the same course/using the same syllabus? Is there a common test or test items that could be used. If they anticipate a change in attitudes,

perhaps a short, well-constructed pre-survey at the beginning of the course. Maybe a trained facilitator would be willing to conduct a pre/post focus group. If it is anticipated that students will value the use of technology, perhaps they could develop some pre/post scenarios and students would have to indicate their preference among alternative actions. Questions you might want to ask:

- Are these data already available to you? If not, what will it take to get the data needed to establish a baseline?
- Do you think that these data will provide the kind of results that will answer the questions you might have?
- In what ways will you involve any of your colleagues in gathering baseline data?

3. Data collection: For this element in the matrix, grantees are asked to think about what data is the most appropriate to gather as a measure of the anticipated outcome. The data should be consistent with the expected change. For example, if they anticipate a change in what students "know or can do" then student self-report would not be the most meaningful data. The faculty member should seek direct assessment data for knowledge and skills—that is, data that provides for the direct examination or observation of student knowledge or skill. One of the common mistakes that is made when grantees are asked about what data they are going to collect is that they want to tell you "how" they are going to collect the data (e.g., test items, surveys, observation, etc.). Keep them focused on the data source and not the method. Instead of indicating "test," ask them what they are going to "test." A better response would be "student performance."
   Questions to ask:
   - Explain how the data are related to the expected change?
   - What other data did you consider?
   - How difficult will it be to get the data? (It is important that the plan is realistic given the resources available.)

4. Method of data collection: This item is pretty straight forward. What method are they going to use to collect the data? Challenge the grantee to be creative and think beyond the traditional survey or test. There are many methods that can be used to collect data. Among them are:
   - **Written surveys and questionnaires** (Asking individuals to share their perceptions about the study target—e.g., their own or others' skills/attitudes/behavior, or program/course qualities and attributes).
   - **Exit and other interviews** (asking individuals to share their perceptions about the target of study—e.g., their own skills/attitudes, skills and attitudes of others, or program qualities—in a face-to-face dialog with an interviewer).
   - **Commercial, norm-referenced, standardized examinations** (commercially developed examinations, generally group administered, mostly multiple choice, "objective" tests, usually purchased from a private vendor.
   - **Locally developed examinations** (objective or subjective designed by local staff/faculty);
   - **Archival Records** (biographical, academic, or other file data available from college or other agencies and institutions).
   - **Focus groups** (guided discussion of a group of people who share certain characteristics related to the research or evaluation question, conducted by trained moderator)
   - **Portfolios** (collections of work samples, usually compiled over time and rated using rubrics).
   - **Simulations** (a **competency based** measure where a person's abilities are measured in a situation that approximates a "real world" setting. Simulation is primarily used when it is impractical to observe a person performing a task in a real world situation (e.g., on the job).
   - **Performance Appraisals** (systematic measurement of overt demonstration of acquired skills, generally through direct observation in a "real world" situation—e.g., while student is working on internship or on project for client)

- **External Examiner** (using an expert in the field from outside your program – usually from a similar program at another institution – to conduct, evaluate, or supplement the assessment of your students).
- **Oral examinations** (evaluation of student knowledge levels through a face-to-face dialogue between the student and the examiner—usually faculty).
- **Behavioral Observations** (measuring the frequency, duration and context of subject's actions, usually in a natural setting with non-interactive methods).

Questions you might want to ask:

- What are some other methods you have considered?
- Why did you choose the methods listed?
- Do you have access to assistance to help you develop your assessment techniques? (This question is designed to encourage them to think about other possible resources. Sometimes faculty are reluctant to involve other in the testing of the project as they feel it makes them vulnerable. This is an opportunity to reinforce the idea that we often learn as much from what doesn't work as we do from what does.)

5. Timeline: You want to encourage grantees to be very intentional about their data collection process. If they fail to get "pre-"data before or at the beginning of the project, it is too late later on and the opportunity is missed. They also need to be encouraged to think ahead. If they would like someone to come in and do focus groups with some of the students, this needs to be planned well in advance to develop meaningful focus group protocols (and comparisons, if appropriate). Questions you might want to ask:
    - What processes have you put into place to be sure that data are collected in a timely fashion?
    - What kind of "lead time" do you think you will need to implement the methods?
    - Are you going to require assistance in developing some of these methods? If so, have you had discussions with those who will be helping and how does that affect your timeline?

6. Evaluation: This is a key part of the process. Once the data are gathered, who will be looking at the results and making decisions about action. Generally this is only the grantee. However, this is a wonderful opportunity to talk to the grantee about bringing others into the process. Not only can this provide more objective feedback, but also bring other people into the project in ways that actually can promote dissemination of the technology into other areas. For this reason, it is important to include this element in the matrix as it provides an opportunity to engage the grantee in a broader discussion of dissemination techniques. Questions you might ask are:
    - Have you thought about how involving other faculty might help to broaden "buy-in" for the use of technology in the classroom?
    - Are there other faculty members that you think could be beneficial in helping you analyze the broader impacts of the findings?
    - What do you think your biggest challenges are going to be in getting others involved in your project? How do think sharing the results of the project might address the challenges?

It is important to remember, asking good questions will engage the grantee in ways that s/he will have ownership of the final draft of the plan. You don't have to have all the answers. Asking good questions will create a dialog of exploration designed to improve their assessment planning and, ultimately, in the quality of the project. Below you will find the matrix that the grantees will be asked to complete prior to the meeting.