**FPD200 Participant Guide – Week 1**

**Instructional Systems Design**

At its simplest, the goal of Instructional Systems Design (ISD) is to improve human performance. ISD is based on the premise that learning should not occur in a haphazard way, but should be developed in accordance with orderly processes, be specifically tailored to the target audience, and have measurable outcomes. As the field of learning has grown, ISD and its applications have evolved through practice as well as through research and expansion of theories. Many ISD models have been created.

**What Is Learning?** In the realm of training and performance development, a common definition is: a ***persistent, observable change in behavior***.

Instructional Systems Development includes the following phases that give rise to the acronym ADDIE:

Analysis: Determine what is to be learned, by whom, with what existing skills.

Design: Map out how learning is to be presented, practiced, remediated, and tested.

Development: Author and produce effective, high-quality materials.

Implementation: Plan for and install the project in the real world.

Evaluation: Collect qualitative and quantitative data about the adequacy of the intervention.

Thus, ISD consists of analyzing what is to be learned, planning an intervention that establishes the conditions for learning, and producing and refining instructional or non-instructional interventions until the specified performance objectives are met. ISD is a process comprised of these repeatable phases; moreover, a great deal of flexibility exists within each phase.

ISD should not be viewed as a rigid, lock-step set of procedures to be used without modification or elaboration. Differences between requirements, goals, learners, delivery platforms, applicable theoretical models, stakeholder needs, resources, development time, and even organizational missions are some of the many elements that may cause the activities within a phase to differ from learning product to learning product.

**About This Text**

By definition *Instructional design* is the process through which an educator determines the best teaching methods for specific learners in a specific context, attempting to obtain a specific goal. Throughout this document, we will use *Instructional Design* (ID) as the referent term, instead of ISD. The terms are interchangeable.

This text is designed to help you apply sound principles of design to the creation or continuous improvement of your courses. The overview presented here is based on a model which provides a systematic, step-by-step approach to designing (and then improving) effective and objectives-based instruction.

It is important to note that the content is presented here in a linear manner, but there will *always* be movement between and among ID phases. Also, remember that not all of the phases may apply to your situation. Depending on your needs, you may work through this text using it as a text-reference guide.

Within this text, each ID phase consists of three sections: concept summary, online references and tools, and reflection questions. The first section, the concept summary, provides bulleted quick tips and important concepts pertaining to that particular instructional design phase. The online references section provides a list of relevant online articles, references, or web sites, some of which will be linked to assignments (additional websites are also provided on the course syllabus). Finally, the reflection questions/activities that will be used as individual or collaboration exercises as you progress through DAU/FPD200.

In this text, we have placed a considerable underlying emphasis on trying to get you to visualize instructional design in varied contexts. Thus, if you are designing, developing, or reviewing a course or unit for a classroom-based offering, we will encourage you to think about what you might do differently if you were designing the very same course or unit for an online learning experience.

**THE CONCEPT IS: ANALYSIS**

There are several types of analysis for the instructional designer to consider. Which type of analysis you choose will be directly related to the type of development you engage in later in the instructional development process.

**Needs Analysis**

*Assessing instructional needs* is a possible first phase of instructional design. Depending on your situation, you may not need to assess and determine an instructional need; that work may have been done for you. It may be, too, that your particular situation does not require a needs assessment. However, if you are responsible for course-creation from the ground up, conducting a needs assessment would be a necessary step.

The motivation behind conducting a *needs assessment* is not too mysterious: in order to begin designing instruction, you may need to determine whether there is a *need* for the instruction you intend to offer. In addition, depending on your instructional goal and course content, you may *need* to identify the gap between what *is* and what *needs to be*; that is, what do learners know now, and what do learners need to know? New educational needs or enhancements may arise because of changes in legislation, changes in a given industry, or mandates from professional organizations.

**Job Analysis**

*Assessing what someone does on their job* may also be a first phase of instructional design. Depending on your situation, you – or someone else - may have to conduct a job analysis.

