



# Design for Learning

21st Century Online Teaching and Learning  
Skills for Library Workers

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## Design for Learning 2 - Foundation

### Steps 1-3 of the 7-Step Instructional Design Process (Week 2 Lesson)



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## Welcome to Week Two!

This lesson includes:

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## Advance Organizer for Week Two

**Video Transcript:**

**"Foundation Module Week 2: Advance Organizer"**

[https://youtu.be/7A\\_DIYYZ46k](https://youtu.be/7A_DIYYZ46k)

Welcome to Week 2 of the Design for Learning Foundation Module. Last week, we talked about instructional design in general terms. There are a number of perspectives and models related to instructional design and I mentioned a few of them including ADDIE which stands for Analysis, Design, Development, Implementation, and Evaluation. I'll bet you remembered that because we had a little challenge question on that last week. We also discussed some learning perspectives and even talked about learning styles.

This week, I'll introduce you to the 7 Step instructional design model for online teaching and learning and we'll be using this throughout our modules. It was developed by Diane Kovacs and it's based on her own breadth of experience in instructional design and online teaching as well as a number of existing models and accepted practices in instructional design.

I'll start with a brief overview of that model and then we'll focus on the first three steps. You'll also be able to download a template for the process so that you can begin thinking about the instruction that you want to plan as you journey through the modules with all of our Design for Learning instructors. I'll also share examples with you from previous D4L students, all

professionals working in different types of libraries. So, you'll be able to locate an example that's relevant to you.

Are you ready? Let's get started.

## Overview of the 7 Step Process for Instructional Design

### Video Transcript:

#### "Foundation Module Week 2: Overview of the 7 Step Process"

<https://youtu.be/3EFTXMeguVU>

[Video begins with a visual credit acknowledging Diane Kovacs' 7 Step Process for Effective Online Teaching and Learning]

Instructional design theories vary in specific details but the essential instructional design process is always learner centered and involves:

- analyzing the content/skills/or a combination of content and skills to be taught within the context of the specific learners.
- planning the instruction for specific learners.
- creating or otherwise preparing instructional materials /delivery mechanisms/supporting tools, etc.
- evaluating the instruction (not just evaluating learner success but whether the instruction itself succeeded).

So, let's go through the 7 Step process for instructional design for online learning.

- Step 1. Needs Assessment and Instructional Goals. (What does the student or training participant need to know or do? What are their motivations? What will be your broad goals for instruction.
- Step 2. Instructional Analysis (aka Learning Task Analysis). Here you need to know about essential prerequisites, for example. What needs to be taught and what resources will you need?

- Step 3. Entry Behavior and Learner Characteristics. (You'll need to know where they are now).
- Step 4. Learning Outcomes and Motivating Learners. What will the learner accomplish? Learning outcomes and indicators need to be specific and measurable. We'll also be talking about motivational goals for instruction next week).
- Step 5. Pre-instructional Activities and Planning Instructional Strategies And this will include planning for learner participation, testing, assessment, and evaluation of learner outcomes. Also, follow-through activities related to motivation and marketing.
- Step 6. Planning Instructional Materials – also known as Learning Objects.
- Step 7. Formative and Summative Evaluation. We call it formative because you are gathering this information throughout the process of instruction and it will help you improve your own instruction and ultimately facilitate better learning.

Good instructional design plans facilitate designing effective instruction that meets the needs of an identified group of learners.

