



Introduction to Instructional Design
Learner and Context
Analysis

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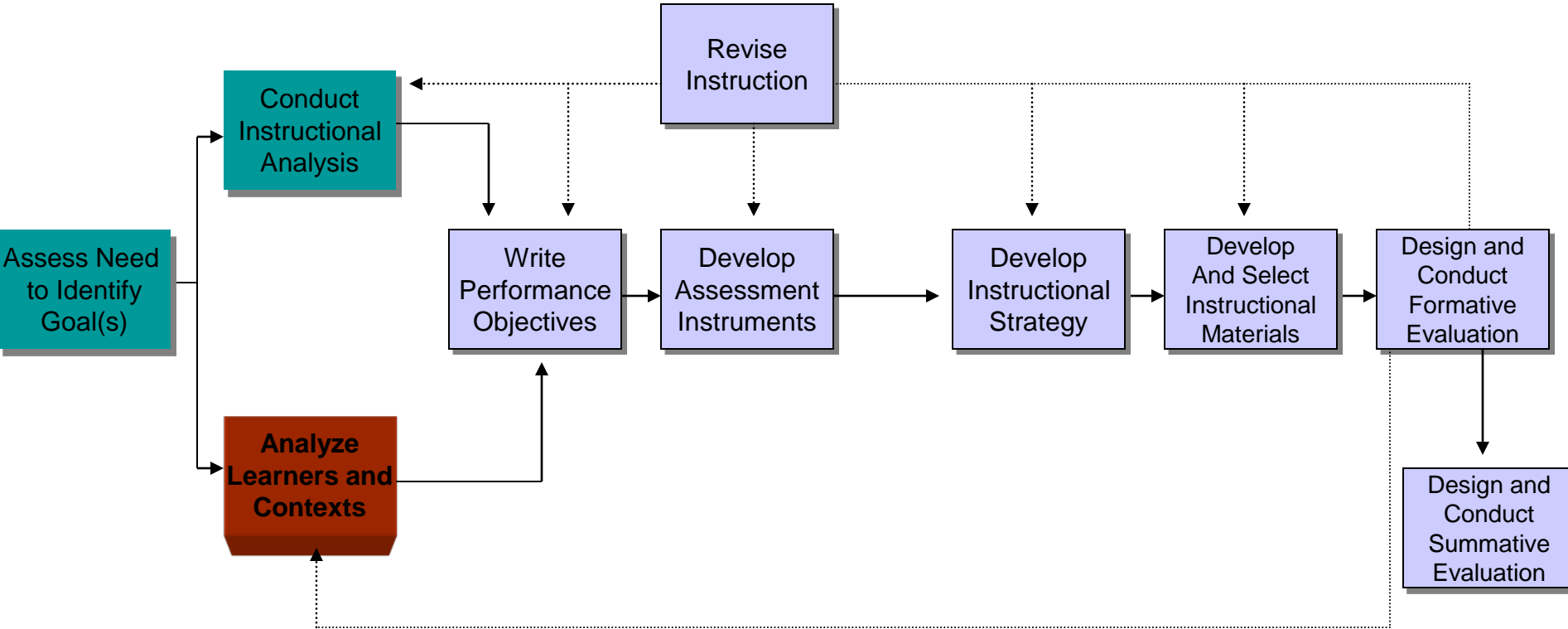
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Objectives

- For a given instructional goal and context, describe methods and sources for obtaining information about the target population, performance setting, and learning setting.
- Analyze and describe the general characteristics of a target population.
- Analyze and describe the contextual characteristics of the eventual performance and instructional settings.



(Dick & Carey's Model)

Quotable Quotes About Learner Analysis

(from Smith & Ragan)

“The danger in not analyzing the characteristics of an audience is assuming that all learners are alike. An even more common error is assuming that the learners are like the designers.” (p. 43)

Quotable Quotes About Learner Analysis

“The most important factor for a designer to consider about the audience is specific prior learning.” (Smith & Ragan, p. 54)

“If I had to reduce all of educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him/her accordingly.” David Ausubel

Quotable Quotes About Learner Analysis

(from Smith & Ragan)

“Although there is some disagreement among experts in this area, all would agree that I.Q. is not a measure of some global, qualitative factor such as ‘good brains’.” (p. 46)

(You better believe there is disagreement! See Stephen Jay Gould’s The Mismeasure of Man, 1981, NY: W.W. Norton)

Quotable Quotes About Learner Analysis

(from Smith & Ragan)

On considering gender, ethnicity, and racial group characteristics:

- “We consider these differences not because members of one gender or racial group process information differently, but because members of a gender, ethnic, or racial group tend to have common experiences due to their group membership that may be quite different from those had by members of other groups.” (p. 50)

In other words, while it is important to consider these differences, be sure not to fall into the trap of stereotyping.

Dick, Carey, & Carey...

