Designing learner-centric e-learning in STEM disciplines
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Lecture - 07
Instructional Design process: overview

We have seen the need and some of the benefits of a learner centric approach in e-learning. Before we delve into the details of designing e-learning based on these learner centric principles, let us do a brief digression, and look at an overview of the process of designing and developing learning content, the materials, the strategies, the formats and so on.

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Let us first pause at a reflection spot. In case you want to create some e-content, what are some of the fundamental questions that you would ask before you go ahead and go into designing and developing the-content? As usual pause this learning dialogue, write down your answer, and then you may resume.

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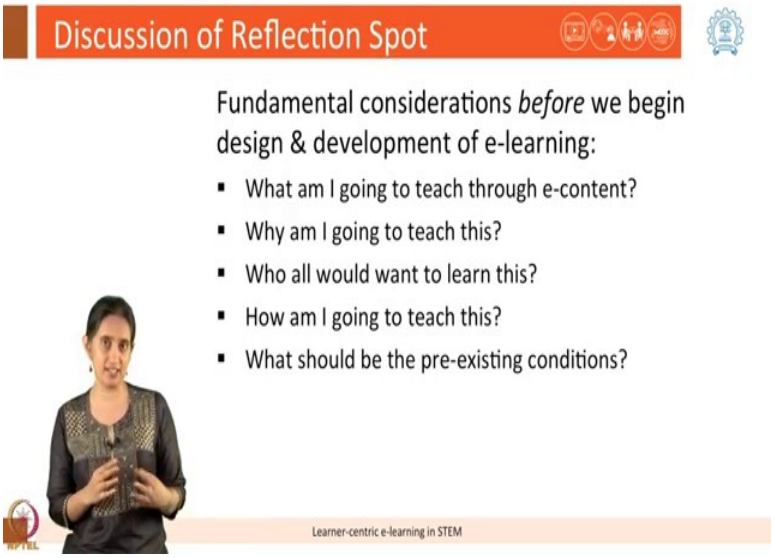

You may have thought of questions like what am I going to teach through the e-content why am I going to teach this, for what purpose, to whom, who all would want to learn this and or who all should be-learning this, how am I going to teach this, what are the pre-existing conditions under which we need to develop these-learning materials. These are some of the fundamental pre-design considerations. See, how many of these you have addressed. And in the rest of this learning dialogue, we will consider a systematic process by which we will try to address many of these questions.

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To answer these questions in a systematic manner, the process of instructional design needs to be adopted. Instructional design is a systematic process of translating general principles of learning and teaching into plans for instructional material, strategies, formats and the training programs. Instructional design is a systematic and iterative framework that guides us; it is also a process of creation of instructional materials and learning activities and strategies. Instructional design is based on research and most importantly most fundamentally it focuses on the learner and the-learning goals.

Now, a bit of disclaimers some of you will know or at least have heard of instructional design especially if you are experienced in e-learning or you have been working in the e-learning industry for a while. So, what we will do in this learning dialogue is only to look at an overview, we would not go into details of instructional design, but we will pose some pertinent questions for everyone who will be designing e-learning. So, regardless of whether you are a student looking to become an instructional designer or design some e-learning, or whether you are a teacher who is trying to design e-learning for your students, or whether you are a professional id in an e-learning company, when you create e-learning you will be an instructional designer.

So, lot of the points in this learning dialogue in the next one will be relevant for these categories of participants. Let us first look at why at all we need instructional design. So, for this, let us

consider a scenario. Let us say there is an e-learning multimedia design team that is creating some instructional materials may be hosted somewhere on the web, for college level science and engineering courses, and they are primarily animations at this stage. The team creates a template for all the screens to be created within the animation. The development team creates what are called storyboards which are very systematic screen by screen plans and this is approved by all team members.

