

Front-End Evaluation: How Do You Choose the Right Questions?

Chris Parsons
Word Craft
Monterey, California

To begin, I want to clarify two terms I use. The word "museum" as used here includes all museums, zoos, aquariums, parks, gardens, and science, history or nature centers. The word "program" as used here includes education programs and exhibits.

I'd like to start with a "quickie" front-end evaluation. As you read, answer these questions for yourself. Later, I'll refer to this evaluation instrument.

A Quickie Front-End Evaluation

1. What do you think you know about front-end evaluation? (*check all that apply*)
 - I know nothing about front-end evaluation.
 - I know something about front-end evaluation.
 - I could define front-end evaluation.
 - I could do a front-end evaluation.
 - I'm not sure what I know or could do.
2. How many front-end evaluations have you conducted? (*check one*)
 - none
 - at least one
3. If you've never conducted a front-end evaluation, why? (*check all that apply*)
 - I don't know how.
 - I never had a reason to.
 - I don't have the time.
 - I don't have institutional support (financial or philosophical).
 - I have other reason(s).
4. How do you feel about reading this paper right now? (*check one*)
 - I'm happy about it.
 - I'm not happy about it.
 - I feel something different.
 - I'm not sure what I feel.

5. What's your primary job/occupation right now? (*check one*)

- I'm a museum education staff person.
- I'm a museum exhibit staff person.
- I'm a museum administrative staff person.
- I'm a consultant.
- I'm a university (or similar institution) professor/lecturer.
- I'm a student.
- I don't fit any of the choices above.

Objectives

After reviewing this paper, you should be able to:

- √ define front-end evaluation
- √ describe how front-end evaluation differs from formative evaluation and summative evaluation
- √ describe the goal and purposes of front-end evaluation
- √ describe or identify situations in which front-end evaluation would be useful
- √ express that it's useful to know who your audience is and what they know, feel and/or can do before designing an instructional program or exhibit.

Overview

Front-end evaluation serves as the foundation for making informed decisions and recommendations when developing program goals and objectives (Shettel, 1992). Front-end evaluation occurs during the definition phase of the program development process. So that we're all thinking of program development in the same manner, Figure 1 displays an illustration of the program development process (based on an Instructional Systems Design model [Gagne, 1987; Fleming & Levie, 1978]) to which I've added evaluation.

The purpose of front-end evaluation is to seek information in a systematic way about:

- Optimal performance: What do we want them (the target audience) to be able to know, feel or do after the program?
- Actual performance: What do they already know, feel or can do?
- Feelings: How receptive are they? How do they feel about gaining new knowledge, skills or attitudes?
- Discrepancies: What's the cause of the gap (if it exists) between what we want them to know/feel/do and what they already know/feel/do?

- **Solutions:** What are the barriers to closing the gap? Is an instructional program the best way to close the gap?
- **Demographics:** What are the characteristics of our target audience?

As with any evaluation, the sources of information and the means for gathering that information vary depending on the evaluation. In many cases creativity is your greatest limitation. Answers to optimal performance questions usually come from subject matter experts, the mission of the institution, and the community at large. For example, for a program on recycling: optimal performance criteria would be based on waste disposal or environmental engineering experts, a museum's advocacy mission, and local government (community) mandates to reduce landfill use.

Answers to actual performance, feelings, discrepancies, solutions and demographics come primarily from the audience, and that's the focus of this paper—developing questions that will help you gather information from your audience.

Question Typology

When I develop questions for a survey or interview instrument, I use as my guide a typology developed by Dr. Rossett of San Diego State University (Rossett, 1987) to assist training and development professionals in conducting needs assessments. The typology offers six different question types for gathering information about the target audience. These are:

Type 1 Questions: Use these to seek a general picture of the actual performance. What's going on? What does the audience already know or do?

Type 2 Questions: Use these to seek a detailed picture of the situation. What are the details behind what's occurring?

Type 3 Questions: Use these to demand proof of what the audience knows or can do. These are "test" questions.

Type 4 Questions: Use these to seek feelings. How does the audience feel about the subject or situation? Ask for:

- feelings about the *topic*
- feelings about *instruction* regarding the topic
- perceptions of the topic as a *priority* in relation to other topics
- *confidence* in their ability to grasp the topic or skill.