Job analysis is the process of determining which tasks each employee needs to perform and the standards at which he or she must perform them. Thus job analysis is frequently referred to as Job Task Analysis (JTA). The job analysis process produces at least three important tools that will help train employees:

1. Task lists
2. Job breakdowns
3. Job performance standards

A task list provides the tool with which to plan employee training. A task list should be prepared for each category of employee to be trained (for contract specialists, logicians, systems engineers, etc.). It lists all of the tasks that must be performed by an employee in a given position.

Effective task lists begin each task with a verb; the verb that describes what the employee must do. The list states all the specific duties that the employee must perform; even if the task is not one that is performed frequently.

Some Online References

Here are some online materials that may help you work through the analysis phase. Two of the sites represented here are specific to distance education; however, many of these principles may be applied to different kinds of educational environments.

(These URLs were “hot” at the time we placed them in this text. We do not guarantee they will be when you go to them). Feel free to browse for (and share) other sites.

Written for distance education by the University of Idaho Engineering Outreach program, this site contains information that can be applied to classroom course design as well. <http://www.uiweb.uidaho.edu/eo/dist3.html>

Also focused on distance learning, but the list of questions is helpful for deciding how to approach a needs assessment for all types of learning. Disregard the ‘Evaluation’ section. <http://frank.mtsu.edu/~itconf/proceed98/rstewart.html>

**Learner Analysis**

Although not always possible, it's good practice to spend some time thinking about and researching your potential learners or your *target population*. These are the folks who will actually be taking your class, using your online learning, or working through your self-paced instructional materials.

Usually, it's best to create instruction around a particular audience, rather than designing content and then searching for an audience. It's also a good idea to avoid designing instruction based on what you think learners *should* know or be like; instead, determine what learners *are* like and what they *do know*. In addition to analyzing the learners, think about the learning context - where will the instruction be offered? Will the environment adequately support the intended instruction? Remember: your learners are adults. Usually, adult learners take classes for a specific reason; make sure you can articulate the relevance of your course materials. How will your learners apply what you're presenting?

What kinds of things do you need to know about your learners? Some instructional design theorists contend that "the most important factor for an instructional designer is specific prior learning." Consider how you can discover what your learners already know about your topic. Think about the prerequisite knowledge your learners must possess before they take your course or instructional unit.

It's also important to consider:

* Cognitive characteristics, such as learning aptitude, learning styles, prior   
  knowledge of topic.
* Psychosocial characteristics, such as motivation and attitudes.
* Physiological characteristics, such as age, race, ethnicity, cultural and linguistic background.

Be aware that we now live, work, and learn in environments that are increasingly culturally diverse. Keep in mind that some cultures may not encourage classroom participation, so some learners may be hesitant to speak up or volunteer information. Nuances of body language and nonverbal communication may vary widely from culture to culture. All of these factors carry implications for selecting your instructional strategy and developing your instructional materials. Many of these variables [may] be negated when developing CBT or WBT learning; this is especially true regarding aptitude, learning style, prerequisite knowledge, and attitude about learning outside a physical classroom.

The extent to which you focus on certain learner characteristics will depend on the nature of your instructional project.

1. Cognitive Characteristics

* English as a second language
* Cognitive processing styles
* Learning strategies
* General world knowledge
* Specific content knowledge

2. Psychosocial Characteristics

* Interests
* Motivation to learn
* Attitude toward subject matter
* Attitude toward learning
* Anxiety level
* Beliefs
* Socioeconomic background
* Racial/ethnic background, affiliations
* Job position, rank

3. Physiological Characteristics

* Sensory perception (visual, auditory, tactile, acuteness)
* General health
* Age

Some Online References

The following documents can guide you through the learner analysis process.

Read the ‘Analyze Learners’ section: <http://www.ieee.org/education_careers/education/reference_guide/index.html>

Keller ARCS Model of Motivational Design: <http://mailer.fsu.edu/~jkeller/Articles/Keller%202000%20ARCS%20Lesson%20Planning.pdf>

Consideration for students utilizing the Americans with Disabilities Act:

<http://www.nwlink.com/~donclark/hrd/sat7.html>

**Environmental and Contextual Analysis**

The environment and culture of an organization may affect the development, delivery, or application of training.

