Designing learner-centric e-learning in STEM disciplines
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Lecture – 31
E-learning Design Process

So, you have talked about the lot of different strategies, how to incorporate learner centricity and lot of our viewers are also teachers. So, if I have to and it becomes difficult you know to incorporate all of these strategies all together. So, if I have to tell them three key strategies to keep in mind; when they are creating any learning content what would they be? Like I can think of one that make your learners do lot of activities, you know it will be as you said it should be interactive.

So, if you are having a designer as a teacher maybe you can opt for blended learning, where your teacher like I said if your facilitator is present.

Ok

Then you can have a instructor like training or blended learning, if a facilitator is absolutely not present.

Right.

Then you go for web based training or you go into different things where a person cannot be there with you.

Right.

So, if your teacher is there, then maybe you cannot opt for blended learning. So, within that now you have your audience in front of you there itself you can do so many other things. There are so many activities which you can do in class. You need not wait for you know all your status to come up later when they finished everything.

Correct.

You need not wait for that much. So, there are so many practices with which you can taken for blended learning. I think that would be the best bet with teachers.

And, if whatever content that they are creating, what are the key things that the teacher should keep in mind?

So, for teachers I have one thing which I can suggest is now depends upon what are you teaching. Is it engineering, is it science, is it math? So, in that what I can say is now your students will definitely work somewhere. So, what you can do is maybe give them relevant examples like when I refer to a scenarios you can give an example where they are possibly going to use this. Because, if you are learning it you are definitely going to use it somewhere.

So, when you give scenarios make sure its relevant to them. Designing stuff you can do any ways with the text and graphics all that you can do, but when you create scenarios do not give generic things. Because, since you are a teacher you are very well versed with your knowledge as well as where possibly you can apply it. So, then you can go ahead and find that out and include those.

Correct.

Because your learners will be able to relate to it, because they have just learnt it and later on it will only may being more useful to them. Why because they going to apply.

Right.

So, it will be much more easier for them later when they start working.

Moving on to the design process. So, what is the design process that we follow in industry when you have to create any learner content?

So, basically if you see how e-learning products get developed in the industry, we generally try to follow and agile model. By agile I mean something that is iterative and also it works in short cycles and fast.

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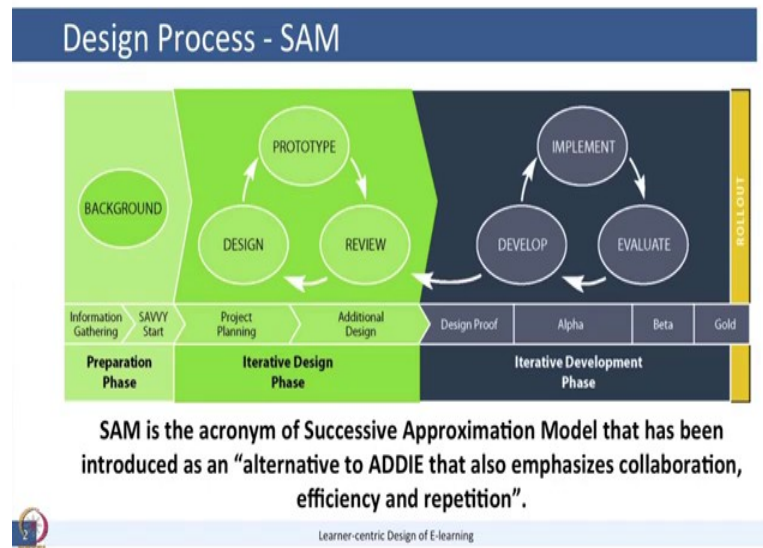
So, basically we use a Successive Approximation Model, it is referred to as SAM an abbreviation. So, in that basically what I give you why we are adopting this model. So, instead of a waterfall design wherein you have certain steps and you go from step 1 to step 5 one after the other and then you have a closure. But, what happens within this is if you have a client who is later going to come back and say no you know I wanted to change something there, you go back to step 2 and go change it. But you have teams working.

Now, your graphic team is going to work separately, the technical team is going to work separately; you are a designer who is linking everybody. And you have an SME who is sitting on top of you who is going to give you further content.

Right.

And there are managers who are going to push you for you know your deadlines.

Mission.

So you have trouble from all sides. Now, in that if you have to go to one step and change it, life is be very very miserable.

Right.

So, in that if you have small prototypes, in SAM what we do is we have three cycles in which there is a preparation phase, there is an interactive design phase and lastly there is interactive development phase. So, basically these are short cycles the idea is that you first create prototypes, do not go into creating the entire thing and then sending it to the client do not do that.

Instead of that create small-small prototypes because, you have to first freeze the design; you speak to your clients, speak to your SME's. So, that they freeze the content first, you can have small changes editing is ok, but if you have to make a big change then it is a problem.

