INTEGRATING ONLINE MODES OF TEACHING AND LEARNING- STUDY OF DIFFERENT METHODS

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Introduction

The online mode of teaching and learning is a recent approach and has developed gradually in the last couple of decades in our education system. Here the students experience a new world of virtual lectures. The difference between online and classroom instruction goes beyond medium alone. How the teacher delivers information, interacts with students, and assess their learning is much different in a virtual learning environment. Online mode of education demands more independence; thus, students are able to learn at least some course material even when the teacher is unavailable.

The world is experiencing a new paradigm shift in the teaching and learning process since the break of pandemic. Online teaching has taken centre place around the globe. The use of online mode of education is catalysing a pedagogical shift in both the areas of teaching and learning. The whole picture has changed -there is a shift away from top-down lecturing method and passive students to a more interactive method. It is a new collaborative approach where both the students and the instructor, jointly co-create the learning process. The new slogan says that the instructor's role is changing from the "sage on the stage" to "the guide on the side."

Constructivism and Online Mode of Teaching - Relationship

The online mode of teaching is based on the work of Swiss philosopher, Jean Piaget who propagated the theory of Constructivism. Constructivism states that:

- The learner is a unique individual.
- There is significance of the learner's background and culture.
- Major responsibility of learning belongs to the student.
- Motivation for learning is derived from successful completion of challenging tasks.
- Instructors work as facilitators for the learners to develop their own understanding of content.
- Learning is an active process.
- There is a dynamic interaction between the task, the instructor and the learner.

Online Mode of Teaching – An Adaptation to Constructivism Theory

Online mode of education follows the theory of constructivism. The highlights of the adaptation to this theory are –

- Persons actively construct new knowledge as they interact with their environment.
- It is a student-centred approach where students "co-create" their online teaching and learning.
- This method empowers students as active learners instead of being just passive recipients i.e., absorbing information and reproducing it at the time of examination

Application of Constructivism Theory in Online Teaching and Learning

- Constructivism emphasizes that learning is particularly effective when constructing something for others to experience. It can be anything from a spoken sentence or any of the internet posting, to a more complex things like making a painting or a presentation e.g., you might read a page several times and still forget it the following day- but if you are made to explain these ideas to someone in your own words, or produce a slideshow that explain the concepts, you would gain a deeper understanding which is more integrated into your own ideas.
- As an instructor, your major focus is on the experiences that would best generate learning from the learner's point of view, instead of just posting and assessing the information you believe they should know.
- The role of each participant in online learning of a course, can and should be that of a teacher as well as a learner. The teacher's job changes from being the sole source of knowledge, to being a guide and a role model. The teacher connects with students in ways that address their own learning needs by moderating discussions and other online activities in ways that collectively leads students towards larger learning goals of the class.

Advantages Of Online Teaching and Learning

- Online distance learning meets the needs of a large number of students who cannot or prefer not to participate in traditional classroom settings e.g., those students who are unable to attend traditional classes, who cannot find a particular class at their chosen institution, who live in remote locations, who work full-time or those who simply prefer to learn independently.
- The requirement for students to participate in online course is - access to a computer, the Internet, and finally the motivation to succeed in a non-traditional classroom setting.
- Online mode of education provides an excellent method of course delivery unbound by time or location, allows accessibility to instruction any time and from anywhere. Online mode of teaching and learning is very convenient as it fits into the busy schedule of the students.
- The ability to access a course from any computer having Internet access, 24*7 is a tremendous incentive for many present-day students.
- Online education enhances learning. There is an increased depth of understanding and retention of course content; meaningful discussions; emphasis on various skills like writing skills, technology skills, and life skills that includes time management, independence, and self-discipline.
- Students can take more time to think and reflect before communicating. Shy students tend to thrive on the anonymity of the online environment.
- There is increased student-to-teacher and student-to-student interaction and discussion. It is a more student-centred learning environment - less passive listening and more active learning, a greater sense of connectedness, synergy.
- Online education is a very innovative teaching method. Reasons:
1. Student-centred approaches.
2. Increased variety and creativity of learning activities.
3. Address different learning styles of the students.
4. Changes and improvements can translate to on-ground courses as well.
5. Improved administration is observed. There is more time to examine the work of the student thoroughly.
6. Ability to document and record online interactions.
7. Ability to manage grading online.
8. Accommodates more students.
9. Increased student satisfaction = higher retention and fewer repeats.
10. Maximizes physical resources. There is less demand on limited campus infrastructure, decreases congestion on campus and parking lots.
11. It enhances the outreach of students.
12. Gives variety of options to students.
13. Reach new student markets.
14. Appeal to current students thus increasing enrolments.