* Are developers allowed access to learners and subject matter experts during course development?
* Is the physical environment is appropriate for learning? Does the environment include appropriate light, sound, and seating?
* Does the environment allow access to facilities, equipment, learning experiences, and resource materials in compliance with the Americans with Disabilities act?
* Are educational services and technical support provided to instructors and   
  learners?
* For distance learning courses: Do learners and instructor(s) have access to appropriate technology and support?
* For video components or courses: Do learners have access to the appropriate equipment?
* Are there existing curricula or certification requirements with which the course must comply?
* How similar to the training environment is the environment where workers will be applying what they have learned?

Some Online References

A summary by Dr. Susan Colaric at St. Leo University: <http://iteach.saintleo.edu/InstructionalDesign/ContextualAnalysis.htm>

**Using Your Analysis to Design Instruction: What kinds of knowledge, skills, or tasks will the intended instruction include?**

When you use the results of analysis to design instruction:

Ask yourself. . .

* Who is affected by this need? Who are your potential learners?
* What prerequisite knowledge, skills, or understanding do your learners need?
* What is and what needs to be? What is the instructional goal?

Begin with the learner. . . .

* If possible, solicit input from your potential learners. Consider using email, a survey, a focus group, informal or formal observation, or discussion.
* If you use or develop CBT or WBT, what kind of access to technology do your learners have?

Consider the learning environment. . . .

* If applicable, determine whether there are existing curricula or certification   
  requirements your course must satisfy.
* If your course is media-dependent, determine the availability of required media. If you use or are working on distance learning, what are minimum technical requirements?
* Find out what facilities are available.

**KEEP SCROLLING. WORKSHEETS ARE ATTACHED BEGINNING ON A NEW PAGE BELOW.**

Needs Analysis Worksheet

Learner Analysis Worksheet

Data Collection Chart

**Needs Analysis Worksheet**

To get started, collect [at least] the following data:

1. Who is the intended audience?
2. Who will make up your potential learners?
3. How many potential learners are there?
4. What specific industries, businesses, and professions will find your instructional material of particular interest?
5. What are the prerequisites for the course? What should learners already know? What training or education courses have they already had?
6. Where the potential learners are geographically located? Will learners be located in a centralized classroom, or distributed throughout a geographical location?
7. What is the need? Has it been determined by legislation, a change in career or job expectations? What is the gap between what is and what should be?

**Learner Analysis Worksheet**

1. What are the required prerequisites? What knowledge do learners need to have before they take this course?
2. Have learners experienced something similar to this instruction?
3. What attitudes do the learners have about instructional content?
4. What kinds of expectations do learners have concerning instructional delivery?
5. How relevant is the instructional goal to the learners?
6. What are the job series/titles or functions of potential learners?
7. How confident will your learners be?
8. What are the educational and general ability levels of the learners?
9. What are the general learning preferences of the target learners?
10. Are the learners heterogeneous? Homogeneous? In what ways?

**Data Collection Chart**

If time and resources allow, consider collecting information using one or more of the following methods.

|  |  |  |
| --- | --- | --- |
| **Method** | **Advantages** | **Disadvantages** |
| **Questionnaire** | •May yield large amount of information. •Restricts respondents to specific areas. •Does not require trained interviewers. •Time effective for a large number of participants. | •Requires explicit instructions. •Return rates tend to be low. Try building in an incentive to motivate people to completion. •Requires a significant sample size for an acceptable confidence level. |
| **Observation** | •Establishes what people actually *do*, not what they *say* they do. •May be accomplished via trained observers or automatic cameras. •Helps pinpoint problem areas. | •Requires skilled observers. •May be expensive and time-consuming. •Data not easily quantifiable. |
| **Face-to-Face Interview** | •Yields a high response rate. •Provides most information for time spent and most accurate detail. •Provides opportunity to pursue responses for more detail. | •May be costly in both time and money. •May provide extraneous information. •Requires trained interviewers. |
| **Telephone Interview** | •Less costly than face-to-face interviews. •Less time-consuming that face-to-face interview. | •Provides no non-verbal feedback. •Respondent may cut interview short. •Requires trained interviewer. |
| **Group Data Collection**  1. A panel of experts or master performers.  2. A focus group of target population. | •Yields a high response rate. •Provides significant amount of information for time spent. •Experts can identify *what is* and *what needs to be*. | •May be difficult to schedule. •Requires some degree of structure. •Dominant participant may bias group response. •Requires a trained facilitator. •May provide extraneous information |

