Instructional Design and the New Classroom

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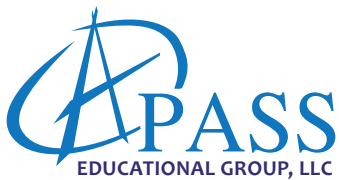
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The concept of "classroom" is going through a revolution in front of our eyes. Because of the digital revolution and the proliferation of varied and easily accessible online content, the classroom is moving from its bricks-and-mortar origins toward a more flexible and creative future.

Instructional design is at the center of the revolution in education. As technology makes it possible to deliver expanded varieties of content and new methods of instruction, it falls on the instructional designer to make good decisions as to what works, and what does not.

In this and the next five A Pass Angles, we will look at instructional design in the technological age, and offer some opinions as to best practices. We will be discussing methods for encouraging

student engagement, for achieving excellent educational results, and for meeting program goals across the board.

The addition of technology to a learning program must be matched with fundamental restructuring of how students are taught. This can include changes to the classroom layout, reorganization of the curriculum, and new ways of (and uses for!) assessment.

But before we get too deep into specifics, we should take a more general look at the role of the instructional designer.

Additional reading: The Classroom Has Come a Long Way.

What Is Instructional Design?

The simplest way to understand instructional design is to differentiate it from instruction. *Instruction* is the teaching of subject matter content; *instructional design* addresses how that material is taught. Anyone who is helping students learn uses ID, whether they employ a blackboard and a piece of chalk or a digital device. Thus, educators who create lesson plans—whether for a single class or for many—are designing instruction. New technology and learning systems may make it easier to create and activate the plans, but they still include familiar features:

- Becoming familiar with learners to understand how they approach instruction

- Aligning learning to educational standards and objectives

- Facilitating learners' knowledge acquisition

- Assessing (at various points) learners' understanding and retention

- Providing opportunities for project-based and cooperative learning

- Linking classroom study to real-world applications

ID provides teachers with multiple advantages:

- It gives them the ability to understand learners—where and how they are approaching the instruction—and to tailor instruction to best effect.

- It aligns instruction to standards and objectives, ensuring that learners are exposed to and assimilate required knowledge and skills.

- It promotes more effective planning and co-teaching, allowing teachers to use time and resources more efficiently.

- It ensures that all students meet their targets, via either a linear path through the curriculum or a looping path that includes remediation.

Because of the close teacher-learner relationship, these advantages are translated to learners:

- Learners can access resources needed to reach their goals in a timely manner.

- Increased engagement means that learners are more likely to

take ownership of their education, resulting in better outcomes.

- Assessment is consistently aligned to objectives and the knowledge and skills learners have acquired.

What Is the Instructional Design Process?

Expert instructional designers follow a well-recognized process in order to plan instruction. Patricia Smith and Tillman Ragan of Oklahoma University explain that instructional designers complete three major and interconnected activities during the design and development process:

1. Perform an instructional analysis to determine the goals of instruction.

2. Design an instructional strategy in order to use the instructional medium to accomplish the goals.

3. Develop and conduct an evaluation to determine how well students learned and what revisions to instructional materials are needed.

Each of these activities is carried out with painstaking attention to detail so that, when the plan is put into action, it operates with a minimum of difficulty.

1. **Perform an Instructional Analysis.** During this analysis, the designer delves not only into the learning environment and the learning tasks, but also the learners themselves. A lot of questions need to be asked:

About the learners: Who they are, what interests and prior knowledge they have, and how they feel about the learning.

About the environment: Where learners will be located (remotely or centrally), how much time is available for learning, and what technology learners will be using.

About the tasks: What goals learners have to reach, what skills and knowledge they need to acquire, and how their achievement should be assessed.

2. **Design an Instructional Strategy.** During this stage, the instructional designer asks questions about how content should be presented, which learning activities (and their sequence) will work best for the learners, and what media to use to support the instruction.

About the content: What kinds of content must students learn, what size chunks should be presented, and whether the content should be presented or embedded in activities.

About the activities: What activities should be used and what role learners will have, whether activities are primary or supportive modes of learning, how activities should be sequenced, and whether students will be learning by discovery or by explanation.

About the media: Will learners benefit most from digital sources or textbooks, and should learners participate in groups or on their own.

3. Conduct an Evaluation. In order to be able to make necessary improvements, the designer asks questions about the instructional materials, the processes through which students learn, and how revisions can be made.

About the instructional materials: Is the content still accurate and up-to-date, and is it accessible and understandable by the students.

About the learning processes: How can different processes be best evaluated, whether they should be evaluated in a group or individual setting, and how frequently evaluations should be made.

About the revisions: What revisions should be made, and how frequently they should be made.

As you might suspect, this process is not linear, but has multiple feedback loops that look something like this:
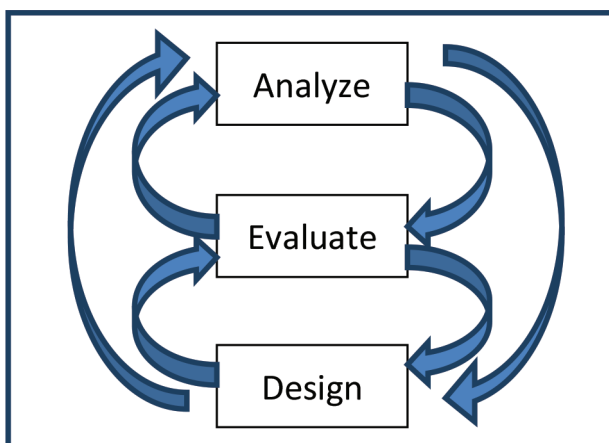
Why Should We Use Instructional Design?

Instructional design seems like a complex and never-ending way of doing something that might be seen as a natural skill of any talented teacher. So why involve professional instructional designers at all?

Smith and Ragan[1] point out a number of compelling reasons to use designers:

- In their constant querying about learners and content, designers become stand-ins for the ultimate learners. This is more likely to place the learners as the focus of instruction.

- The process of design focuses on effective, efficient, appealing instruction. This discards inappropriate content, increases learner engagement, and provides opportunities to evaluate and revise the plan.

- The systematic process and documentation promote coordination between the people involved in designing, producing, and delivering instruction. This makes implementation of the plan easier and more uniform, and lays the foundation for any revisions that must be made.

- The process supports development of alternate means of delivering instruction. Since the ID product is independent of the specific media used for instruction, the strategies are valid across multiple platforms.

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- The process helps ensure that what is taught is what is needed for learners to achieve required goals and that evaluation will be accurate and appropriate.

Finally, watch this TED talk: "Reimagining Learning." Richard Culatta is one of the founders of InstructionalDesign.org, which provides education about ID and acts as a clearinghouse for sources about instructional design.

Notes

[1] Patricia L. Smith, Tillman J. Ragan, Instructional Design, 3rd Edition, November 2004, ©2005.

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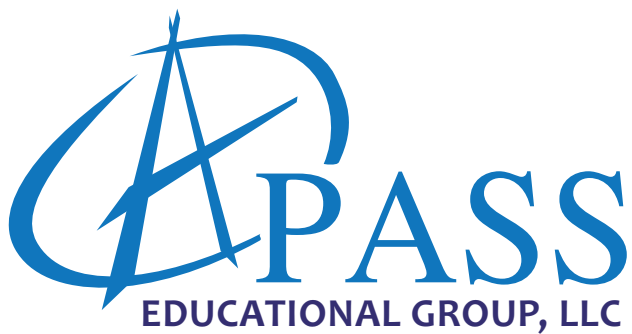
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