So, you have to first create small prototypes of your design, give it to your client you can iterate it there as much as required. So, in the background if you see on the screen in the preparation phase you first gather all information that they can give. Just sit with that you know all your information gathering session first brainstorm.

Come out with all possible ideas that you can think of to create a design. Once you are done with that then you go to the interactive design phase. When you come to design, now you have your project managers also who will brief you about the budget and time.

Now, why am I emphasizing on budget and time? It is because all of this has to get completed. You have a certain deadline, you cannot go on for eternity. You know going on in thinking, thinking and creating and making you cannot do that. You have to deliver it.

Right.

Now, within delivery there are so many alterations which have to complete, you have to get a heads ups your own client as well as SME. Your SME has to say for the content, that this is sufficiently concluded like I am ok. And, then your client can say sign off for this. So, basically what we do is first design, we do not go to development, it is not going to get developed; no tools, no software nothing.

Just sit down with your design and talk to your clients, have calls with them and first only freeze the design. Give them multiple designs, small-small prototypes and by small I mean seriously small; simply an idea and if they like one then you going to small prototype. Show them do you

like this, then we create more. So, when you talking about this design I know what the story board face.

Correct.

So, every visual that is going to come like every screen, you first design that.

Yes. But an idea of it, now when you create a storyboard you do not create the entire storyboard, like you create the first five to ten slides.

Ok.

And show it to them.

Ok.

If they do not like it there only they say that you know this is not ok, I just do not like it I do not have a reason.

Ok.

I do not like it, it is like color black or blue; I do not like blue. There is no reason for that.

So, there is no content involved here yet?

Content is given by your SME already. So, there are two people here.

Right.

Within your client you have your SME also and you also have one more person who would be along with your SME signing this off. Your SME is a part of it, but an SME is in charge of your content specifically.

Ok

So, technical stuff for example, if you are going to speak about factories or if you are going to speak about soft skills, we are not experts on that somebody else is. So, they will say this much content is sufficient.

Right.

Do not go ahead of this and do not go into too much basics that they know.

Right.

So, they will be telling you what is to be covered, now how on test to be covered is with you.

Right.

How you cover it?

Right.

So, you give them the first five to ten slides and say I am going to present your content. We have begun with this much this paragraph and we think that these 10 slides will take care of it.

Ok.

Now, this is your design, see if this make sense to you. And, we will have a call with you, let us discuss it. For this paragraph I think this much is sufficient. Now, let us just discuss it.

Ok.

And get their ideas, sometimes they give good ideas that they will tell you why it is not cool or maybe they just say excellent, you know we will proceed.

Ok.

Like create the entire thing.

Ok.

And once your design is approved then you go into development because, it is an entire team effort. And, they also have timelines because they are working on multiple projects. When you have a client facing company a technical team is dealing with lots of projects. And then your project is not the only one, it is one of their million things that they are doing.

So, in that you have to seriously block their time and, tell them in this much time you complete this. And, again if you create a errors in this, I have to block more time; so this time blocking things happens. So, it is you have to live with it.

And also your graphics, freeze the graphics after your designer is done. Again talk to your SME, show them the graphics and say that I think this is good; you see if it is good. Because, sometimes our understanding of the technical content may vary from what the SME things and they are the final word because, we only understand design, technical stuff, accuracy your SME will tell you.

So, what if they say this visual looks cool we will proceed, but get it approved freeze the graphics; do not keep it till development. Because, there again you are going to come back and your graphics team is going to get annoyed with it. So, and graphics team also works with million projects at one time. So, you have to block one designer over there graphics person, who is going to help you out. So, again and again you cannot keep doing this.

Correct.

So, when your design is freezed finally, you give it to the technical team, they will code it, comes to you for a review, you find bugs in it and again give it back to them. Then it will go for final testing, all this is in alternative cycles if you see the screen you will see alpha, beta, gold. So, these are three stages in which we delivered the product. So, alpha meaning the first stage, that is the first stage in which we have created one product delivered it, delivered it to the client.

Ok.

In that all possible errors that they can find, but now no change in design now. In the product if they think that something needs to be seriously added, they can tell it. Or if they want certain

things to be changed, then that will be done in beta, but when gold is signed off no further change.

So, then that gets uploaded on an LMS and finally, you just send off that is all your budget and everything is done, it is closed then next project. So, we undertake this agile method of developing products, instead of a waterfall design this is always much more better; life is way more simpler.

So, a learning learner centric LMS come into picture the first design process itself right and then they go to the client. And, if they have any suggestions they give and then the final designing the elements go forward.