The coding of the-content begins and the team moves along very swiftly. At this point, what happens is one team member gives feedback that his daughter who is a college level college undergraduate student was confused by some sequence of steps in the animation that he was working on at home. He suggests some sequence, he suggests a change in sequence of steps based on his daughter's feedback, and then a design expert in the team says that the template button should be modified for ease of navigation. At this stage the development team is unsure if they can make all these modifications and still meet the project deadlines.

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So, what went wrong in the scenario?

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Perhaps you thought that the project could have been well-planned from the beginning; some of you may have thought that there is a need for constant evaluation especially with the stakeholders, and the entire team should be in sync and they should be act on the feedback and communicate with each other, all of you are right. These problems are avoided when a team follows a systematic instructional design process.

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So, the instructional design process enables consistency- across multiple people in the team like we saw across various courses or various modules in one course, across various instructors. It pays attention to effective ways to communicate-content of different types. ID is actually the driver of the quality of e-learning materials. It structures the student's path through the course, and again like it was emphasized earlier instructional design begins with the learner, the-learning experience, the-learning goals and so on.

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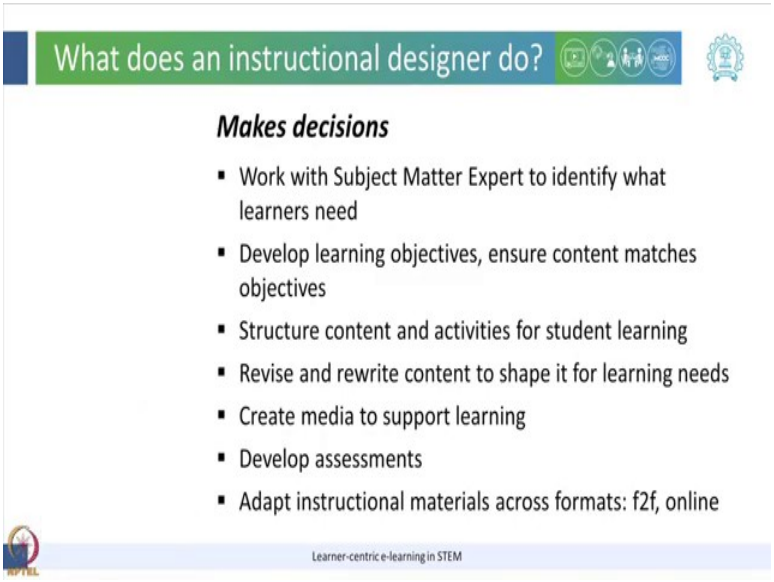

What exactly does an instructional designer do, or what exactly will you be doing when you design e-content? Essentially you will be making a lot of decisions. You will identify what learners need based on the subject matter, you might talk to experts on this. You will develop learning objectives ensure that there is an alignment between the-content and the objectives and the pedagogical strategies. You might structure the-content create activities, you might decide on the media and the formats, you might develop assessments and you will put it all together.

Now, that we know what is instructional design and why instructional design is important, we need to discuss on how to implement instructional design.

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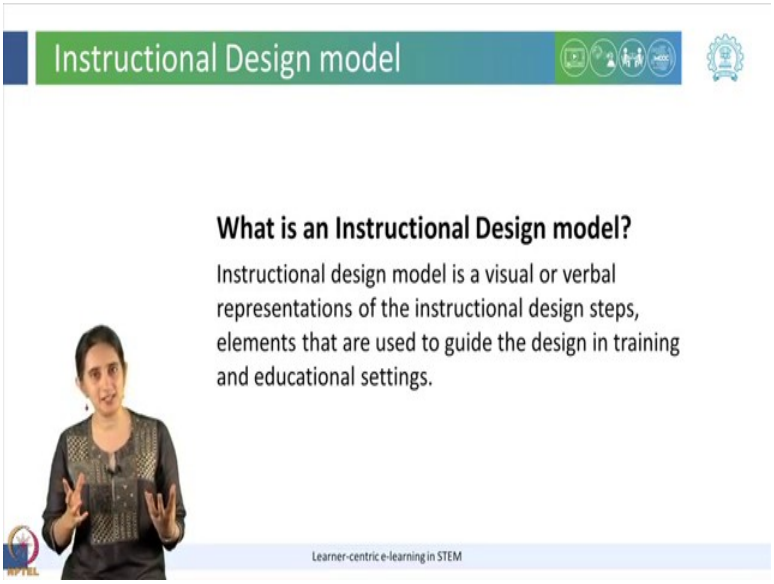

Implementation of the instructional design process is done through instructional design models. And an ID model is a representation a visual or verbal representation of the various steps of the process, various elements of the process that are used to guide and complete the design in the training and educational settings.