Increasingly sophisticated online courses address to many of these differences. The teachers should know when to use the right tools, in the right circumstances.

Impact of Technology on Online Instruction

Teachers new to online teaching occasionally adopt a technology-first approach to instructional planning. It is advisable that online instructors prioritize learning objectives before using technology. The question should be - What do you want learners to have accomplished at the end of the course? For this you will have to choose the tools that provide the best opportunities to learn, practice, and socialize with the least amount of technical burden.

Once online instructors identify what they want to teach, and the methodology to be adopted, they can review the available online learning technologies available and identify those that complement their goals best. However, all online courses are not structured the same way: while some allow a great deal of scheduling flexibility, some others strive to recreate a more traditional campus-based online course environment. One must consider these factors when choosing instructional tools and methods.

Instructional Tools and Methods
Content Delivery

One of the unique features of online degree programs is that students do not necessarily have to report to regular class during scheduled sessions. Still there are some learners who prefer the traditional, interactive courses in the class that are simply more

accessible. Technology now allows colleges and universities to deliver courses in either format. The virtual tools can also help online schools recreate the campus-based learning experience online.

Synchronous Instruction

Synchronous instruction replicates live, traditional coursework in the best possible way as an online class can. The instructors adopt tools and online instructional methods that support real-time learning and discussions.

Benefits of Synchronous Instruction-
- The key element of education is intellectual engagement by students with faculty instructors, teaching assistants, and fellow students.
- The live sessions offer the opportunity for student mixing, and the additional perspectives of the larger, more diverse student body benefit all the students.

The key factor involved in teaching online courses is technology. Instructional methods depend both on and inform how, and when, content is delivered. Instructors teaching large classes may find tools that allow student audio to interrupt lectures very disruptive, those that integrate live, two-way video at-will find it impractical. Technologies that allow instructors to maintain control over audio and video while giving students a chance to ask questions and engage in discussion using live chat might offer a common ground.

Asynchronous discussion boards are, perhaps more structured means of addressing questions and discussions.   However, small classes can easily accommodate a live, two-way audio and video communication, which provides an even more personal, classroom-like learning experience.

Teachers teaching synchronous courses are not limited to just content delivery method but they can combine them with additional technologies to accommodate wider range of learners. The following tools support real-time communication:
- Streaming video platforms
- Live chats, individually or course-wide
- Web conferencing tools
- Telephone availability
- Virtual office hours

Each of these tools encourages live participation and interaction, though some online teachers also capture and upload lecture videos and chat transcripts for students who for some reason occasionally miss the class.

Asynchronous Instruction

Online courses that allow students to view lectures, access materials, and collaborate with teachers and peers according to their own schedule are called asynchronous courses. Lectures might be pre-recorded or may be presented on a program like Microsoft PowerPoint, perhaps with instructor voice-over. These delivery methods allow students to review and re-review lessons as and when necessary. These options are quite helpful for those students who cannot attend scheduled sessions, not eager to join live group projects or discussions, or want to work through the assignment according to their own pace.

Programs that use asynchronous content delivery methods require a different approach to teaching that depends heavily upon the technologies used. With synchronous instruction, a number of options like class size and instructor preferences influence which tools will be used. Many employ more than one technology, which include the following:
- Downloadable pre-recorded lectures
- Microsoft PowerPoint presentations with or without voice-over
- Forums and discussion boards
- Email communication
- Google Drive and similar collaborative tools
- Tools for off-hour support, like virtual tutoring centres and virtual resource centres

All these delivery formats allow instructors to overcome teaching challenges, while few programs adopt just one approach to teaching. The teachers can decide from a much larger instructional toolbox. Both the teachers and students benefit from knowing how various teaching methods work online, and in what circumstances.