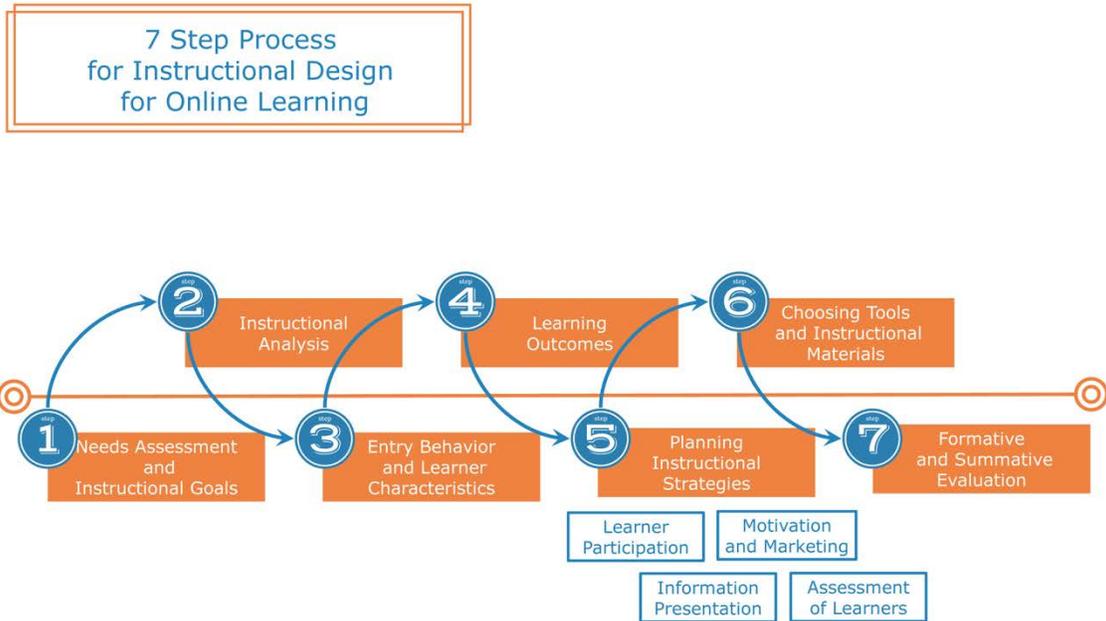
The instructional design process can be more or less complicated and include other factors that the teachers, managers, or instructional designers think are important.

Formal instructional design is analogous to how computer programmers work. New programmers begin by using flow charts to guide the coding of algorithms. Then, as they become more facile with their work they leave out the flow charts and do the algorithm organization in their heads as they code. Real programmers in real organizations must learn to document their coding in any case, so they can share what they've done with other programmers, and members of the organization who need to be able to understand, edit, and improve on their work.

In the Web-based instruction environment, as trainers, we are not yet facile. A formal instructional design process is necessary to get properly started with instruction design.

And if that's not enough to convince you about the importance of instructional design, think about this . . . Many of us need to create a formal instructional design plan to apply for funding to support projects, convince administrators and managers that the instruction is a good use of time and funding, and to more effectively work in a team environment where more than a single individual contributes to the project.

