

# Instructional Design Activity - Needs Assessment

(adapted from Lloyd Rieber)

## Background

"An instructional system is designed as a solution to a problem" (Briggs & Wager, 1981, p. 12). Therefore, the first step is to identify and then verify a problem. This identification begins with an analysis of what is and what ought to be. Any gap appearing between these two states is a need. While there may be a lot of needs, only instructional problems have instructional solutions. It is also important to keep the order in mind: first identify the problem then identify potential solutions, avoiding the "I have a solution -- what's the problem" syndrome.

At this point, the needs assessment is broad -- more at the course/unit or workshop level. Afterward, your project will begin to "funnel down" to the lesson level through other phases of the process.

## THE PROCESS:

**1. Preliminary:** Describe the context within which this potential instructional problem takes place. This will pinpoint where the problem is located. If instruction is deemed necessary, this will be the place where it will be designed and implemented.

a. List the context, also known as the "system of interest". The context is the social or institutional or curricular setting in which the new instruction will take place.

Example: The Instructional Design course

b. Describe or show how the context relates to the bigger environment. Show how this context relates to other levels of the system within which it works.

Example: The Instructional Design course is offered within the Department of Instructional Technology in the College of Education at the University of Georgia, which is part of the University System of Georgia comprising 34 institutions of higher learning. Within the Instructional Design course there are delivery platforms (HorizonLive), computer-mediated communication tools (email, WebCT), resources (Dick, Carey, & Carey), one instructor, and participants with design interests in K-12 schools, business/industry, and higher education.

**2. Symptoms of a problem.** Write a brief description of some symptoms that make you stop and wonder if something is wrong.

Example: Participants in the ID class are unable to complete the IDAs correctly. They have to rewrite IDAs numerous times. They don't use the formal language of the design process.

Using the evidence cited above, describe **why** you believe that these symptoms signal a problem. Keeping these questions in mind, describe the reasons for identifying these symptoms as problematic.

Example: The IDAs are based on the design process; if participants are unable to complete the IDAs, it is likely that they will not understand and use the design process appropriately.

Food for thought: You may find these questions useful in guiding your explanation:

- Why do these symptoms indicate an error?
- What evidence can I provide from observations, literature, test scores, publicity, or other such medium to support my proposition?
- How does the evidence support my proposition?
- Is there evidence that is contrary to my proposition? How do I explain this evidence?
- If my initial proposition is incorrect, can I provide alternative explanations for the problem? Do I have evidence to support these alternative explanations?

**3. Preliminary Problem Statement.** Based on 1 and 2, write a preliminary draft problem statement. Your context (*not* the learners) should be the subject of the statement. This is just the initial pass -- the statement will be revised in subsequent steps.

Example: The ID class does not adequately prepare its students to follow a systematic design process.

**4. Verify the problem and determine specific needs.** Two things will now happen concurrently. First, you need a systematic procedure to identify and collect data in order to verify that a problem exists. Second, you must identify information that the data sources may help uncover.

Food for thought: You may find these questions useful in guiding your explanation:

- What data support my statement of the problem?
- Where or from whom can I gather this supportive data?
- How can I prove that the data support the problem statement?
- What need do the data describe?
- What data oppose my statement of the problem?
- From whom or from where can I gather this opposing data?

**What data sources do you need to construct or find?**

Example: Interview participants in course; administer class survey; administer test of understanding; track down research literature.

**What kinds of information did you gather from the data sources?**

Example: Participant opinions on IDAs and course; Participant scores on a test; literature describing the needs of this demographic.

**What were the results? (i.e. What did you find?)**

Example: Participants believe there is too much jargon (felt need); Participants don't understand ID vocabulary as compared to other classes (comparative need); Participants don't score above national average (comparative need); Participants don't/couldn't see the relation between their work and the ID process)

*Description of types of Needs*

- \*Normative\* - Child not reading at grade level
- \*Felt\* - A person or group's opinion. Secretary of Education believes we need more instruction in math
- \*Expressed\* - Statistics course has waiting list of 100 people
- \*Comparative\* - Penn State offers a Dreamweaver course and we don't. Why?
- \*Anticipated or Future\* - Growth in Hispanic population: ESL instruction

**5. Prioritize your list of needs.** Which are most important? Why are they most important?

Prioritized needs

Reasons/evidence for priority

**6. Rewrite your problem statement.** Take a moment to look carefully at the initial problem statement that you wrote. Revisit your prioritized needs and check to see if your problem statement is still accurate and appropriate.

- Food for thought: You may find these questions useful in guiding your explanation:
- Is the problem statement an accurate reflection of the situation?
  - Will solving the problem (as stated in the first rendition) eliminate or reduce the needs you listed?
  - Does the data indicated earlier support or contradict my reading of the problem?
  - Do I need to create a new problem statement or modify the existing statement?
  - What will the new statement look like?

Rewrite the problem statement here:

**7. Identify the instructional goals.** The last step in Needs Assessment is to list a few goals of instruction. Remember, not all goals can be solved through instruction. The instructional goals you identify will be the starting information for the next steps in the instructional design process. List the instructional goals in order of priority.

Example: The language used in the ID course will be clarified; IDAs will be revised to meet student experiences and expertise, links between design process and student experiences will be made explicit.

**Food for thought:**

As you prioritize each instructional goal, list the reasons for each goal's priority. If possible, also try to list the benefits of prioritizing or accomplishing the goals in the order you have listed.

**List your instructional goals in order of priority:**

**What are the reasons why your top 1-2 goals are the most important?**

-----

**THE DOCUMENT:**

The need for the instructional design & development project should be well stated and substantiated with data that clearly points to instruction as a viable means to meet the need. The problem statement should be well written. An instructional goal should be provided that is consistent with the stated need. This document should contain the following headings:

- Background of the Problem;
- Problem Statement;
- Needs Analysis;
- Rationale for the Need for Instruction;
- Instructional Goal Statement; and
- Scope Statement (if no separate scope document is being provided).

The "Background of the Problem" includes narration with references of general professional or research literature and/or state/national reports that support and justify the instructional goal.

For the "Problem Statement" see the example and notes in the process section above.

The "Needs Analysis" includes data collected by the team and/or by the client (e.g. surveys, interviews, etc.) that support and justify the instructional goal.

The "Rationale for the Need for Instruction" should explain and justify why instruction is the best solution to this problem.

The "Instructional Goal Statement" should generally describe some result that you want to see happen in the real world as a result of the instruction you create (e.g., in the actual work setting of the learners, or in the performance of the learners during some real-life experience). *Note that this is in contrast to the performance objectives you will later*

*identify, which will normally describe what you want learners to be able to DO immediately after instruction, in the instructional setting.*

The “Scope Statement” (or separate Scope Document) should contain items such as the following:

- 1) One-sentence statement of what the project will accomplish
- 2) Team project objectives (NOT the performance objectives for learners) – this is simply a more detailed, itemized version of #1 – what the project will accomplish
- 3) Constraints (known facts or conditions that could prevent work from getting accomplished)
- 4) Team personnel, roles, & organizational structure
- 5) Assumptions - "What (few) things should not be left unsaid?"
- 6) Deliverables - Mainly products (intermediary and final), but also possibly some services, such as setup assistance.
- 7) Project change control - what will be the procedure for how aspects of the project may be adjusted or modified?
- 8) Any future projects or tasks anticipated but not included in this project
- 9) Signoff on the scope document (or needs assessment including scope statement)