Instructional Strategies for Online Courses

Online degree programs are designed to convey the same knowledge and skills as the traditional campus-based programs. Therefore, the instructors often adapt the same instructional methods to the online teaching environment. In certain cases, delivery is virtually the only notable difference; in some others, technology fundamentally changes or enriches the learning experience.

Lecture

Lecture is one of the most prevalent instructional strategies used in higher education both on campus and online. Just as they would in a classroom, many online teachers use lectures to transmit information, promote comprehension, and spark students' interests. Learning management systems typically allow instructors to record their lectures, deliver them live, or both. However, it is important to keep in mind that lectures place students in a passive role, which can negatively impact student engagement in the online learning environment. The online lectures are most beneficial when used in conjunction with more active instructional strategies.

Discussion

Whether used in conjunction with lectures or independently as a learning exercise, class discussion supports learning and actively engages online students in learning process. Learners have ample opportunities to ask questions and communicate their ideas while practicing analytical and cognitive skills. It is often found that many students feel more comfortable participating in discussions online than in the classroom.

The ability to participate in a 'safe' environment is one of the hallmarks of online learning. Not all students have the confidence (or language skills) to freely express themselves in traditional course setting.

Demonstrations

Teaching by demonstrating or showing is just as prevalent in online courses as in the traditional ones. Demonstrations are a mainstay when it comes to conveying certain concepts and the processes. They are among the instructional methods enhanced by virtual learning environment.

Simulations

Simulations delivered in realistic digital environment allows online students to test practical skills and knowledge remotely. Many colleges and universities sometimes use simulations to prepare online students for various fieldwork that are traditionally carried out in a face-to-face setting. These virtual experiences are applicable in many fields and disciplines.

Games

Same as simulations, games allow online students gain practical experiences in an accessible digital environment. They also increase student participation as learners find them more engaging and less stressful than simulations.

Case Studies

Case studies are another instructional method that place students in an active learning role while promoting research, problem-solving, and high-level cognitive skills. While being used in a collaborative way, these exercises give another opportunity for online students to connect and learn from one another. It can be helpful for instructors to give suggestions about good online resources that students can consult for information.

Problem-Based Learning Projects

Problem-based learning (PBL) encourages students to practice several of the same skills as case studies while actively solving problems. Projects are usually collaborative in nature. The teams of online students can use collaborative document programs like Google Drive to manage their work and share information. Small group chats and forums can also become a sounding board for theories and discussion among the learners. This work places instructors in an advisory role rather than in an authoritative position. An online resource called WebQuest allows instructors to find, create, and share the type of inquiry-based assignments used in PBL projects.

Guided Design

The Guided design is an inquiry-based instructional method that encourages students studying online to familiarize themselves with resources available in their local communities. In guided design, the learners are tasked with solving open-ended problems. Unlike most of the PBL projects, this technique requires students to complete some assignment outside of class. Guided design emphasizes independent research thereby making it ideal for teaching students in a self-directed online degree programs.

Assessing the Effectiveness of Online Instruction

- Initially, teaching online courses requires a period of adjustment. The instructors must be able to assess how well an instructional method is working and thereafter adapt accordingly.
- The teachers teaching classroom-based courses can evaluate their instructional success through testing, students' questions, and visual feedback during lectures. Online instructors can evaluate their teaching methods through regular assessments and student communications. Though the data-driven nature of online technology offers a less subjective measurement of success.
- Learning management systems can monitor progress and behaviours of each individual student, and then compile them for the instructor review.
- The data, called learning analytics, informs the teacher about how often students are logging in, how much time they spend on each task, and how well they master the material. Such tracking can be very valuable.
- Learning analytics help instructors to quickly identify areas of concern at any point of time so that they can adjust the teaching methods, course materials, or objectives accordingly.
- Teachers new to online instruction and teaching, who would benefit from guidance in this area—or online instruction in general—should not hesitate to find the required support.

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