# Visualization of the 7 Step Process

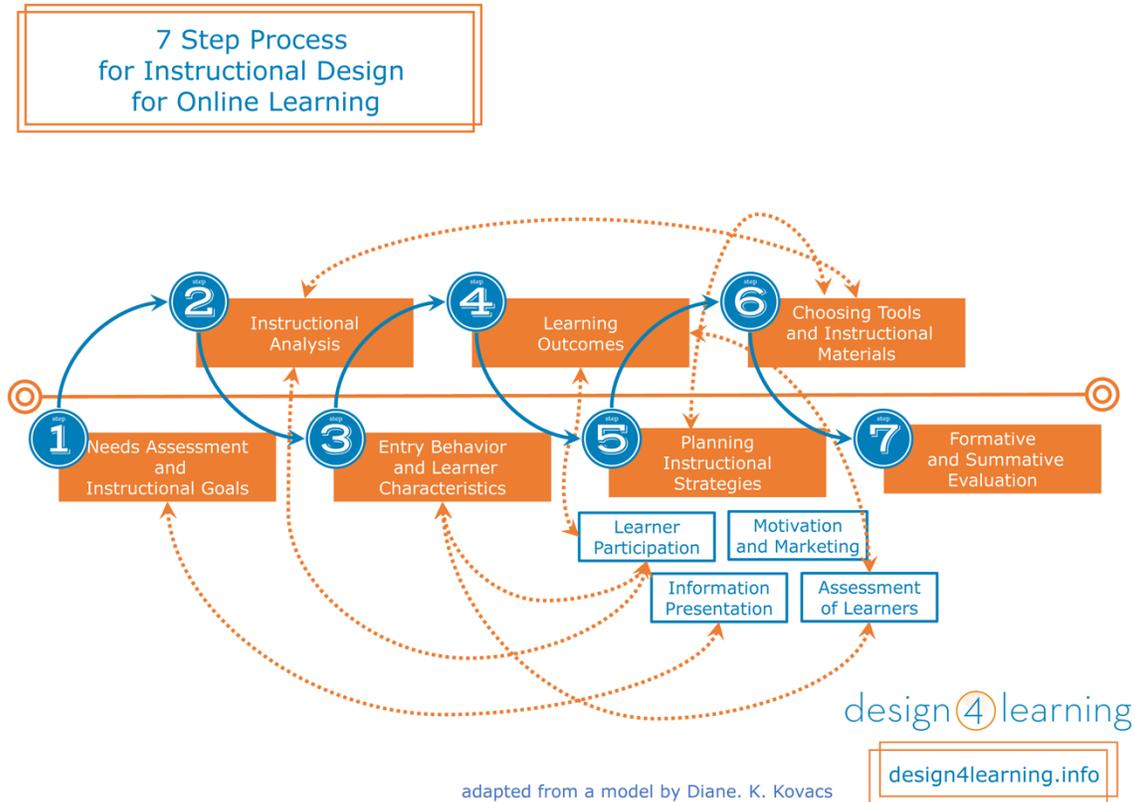


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adapted from a model by Diane, K. Kovacs

The second image shows the ways that this 7 Step process is iterative, continuously returning to previous steps.



## Step 1: Needs Assessment and Instructional Goals

### Video Transcript:

#### “Foundation Module Week 2: Needs Assessment and Instructional Goals”

<https://youtu.be/L8ORDoV1xU0>

Needs Assessment is the most important step in the design process for an online course or instructional session in my humble opinion. Sometimes, though, it’s overlooked or hurried because of tight deadlines and such. But give this step as much time as you possibly can. And also get consensus on the needs from those who have a stake in the course or instructional session.

Now, what kind of questions do you need to answer when conducting a needs assessment? There are three basic things to consider.

1. Learner Characteristics
2. Extant Materials
3. Instructor

Finding out about your potential learners is critical. In Step 1, you don't need to get into great depth on your learners as you will address learner characteristics again in Step 3. Ask questions such as who are they, referring to the composition of your learning audience? What do they already know and what do they need to know? Why do they need to acquire the knowledge and skills your instruction would provide? This provides the rationale for the instruction. There could be a knowledge or skills gap that needs to be filled. For example, perhaps it was determined that at a college where you teach, freshman were coming in without adequate knowledge of information literacy skills and that this was having a negative effect in their course work? That would be an answer to the Why question. How much time will learners need to dedicate to their learning? You may think they have more time than they actually do. This is an iterative process and so you will revisit this again in Step 3 when you will dig a little deeper into entry behavior and learner characteristics.

A Needs Assessment also includes investigating whether instruction already exists elsewhere that you can send your learners to. If something appropriate exists and is available, you may not need to create new instruction. This is different than Step 6 where you'll be actively looking for learning objects that you can re-use within your instruction. You may not need to create every piece of your instruction. There certainly is no sense in re-inventing the wheel for those aspects of your instruction that have already been done well and are available to you, of course. During the needs assessment, then, you will be searching what already exists on your topic.

It is at this point that you should also consider the resources available for instructional delivery. Are you the person who will be delivering the instruction? Or will you create the instruction but someone else will be delivering it?

Sometimes, a subject matter expert may be called in to help with content but this person may not actually deliver it. What makes the most sense and why?

To review, we've discussed three important considerations for a needs assessment:

1. Learner Characteristics
2. Extant Materials
3. Instructor

Next, Step 1 will involve developing one or more instructional goals. A goal statement should answer the question of why students need the instruction. An instructional goal is on a broad level. It's a general statement that coupled with your instructional analysis in Step 2 will help guide you as you develop your specific and measurable learning outcomes. We will address learning outcomes in Week 3.

