

LIVE LECTURE CAPTURE SOLUTION – ADVANCED TEACHING AND LEARNING TECHNIQUE

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Abstract - In the current education system, students come from culturally and linguistically diverse backgrounds. So the role of education is to make certain that whatever the teacher teaches should be understandable and comprehensible to the students. The teaching and learning process can be enriched by the usage of modern pedagogical methods. Various types of digital teaching and learning methods are being experimented across the world. Live lecture capture solution is one such method which enhances the teaching and learning process that includes Video Content management, Collaborative learning, Advance search, Strong analytics and Gamification. This paper gives an immense exposure to live lecture capture solution, usage and its application.

Keywords: *Lecture Capture, Flipped Classroom, Digital learning, Virtual Classroom, Online Course*

1. Introduction

In the earlier days, instructional methods were limited to traditional classroom face-to-face teaching. With the advent of digital technology new innovative instruction methods are being explored. Different approaches and ways are required to enhance the output of education i.e. learning. The current generation students/teachers are well versed with the computer technologies. So it is of high importance to develop different digital teaching and learning aids using electronic gadgets for improving teaching and learning skills.

The prime mission of innovative teaching is to make learners to get expertise with the subject and advanced methods which helps to improve learning skills. Various levels of proficiency require the support of diverse pedagogical methods. Flexible instructional support is necessary at every stage of learning process for the learner.

Active learners will contribute their own intelligence to the task and will not simply follow the protocols. Different innovative teaching learning methods include live lecture caption solution, experiential learning, Massive Open Online Course (MOOC) and many more.

- Live lecture capture solution is a teaching and learning tool that offers teachers with a variety of means to teach, record and accesses the recorded videos wherever and whenever it is needed. Flipped classroom method can be implemented using live lecture capture solution as a part of asynchronous classroom preparation. It is convenient for the students to access the study materials as and when required and they can return to reflect upon difficult concepts later.

- Experiential learning is a way of learning in which the students apply their conceptual understanding and knowledge to solve real world problems. It is connected with learning process whereby students “learn by experimenting” and reflecting on the experience.

- MOOC a new learning method in Higher education. It promotes interactive sessions where the students can actively learn through watching videos and by participating in discussions. The student can complete the course on their own pace. This encourages lifelong learning and skill development.

In this paper we will mainly discuss about the live lecture capture solution

2. Live lecture capture solution

Live lecture capture solution is a video-based learning stage that empowers teachers to capture, edit and convey content. The term lecture capture not only refer to study materials based on live lecture recordings but it also refers to the system which enables lecture recording and reproduction with the support of hardware and software. [1] Lecture caption solution can be broadly classified into two types: Desktop recording and classroom recording.

In desktop recording one creates a video of the complete computer screen along with the audio. Power point presentations with voice over online lectures are also possible in desktop recording. This provides the flexibility of creating, editing and sharing the videos for classes. Demonstration of using software tools can also be provided in desktop recording. Desktop recording can also be used as part of flipped classroom lectures where the

class time can be effectively utilised for the student centered learning activities. An important advantage is when the teaching space is not equipped with facilities for classroom recordings then desktop recordings can be used as an alternative.

Classroom recording is a process in which classroom lectures are recorded and made available as videos for students to revise after the class hours is shown in fig 1. To record a lecture it mainly requires hardware and software components. These components should work in synchronous to record audio and visual segments of the teaching content. Online access to the recorded lectures and other examination materials allows learners to virtually re-live their classroom experience on anytime anywhere basis.

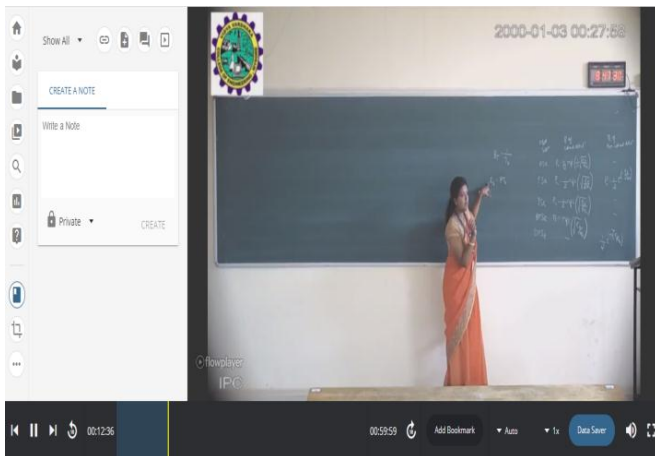


Fig 1: Classroom recording

Hardware and software requirements for lecture recording:

Desktop recording requires hardware equipment's like desktop/laptop (integrated with webcam) and software's to capture the entire computer screen and to edit the recorded videos.

Classroom recording includes hardware and software based system to record the lectures. Lecture capture hardware's should be physically in a classroom for recording and streaming presentations, events and lectures. Lecture capture software lets you to record videos presentations, manage video files and stream video content to any device.

