

Module 3: Analysis (P3: Learner and Context Analysis)



This document contains the content from the interactive instructional unit for the module.

Contents

Learner and Context Analysis	3
Objectives	3
The Learner Analysis	4
Morrison, Ross, and Kemp's Approach	4
Dick, Carey, and Carey's Model.....	5
The Context Analysis	6
Performance Context.....	7
Learning Context.....	7
ISD Project Step 3: Develop a Learner and Context Analysis	8
Learner Analysis	9
Context Analysis.....	9
Summary.....	10

Learner and Context Analysis

As you are establishing the goals and conducting a task analysis, you need to simultaneously consider the characteristics of the learner, the characteristics of educational setting in which learning will occur, and the contextual characteristics of eventual setting where the learners will use their new knowledge or skills. You need to conduct a Learner Analysis and a Context Analysis to ensure that that the instruction is effective, efficient, and appealing.

Numerous approaches exist for conducting learner and context analyses. We will consider a few. However, before we discuss them, let's identify our objectives for this instructional unit.

Objectives

We will:

Unit Objectives:

- Define a learner and context analysis
- Identify the processes of conducting learner and context analyses
- Describe how learner and context analyses can be used to identify instructional goals and tasks
- Complete learner and context analyses for a distance education professionally developed lesson or workshop or unit.



By the end of this unit, what would you like to learn? Write your personal objectives.

Personal Objectives:

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Now, let's look at how some experts in the field suggest these two types of analyses.

The Learner Analysis

Characteristics of the learners influence learning goals and impact the manner in which learning occurs. Understanding and taking into considerations the characteristics of the learners can determine whether or not the learning experience is meaningful. "They will help the designer develop a motivational strategy for the instruction and will suggest various types of examples that can be used to illustrate points, ways in which the instruction may (or may not) be delivered, and ways to make the practice of skills relevant for learners" (Dick, Carey, & Carey, p. 98). When analyzing learners, it is important to keep in mind diversity among individuals so you can, as much as possible, accommodate diversity and each individual learner. Be aware of Universal Design.



Think About It Activity 3.5

Don't know what universal design is? Take a Virtual Field trip to the UDL tutorial at <http://www.cast.org/teachingeverystudent/ideas/tes/chapter4.cfm>. After you have completed the tutorial, answer the following questions: What is it? How is it relevant to your ISD project?

Morrison, Ross, and Kemp's Approach

Morrison, Ross, and Kemp suggest creating a list of the following characteristics of the learner:

- Age
- Maturity level
- Motivation
- Attitude toward the subject
- Expectations and vocational aspirations
- Previous or current work experience
- Talents
- Mechanical dexterity
- Ability to work under various environmental conditions or conditions in which work will occur
- Cultural diversity or disability needs



Think About It Activity 3.6

List several ways that you can obtain information about learners.

Instructor's response: understand learning theory; research; talk with learners, instructors, and administrators; observe classrooms, and workplace; collect data through surveys, questionnaires, pretests, etc.. Be careful never to assume too much. As the old saying goes: Assume = Ass + u + me Thus, by assuming too much, we can make an ass of not only others but ourselves too.

Dick, Carey, and Carey's Model

Dick, Carey, and Carey identify several characteristics of the learner that should be considered.

- **Knowledge, Skill, and Ability** - What is the learners prior knowledge and skill level? What are the general ability levels of the learners? For an online course, what are the learner's technology skills?
- **Attitudes Toward Content and Potential Delivery System** - What are the learners' attitudes about the topic and how it might be delivered? Does the learner have any preconceived notions? (For example, online education is lower quality; people in general do not do well in research and statistics)
- **Attitudes Toward Training Organization** - How do the learners feel about the organization providing the training? Do they have a positive view of management and peers, or are they cynical about leadership?
- **Motivation** - How motivated are learners to learn? What is there level of interest? and how much is it likely to interest them? How relevant is the instructional goal to the learner?
- **General Learning Preferences** - What types of learning approaches do the learners prefer? Do they prefer lecture, discussion, individual, case study, small-group?

