Online and offline transaction of curriculum

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1. Introduction

Curriculum is a systematic and intended packaging of competencies (i.e. knowledge, skills and attitudes) that learners should acquire through organized learning experiences both in online or offline mode of learning. Curriculum transaction is the process of planning, implementation and monitoring the implementation of the curriculum. The transaction of the curriculum based on the aims and the objectives of the curriculum, assessment system and development of the students.

The main responsibility of the curriculum transaction lies on the teachers and trainers who may use different types of pedagogies to offer an effective transaction. Curriculum is implemented by teachers and depends on the quality of teaching and learning strategies, learning materials and assessment.

Major emphasis should be given on effective transaction of curriculum in any educational program. The effectiveness of the curriculum transaction is determined by the factors learning experience and the usage of available resources. Creation of the lesson plan, organizing the instructional material/aids, implementation, monitoring, and reviewing are the elements involved in providing effective learning experience to the learner.

With availability of software tools and technologies within affordable cost, online teaching and learning become part of curriculum transaction. As a result, there are three different modes of teaching and learning namely online, offline, and blended learning emerged. Teachers need to learn these new tools and technologies to be a competent teacher. Let us discuss the elements of curriculum transaction on the base of online and offline teaching mode.

2. Elements of Curriculum Transaction

2.1. Lesson Plan

A well-designed lesson plan helps promote student learning, retention, and engagement. There is a little more effort and thought process is needed when preparing lesson plan for online classes than offline classes.

Good lesson plans typically have:

- One main objective

- Key vocabularies

- Clear demarcation of what to be taught in online sessions and what to be available for self-learning

- Visual and audio elements for self-learning and to enhance understanding

- Exploring activities and assessment strategies

- Plenty of opportunities to practice

2.2. Instructional Material

Retaining the attention of the students in a face-to-face class is hard enough. It is even harder when there is online teaching, even though the students are appearing through video camera. It depends on how the teacher organizes the instructional material/content/teaching aid and how well it is presented. Here the visual presentation of the content helps much on online teaching. And it is evident that some forms of the visual presentation are helpful even on offline teaching.

Research has shown that humans tend to remember 80% of what they see while only 20% of what they read and 10% of what they hear. A few ways teachers can incorporate visuals into the online lessons include:

- Replacing written instructions with videos. Teachers may be able to find a relevant free video that already exists on the internet sources such as YouTube, Google Videos, National Geographic Education, History etc.

- Graphic organizers are another great way to both simplify a complex concept and grab the students' attention during the lesson.

- Use an online whiteboard like a teacher rely on whiteboard/ blackboard for offline.

- Presentations are great visual tools for engaging students in offline class as well as online. While a teacher can explain an entire lesson using a presentation, she can also use it to assist highlight important facts, during online lecture.

- Make use of visual props during an online lecture. Props can vary from flashcards to real-life items that you can find in your home.

While visuals help to retain the attention, segmented lesson plan helps to engage the students effectively. Using appropriate and variety of teaching techniques such as Flipped classroom, Inquiry based learning and Game based learning help to engage the students.

2.3. Planning for Activities

Another challenge for the teachers transacting online curriculum is planning and defining activities when they are not with them. There is a misunderstanding that activities can't be offered while in online learning.

Activities can be split as guided activities and do-it-yourself activities. While teachers conduct guided activities during online video conferencing sessions (or in classroom sessions), incorporating offline activities as part of lesson plan helps making students focused and collaborative. This is especially important for science and math lessons. Such offline activities also give break from screen time. Real world exploration, Group assignments, Interviews, work assignments, journal creations are examples for do-it-yourself activities for both online and offline teaching.

2.4. Teaching Techniques

Most of the traditional methods used in face-to-face classrooms can be applied equally efficiently online. Lecturing, few of the teacher-centric teaching methods call still be effectively used on online live classes.

When delivering the classes over video conferencing (ex: Zoom, Teams) presentations are more effective. Microsoft PowerPoint, Google Slides, SlideShare, Prezi are some of the popular tools to create such effective presentations.

Online whiteboards help to virtually emulate the in-person classroom experience shared between teachers and students. Teachers can collaborate with students on the same whiteboards in real-time which paves the way to brainstorm, mind mapping, do interactive exercises etc.

Using pre-recorded lectures allows the students to learn at their own pace at any time without the presence of the teacher. It also gives them material to go over during revision.

The flipped classroom entails a strategy opposite to the traditional class format, which is good candidate for online teaching. In Flipped classroom the students are required to review class material prior to the actual lesson, hence reserving actual in-class time to put what they have learned into test with teacher-guided activities such as debates, problem-solving, in-depth discussions, quizzes, etc. Videos and visual materials are core element in flipped classroom model.