A combination of different tools can be used for recording of a lecture /presentation. Some of the tools that are used are microphone, camera and screen capture/ recording. Live classroom lectures as well as slide show presentations can also be recorded. As soon as the videos are recorded, it is stored immediately in the hardware or it

is transmitted to a server over a LAN or the internet. After processing the video according to standards, it can be distributed among the stakeholders.

Lecture capturing hardware, computers used by the instructors/learners and the server where the videos are stored all requires software for their working. Captured lectures can be accessed using web browsers, video players or dedicated software programs designed specifically for viewing the lectures. [2] The software's used by viewers and presenters should be compatible with each other and also with the software on the server. The videos can be sent to the viewer's computer on-demand. Some of the advanced features supported by modern lecture recording software are instantaneous search, real-time video editing and annotation, along with other advanced features. [2]

3. Applications of Live Lecture Capture Solution

Teaching Learning process carried out by adopting live lecture capture solution helps in transmitting knowledge along with imparting skills. This can be adopted by students to access the lecture videos even outside the class to learn the topics taught by teachers.

We can have the application of live lecture capture solution in many innovative teaching methods such as flipped classroom and virtual classroom.

Flipped classroom

A flipped classroom is a kind of strategy which is all about blended learning that has some deviation from traditional learning environment. It is different from the traditional teaching-learning environment since it introduces the students to new instructional contents/topics beyond the classroom activities. While real time classroom is utilised to explore topics in greater depth and create meaningful learning opportunities. It changes the classroom as the hub of activities while it was given as homework in traditional Teaching-learning environment. In a flipped classroom, students can be educated through online lectures which also help in collaborating them in online discussions. This also encourages the students to carry out research at home with the help of concepts explained in classroom by their mentor.

In flipped classroom the teacher and student interaction can be more personalised and it shifts the teaching to a learner centric model.

Virtual Classroom

A virtual classroom can be defined as a digitized version of traditional classroom. In a virtual classroom the learners will have an opportunity to discuss presentations, work

together with their team, interact and communicate with each other via online. The virtual classroom is often conducted through video conferencing application where multiple users can be connected at the same time using the Internet. This allows the Teachers/students from virtually anywhere to participate. Students are not restricted to the courses accessible in their geography.

4. Benefits of live lecture capture solution

There are various benefits credited with the use of the live lecture capture solution approach to the students, teachers and also to the organisation.

For students

1. The accessibility of live lecture capture solution is highly benefitted for the students who would face difficulties in understanding the difficult concepts when thought only once and need repetition and who missed the class can access the topics covered by the faculties.
2. The lecture captures are a brilliant idea for students in distance learning programs where it focuses on personalised learning, re-live the classroom experience anytime, anywhere and at once own pace.
3. It is also helpful for part-time students and also helpful for the international students who do not reside at the place of the classroom.
4. Availability of various lecture contents (notes, videos, study materials, test etc.) at one place
5. It provides an effective platform to discuss and get their quires cleared. This in turn increases the students' performance.

For Teachers/Instructors

1. The Teachers/instructors can improve their teaching methods and skills by watching the recorded videos and asses oneself.
2. This helps the teachers/instructors to effectively deliver their course content and allows for easier overall course management.
3. It facilitates advanced teaching processes like Massive Open Online (MOOC), virtual and flipped classrooms.
4. The increased number of views of their videos will fetch them popularity and in turn encourages the teachers to put-on more efforts in their self-improvement.

For Organisation

1. Lecture capture solution results in enhanced students' performance which in turn enriches institutes brand image.
2. The overall teaching process of the organisation can be analysed, improved and fine-tuned based on the students' performances and usage of the lecture capture solution.
3. It's a Cost effective method to build a repository of recorded lectures/ presentations.
4. This helps to share the best practices of teaching with colleagues simply by recording the lessons.

5. Limitations of live lecture capture solution

The lecture capture solution model has its own consequences for both students and teachers as follows

1. Not every student is from a good economic background. Thus it is not possible to access electronic gadgets or digital learning technology outside of the school or college.
2. Most of students may not have the knowledge of operating with software.
3. The advantage of accessing of lecture capture solution may mislead the students in the negligence of not attending the class and missing topics thought by lecturers.
4. Accessing facility of videos by anyone may sometimes lead to criticizing of lecture styles and methods by viewers.
5. There is a fear of always being recorded, so the teachers may conclude up being very cautious and may not give their hundred percent to the teaching.

6. Conclusion

In today's generation innovative teaching learning method has become an advanced and essential platform to attract and benefit the interested learners. Live lecture capture solution is one which supports both teachers and learners in utilizing today's technology to enhance their teaching and learning methods. It's an alternative platform to publish the topics to students through videos. These videos can be accessed anywhere and anytime when it is required. This provides a flexible resource to help with their learning process and to deal with challenging demands.

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