**FPD200 Participant Guide – Week 2**

**Writing Learning Objectives**

A learning objective is a clear, concise, objective description of what your learners will be able to *do* at the end of a given instructional unit. If you remember nothing else as it relates to designing instruction, remember this:

Developing learning objectives is important because they are purposeful:

* Learning objectives tell learners what they will know, understand or be able to do at the end of a block of instruction (section, topic, lesson, or seminar/workshop).
* Objectives should be clear, direct, complete, and correct.
* Well-written objectives should serve as the basis for test items.

Well-written objectives tell learners how their performance will be assessed. Developing learning objectives require thoughtfulness to compose because you must:

* Determine the *goal* of the learning activity (the terminal objective) or what the learner should be able to do to demonstrate mastery.
* Determine what learners must demonstrate to achieve that goal (the enabling objectives).
* Write your objectives based on the above skills, task, or knowledge.

**What are the appropriate verbs for learning objectives?**

**Phrases to Avoid**

These verbs are subject to multiple interpretations.

• *Comprehend; fully understand; know; remember; contemplate; perceive; enjoy; consider; experience.*

**Phrases to Use**

***Categories with Outcome-Illustrating Verbs***

1. Use verbs like the one’s below when the objective is to remember and recall previously learned information:
2. Use verbs like the one’s below when the objective is to understand the meaning of informational materials:

*Define, describe, identify, match, name, record, classify, describe, estimate, summarize, provide an example*

3. Use verbs like the one’s below when the objective is to use previously learned information to solve problems:

*Assess, compute, determine, develop, implement, prepare, produce, provide, report, utilize*

4. Use verbs like those below when the objective is to break down informational material into component parts:

*Diagram, differentiate, discriminate, illustrate, recognize, separate, subdivide*

5. Use verbs like those below when the objective is to apply prior knowledge and skills to produce a new or original whole:

*Compare, compile, contrast, design, devise, facilitate, formulate, generate, incorporate, integrate, plan, revise, structure*

6. Use verbs like those below when the objective is to judge the value of   
information:   
  
*Compare & contrast, conclude, critique, defend, interpret, justify, support*

**What are some examples of performance objectives?**

**Objectives: Performance Component Performance Statements Learning Objectives:** *Use this list as a resource when you develop or critique your own objectives. Note the specific action verbs used in each performance statement.*

* Student teams will *design* a five-day, Level I course in acquisition.
* Student teams will *convert* a five-day, Level 1 course to a asynchronous online offering.
* Learner will *define* the protocols and systems that implement …
* Learner will *write* a position paper.
* Learner will *define* error-correction coding.
* Learner will *define* the correct name for the components that make up the provisioning system.
* Learner will *analyze* the design trade-off in A’ and B’ design.
* Learner will *develop* strategies and analytical methods for evaluation of capital projects.
* Learners will *outline*, in writing, key concepts and principles of effective human resource management.
* Learner will *compose* a complete and accurate technical document.
* Learner will *compose* and *customize* a presentation for a specific audience.

**Some Online References**

The following online materials offer assistance and tools that may help you work through the developing *Learning Objectives phase.*

http://www.adprima.com/objectives.htm Although this Web site anticipates an audience of secondary school teachers, the high level overview is terrific

How to write Mager style instructional objectives: <http://www2.gsu.edu/~mstmbs/CrsTools/Magerobj.html>

Bloom’s Taxonomy updated has good charts for matching cognitive levels, instructional activities, and evaluation strategies: <http://gaeacoop.org/dalton/publications/new_bloom.pdf>

**Choosing an Assessment Strategy**

After writing objectives that are clear, direct, complete, and correct, you need to decide how you will determine if the objectives have been met.

