

EDUCATIONAL TECHNOLOGY AND ICT

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Lecture-44

Module-44: Applications of ICTs in and outside the classroom (Part-I)

Hello dear learner, welcome to SWAYAM-NPTEL course on Educational Technology and ICT. I am your course coordinator, Dr. Sarita Anand, from the Department of Education, Vinaya Bhavana, Visva-Bharati, Santiniketan, West Bengal, India. Today, we will talk about Module 44 on Applications of ICTs in and outside the classroom. That will be Part 1 and Lecture 44. I have divided this lecture into two parts: Lecture 44 and Lecture 45.

Before going to Lecture 44, we will see the concepts covered. Earlier, in the previous lecture, we discussed the importance and utility of the internet in education, its concept, the evolution of the internet, and the advantages and disadvantages of internet use. We also prepared a table for your reference.

Now, let's discuss the application of ICTs in and outside the classroom. Information and Communication Technologies have become an integral part of the modern education system. We cannot function without using ICTs. They are transforming both inside-the-classroom and outside-the-classroom learning experiences.

ICTs include a wide range of tools, including computers, the internet, multimedia resources, different software applications, and mobile devices. These applications in education are vast and can be categorized into in-classroom and outside-classroom uses. However, many times, the types of ICT resources are mixed between inside and outside the classroom. So, I have tried to mention the applications of ICT inside the classroom—which ICT facilities can be utilized inside the classes during the teaching-learning process.

The first one is Enhanced Assessment. If we are using the ICT for our classes, for streamlining our evaluation process with the automatic grading, then definitely that comes under the ICT inside the classroom. Then comes the collaborative learning, if we are interested to collaborate with the different teams, different institution or the teachers from

that institution through the virtual tools, virtual classroom, then we can use it as ICT in inside the classroom. Then the interactive learning engaging our students with the help of smart boards or any gamified app using on those smart boards can be called as the inside classroom ICT application.

Then the fourth one is personalized learning. If we are designing any classroom to in regarding their individual need of the students. Using the adaptive systems like speech to text etc., then that also can be connected with the inside classroom ICT application. So, we will go one by one like if we are trying to use the multimedia content with the help of smart board or interactive whiteboard in our classes that comes under the application of ICT in the classroom. In daily teaching at the time of teaching in the classes if we are using either blackboard, whiteboard or smart board that is ICT and we can transform our teaching with the help of these smart boards or interactive boards.

Whereas, on blackboard only we can use chalk and duster, here on a smart board we can not only write not only can show, but also, we can use the internet and search different content on the same screen of the interactive whiteboard. Then comes the Gamification. At the time of teaching, educational games and simulation can make the classes very interactive and motivate the learners to understand the concept. In previous lecture, I had shown you the demonstration of simulation on the tiger, I hope you remember and that kind of classes or the application can be used in the inside the classroom teaching.

If you are using the simulated games or gamification in your classes that is coming under the application of ICT inside the class, then comes the personalized learning. If we are using the adaptive learning systems especially made for students based on their performance, then that is coming under ICT inside the classroom.

Then learning analytics; I have already told that if students are performing well or not, there should be an instant response system in your Google Form or any other quizzes you are using. Then we can identify that learners have these strengths and weaknesses, and accordingly, we can change or design our classroom teaching-learning process. Then the third one is collaborative learning. For any kind of collaborative learning, if we want to utilize ICT in our classes, then we can use platforms like Google Workspace.

I will go through it in the next lecture regarding Google Workspace because these Google Workspace tools provide great facilities for teachers like us. But due to less awareness about Google Workspace, we are not utilizing it very well. Similarly, the concept of Padlet and providing real-time collaboration, we can use Padlet, we can give questions, curate

questions, and students will give their answers, discuss on this platform, and it will play the role of ICT in the classroom. Then comes the virtual classes. We can organize Zoom meetings, Google Meet, or any other video conferencing app to organize virtual classrooms. And if we are using these platforms in our classes,

not only to take the class but also to organize any kind of activity related to our teaching-learning process, like if we are organizing a workshop for SPSS for M.Ed. classes. Jamovi is the new software for statistical analysis. So, if we are organizing a Jamovi workshop with the help of some expert sitting in Delhi in our class at West Bengal, then that will be the application of ICT in the classroom, and the virtual classroom will be counted here as the application of ICT.

Then comes the fourth one: Enhanced Assessment and Feedback. If platforms like Turnitin, Gradescope, or any other platform are utilized for automatic grading and formative assessment through quizzes, polls, or surveys in the class, and students are giving their responses, this is possible in higher education, okay! In the school education where students are not allowed to use the smartphones or the mobile in the class, then it will not happen but in higher education like classes.

