

# MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES

(Deemed to be University under section 3 of the UGC Act, 1956)

## Methodology to train the faculty to effectively Design Develop and Deliver Massive Open Online Courses (MOOCs)

MOOCs: Massive Open Online Courses (MOOCs) are such online courses which are developed as per the pedagogy stated herein and following the four quadrant approach consisting of video, text, self assessment and learn more.

- Quadrant I : Shall be e-tutorial, audio/video content/animations/virtual Labs etc.  
Quadrant II: Shall contain self learning material,e-books, illustrations, case studies, presentations etc.  
Quadrant III: Including discussion forum & real time doubt sessions.  
Quadrant IV: Includes various assessments such as multiple choice Questions, fill in the blanks, short & long questions etc.

### Identified Platforms for MOOCs

Following platforms have been identified for the students to enroll for the courses under MOOCs category.

- Courses offered by Govt. of India supported through SWAYAM/NPTEL
- Courses offered by Govt. of India supported through Indian Institute of Remote Sensing / ISRO
- Recognized courses offered by MHRD supported Spoken-tutorial project from IIT-Bombay
- Recognized courses offered by Coursera/Udemy/edX

Frequent webinars/workshops are conducted to train faculty to design ,develop and deliver online courses. Guidelines are framed to design e-content more effective, ensuring quality sound, video, use of graphics, animation, plagiarism check, use of different assessment tools etc are explained to faculty.

### **SOPs for E-Content, Videos and Online Assessments**

Online mode of learning refers to several synchronous and asynchronous learning activities such as:

- Accessing e-Resources, mainly in the form of Open Educational Resources (consisting formats such as text, graphics, animations, simulations, gaming, interactive multimedia, etc.) uploaded on LMS by the course coordinator
- Accessing links, e-Resources, digital libraries suggested by the faculty as well as explored individually or in groups
- Studying E-Content etc. by the learner as per guidelines by the course coordinator
- Attending online virtual sessions of the instructor or by industry expert
- Performing individual or group activities using any ICT tool or platform on LMS
- Participating in the workshops/webinars as per suggested by the instructor related to the curriculum
- Completing assignments and uploading on LMS / submitting to the instructor using other ICT platforms
- Attempting tests/quizzes/other assessment tools
- Engaging in webinars, counselling sessions, online short term training programs, etc.

- Engaging in online internships/ projects, etc.
- Engaging in any activity directly related to the course curriculum for which learner needs to use digital devices and internet connectivity

### SOPs for E-Content

- Use a font no smaller than 24point. 24 point is good for text and 30 is recommended
- Use a sans serif font like Arial, Calibri, orTrebuchet.
- AvoidComicSansandotherhandwriting-style fonts.
- Limit text to no more than 7lines.
- Keep text leftjustified.
- Avoid too many capitalized words
- Avoid using complicated and ornamental format
- Avoid many italics
- For every one-two minute one slide
  - 4-5 bullet points per slides
  - 4-5 key words per points
  - Avoid reading your slide
- Plan the color scheme for the whole presentation before choosing colors for individual elements. Limit color regions on any one slide to maximum of four. If the text color is white/pale, background should be dark. If text color is black/blue choose a light background.
- Also consider the psychological effects of color like bright color denotes energy while white is more cheerful than black. When choosing colors, one must consider the type of output.

### How to emphasize the key words

- Animate a Filled rectangle behind the key words
- Make the letters **bold**
- Use colour for emphasis
- Use illumination effect
- Color is used for highlighting key messages like providing learning cues, emphasizing relationships, discriminating between objects and for arousing interest.
- Avoid using red and green together
- Avoid using dark red shades and black
- Avoid excessive animation
- A simple fade is good

## Make your slides effective

- Be **consistent** in your slidelayout.
- Use a standard PowerPoint templatelayout.
- Show the Content Visually
- Use text to **highlight important terms**only.
- Include images, diagrams, illustrations, etc. to **display concepts**.
- Use **animations that show**functions and connections.
- Use number list only for points with logical sequence
- Use bullets for lists of information
- Add summary
- Concluding slide
- Ask question
- Add reference slide