**FPD200 Participant Guide – Week 3**

**Select an Instructional Strategy**

As you begin to formulate your instructional strategy, it may be helpful to use *Robert Gagne’s* "nine events of instruction" as an organizational tool. Gagne outlined a process of learning that includes the following nine events:

1. Gain attention
2. Inform learners of objectives
3. Stimulate recall of prior learning
4. Present the content
5. Provide learner guidance
6. Elicit learning/practice
7. Provide feedback
8. Assess learning
9. Enhance retention and transfer

Although you may not need or choose to incorporate each discreet event presented here in your own instruction, you may want to refer to this hierarchy as you develop your course or instructional materials. Remember that, depending on your course delivery, integrating these instructional events may present challenges. For instance, if you are developing a distance education or self-study course via electronic or paper-based materials, your instructional materials need to gain learners' attention, as well as provide feedback and guidance.

Depending on your instructional goal and course content, you may need to test your learners' knowledge. So, as part of your instructional strategy, you will need to keep the assessment strategy you developed last week in mind.

It may seem unusual to suggest that you begin to create assessment instruments in the middle of the design process, rather than at the end. However, the best time to develop test items is after developing learning objectives. Your assessment instruments, then, will be more likely to actually measure what you want your learners to accomplish.

Remember, too, that assessment doesn't only occur at the end of an instructional unit. Think about how to integrate formative assessment during instruction.

Use the documents on the following pages to guide you through the Instructional Strategy development phase.

**Using Gagne’s “Nine Events” To Organize Instruction:**

**Lesson Plan Format**

**Name:**

**Topic:**

**Gain Attention**: How can you gain learners’ attention? How can you establish the relevance of your material and stimulate their curiosity? Pique the learners' interest in the subject.

**Inform Learner of Objective:** Upfront, tell learner what the objectives are. Let the learners know what they will be learning.

**Recall Prior Knowledge:** How can you link your instructional material to the learner’s prior experience or knowledge. Get the learners to think about what they already know.

**Present the Content:** Teach the topic. How can you accommodate different learning styles? How can you engage different presentation methods? (Video, Graphics, Audio, etc)

**Provide Guided Learning:** Help the learners follow along as the topic is presented. Provide students with clues to help them understand and remember what they are to learn.

**Elicit Performance:** Ask learners to do what they have been taught. How can they demonstrate what they know?

**Provide Feedback:** Inform learners of their performance. How can you provide helpful, constructive feedback on learner activities?

**Assess Performance:** Evaluate learners on their knowledge of the topic. How can you assess whether learners are ready to proceed? What type of formative and summative assessment will you employ?

**Enhance Retention and Transfer:** How can you review, summarize, and connect you instructional material to learner’s life experience and prior knowledge? What will aid learners in remembering and applying the new skill?

**Applying Instructional Strategies To Presentation for Online Materials**

|  |  |
| --- | --- |
| **Retrieval** | •Keep topics small and self-contained. Chunk in groups of 3 to 5 units of information. •Label topics clearly. •Use a template for consistency. •Disclose information in progressive layers. |
| **Orientation** | •Online material has no physical representation of its organization; there are no covers, chapters, or pages. Provide visual cues through metaphor or color. •Provide a site map, easy backtracking and exit, and a default path. |
| **Presentation** | •Consider readability and layout. •Reduce clutter; aim for 50% white space. •Distinguish important information. •Use color and graphics appropriately. Be consistent and conservative; use color and graphics for clarification, not for explanation or decoration. |
| **Encoding** | •When designing the structure, consider the purpose. o For instructional units, design sequentially. o For browsing or reference, design hierarchically or associatively. •Structure each topic to answer one question. |
| **Sequence** | •Provide several access techniques: menu, index, table of contents, hypertext links, keyword searches. •Provide multiple entry points and paths to address a variety of learner needs. |

**Some Online References**

Take a look at some online materials that offer assistance and tools that will help you work through the *Instructional Strategy* stage.

This is a checklist to look at your elearning assets, but even if you have a classroom course, it’s interesting to think about these topics. I recommend the entire Cathy Moore blog.

http://www.cathy-moore.com/resources/checklist-for-strong-elearning.pdf

This is a basic 60 minute course for non-instructional designers. Free sign-up is required to view. It’s up to you whether you feel comfortable signing up, but I think what you find here might be helpful to you. There are about 75 slides total, but for this week, I recommend that you review slides 27-52.