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There are many instructional design models.

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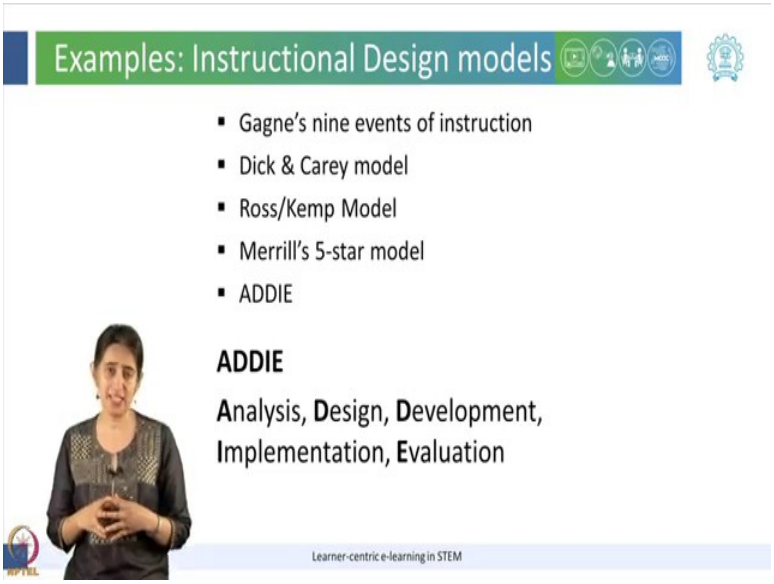

The more popular ones are ADDIE, Gagne's nine events of instruction, Dick and Carey model, Merrill's 5-star models, some of you may have heard of some of these, in fact, there are many many such models.

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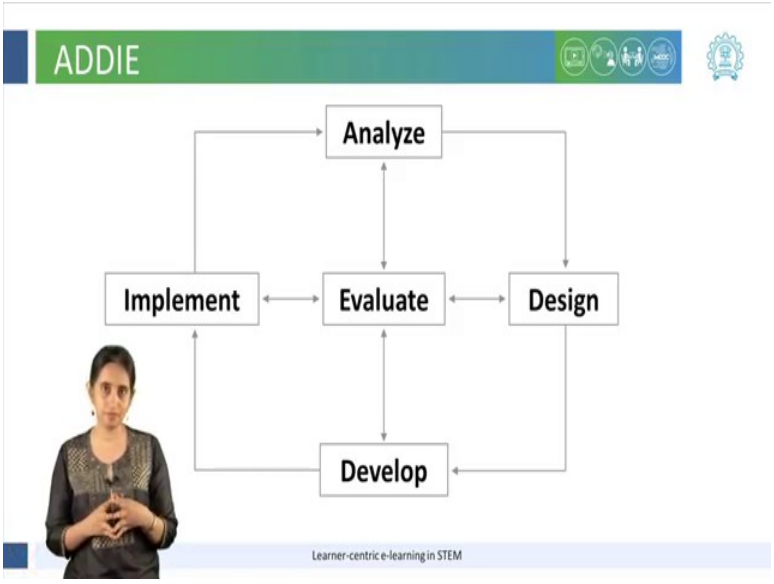

Now, in this course we will focus on ADDIE which stands for Analysis, Design, Development, Implementation and Evaluation. It is essentially a sensible structured process that guides us to design, create and develop e-learning.

Thank you.