

**Designing learner-centric e-learning in STEM disciplines**  
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**Lecture - 28**  
**Closing**

As we come to the end of this course, let us take a few moments to summarize what we have discussed so far in this course.

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The slide features a green header with the title "What Have We Done So Far" and several icons representing different aspects of e-learning. Below the header, the word "Topics" is followed by a bulleted list of three items. To the left of the list is a video frame showing Prof. Sahana Murthy. At the bottom of the slide, there is a small IIT Bombay logo and a text box that reads "Learner-centric e-learning in STEM".

**What Have We Done So Far**

**Topics**

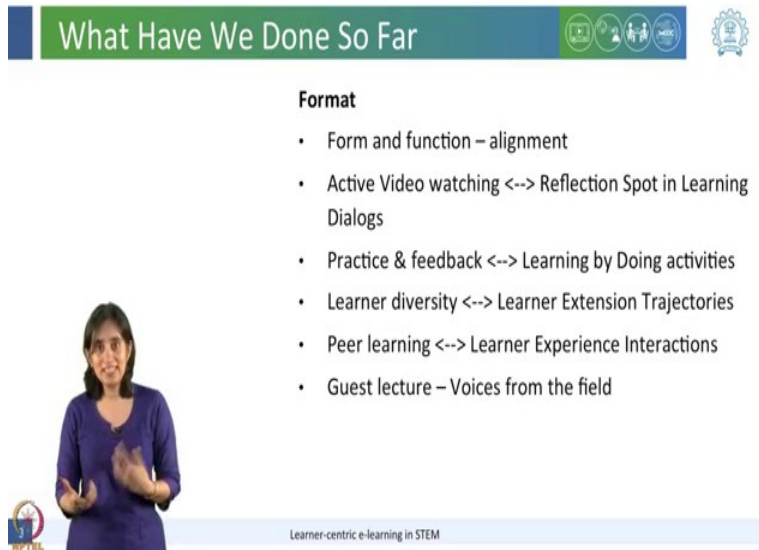
- What is meant by learner-centric approach and its need, especially in e-learning
- Pedagogical design principles for learner engagement and learning
- Some design decisions for effective learner experience

**Learner-centric e-learning in STEM**

In terms of topics, we began by discussing what is meant by learner centric approach and what is its need, especially in the context of e-learning and also how do the principles behind a learner centric approach manifest in an e-learning context. We then spent the majority of the rest of the course, especially in weeks 2 and 3 discussing various pedagogical design principles to address learner's cognitive engagement and learning.

And in this week, in week 4 we looked at some of the other design decisions that we have to make that are needed in fact, when we design e-learning content so that the users undergo an effective learner experience.

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The slide features a green header with the title "What Have We Done So Far" and several circular icons representing different learning activities. Below the header, a list of learning formats is presented. To the left of the list, a video of a woman in a purple top is shown. At the bottom, a small logo and the text "Learner-centric e-learning in STEM" are visible.

### What Have We Done So Far

**Format**

- Form and function – alignment
- Active Video watching <--> Reflection Spot in Learning Dialogs
- Practice & feedback <--> Learning by Doing activities
- Learner diversity <--> Learner Extension Trajectories
- Peer learning <--> Learner Experience Interactions
- Guest lecture – Voices from the field

Learner-centric e-learning in STEM

We should also take a few minutes to reflect on the various formats and strategies that we saw in this course. And here before we begin, let us talk a minute about form and function and there was a little bit of discussion of form and function earlier this week in Dr. Sameer Sahasrabudhes learning dialogue. The point here is that the form of whatever we design, the content we design, the activities we design should be aligned to its function.

For example: when we were discussing learner's engagement in videos, right. So, the function we wanted is learner's engagement in videos, and we talked about operationalizing that via active video watching, for example, via reflection spots. Now, as you were learning about reflection sports and active video watching, you yourself experienced several reflection spots in each learning dialogue throughout this course.

Similarly, we discussed practice and feedback and when you did the learning by doing activities you saw that there was customized feedback, some of it was constructive, it pointed you to the various resources, that you could go back and look at in case you are learning by doing activity response was incorrect. So, this match this mapping between form and function is something we have to always keep in mind when we design any learning materials and especially in e-learning.

The other two important elements that we saw were learning extension trajectories. And we saw right at the beginning we discussed right in the beginning of the course about why learner

diversity is important and how to address it. So, you would have seen that in every week there were multiple resources, multiple learning extension trajectories, some were in the form of reading, some more videos, some were applied whereas, some were related to the more fundamental theoretical aspects. So, this addressed a variety of learners. And we also had learner experience interaction every week and this was to promote pure learning.

Now, here I would like to encourage all participants urge all learners to take LxI seriously. What we have found is that often people think that well LxI is just something that happens on the side, but LxIs are fairly very central to a learner centric approach. And please do consider them seriously, because a lot of learning happens, with your peers, between your peers and from your peers. Especially, in topics where you have to you know design learning materials and other people have also designed in their own context, there is a lot of given take possible here.

We also had a guest lecture this week which was part of voices from the field by Dr. Anura Kenkre and she is actually a working professional in an e-learning, she works in an e-learning division. So, that hopefully gave you an idea of how some of these principles are actually implemented on the field.

What next? In terms of this course itself if you recall there were several resources. For example, every LED had many links to examples or tools, cone explore those. Every week there were at least 3 resources in the lxts and you required to do only one and I am sure all of you have explored one of the resource and done its corresponding a simulation quiz, but why not go and explore the other lxts. Perhaps you would find something useful when you design your own e-learning content.

The other step, one more step that you can take is to look up a little bit more about the instructional design process, so that you can actually create your own e-learning module. It could be small that is fine, but try to go and create your own e-learning module which has learning dialogues, learning by doing activities with peer, practice and feedback, include reflection spots, usage 5 p. So, all the design principles and strategies that you saw this week use them and actually create your own; that is one more direction in which you could go next.

If you have already created e-learning, you can maybe pick up something you have already created and revise it or refine it, based on the design strategies that we discussed here. And finally, our goal as instructors of this course is that everybody internalizes this idea, this philosophy of a learner centric approach in any teaching and learning context that we are part of.

Thank you.