What is Instructional Systems Design (ISD) and its basic principles?

If you're looking for a systematic approach towards developing training courses, then an Instructional Systems Design (ISD) is what you need.

Instructional Systems Design is used for assessing and developing courses and solutions needed for formal training. The operative word here is "systematic," as ISD is based on a framework and systems approach to designing courses for training delivery.

Applying ISD in designing and developing a course keeps Instructional Designers (IDs) on track for a learners-based rather than teacher-based approach to training. This systematic approach ensures an effective learning process grounded on learning objectives.

What are the various Instructional Design Models?

Perhaps the most popular ISD is the ADDIE model, which stands for Analysis, Design, Development, Implementation, and Evaluation.

ADDIE is a step-by-step framework used by instructional designers, training developers, and learning and development specialists to create educational or training programs. ADDIE is an instructional design model that aims to organize content, streamline development, and ensure a structured framework for every course.

But while ADDIE is the most widely recognized ISD, there are other models in use today to apply a systematic process to content development, planning, and developing their corporate training. Here are some other examples of Instructional Design Models:

Bloom's Taxonom

Bloom's Taxonomy shows a hierarchy of cognitive skills that can aid instructors in teaching and students in mastering the subject matter. One of the goals of the taxonomy is to motivate the learners to go beyond the lower steps of learning, such as memory and knowledge, and into deeper learning activities such as understanding, reflection, application, and problem-solving.

Merrill's Principles of Instruction

This instructional design model is applied when designing a training program and ensuring effective and efficient instruction. Essentially, this design model is based on the principle that learning takes place when the following are achieved:

- Learners are engaged in solving real-world problems.
- Existing knowledge is activated as a foundation for new knowledge.
- New knowledge is demonstrated to the learner.
- New knowledge is applied by the learner.
- New knowledge is integrated into the learner's world.

Gagne's Nine Events of Instruction

As the name suggests, Gagne's Nine Events of Instruction are based on nine steps which Robert Gagne called "Events of Instruction." This instructional design model helps IDs follow a strategic process for designing and developing a training program. The nine events are as follows:

1. Gaining Attention (Reception)
2. Informing Learners of the Objective (Expectancy)
3. Stimulating Recall of Prior Learning (Retrieval)
4. Presenting the Stimulus (Selective Perception)
5. Providing Learning Guidance (Semantic Encoding)
6. Eliciting Performance (Responding)
7. Providing Feedback (Reinforcement)
8. Assessing Performance (Retrieval)
9. Enhancing Retention and Transfer (Generalization)

Note that the aforementioned instructional design models are merely an overview; more needs to be covered to evaluate whether one is appropriate for your training and learning objectives. In addition, each of the design models has its own pros and cons, and choosing one will depend on your organizational goals and broader learning outcomes.

If you're wondering what comprises an effective Instructional System Design (ISD) that is designed specifically for your organization's needs, then here are some basic principles to follow:

Basic Principles of Instructional Systems Design to know before you pick “The One”

It should move at an efficient pace.

An instructional program should be able to teach a subject matter efficiently, given that participants normally require several hours of learning. It should encourage its learners to cover the learning activities whenever they can, enabling them to apply the subject matter in practical situations quickly.

To do this-

- 1) Look into the students’ background and learning capabilities.
- 2) Add in supplementary resources and extra (remedial) materials to allow students to absorb the lessons faster.
- 3) Use a clear, straightforward, and organized format while giving structure to the build-up of knowledge, such as referring back to previous lessons and explaining how the current subject links to the next one.
- 4) Break down the lessons into smaller chunks instead of giving a significant amount of information in one go.

It should put information into context.

Enable the learners to understand the subject more deeply by linking new information and theories to their existing knowledge. Provide context as to how they can apply it in real life. Use several examples and mix up the formats, i.e. written and practical.

It should be community-based.

Even when the training program is remote, learning should take place within a community of learners. Provide avenues for peer feedback and student-to-student interactions. Enable teamwork by providing learning activities that require them to collaborate with others.

It provides opportunities for learners to create original output.

Learning does not just involve cognitive functions such as remembering and memorizing. Learning improves when students are able to produce output that applies what they have learned. For example, writing reaction papers or delivering oral presentations help students digest information in a more in-depth manner. Critical-thinking and problem-solving exercises help learners understand how theories can be applied in practical situations. Working outside of the class, like on-the-job training, will help them see various viewpoints and appreciate how the course becomes significant in day-to-day work.

It creates and uses evaluation tools implemented at the learner's pace.

Ensure that learners have a full grasp of the lessons before conducting an evaluation. Provide ample time for learning, versus cramming a heavy amount of information and then administering tests at the end of the module. Space out the delivery of materials and provide informal evaluations and feedback in small chunks. Make sure tests are relevant and effective by evaluating testing instruments to see if they actually work.

CONCLUSION

There are various Instructional Systems Design (ISD) models available for Instructional Designers. It is worth having knowledge of each of them and understanding each framework's advantages and disadvantages. Also, look into the five basic principles of ISD to understand which model to adopt based on which best suits your learning objectives and broader organizational goals.