In the web-based environment, it is especially important to consider learner's technological skills and in design aim to serve the lowest common denominator. It is also important to

consider the learners' knowledge and skills to navigate the delivery platforms and technologies integrated into the course, for tutorials and technological support may need to be planned.

As an educator or an ID, there are two ways in which you can create a useful working document that describes the learner for whom you are designing instruction:

- A chart of learner characteristic data
- A fictitious learner profile of the average target student



Think About It Activity 3.7

You are designing instruction for a graduate, online student working toward a degree in education. Write a fictitious learner profile.

Instructor's response: Anna Marie is a 35 year old wife and mother. She is actively involved in her church's women's and children's ministry, and, she is a second grade teacher. She considers herself a technologically savvy person as she regularly integrates technologies such as SMART board, SMART response systems, and iPod touch applications in her classroom. Her experience in the online environment includes course development with Moodle. She has an email account and a Facebook account. She desires to go back to school to work on a master's degree in educational technology because she wants to be the educational technology director for her district. Due to her multiple responsibilities and busy schedule, entering an online program is both convenient and ideal her; however, she has some concerns. A close friend of hers recently dropped out of an online program due to lack of student interaction, lack of instructional support, poorly designed course, and substandard instructors who do not teach. Her friend told her "you just read the text book and take test." Thus, Anna Marie has worries about having a similar experience; she worries completing an online program will jeopardize the quality of educational experience. Unfortunately, in light of the literature, her concerns are valid and real.

The Context Analysis

In addition to analyzing the learners, the context, both the performance and learning context should be analyzed. For, understanding the setting in which new skills, knowledge, or

attitude will be used can inform the planning of instructional activities that will approximate what learners will face in the real world. Additionally, an understanding of the learning context helps us identify obstacles in the setting and best use the instructional environment.

Performance Context

The performance context is the setting in which the new skills, knowledge, or attitude will be used by learners. Dick, Carey, and Carey identify 4 factors to consider or analyze:

- **Managerial Support** – Will the learner receive organizational support to support new knowledge, skill, or attitude? How much support will be received? For example, as an educational technologist for a school district, you instruct teachers on how to design an online course using [Moodle](#), to support the goal identified by the district technology plan for all students in grades 3 through 12 to be enrolled in at least one class that utilizes Moodle. After the training, how, if at all, will teachers be supported in developing Moodle courses for their classes?
- **Physical Aspects** - What resources (i.e. equipment, facilities, tools, timing, etc.) will be available and/or necessary?
- **Social Aspects** – Will learners be expected to work alone or in a team?
- **Relevance of Skills** - How relevant is the new knowledge, skill, or attitude? Are there physical, social, or motivational constraints in application in which the learner needs to know about?

"We encourage you to think beyond the accepted textbook and curriculum guide approach to public schooling. That approach has led to the criticism that much of public education emphasizes factual recall over conceptual understanding and textbook problems over authentic applications. Constructivist theorists have been justifiably sharp in their criticism of teaching/learning activities that are abstracted from, and thus not relevant to, actual physical, social, and problem contexts." - Dick, Carey, & Carey, p. 102

Learning Context

The learning context is the other environment that needs to be analyzed. Dick, Carey, and Carey identify 4 factors to consider or analyze:

- **Nature of Environment** – The physical characteristics of the environment and the facilities, equipment, and resources are available. (What devices are learners using (i.e. laptops, mobile devices, etc.)? Where will learners be when participating in the course and what are the potential factors?)
- **Compatibility of the Environment With the Instructional Requirements** – The environmental resources available to support the instructional goals (e.g., Does the environment include any tools or other items that are necessary for the learning of the goal? Are there any personnel or time constraints that you can identify? What is the general technology requirement for learners- bandwidth, operating systems, utility and software applications, etc.?)

- **Compatibility of the Environment With the Learner Needs** - The environmental resources available to support learners needs
- **Feasibility for Simulating the Workplace** The similarity between the learning environment and the workplace (e.g., Does the learning environment adequately simulate the eventual work environment? Is there anything that can be done to make it more like the work environment?)