Let's think about a sample situation around the topic of information literacy for college readiness. It's helpful to start with a definition of information literacy. ALA defines information literacy as a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information."

School librarians will be teaching information literacy skills in each grade level with increasing levels of complexity so that when students graduate from high school, they are hopefully ready for the demands of college.

On the college level, information literacy skills may be integrated into the program's curriculum, and supported by one shot instructional sessions delivered by an instructional librarian. We'll focus on college level. Before establishing our instructional goals, we need to decide what piece of this you will tackle. Do you need to develop a whole course on information literacy on the freshman college level? Or are responding to a more immediate need and delivering instruction on one information literacy skill in a one-shot session? Let's suppose you are preparing a 1-credit course on information literacy to be delivered in a 5 week session. Your broad level goal statement might look like this:

*Goal Statement: Students need to acquire information literacy skills for success in their college level classes.*

In this statement, both what skills are needed and why students need the skills is evident. Your goal analysis will answer the question of whether and how we will know that instruction can meet the need. In this example, yes instruction is a solution and how we will know is through measuring how students perform in the learning activities and in the assessments that we develop.

In summary, needs assessment and instructional goals is an important first step in your 7-Step Process for Instructional Design for Online Learning.

*Note:*

While the D4L series is all about online learning, there are times when you may also include synchronous components. Indicate any synchronous components on your lesson/unit plan as demonstrated on the example lesson plans.

## Key Points for Step 1

- *Needs Assessment and Instructional Goals* is Step 1 of the 7 Step Process for Instructional Design for Online Learning. In Step 1, instructional designers use information derived from the needs assessment to create one or more broad goals for instruction.
- Needs Assessment involves researching learner characteristics, exploring the availability of suitable extant materials, and making a decision on who should deliver the instruction.
- An instructional goal is a broad generalized statement of what learners need to learn. Goal analysis involves, in part, determining the category of learning for instruction and can be related to verbal information, intellectual skills, cognitive strategies, psychomotor skills, or attitude.

## Challenge Yourself!

Time to challenge yourself!

*Choose the response that best completes the sentence below.*

1. A goal statement should answer the question of . . .
  - A. why students need the instruction
  - B. where extant materials can be located
  - C. whether a subject matter expert will be needed
  - D. how much time students will need to dedicate to their learning

## Step 2 - Instructional Analysis

**Video Transcript:**

**"Foundation Module Week 2: Instructional Analysis"**

[https://youtu.be/GwtbmZHhz\\_4](https://youtu.be/GwtbmZHhz_4)

Welcome to Week 2, Part 2. This is Marilyn Arnone, again. What do we mean by Instructional Analysis? Instructional analysis, sometimes referred to as *task analysis*, is a procedure to identify the knowledge and skills that are necessary to achieve a clearly stated instructional goal. So, you can see why this step follows Step 1 where we already completed our needs assessment and articulated our instructional goal or goals. The focus here is on you as the instructor, and what you'll need to do in order to teach a concept, principle, skill, or procedure. It is a step-by-step breakdown of what's necessary to achieve your goal. It's an important step that you will relate back to in future steps.

Instructional designer and online teacher, Diane Kovacs, emphasizes that there is a direct correlation between your Step 2 instructional analysis and your Step 4 learning outcomes. Step 2 maps to Step 4. Additionally, by creating a good outline of what needs to be accomplished here in Step 2, you will be helped immensely in Step 5 with your instructional strategies planning.

Let's assume that we are going to teach a process or procedure. We'll need to first break down the content and look for logical steps. Next, it will be helpful for you to diagram those steps as if you are creating a flow chart. You can do that on the computer or sometimes I like to just get a large piece of paper and rough it out by hand to start with. With complex content or procedures, you'll need to take each of those logical steps and break them down into the subordinate knowledge and skills that would be necessary in order for the learner to fulfill each of the steps. Now, let's assume we are going to introduce new content of a conceptual nature. We can still use diagramming to break it down. Our diagram could take a hierarchical approach with the general concepts a learner needs to know and branching off into more specific concepts right down to the individual activities that will help the learner acquire the new conceptual knowledge.