<http://www.articulate.com/products/demos/blog/60-Minute-Masters-no-audio/player.html>

**FPD200 Participant Guide – Week 4**

**Developing Materials**

*Instructional materials* are any tools you use during the instructional process. An instructional package usually consists of a student text, instructional materials, pre- and post-tests (recommended), and an instructor's manual. You may choose to employ worksheets, handouts, job aids, computer-based training, the Internet, laboratory work, learning objects, learning portals, or audio/video material.

Prior to developing your instructional materials, consider your intended development and delivery mode. Will your delivery mode be self-paced and instructor-independent, such as online learning? Will your delivery be a combination of instructor presentation and use of materials? Think about how you will cover all required instructional events. Consider, too, the resources and budget you have available.

Also, consider whether you wish to create your own instructional materials or whether you want to use materials that already exist. Remember, though, to avoid using material just because it's available; make sure the material is appropriate for your instructional goals.

When developing your instructional material, think about using the following steps:

1. Review your instructional strategy.
2. Research existing literature or fellow subject matter experts; determine what material is available.
3. Consider how you can adapt existing material.
4. Determine whether you need to design new materials.
5. Consider the best media for presentation. How can you best monitor practice and feedback, evaluate learner learning, and guide student learning?
6. Based on your instructional strategy, build your instructional material.
7. Review each completed instructional unit for flow, clarity, and information  
   chunking. Keep your learner analysis in mind.
8. Develop a student manual or student instructions; provide a syllabus or outline that informs learners of objectives and assignments.

As you develop your instructional materials, the following pages may help you work through this phase.

**If you are considering implementing educational technology, consider the following:**

***Access***

* Is the technology accessible to all learners?
* Is the technology flexible? Will there be language barriers?
* Is the technology difficult to learn or to use?

***Cost***

* How much will developing the technology cost?

***Learning and Instructional Strategy***

* What instructional approaches will best meet your learning objectives?
* What technologies are best for supporting this kind of learning?
* Can any existing content be adapted to the technology?
* What skills or knowledge does the technology support?

***Feedback and Interactivity***

* Does the technology encourage any interaction? What kind?

***Institutional Issues***

* Are there any institutional barriers to using this technology?
* What kind of support is needed for this technology? Does it exist?
* Do any organizational or institutional changes need to be made to incorporate the technology?

***Flexibility***

* How quickly can you create and distribute materials?
* How much flexibility does the technology allow? How quickly can you change the materials?

***Compliance***

* More and more, online materials are being developed for digital libraries. Do you need to ensure that your materials are built and tagged consistently and appropriately for inclusion in a digital library or meet other required standards for interoperability?
* If your course is online, is it Section 508 compliant ([Rehabilitation Act](http://www.section508.gov/), as amended, 1998.)?

***Self-Check for Materials Assessment***

**Do your materials include the following elements?**

* Explanation/presentation of instructional content
* Appropriate opportunity for practice
* Assessment of progress

**Do your written or online materials follow these general guidelines?**

* Effective writing
* Phrasing and terminology are simplified
* Materials are concise
* Materials use active, not passive, voice
* Readability
* Text is formatted with ragged right margin
* Appropriate line-length (5.5 inches) and font size (11 - 13) are used
* Use of varying fonts is minimized.
* Graphics
* Graphics are placed close to text that describes them.
* Graphics are consistently laid out.
* Graphics are used to explain visual conventions.
* Information organization
* Overviews or pre-questions are included.
* Tables or lists are used for clarification.
* Information is chunked into meaningful groups (5 - 9 items).
* Learning Theory
* Material contains an introduction that provides background.
* Material presents topics that create a basis for understanding and procedures to enable performance.
* Material allows learners to practice and perform required procedures.

**Materials were developed with sufficient attention to . . .**

* Learner characteristics
* Resources and/or constraints of facilities
* Content analysis
* Learning objectives
* Instructional strategies

**Some Online References**

Take a look at some online materials that may help you work through the *Develop Materials* stage.