Game-based learning is a popular technique used to improve student engagement and retain attention. And in online teaching, games help close the gaps in the interaction between face-to-face learning and online learning.

The teacher can use the blog as a platform to share learning material for the lessons. A blog can be a great place for students to share what they have learned in the form of in-depth articles. Students can work on blog posts individually or in groups. It's a great strategy to improve students' research skills and encourage them to explore self-learning.

Live chatting helps to replicate the real-time discussions that take place in the classroom. Live chatting allows students and teachers to communicate and brainstorm around lessons. It is important to set clear guidelines to ensure that all students get an equal chance to communicate their ideas and pose their questions.

Discussion Boards and Forums provide students the space to share what they have learned or what they want to know more about with others in the classroom. Different discussion boards can be maintained for individual lesson topics, so it'll be more organized.

2.5. Assessment Process

Assessments help students gear up for success by challenging them to reflect, interact, and apply their knowledge to answer questions, solve problems, and communicate information. Whether it is formative or summative, assessments are more than just grades.

While pen and paper tests help to certain extend, new technologies are evolving to assist teachers with this task.

When traditional quizzes are paired with technology, they are an excellent way to measure student learning. One benefit of online quizzes is that question order and options can be randomized, so each student's quiz is unique.

Essay-type questions encourages critical thinking and is best suited for evaluating higher-level learning. It is well suitable for both online and offline assessment, where the teachers need to assess either it paper and pen or in online tool.

Game-based assessments in online mode (some in offline too) help to engage and challenge the students in a non-traditional way. For example, crossword helps to assess students' vocabulary skills and sudoku helps to assess the logical thinking.

Discussion threads, seminars, blogs are also effective online tools to be used for assessment.

There are variety of tools available in the market to enable online assessment such as Mellifera, Google Form, Socrative, Spiral and many more. With these tools and technologies students' strength, weakness and competencies are well measured and used for subsequent learning enhancements.

3. Challenges and Opportunities

While teachers and students are familiar with traditional classroom model, new skills and capabilities are needed for effective online teaching and learning to happen.

Digital competence is needed when performing online teaching and learning for both teachers and students. Students and teachers with low digital competence are liable to lack behind in online learning. Educating on the digital competence will help to improve the situation.

Ensuring student's participation is another challenge. Teachers can ask the students to share their notes after every class may help to ensure the students effective participation. Equipping students with mind mapping, notes taking techniques will help them to note down and recall the lessons later.

Learning languages and social studies through online mode is proven effective. But it is bit challenge to learn science, engineering, and mathematics, where hands-on practical experiences are required. Remote laboratories are used as alternative laboratories in online learning and such virtual laboratories can only fill the theory-to-practice hole.

Assessments when carried online whereby instructors are limited to supervision making it impossible to regulate and control cheating. Though keeping the video camera ON while writing tests help significantly, still it is not guaranteed control cheating.

The quick and sudden push to transact the curriculum in online mode has huge workload on teachers to transform their lesson content into digital content (be it presentations or videos). While some institutes have engaged separate team to create digital content still there is a significant workload for teachers.

Despite the challenges, transacting curriculum in online mode has advantages such as self-pacing, flexibility and outcome based personalized learning. This bring opportunity to plan for blended learning model, where online learning and classroom learning are mixed as part of the curriculum plan.

4. Conclusion

It is evident that internet tools and technologies has played a major role to reduce the effect of this pandemic on educational activities. The online learning research and solutions has been started decades ago; it is emerged only because of this pandemic situation. The institutes migrated to online education without proper planning, design, and development due to the pandemic.

Rather than using the technologies as just remote teaching solutions, institutions should start researching to use these technologies as part of their day-to-day teaching-learning process to achieve the best learning experience. The effectiveness of the curriculum transaction is determined by the learning experience than the mode whether it is online or offline.

With emerging technologies and different learning needs efforts need to be taken to redesign the learning process. More research is to be done on this regard. This research should focus more on transforming learning process to blended (aka hybrid) model, to redesign of learning model, to reduce the workload of the instructors, and to design more outcome based personalised learning model.

There is a need for Schools/Institutes to work closer and share the findings and best practices to promote collaborative effort. While the technologies are advancing over the period, educators need to gear the actions toward the development of effective online/hybrid teaching learning model.

Despite the sudden migration to online learning during this pandemic, it is evident that online learning will be sustained, and learning will become more hybrid. As the world started accepting online teaching and learning, integrating online learning as part of regular schooling is inevitable.