An example of a top level barebones outline for a course on information literacy could be:

1. Define information literacy
2. Establish the usefulness of information literacy
3. Have students select a research topic applicable to their needs in one of their courses.
4. Demonstrate a process for determining the need for information
5. Provide ways of accessing information effectively and efficiently
6. Equip students with evaluation skills
7. Establish guidelines for ethical use of information

Each of the above can be broken down into learning sub tasks and sub sub tasks. For example, #5 would involve showing students how to use keywords and other meta data fields, how to

implement different search strategies, how to differentiate between primary and secondary sources, and so on. However, this outline is on a top level at this point.

To summarize, when you conduct your instructional analysis, you will be building an outline of each step of your instruction and what it will take to achieve the goal of instruction. However, it is still basic and will be flushed out in Step 5.

## Key Points for Step 2

- *Instructional Analysis* is Step 2 of the *7 Step Process for Instructional Design for Online Learning*. It is sometimes referred to as task analysis. It breaks down the goal into smaller parts.
- Conducting an instructional analysis involves identifying and breaking down each step required to teach a concept, principle, skill, or procedure that is necessary to achieve the instructional goal. Usually, this involves identifying subordinate knowledge and skills, as well.
- Diagramming is useful in conducting an instructional analysis. Procedural and hierarchical approaches can be used.

## Challenge Yourself!

*Is the following statement TRUE or FALSE?*

2. By conducting a solid instructional analysis of what needs to be accomplished here in Step 2, you will be helped immensely in Step 5 with your instructional strategies planning.
- A. TRUE
  - B. FALSE

## Step 3 - Learner Characteristics and Entry Behaviors

**Video Transcript:**

**"Foundation Module Week 2: Entry Behaviors and Learner Characteristics"**

<https://youtu.be/K6s8pP7Mro8>

In Step 1, Needs Assessment and Instructional Goals, you identified learner characteristics in general for a group of learners. In Step 3, you will determine learner characteristics for actual

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learners. You'll need to really know who your learners are. Why? Because different types of learners will need different types of instruction and you'll need to plan various instructional strategies to address that. But we'll talk about instructional strategies later. At this step, you just need to know who they are. And you'll want to know the context in which they'll be learning what you'll teach, as well as the context in which they are going to actually use the knowledge and skills you'll be teaching. Identifying the entry behavior is different than learner characteristics because it means establishing the baseline knowledge or skills that students have to have in order to engage in your course or unit of instruction. For example, for an online course, you might expect that students have the ability to use a browser, access the course learning management system, know keyboarding, and other basic and necessary online behaviors. Some of your options for discovering entry behaviors and learner characteristics are:

- Pre-defining the entry behaviors and learner characteristics, that is, for example, stating that the course you'll be teaching requires certain learner characteristics or pre-requisites.
- You can also do a pre-instruction survey to identify the knowledge and skills that your incoming learners have.
- You could start the instruction with a test of their existing concepts and skills that are related to the instruction.
- Learners can self-select by registering but the teacher will ask everyone to assess their own knowledge and skill levels before the instruction begins.
- You could also do a virtual show of hands by incorporating a poll in the online instruction.
- Query students on their motivation for taking the course. For example, is the course a requirement for them? Is it an option that they are taking because of an interest they have? And so on.

As mentioned, we often need to pre-define the entry behavior and learner characteristics because we know there will not be adequate time and resources to get them up to that baseline of knowledge and skills that would allow them to engage successfully in the instruction.

Another important variable is class size. This also gets important in Step 5 when you consider learner participation with respect to your instructional strategies. For example, will you be able to accommodate a very large class with a particular strategy or would it only be viable with a smaller group?

For school librarians, your information about entry behavior and learner characteristics can come from teachers, the curriculum, known grade benchmarks for learning, and the students themselves. For example, a K-W-L chart is often helpful. The K stands for *What do I think I*

know, the W for *What do I wonder or want to know*, and the L stands for *What I learned*? And the column for *What I think I know* could be used at the beginning of instruction and then students are giving you information themselves.