Increasingly, instructors are turning to the Web as an educational method. Here are some quick tips to keep in mind when developing Web-based instructional materials. <http://www.fgcu.edu/onlinedesign/mediadev.html>

Mike Orey at the University of Georgia’s website:

<http://projects.coe.uga.edu/epltt/index.php?title=Adult_Learning>

<http://projects.coe.uga.edu/epltt/index.php?title=Cognitive_Tools>

<http://projects.coe.uga.edu/epltt/index.php?title=Computer_Mediated_Instruction>

Don Clark’s Big Dog/Little Dog website - recommend the *Training* tab and the following links:

<http://www.nwlink.com/~donclark/hrd/sat.html>

<http://www.nwlink.com/~donclark/hrd/costs.html>

**FPD200 Participant Guide – Week 5**

**Evaluate Instruction**

How can you make sure that your instruction is effective? If your particular situation allows, the best way to test your instruction is by employing a system of evaluation. Of course, your learners are your best test audience; however, it's also a good idea to ask available fellow subject matter experts to provide a peer review of your instructional materials and strategy.

Don't confuse *evaluation* with *assessment*. Usually, assessment methods concentrate on learner learning; evaluation, on the other hand, has a wider scope. *Evaluation* implies an examination of the entire instructional unit you have been developing. A peer review from your colleagues is one way of evaluating the effectiveness of your class, presentation, or self-study materials.

To some extent, you may be evaluating your instruction throughout the development and delivery process. Considering the needs of your target audience, for instance, is one way you evaluate what strategies or materials are appropriate.

1. ***Formative* evaluation**, evaluating instruction as you develop and deliver instruction, enables you to make critical decisions on how to revise and thereby improve your instruction. This will help you more effectively meet the needs of your learners.
2. ***Summative* evaluation** comes after delivery or after full development of the instructional unit.

It may help to use tables or questionnaires to gather valuable data from your test audience, whether your audience consists of potential learners, fellow subject matter experts, or learning specialists. Use the documents and Web sites referenced in the *Online References* section to adapt and create your own tables and questionnaires.

If you have the time and opportunity to evaluate your instruction, the following checklist may help you work through this phase.

**Checklist for Evaluating Instructional Materials**

To be completed by learners, instructional designer, learning specialist, or fellow subject matter experts:

* Materials are appropriate for defined performance objectives.
* Materials include adequate instruction for required skills.
* Material is sequenced logically and chunked meaningfully.
* Materials are clear and understandable.
* Materials are relevant to learners' needs.
* Media employed encourages efficient management.
* Materials allow adequate opportunity for practice and constructive feedback.
* Assessment items are relevant to performance objectives; test items test   
  required behaviors.

**Evaluate Instruction**

Consider employing formative evaluation, summative evaluation, or combining the two efforts.

***Formative Evaluation***

* Is an on-going process.
* Facilitates course and content adaptation.
* Enables the instructor to improve instruction on an ongoing basis.

**Consider using. . . .**

* Face-to-face interviews
* Electronic mail
* Telephone
* Surveys
* Questionnaires

***Summative Evaluation***

* Assesses overall effectiveness of the completed instructional unit.
* Allows instructor to develop a revision plan, in order to improve next instructional delivery.
* Can provide information for designing a new plan, program, or course.

**Summative data may include items such as . . .**

* List three to five weaknesses of this instructional unit.
* List three to five strengths of this instructional unit.
* What would you recommend to a friend planning to take this course?
* What did you think would be covered in this course but was not?
* Would you recommend this course to a friend? Why or why not?

**Some Online References**

The following online materials may help you work through this phase.

This Georgia Tech site provides a number of useful evaluation tools; although they are specifically designed for multimedia projects, the tools may be adapted for use in any instructional design project. <http://www.ceismc.gatech.edu/MM_Tools/evaluation.html>

Don Clark’s Evaluation page:

<http://www.nwlink.com/~donclark/hrd/sat6.html>

This site, part of the International Association for Continuing Education and Training, provides guidelines for maintaining quality in distance education offerings.

<http://www.iacet.org/content/iacet-standard.html>

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