They will yeah they will be retained, because in your design phase if the client is not convinced, but if you are convinced as a designer. That this is cool you have to include this otherwise my entire like whatever I have thought of it does not make sense. I really need to include this then you defend your design and they understand, it is just that they do not have a design background.

They just know it is like your teachers, they do not have a background in design; they just know their content that is it. They do not understand design at all. So, you are the expert in that, you have to defend what you have created.

Correct.

So, you just talked about sequence of process as this agile method. So, what kind of resources which will be required to do this considering an id with a limited resource?

So, like I said all of your work is tied to timelines and budgets and also you have reporting people you are answerable always not only to your clients, but even to your managers, to your team because suppose you are leading a team.

Here when we say ID is restricted with you know limited resources we also include teachers.
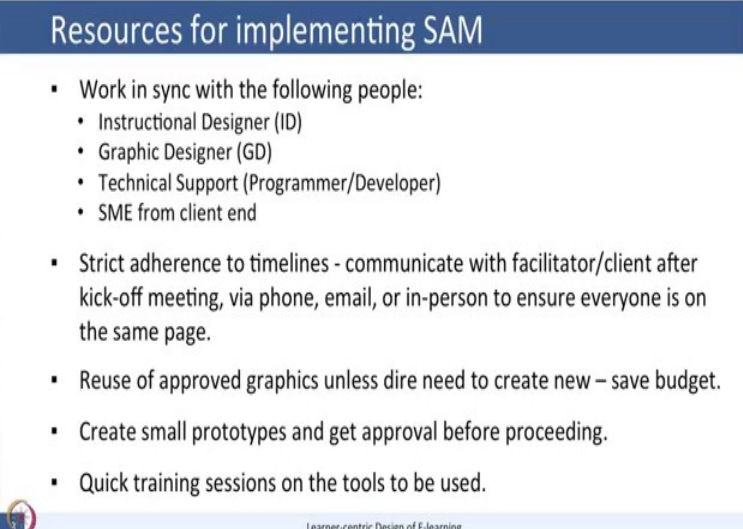
Yes, I am taking.

Those, everybody.

Everybody.

As I know when I say designer, I mean anybody seated on that seat irrespective of their background. I am taking anybody who is seated there to create an e-learning product.

So, for that basically you have to keep in mind that you are answerable for multiple things and if you are leading a team you are answerable even more. Because, if your team does not work or if they have glitches, they have roadblocks (Refer Time: 12:49) you are going to answer that, your team is not going to answer because your client will ask you why this is not done, they are not going to go and ask your team.

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So, you should make sure that you are always in sync. So, have regular meetings like every week or every 2 weeks maximum, where if you can call it a scrum or you can call it a quick you know check; check point for your entire team. And, make sure everybody is on the same page. If people are having trouble somewhere, you make sure that it is solved, it is resolved there itself. Any technical support that they require, if licenses are getting expired or if sometimes people leave the company or new people joining, licenses need to be transferred, all of this admin stuff it takes time it is going to affect your time.

So, make sure that you know you are aware as the leader or as one of the members of your team. Make sure that you can take care of this and another thing is you be very strict in adhering to your timeline. You as a person your team of course is there, but you as a person you are already aware of what is the sign off date for alpha, what is the sign of date for beta, final sign off date for gold; you are already briefed.

So, you make sure that you are always within that. If you feel that no you know I am not going to achieve this, this is not happening; you go and report to your manager, tell him or her why this is not happening. Give them your you know answers for it, it is ok.

So, they have further discussions with your client and they brief them that we can push it ahead a little, all these negotiations happen, but if you tell it in the last minute that tomorrow is the date and I cannot do this. Then its not good professional behavior, you make sure that you keep everybody informed and as far as possible try and reuse graphics because, your team is working very hard.

So, instead of creating graphics new-new graphics again and again and again you try and see if you can reuse some of them. Because as a designer this was also thought of right somebody thought of it. So, see if you can you know maybe alter a few things do not create it from scratch, try and tweak it a little. And, then try and use it. So, have these little you know mid ways in that you can save on your time and your budget.

And finally, you can just deliver it and create those small prototypes and see. Now, suppose while working you come across a good idea and you think that you know this will make you know stuff very fast. Instead of sticking to one software which we have been using maybe this will work fast, you create a small prototype and show it to your manager. And say that you know this looks fast they are more than appreciating because, they like this that you are coming with good examples, good ideas and they will just in cooperate it.

Life is fast, simple and also quick training sessions like suppose you have you know gathered a good experience on certain tools, you can just brief your entire team; it takes like half an hour. And in just briefing them about these few features are there, they can always come to you for further help. But just to brief them quickly maximum 1 hour to brief them about the software.

And once tell them to go and practice and if they need your help you are always there. So, it is always a team effort is what I can conclude.

Right.

So, one of the questions that we often get is that can I do creation of e-learning as a one man team?

