ADDIE
The Instructional Design Process

ADDIE

1. ANALYZE
   a. Learners
   b. Goals

2. DESIGN
   a. Learning Objectives
   b. Outcomes

3. DEVELOP
   a. Facilitation
   b. Logistics

4. IMPLEMENT

5. EVALUATE

The Five Steps

The ADDIE Instruction Design Process consists of 5 basic steps:

1. **Analyze**
   a. Analyze your **learners** and gather as much information as you can on them.
   b. Analyze your **broad goals** for the lesson or unit. What is it you're hoping to achieve?

2. **Design**
   a. Identify learning objectives—what specific skills and knowledge do you wish students to obtain? For example, *"Student will be able to describe each step of the ADDIE process."*
   b. Identify **outcomes**—how will you know that the students have achieved your learning objectives? How will you **assess learning**?

3. **Develop**
   a. Develop your **instructional strategies**—how will you facilitate students in learning the objectives you identified so that they are able to achieve the outcomes you've set for them?
   b. Plan the **logistics**—how will you group students? How will you arrange the classroom? What tools and materials will students have available to them?

4. **Implement**—Try out your lesson plan or unit with students.

5. **Evaluate**—Were you successful? Did students learn? Did they have fun doing it? What should you change for the next time?

STEP 1.A
Analyze

Developing Your Learning Goals

When you design any course, unit or lesson, the first questions you must ask yourself are:

- What are my goals?
- What do I hope that students will know at the end of our experience?
- What do I want students to be able to do?

Obviously your goals will vary, depending on the subject of your course. If you are developing a specific lesson, you will usually only have one or two broad goals. If you are developing a unit or a whole course, you may have several learning goals. Identifying your basic goals allows you to then develop specific learning objectives (Step 2—DESIGN).

Examples:
- *Introduce students to the ADDIE process*
- *Provide students with a chance to experience different types of active learning.*
- *Allow students to form teams and begin to develop group norms.*

STEP 1.B
Analyze

Understanding Your Learners

A thorough needs analysis obtains the following information:

- Your learners' backgrounds (Age, Education, Profession, Position and Organization) and preferred learning styles.

- Their level of knowledge on the topic*

- Their expectations from the training*
  (*these can be done through quick telephone calls, a brief survey or feedback form)

- What relevant knowledge and skills do they need to learn? What do they already know?

- How varied are they in knowledge and learning styles?

- How well can they learn? What study skills?

- What motivation and interests, attitudes to teaching/learning methods?

- What are their obstacles to their learning, such as anxiety, color blindness, lack of concentration, computer access?

STEP 2.A
Design

Developing Learning Objectives

After identifying your broad learning goals and thinking about your learners and what you know of them, you must then develop specific learning objectives.

Although related to your goals, learning objectives are not the same. Learning objectives are more specific, describing in more explicit detail what you expect that students will know and be able to do.

Rules for Developing Objectives

- Start your statement with "Student will be able to. . . "

- Begin each specific objective with an action verb, something that can be measured or observed. For example:

     Student will be able to describe the five steps of the ADDIE process.

By using specific, measurable words you make it easier to develop your learning assessments. It also communicates more clearly to students what they will be learning in the course.

- Do NOT begin objectives with words such as "understand" or "know." We cannot directly observe if someone "understands" material—they must DO something with it for us to be able to determine if they understand.

STEP 2.B
Design

Designing Outcomes:
Authentic Assessment

If we've designed our learning objectives well, then we've also created an easy framework for us to begin developing ways to assess learning.

There are a variety of ways to evaluate student learning, from tests and papers to projects and presentations. One fact that we do know about how we learn is that we are best able to understand facts and information when we use them "in context"—that is, we interact with and process information in the same ways that we would use that information in the real world. For example, we are better able to learn interviewing skills by actually practicing how to do an interview, rather than writing an essay or completing a test on "interviewing basics."

When we look at evaluating student learning and determining if students have developed the skills and knowledge we defined in our learning objectives, we must focus on creating and using assessment tools that will most effectively allow students to demonstrate their knowledge. This means creating tools that:

- **Provide students with some level of choice.** For example, doing a presentation, a skit or a role-play.

- **Are clearly linked to learning objectives**. For example, if an objective is "Student will be able to describe the ADDIE process," then your assessment should provide an opportunity for the student to do that.

- **Allow for concrete skill demonstrations**. If the lesson is on how a student would write a business letter, then the student would actually produce a business letter and that letter would be measured against a "sample" letter to determine if it met standards of quality.

STEP 3.A
Develop

Facilitating Learning
Identifying Instructional Strategies

We know that:

- Students have different learning styles.

- Learners need to learn skills "in context."

- Learning is "social"

- Students are motivated by activity, appropriate challenge levels and a pace and style that is facilitative, rather than "instructive."

With this in mind, it's time to develop appropriate instructional strategies.

Guidelines for Selecting Instructional Strategies

- **Begin with a product in mind.** When students must "produce" something as part of a lesson, this creates a goal-oriented mindset. Students clearly understand expectations and are automatically more comfortable.

- **Reduce the level of threat.** Learning is primarily a social activity. We are worried about how we will "look" in front of teachers and fellow students. We are concerned that we won't be able to learn the material or that someone will find out we can't read as well as we'd like.