Type 5 Questions: Use these to seek the causes of the gap between the actual and the optimal. What is creating or contributing to the discrepancy?

Is it because the audience lacks knowledge? Or do they lack access? Or is something standing in their way?

Type 6 Questions: Use these to seek basic demographic information about the audience that is relevant to the purposes of the front-end evaluation.

Before you read on, turn back to the “quickie” front-end evaluation at the beginning. Using the typology see if you can determine the question type for each of the five “quickie” questions.

Now, let’s review each of the questions on the “quickie” front-end evaluation instrument.

Analysis of a Quickie Front-End Evaluation

- 1. What do you think you know about front-end evaluation? (*check all that apply*)
 - I know nothing about front-end evaluation.
 - I know something about front-end evaluation.
 - I could define front-end evaluation.
 - I could do a front-end evaluation.
 - I’m not sure what I know or could do.

#1 is a Type 1 Question. I wanted to get a general idea of what you think you know.

- 2. How many front-end evaluations have you conducted? (*check one*)
 - none
 - at least one

#2 is a Type 2 Question. I wanted to get a better idea of what you know by asking for information about your past experiences. If you had conducted a front-end evaluation and if I wanted more, I might ask for a copy of the evaluation. That way I could review it to see how skilled you are.

- 3. If you’ve never conducted a front-end evaluation, why? (*check all that apply*)
 - I don’t know how.
 - I never had a reason to.
 - I don’t have the time.
 - I don’t have institutional support (financial or philosophical).
 - I have other reason(s).

#3 is a Type 5 Question. I'm looking for the reason or reasons you haven't conducted a front-end evaluation. Not all barriers are knowledge-based (Mager, 1984). The audience may be knowledgeable, but blocked by physical, motivational or other barriers. I'm trying to get to the source of the discrepancy between the optimal and actual behavior.

4. How do you feel about reading this paper right now? (*check one*)

- I'm happy about it.
- I'm not happy about it.
- I feel something different.
- I'm not sure what I feel.

#4 is a Type 4 Question. I'm searching for your attentiveness to reading this paper. I could have asked about your feelings toward front-end evaluation, or your feelings about reading, or had you prioritize your interest in several different evaluation topics including front-end evaluation, or had you rate your confidence in learning several topics including front-end evaluation. Type 4 Questions gather information about feelings, priorities and confidence in learning.

5. What's your primary job/occupation right now? (*check one*)

- I'm a museum education staff person.
- I'm a museum exhibit staff person.
- I'm a museum administrative staff person.
- I'm a consultant.
- I'm a university (or similar institution) professor/lecturer.
- I'm a student.
- I don't fit any of the choices above.

#5 is a Type 6 Question. I'm seeking basic information about you that's relevant to my evaluation. Relevance is important. If you don't need to know certain information—such as the income of your target audience—and you need to keep your instrument short, don't ask the question. Ask only for the demographic information that's relevant to your study. (The exception to this is when you're planning to disseminate your study to a wider audience or when you expect that other evaluators will want to apply your methods or results to their situation. In those instances general demographic information will help other evaluators determine the applicability of your study.)

As you've probably noticed by now, I don't have a Type 3 Question in this instrument. If I asked you to write out a definition of front-end evaluation, that would be a Type 3 Question. I'd be testing you on your knowledge. Type 3 Questions are useful to determine the level of

understanding of your audience. (One cautionary note: Type 3 Questions can intimidate people. Most people don't like to appear or feel stupid, and poorly worded Type 3 Questions can elicit those feelings. If you're seeking mostly Type 3 information, you may want to approach your audience with open-ended, exploratory Type 3 Questions, rather than fact-based, test questions.)

Summary

Before you develop goals and objectives for an instructional program or exhibit, you should know as much as you can about your audience. In addition to who they are (demographic information), you need to gather psychographic information (Popcorn, 1992): information about their needs, interests, understanding, the perceived benefits and the barriers to what you're planning. You gather this information by conducting a front-end evaluation. Whatever method you choose to use (surveys, interviews, observations, etc.), the six question types presented here will help you choose the right questions.

References

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- Gagne, R. M., (Ed.) (1987). *Instructional technology: Foundations*. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.
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Figure 1

Program Development Process Supported by Evaluation