It yes you can, but your time would be a way lot more than a team working together and also the effort that they are putting it, because you would be a one standpoint for creation of everything. You will not have helping hands at all. So, right now when I am working at Diebold I have to do everything on my own, take care of my project.

And you need to have those skills to do everything on your own.

Yes, you as a designer I will be very honest, you are expected to have these skills. So, it is expected of you to have an understanding of graphics, you are expected to have an understanding of software tools which are used for development, you cannot go blank. Because, if you go and sit there blank and say that I know only design I have created my design, I am just going to sit. So, this does not happen. Because, you know sometimes graphic people they come and tell you this is looking cool let us just use this. Now, you do not know whether you know your rest of the images were vector graphics. And, now suddenly you started using you know the different like character based graphic, nothing is matching with either. And sometimes you have already decided dimensions, for certain reasons maybe you templatized it.

All of this if you are not familiar with, now certain companies they very strictly adhere to RGB values, believe me even for shades they have strict adherence to a shade; you cannot change that shade.

Wow.

So, if you put different number within RGB your entire screen is going to look very different than what the earlier screens were. So, if your 10 modules previously made were with a 1 RGB value and you made one error of changing G somewhere.

Now, your entire screen looks different and there are like 10-20 id's working. Now, if everybody starts making errors you imagine what the entire screen will look like and all modules one learner will be taking. So, that poor person who is finally, taking this will get something to very you know unpleasant to look at. So, that way you should at least try.

Ok

Ok. So, thank you for your description. So, we have been receiving requests from our teachers and faculty members who all are taking the course about some open sourced tools or software's, that they can be able to use to get started creating their own content, can you give some instance on that?

So, open force basically for good e-learning content development are not that much available, but you get free 30 day trial sessions. So, I would say that if you want to try responsive design you can go for Adobe rise.

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So, in Adobe rise you can create responsive design and for Adobe captivates storyline all of these you can use for creating e-learning products, WBT is definitely or blended learning you can decide. And, sometimes even or they use ice-cream within PPT, like something as simple as

PPT you can just take ice-cream it is an add on. And, within that you can create all kinds of interactivity and video scribe, you can use for I think telestrations are also possible.

Ok.

Other than videos only, Camtasia is there only for videos. So, other than these I have giving you an entire list, you can just click on the URL and you will get Complete idea of all possible tools that exist. I would say that take your first you know hand at it, try it out. If you do not like it, move to the next and for the videos you have lots to take, but for developing WBT's you can just have to go through a 30 day trial.

Fine.

See what you like and what you are familiar with there are so many tutorials that are available and on Adobe its website itself. So, many tutorial you can easily learn it.

Ok. Anything else that you have would want to convey to our learners, what they should follow, how they should go about making learner centric e-learning content?

For your learners or for your designers?

Our learners should be our designers.

So, basically keep your audience in mind that is the most thumb rule which I will say because, who is the person for whom you are making this. Now, if it is person who is very senior guy, his is a CEO of a company; you cannot give him like you know kindergarten examples. He is not going to read that.

And maybe he will fire you, but if he is a CEO you have to give him something that is relevant for him and quick, fast, complete. But, as opposed to on boarding they are blank, they do not know anything about your company; you have to give them very detailed examples so, that they understand what is expected of them.

So, keeping your audience's mind, if you go into K-12 education that has nothing to do with this. There are companies who work into K-12 education, in that it is all maths, science, chemistry,

physics all of that is there. They have nothing to do with soft skills or you know clients, in that you make sure that you adhere to either their textbooks or whatever it is that they have freezed, that they want to cover this much.

So, make sure that you know your audience properly and within that also, I would say that make sure you adhere to budgets and timelines. Because, if you do not do that your projects will you know just snag on for a long time and just screws everybody's mood. So, make sure you do that budget, timeline, audience.

So, in this session Anura has mentioned a lot of learner centric strategies, how to implement them, she has spoken about how to increase challenges for learners while, creating e-learning content. The use of active learning approach, using real life scenarios and she has provided examples like use of gamification, leader boarding. Use of multimedia principles like personalization, segmentation, visual design principles, how to make responsive design, how to not force a navigation on learner's and keeping it self-paced; providing feedback and making it interactive.

She has also mentioned about successive approximation method for the design process, she has also provided some software tools to get started with the design of the e-learning content. And finally, she has talked about the target audience, budget and timeline which are the key aspects to keep in mind while designing the e-learning content.

So, most of these aspects have been covered in our course ah, but this is coming from an experienced professional working in the e-learning design. So, this is an industry perspective on these key aspects. So, we would like to thank Anura for taking out time and coming and informing us about all this.

My pleasure.

So, thank you.

My pleasure.

So, thank you.

Thank you.