In our classes, B.Ed., M.Ed. and M.A in Education or even in PhD coursework classes, we can utilize these formative online quizzes and polls and surveys to get the feedback and it will be treated as the application of ICT in the classroom. These were the list of ICTs in the inside the classroom now the outside the classroom definitely many things are overlapping it will come under the inside as well as the outside we cannot ignore.

Now see the application of ICT outside the classroom the first one is distance and online classes like utilizing using the MOOCs and LMS teachers can run their courses on different LMS, they can students or learners can utilize the MOOCs courses, they can use it see the watch the videos anytime anywhere that is the application of ICT outside the classroom. Then mobile learning whatever the content provided by the teacher on the LMS on the MOOC platform.

That is availed by the educational app or the SMS based learning by the provider those who are uploading the content and you can fetch it out you can see, you can learn when you are doing your journey roaming from one place to another place you are roaming on the train or on the way you can go through your mobile learning. Then comes the Self-Paced Learning. This recorded lectures available on different LMSs, MOOCs can be phased out by the learners anytime and it is promoting the self-paced learning.

It means application of ICT is there for the self-paced learning. If you are using any kind of OER provided by your teacher, your fellow colleague or randomly available on the internet, you are using it for your learning purpose, then definitely that is the beyond your classes and it is coming under the self-paced learning in the application of ICT outside the classroom.

Then the next one is virtual and augmented reality, these days we cannot leave it on the institution only, because virtual field trips are possible. For example, I have shown you the virtual field trips of different websites. In the lecture of educational game, I have shown you the simulation. and mention the many educational games which are online available so you can go through those website by your own there is no need of the class that you will sit in the class your teacher will show you the picture or the video and then only you will understand no you can fetch it out by your own at your home as per your convenience and this virtual field trip will be the program done by completed by you outside the classroom and the 3d-simulation.

I have already shown you, then comes the professional development for teachers this is the best picture, best facility for the teachers like us, the professional development for the teachers earlier it was very hard to get the duty leave or the permission to attend the orientation, refresher programs organized as the HRDCs. We have to take the leave to attend the 21 days refresher course and there was the queue that the senior person will get the chance to attend those refresher course we have seen those days also. But now scenario has been changed. Professional development for teachers has opportunity for the online programs and some professional learning networks are there and we need not to get the leave, but only we have to manage the timing and we are allowed to attend those professional development courses like ARPIT.

Earlier ARPIT was there, but these days I am not seeing the any ARPIT course on SWAYAM, Similar courses are being offered at the MMTC Madan Mohan Malaviya Scheme also different HRDCs are on organizing online courses. Different faculty development programs are there. so the websites like -RC MOOCs, Ramanujan College of MOOCs are providing several courses for the teachers like us and we can be benefited beyond the classes and we need not to hamper the regular classes, because we are not going somewhere else, we are not on the leave, we are working and whenever we are getting the time, we are watching the videos, going through the assessment questions and we are learning.

Similarly, maybe you or maximum of you are doing the same with the SWAYAM courses. So, these are the application of ICT outside the classroom where the biggest beneficiary are the teachers also. They are getting benefit from these online training programs, we just have to go to register on SWAYAM or any MMTC program, now we call it TLC, Teaching Learning Centers. and we can join online and complete our course, get the certification and go for the cash promotion etc., it will be utilized in that also.

So, these are the main aspects of the application of ICTs outside the classroom without hampering the classes. Without thinking about the classes, we can go beyond those classrooms activities and learn many things benefit our teaching learning process. So, I have given whatever I have discussed, I have given here in the writing content also and you can go through it that recorded lectures we can see, we can listen audio or podcast are there, we can go through that virtual trips or simulation whatever I had mentioned, I have mentioned here in the PPT also and you can go through this content and you will find that the concept of application of our ICT outside the class is having much more weightage because this is providing the facility to learn beyond the classes, So we can conclude that integration of ICT in education has significantly transformed our teaching learning and both inside and outside classroom ICT application is important.

The diverse range of ICT tools including smart boards, adaptive learning systems, collaborative platforms, virtual classes have enriched the in-class learning experiences and beyond that classroom ICT have extended, expanded our access to education through distance learning platform. self-spacing learning and resources and virtual and augmented reality and mobile applications are there which are benefiting our learning process. Also, the online courses, open educational resources, immersive learning experiences have democratized education, allowing the learner to engage with the content anytime, anywhere and it also supports professional development of teachers, and teachers like me are happy with this kind of facilities equipping them with the skills necessary to integrate technology effectively into their teaching learning practices.

These are the few references which I have mentioned here. I hope you will go through it. Thank you. Keep learning.