- Learner Analysis
- Context Analysis of Performance Setting
- Context Analysis of Learning Environment

Not only must the designer determine what is to be taught, but also the characteristics of the learners, the contexts in which the instruction will be delivered, and the contexts in which the skill will eventually be used.



Learner Analysis

- Who are they?
- What are their characteristics?



Target Population And Try-Out Learners?

We will refer to these learners as the target population.

- Target population: an abstract representation of the widest possible range of users.
- Try-out learners: those learners who are available to the designer while the instruction is being developed. It is assumed that these try-out learners are members of the target population.

The Goal of Learner Analysis

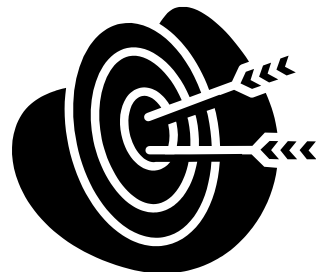
Find out as much information about your learners as possible.

The information collected from the analysis can *help determine what instructional content is needed and where the instruction should start*. Of course, some learners will know more than others and all people do not learn the same way. However, the learner analysis can help you identify the learner characteristics that need to be considered when you design your instruction.

What information do designers need to know about their target population?

Useful information includes:

- Entry behaviors
- Prior knowledge of the topic area
- Attitudes toward content and potential delivery system
- Academic motivation
- Educational and ability levels
- General learning preferences
- Attitudes toward the organization giving the instruction
- Group characteristics



Four major areas of characteristics

1. Cognitive – mental/intellectual capabilities
2. Physiological – physical capabilities
3. Affective – attitudinal considerations
4. Social – especially important for group work

Four Categories of Learner Characteristics

(from Smith & Ragan)

Similarities

[among learners]

Differences

[among learners]

Stable

[over time]

- Sensory Capacities
- Information Processing
- Types and conditions of learning

- IQ
- Cognitive Styles
- Psychosocial traits
- Gender, ethnicity, and racial group

Changing

[over time]

- Development Processes
 - Intellectual
 - Language
 - Psychosocial
 - Moral

- Development State
- Prior learning
 - General
 - Specific

Learning Style

Another learner characteristic to consider is learning style. Although you may not be able to create instruction that will fit every type of learning style, understanding the learning style can help to provide alternatives.

Learning Style

The following is a list of common types of learning styles:

1. Tactile/Kinesthetic

Students learn best when physically engaged in an “hands on” activity. They do not want to just read about something, they want to do it.



Learning Style

2. Visual/Perceptual

Students learn best by looking. Demonstrations from the blackboard, diagrams, graphs and charts are all valuable tools for them. Visual learners remember best what they see- pictures, diagrams, flow charts, time lines, films, and demonstrations.



Learning Style

3. Auditory

Learners prefer information presented in an oral language format. In a classroom setting, they benefit from listening to lectures and participating in group discussions.



Learning Style

4. Active versus Reflective

Active : Learners tend to retain and understand information best by doing something active with it (discussing or applying it or explaining it to others)

Reflective : Learners prefer to think about it quietly first. “Let’s think it through first” is the reflective learner’s response.

Learning Style

5. Sequential Versus Global

Sequential: Learners prefer to proceed step-by-step, in an orderly way, to the end result. They expect to learn whatever they are shown immediately.

Global: Learners prefer an overview or “big picture” of what they are going to do first before learning a complex process. They like having a map or an example so that they where they are headed and what they are working toward.

How To Gather The Information

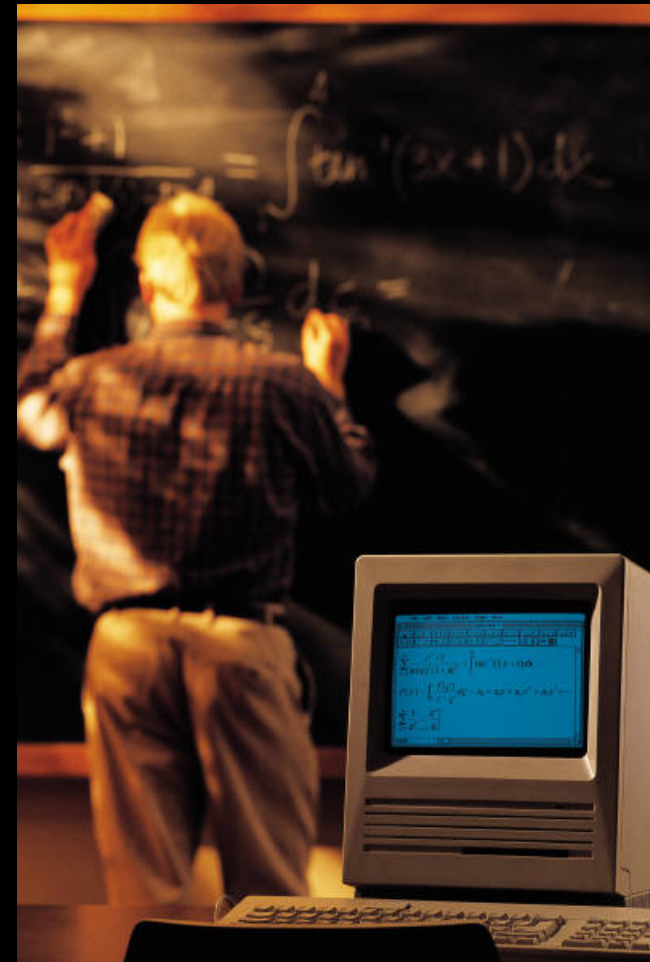
- Interviews or questionnaires/survey with those who work with target population and with members of the target population.
- Observations of the target population
- Published information about age group: more generic, but still be useful.
- Records/documents created by learners in the target population.