## Avoid Distractions

- **One larger image** is better than several smallimages.
- Use decorative images sparingly and avoid **duplicative images**
- Avoid **animations that distract** from the content.
- Avoid using different colours for each point in a slide
- Avoid using many colours for decorating a slide

## Slide Narration

- Asking students to read and listen simultaneously splits their Attention and **reduces comprehension** and **retention**.
- Make narration clear
- Start with a **script**.
- A script keeps you on track, reduces awkward pauses, and provides a good basis for closed captioning.
- Practice your presentation.
- Practice improves delivery and tells you how long your presentation will take.

## Graphics

- Use standard graphics file types i.e. jpg, gif, tif, bmp, wmf.
- Avoid text over graphics
- Axis text should be legible

## Using graphs

- Graph should be readable.
- Avoid graphs with 3D bars

## Background

- Avoid text on background picture
- Avoid shading background
- Use a background to focus your audience's attention on the presentation material.
- Make fancy by using soft view of picture as background

## SOPs for Video Recording

- Explicitly situate the lecture content

## Planning

- Have a clear plan of what students should get out of each video lecture
- Segment videos into the smallest logical unit (4-9 minutes)
- Write 1-2 learning outcomes for each video lecture

Give more examples. Try to add visuals or videos of examples.

## Video content

- Use technology to support learning and engagement
- Add in-video quiz questions to video lecture.
- Give videos explicit, descriptive and inviting titles. Promote easy review. The title should explicitly state what learners will see.
- Don't read slides
- Allow learners to test their understanding at the end of the video
- Use a combination of visual images and keywords on slides
- Use a poll question to allow the class to share their views or experiences with each other. Include a poll question that leads into a topic on which you are about to lecture
- Present 1-2 learning outcomes at the beginning of a video lecture. Create in-video quiz questions at the end of a video lecture to let learners test their understanding
- Ask a question which engages learners in recalling things they already know that are relevant to what will next be taught.
- Ask learners the next step in a problem solving process, before showing it Ask learners to predict something about to be drawn about to be pointed to in a figure/graph Ask learners to identify an error in a solution, before it is pointed out and corrected. Create a welcome video for the course
- Create an introductory video for each module or section
- Speak more directly to learners Use first person words like "you" and "I" (rather than third person, "one would") to help learners develop more of a sense of personal connection.
- Stand up, or otherwise replicate common lecture hall physical behavior. Put up pictures of students or mentally imagine a common lecture space before recording each video.
- Practice any dynamic writing and plan use of space

## Some Important Points

- Build in extra materials to address anticipated learner confusion
- Print out all course assessments and learning outcomes. Use the list to drive video lecture content
- Create a set of videos based on common learner questions
- Create a set of videos with quick reviews of background content in which learners may be weak.
- Aligning with your video or narration
- Align animation effect with narration.
- Add video wherever you want to show process, incident, and description
- Develop an appropriate visual story board.
- After preparing the outline, one must review for certain points like appropriate theme, text include illustrations, type of multimedia, incorporation of video and sound.
- Use sound and video only for educational purposes and not for distraction. When designing the outline, wherever possible, provide the students with effective learning cues. Consistent use of one color or icon can cue the student to a main point or essential 'action'.
- Use verbal explanation with effective visual cues
- Look for different ways to provide relevant and best 'Learning Cues' in your presentation.

## SOPs for Online Assessments

The new paradigm of student-centered learning and teaching requires a change in teaching methods as well as in assessment methods, because assessment directs learning. Assessment results are typically used to identify areas for improvement and ensure that course content meets learning outcomes. When meaningful and well-constructed, they help students gear up for success by challenging them to reflect, interact, and apply their knowledge to answer questions, solve problems, and communicate information.

There are a number of practices we can use to evaluate students mindfully. The best method will vary based on learning needs and objectives.