  Instructors must develop classroom norms that communicate that it's safe to learn in their classroom. They should also model their own learning, uncertainty and anxiety when appropriate. If a lesson doesn't go well, acknowledge that and show students the process you go through to identify what's wrong and how to fix it.

- **Establish relevance.** We are all motivated by the "WIFFM"—"What's In It For Me?" Strategies you select should help demonstrate relevance to students so that they see connections and are more motivated to learn.

- **Clearly and appropriately link strategies to objectives.** If the objective is "The student will be able to cut a board using a circular saw," clearly any instruction must involve an actual demonstration of how to accomplish this task. Reading about it in a book or listening to a lecture on how to cut a board will not do it.

- **Strategies should match needs and characteristics of learners.** Each individual has a "channel" of learning, ways that allow them to process and use information. Individuals who are more "hands-on," do not learn well through reading a book. Even if you are teaching reading your instruction will be more effective if you include opportunities for movement and touching.

Examples of Active Learning Options

- Projects and mini projects
- Case Studies
- Presentations
- Think/Pair/Share
- "One Minute Paper"
- "The Muddiest Point"
- Carousel Brainstorm
- The Fish Bowl
- Underexplain/Learning Pairs
- Structured Observation

STEP 3.B
Develop

Classroom Logistics

As important to learning as the specific instructional strategies you use are classroom logistics. Things like class ground rules, the physical layout of the classroom, the use of teams—all of these logistical issues influence learning.

Some Basic Logistical Principles

- Rows imply lecture. They make it difficult for students to interact with one another and they put the instructor at the center of the learning experience. **Circles, horseshoes and other configurations promote more interaction and a greater sense of community.**

- **Have students set ground rules and expectations.** Work with students to establish basic expectations—what they can expect from you and what you can expect from them. Use learning contracts, ground rules lists and other tools to include students in the setting and enforcing of individual and group norms.

- **Be consistent.** Nothing causes a faster break-down in norms than inconsistency. Students must understand expectations and then see that both the instructor and students are held accountable for those expectations.

- **Work in teams but do so strategically.** Pay attention to how you form teams. There are times when teams need particular expertise or experience and times when that is not necessary. There are times when it's appropriate to let students form their own teams and when it's better for you to make assignments. Your learning objectives and strategies can help you determine the best methods for team formation.

STEP 4
Implement

Putting the Lesson into Practice

This is either the easiest or hardest step in the process. Usually if you've planned well, the implementation phase is when you get to see the fruits of your labor. If you haven't planned, then this is often where you see unmotivated students and ineffective lessons.

When it Works
Probably the best thing about teaching is going through a lesson and seeing students get excited and motivated by the process. Watching them become more skilled or seeing that "light bulb" of understanding go off in their heads is one of the most gratifying experiences there is. Sometimes it seems that we don't get moments like these often enough, so enjoy them while you can.

When it Doesn't Work
Sometimes, no matter how well you've planned or what you've pulled together, the lesson just doesn't work. Students don't understand or they seem unmotivated and disengaged. This is often when behavioral issues erupt because students are either challenged too much by the material, or are insufficiently challenged so that they become bored.

When it's clear that things aren't going well, you have a few options:

- **Stop the lesson and find out from the students what's going on.** Is it the lesson? Is there something else going on? Sometimes it's better to stop and deal with whatever open issues may exist than to try to slog your way through the rest of the plan.
- **Take and break and re-group.** Sometimes you need a minute to pull your head together to try something else. Take it if you need it.
- **Move to another lesson or activity.** If it's REALLY bad, have something else that you can move to easily.

STEP 5
Evaluate

Evaluation—Was it a Success?

There's no point in conducting lessons that don't work. But the only way to know if they did, is to evaluate yourself. There are a few factors to consider in this process.

1. **Student Reactions**
   Did students enjoy themselves? Was it interesting and engaging? Were there things that students feel worked particularly well? That should change? Periodically checking in with students helps build class solidarity and community and keeps you refreshed with new ideas and possibilities.

2. **Student Learning**
   Of course, the real measure of success is—did the student actually learn the skills? If we go back to step 2 of the ADDIE process where we designed learning objectives and ways to assess student learning, we should be able to tell if students have learned or not by reviewing the results of their assessments. If we've paid careful attention to allowing students to demonstrate learning in concrete ways, then we can be relatively certain that they've learned what we wanted them to.

   If students haven't learned, then we need to ask ourselves why. What could we do differently the next time? Do we need to address issues of classroom culture? Do we need to try a different strategy? While not every student will be successful, there is always something that we can change in how we teach that can improve learning for more students.

ADDIE Instructional Design
Lesson Planning Worksheet

Step 1—Analyze

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f. Learners
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1.A—What are your goals for your lesson?

1.B—What are the relevant characteristics of your learners that you will consider?

Step 2—Design

2.A—What are your specific learning objectives?

Students will be able to . . .

2.B—How will you measure if students have achieved these objectives? What assessment tools and processes will you use?

Step 3—Develop

3.A—What instructional strategies will you use?

3.B—What logistical issues impact your lesson?

Step 4—Implement

You will be sharing your lesson for feedback.

Step 5—Evaluate

What feedback did you receive? What would you change about your plan? What would you need to watch out for when you implement it?