Designing Learner-Centric MOOCs

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Lecture 10

Chunking a lecture into LeD

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We will now discuss how to create LeDs? The LCM model consists of learning dialogues, learning by doing activities, learner experience interactions, and learning extension trajectories. The learning dialogues or LeDs promote concept acquisition through learner interaction.

What does this mean? Means that we create content which the learner watches or reads, followed by a reflection spot where the learner expresses their opinions or does some micro-practice followed by some more content wherein the learner is able to assimilate the content in the LeD.

Now the question is how do we create LeDs? We are used to giving lectures in which we have natural pause points, where we go to a deeper understanding of the topic, or we give an example, or we ask a question to the student or we respond to the students' queries. All of these natural pause points are actually the points where we can chunk a lecture into multiple LeDs.

Having said that, here is a reflection spot. Consider a topic on which you have given a lecture and identify the pause points in that lecture where we can create LeDs. Once you have thought about this, you can press resume to continue with the LeD. So having thought about chunking your lecture into a series of multiple LeDs, some of you may have thought about giving the explanation in multiple pieces. Others may have thought about including examples. Some others may have thought about, you know, providing clarifications or showing some demos.

All of these are valid ways for chunking a lecture into LeDs. As an example, let's consider a programming course CS101, wherein we are teaching the topic of iterations or loops. Now this topic we may cover in a 1 hour or a 90 minute class, and it may include the concepts of loop initialization, entry criteria, exit criteria, the structure of the loop. It may include the syntax of for loops, while loops, do-while, repeat-until or whatever and how these loops are different from each other. It may include examples of using iteration for linear searching, sorting, and other applications.

We may also have exercises and demos and hands-on programming that we show during this class. Now this entire class can actually be split into multiple LeDs. One of the LeDs could be an example that we do in the class.

Suppose we have taken the example of calculating the approximation of a logarithm. The programme would look something like this. There would be the initialization where we are initializing the various variables; we're initializing the value of the number to be read in, and the value of the logarithm. Then there would be the entry and the exit criteria, suppose we are using a while loop, we would be actually checking the entry criteria as the number being greater than one and exit criteria as the current value of the number being less than one, and then at the end you would have the value of the logarithm being printed out. Now this entire thing can form one LeD in a series of LeDs on the topic of iteration. Another LeD could be on the difference between while loop and for loops.

On the one hand, we could shows the flowchart of a while loop vs the flowchart of a for loop. On the other hand, we could also have a discussion of the syntax of the two different loops. We could talk about entry criteria and exit criteria for both of these loops. This would be another LeD that we can create for the topic of iterations. So to summarize, in order to identify LeDs from your typical lecture, what you need to do is to identify the points where you naturally pause during the lecture.

So these could be points where you are advancing the topic, or where you are switching to a slightly different idea of the topic, or where you have given an example, or showing a demo, or asking a question to the students. All these points are natural points where we can chunk a lecture into a series of multiple LeDs.