School librarians have another learner characteristic that is critically important because their students are mandated to attend school; they don't have a choice like college students do. School librarians must also consider the incoming motivational profile of their students. While college instructors must also consider student motivation and plan strategies to increase motivation, school librarians are often faced with factors like whether a child's basic physical and emotional needs have been met. Abraham Maslow talked about basic needs like food/shelter, acceptance and love as being essential building blocks before a person can reach their potential through their work and their education. If, for example, a child feels hungry or threatened, we cannot expect that student to be motivated to learn. This is the reason why some schools have breakfast programs for students and seek to intervene when children are in dangerous situations at home or are somehow at-risk. So, incoming motivation is also an important variable for your consideration.

Let's return to the college level students so that I can apply some entry behaviors and learner characteristics to this week's example of a goal statement:

*Students need to acquire information literacy skills for success in their college level classes.*

Example Entry Behavior and Learner Characteristics might include:

- Learners will register for the 1 credit course with the knowledge of the pre-requisites.
- Learners will be coming from two programs: information management and library and information science. This gives us clues to the contexts in which they may use the skills in their future employment.
- Learners are motivated to do well in their college program which is the reason why they are enrolling in the information literacy course. We could do a survey to confirm this.
- Learners will use skills in a variety of library positions or in a corporate setting that involves information consulting and management.

We should be also prepared that:

- Some of our learners may need accommodations if there is an identified disability.
- Class size will be limited to 30 students because of the activities that will require individual online guidance by the instructional librarian.

Think about the instruction that you are planning for your capstone project in the D4L series of learning modules. What will you do to identify entry behavior and characteristics?

## Key Points for Step 3

- In Step 3, entry behaviors and learner characteristics are determined for actual learners or specific groups of learners
- Several options for discovering entry behaviors and learner characteristics include pre-defining them for your course or unit of instruction, conducting a pre-instruction survey of skills and concepts, a simple show of hands, virtually speaking (e.g., survey, poll, etc.), and consideration of incoming student motivation.

## Challenge Yourself!

Abraham Maslow suggested a hierarchy of human needs. When basic physiological and safety needs are not met, how might this impact a learner?

3. *Choose the most likely result from the options below.*

- A. Learner motivation increases
- B. Learner motivation decreases
- C. No impact

## Summing up Week 2

**Video Transcript:**

**“Foundation Module Week 2: Summing Up”**

<https://youtu.be/BMZPcqCzRXE>

[TEXT SLIDES IN] Summing Up . . .

We’ve covered a lot this week. Hopefully, you are beginning to feel more comfortable about planning online instruction and you are ready to check out the examples from other librarians who have been through the D4L training. After that, download the template and get to work on your own plan. Remember, instructional design, and I’ll say this over and over, is an iterative process. The more you go through the modules the more you’ll be making changes on your own plan, and that’s great!

Don't forget to also check out the additional resources I've set up for you this week. And I'll see you in Week 3 as we move on to Step 4 which is all about learning outcomes. See you then.

## Additional Resources

**For this week's instruction,  
you may find the following resources helpful.**

### Journal Article

- Cercone, K. (2008). Characteristics of adult learners with implications for online learning design, *AACE Journal*, 16 (2), 137-159 Retrieved 2/5/2017 from <http://anitacrawley.net/Resources/Articles/adultlearneronline.pdf>

### Videos

- All of this module's videos are available on a playlist at YouTube: <https://www.youtube.com/playlist?embed=no&list=PLw6HBD7UyT3nKkQsX00KGsD-SzlheYb1B>

## Answer Key:

1. A - why students need the instruction  
Answering the why question will serve as your rationale for soliciting funding or approval to develop a new course, for example.
2. A - TRUE  
It will absolutely help you in Step 5 if you prepare a solid instructional analysis in Step 2.
3. B - Learner motivation decreases  
Learners cannot pay attention or focus on content when they are hungry or feel threatened.