ISD Project Step 3: Develop a Learner and Context Analysis



Think About It Activity 3.8

You are designing an online course for undergraduate students utilizing a content management system, computer software that supports the organization and delivery of online instruction, such as Moodle, Sakai, and Blackboard. The system consists of an integrated set of asynchronous applications, such as discussion forums, rosters, homepages, etc., that are accessible to students for learning and the instructor for instruction and facilitation. What is the compatibility of the environment with the general instructional requirements and learner's needs? What are the constraints?

Instructor's response: A plethora of research has examined the use of asynchronous systems in online Higher Education, and researchers have cited numerous educational benefits such as democratic and equitable communication, time and location independence, and high level of reflection. In studies that compare F2F and asynchronous text-based discussion, researchers have found that online discussion is more democratic and equitable (Levin, Kim & Riel, 1990; Ruberg, Moore & Taylor, 1996). Everyone, even the quiet and shy learner, is afforded the opportunity to participate and to learn through discussion (Davie, 1988), for the risk of one or two individuals dominating the dialogue is reduced (Eastmond, 1994). Furthermore, asynchronous CMC provides an ongoing permanent record of course dialogue, making it easier for students with irregular work schedules and living various time zones to communicate with one another (Nentwich, 2003). The electronic preservation of all course dialogue also provides online learners with an extended amount of time to reflect upon topics and to re-examine ideas (Mason & Kaye 1990; Sanderson, 1996). Time allotted to students in the asynchronous environment, as compared to chat rooms, enables students to think about and edit their posts and responses (Mitchell, 2003).

Although research attests to the beneficial nature of the asynchronous e-learning environment, problems and limitations with the medium exist. The occurrence of information overload, reduction in non-verbal communication cues, increased misunderstandings, lower sense of community as compared to hybrid classes, difficulty in communicating emotions, and lack of higher order thinking are a few of the limitations noted throughout the literature (Eastmond, 1994; Hiltz, 1986; Moore, 1993; Moore & Kearsley, 2005; Nentwich 2003; Paulo, 1999; Rovai & Jordan, 2005; Stevens-Rayburn & Bouton, 1998). In asynchronous e-learning interaction, online learners and educators have found some tasks, especially cognitively complex tasks, challenging and the social aspect of learning lacking (Arbaugh, 2005; Liu, Bonk, Magiuka, Lee, & Su, 2005). Thomas (2002) suggested that "the attainment of a discourse that is both interactive and academic in nature is difficult within the online environment of the traditional threaded discussion" (p. 359).

Learner Analysis

Using your understanding of learning theory; research; interaction; observations; and/ or data collection, answer the following questions. Then, create a chart of learner characteristic data or factitious learner profile of the average target learner.

- What are the general characteristics of your target population? (i.e. age, grade level, topic area)
- What is the learners prior knowledge and skill level? What are the general ability levels of the learners? Is it reasonable to expect learners to learn what is planned? Do the learners already know something about the topic?
- Is the topic likely to interest the learners?
- What are learners' attitudes toward the content?
- What are learners' attitudes about the delivery system?
- Do the learners have any general learning preferences?
- What are learners' attitudes regarding the organization providing the instruction?
- Are there any important group characteristics? How similar or diverse are they?
- How will you or did you obtain this information regarding the learner characteristics?

Context Analysis

Analyze the learning context. You can use the factors that Dick, Carey, and Carey identified. Then, write one to three paragraphs about the setting for which you are designing your instructional lesson and any special considerations. Describe the nature of the learning context and compatibility and constraints of the environment for the learners and instructional goals. See Learning unit to see an example context analysis.

Summary

With the information from the analysis instructional units - the needs of the learners, who your learners are, the context in which they will be exposed to your instructional, and the context in which they will eventually use the instruction- you can write instructional objectives and plan instruction that is appropriate for the identified skills, learners, and contexts. Again, please note that for the purpose of this course, you are applying the instructional design process to one lesson; however, the same principles are applicable whether your area teacher designing a lesson or a course or a district technology manager designing a school or district program.

Now you should be able to:

- Define a learner and context analysis
- Identify the processes of conducting learner and context analyses
- Describe how learner and context analyses can be used to identify instructional goals and tasks
- Complete learner and context analyses for a distance education professionally developed lesson or workshop or unit.



Did you learn what you hoped to learn? If not, what resources can you use to learn?

Personal Objectives:

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