Implications of Learner Characteristics for Design

(from Smith & Ragan)

- Pace of lesson
- Number of practice activities
- Making the case for relevancy
- Techniques for gaining and focusing attention
- Context of examples and practice activities
- Amount of structure and organization
- Type of feedback to give
- Level of learner control
- Reading/vocabulary level
- Amount and types of reinforcement
- Amount of time allowed for instruction
- Amount and type of learning guidance
- Level of concreteness/abstraction

Analyzing Contexts



Context Analysis Of Performance Setting

Why?

- To know the environment in which our learners will be using their new skills
- To enhance the learners' motivation, sense of instructional relevance, and transfer of new knowledge and skills to the work setting

What Information Do Designers Need To Know About The Performance Setting?

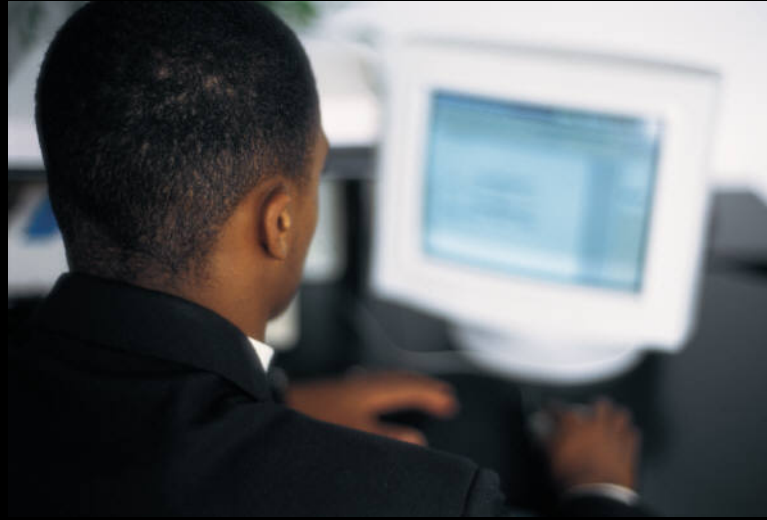
Useful information includes:

- Managerial or supervisor support
- Physical aspects of the site
- Social aspects of the site
- Relevance of skills to workplace

How to Gather the information

- Observations – provide critical information not only for direct input to the project but also for enhancing the skills and knowledge of designers
- On-site visiting – to gather data from potential learners and managers and to observe the work environment where the new skill will be used.
- Interview

Output



Performance Setting

1. A description of the physical and organizational environment where the skills will be used.
2. A list of any special factors that may facilitate or interfere with the learners' use of the new skills.

Context Analysis Of Learning Environment

Determining what is and what should be.

- What is: a review of the setting in which instruction will take place
- What should be: facilities, equipment, and resources that adequately support the intended instruction

What Information Do Designers Need To Know About The Learning Environment?

Useful information includes:

- Compatibility of the site with instructional requirement
- Adaptability of site to simulate workplace
- Adaptability for delivery approaches
- Learning-site constraints affecting design and delivery

How To Gather The Information

The procedure to follow in analyzing the learning context is

- To schedule visit to one or more training sites
- To schedule interviews with instructors, managers of the sites, and learners
- Observe the site in use and imagine its use for your instruction

Output



Learning Environment

1. A description of the extent to which the site can be used to deliver training on skills that will be required for transfer to the workplace.
2. A list of any limitations that may have serious implications for the project.

Overall Analysis Tips

1. Make a list of the important data – and check it off once you have it
2. Develop a strategy for discovering the information you need
3. Develop a strategy for making sense of the data
4. Cultivate relationships with various people who might be able to inform your analysis
 - Teacher/boss
 - Parent/partner
 - Peers/colleagues
 - One of the best sources: the learners!



Closing

- Learner Analysis
 - The more you know about your learners, but the better your instruction will be
 - Don't assume that all learners are the same
 - View diversity of learners as a strength
- Context Analysis
 - Understand the actual setting where a learner ultimately will perform the skills
 - Instruction usually takes place in a different setting, so look for ways to help learners transfer their learning.