### 1. Online Quizzes

- i. Online quizzes are ideal for measuring learning results across a wide audience. The online quiz can be graded as well as non-graded. A non-graded online quiz can be given prior to the start of a lesson to gain a baseline measurement of a student's existing knowledge. A graded online quiz can be given at the end of the course to evaluate students' overall performance. Quizzes can be easily created using an eLearning platforms like <https://www.ispringsolutions.com>, <https://www.woobox.com>, <https://www.thinkexam.com>, etc.
  - a. Quiz questions can take a number of forms, such as multiple-choice, fill-in-the-blanks, true/false, check errors etc. They are short and easy to assess.
  - b. Question order and options can be randomized, so each student's quiz is unique.

## 2. Online Polls

Specialized online platforms like <https://www.surveymonkey.com>, <https://www.woobox.com>, <https://www.surveyparrot.com>, etc. that allow us to create, send, and analyze surveys.

### Benefits-

1. It can be used to measure anything from learning satisfaction to why a student made a particular choice.
2. Online surveys are highly engaging for learners because they allow them to share their opinions, make themselves heard, and are quick to complete.
3. Poll questions can be used when we want to quickly grab and focus our learners' attention on something important.

## 3. Peer Evaluation and Review

Peer evaluation turns the tables to put learners into the instructor's seat and allow students to review and edit each other's work. Platforms, such as TurnItIn's Feedback Studio, enable students to read, review, and evaluate one or more papers submitted by their classmates.

### Benefits-

- i. Such activities give each participant a chance to reflect on their knowledge and then communicate their feedback in a consistent and structured way.
- ii. It enables the students to read, review, and evaluate one or more papers submitted by their classmates using rubrics or prescribed assessment questions.
- iii. Teachers are able to log in and track individual participation in the activity and monitor comments or peer evaluation feedback. The instructor should clearly explain the steps of a peer review and evaluation process prior to launch.
- iv. The instructor should also provide a rubric or set of guidelines for each participant to follow to ensure that evaluations are conducted in a consistent manner.

### Forum Posts

A forum is an online discussion board organized around a topic. There are many forum submission websites like

<https://www.letsdiskuss.com>,

<http://forum.submitexpress.com>,

<http://www.ninjafortress.com/forums>,

<http://www.firststrikepro.com/forums>,

<http://kerygmfamily.com/forum>,

<http://www.scionxdforum.com/forum>,

<http://www.mmselfmade.com/forum>,

<http://866mymajor.com/forum>.

## **Benefits:**

- i. Contribution of the students to a forum post is an excellent way to gauge their understanding, identify their interest, and support their learning.
- ii. Students are given a critical thinking question based on a lesson or a reading, and are asked to reflect on both.
- iii. The answers are posted to a forum and their peers are given the chance to respond.
- iv. It enables the learners to interact, communicate, and collaborate as part of the learning process, while checking their comprehension of the topic.
- v. Participation goals and guidelines can be set to explain acceptable standards for posting.
- vi. The teacher can review postings on a regular basis and provide constructive feedback or guidance to participants.

## **Dialogue Simulations**

A dialogue simulation is a way to train learners for real-life conversations with customers, colleagues, and others. When creating a conversation activity based on a situation that a student may face on the job, let them know what to expect and provide a safe place to practice their reactions and responses.

There are some specific tools like [iSpringTalkMaster](#) to map out the scenario you want to create. Think over the scenario and script, choose a suitable character and location from the built-in library and create a dialogue. There are some specific tools like [iSpringTalkMaster](#) that allow you to design a conversation.

### **Benefits -**

- i. The students will know how well they are prepared for a job interview.
- ii. These activities can also be a good learning support tool for experienced workers who want to refresh skills they haven't used in a while.
- iii. Allow us to design a conversation quickly and easily.
- iv. Students will get points for correct answers and lose points for inaccurate ones.

## **Problem-Solving Case Studies**

It is an ideal assessment tool and practice for learners as they help bridge the gap between theory and practice. In this real-life situations can be easily converted into learning activities in a course. First, outline a problem or a real-world situation. Then, remove the ending. Now, ask online learners to think of different solutions. Make them explain why they chose a specific solution and how they could have chosen alternate paths to establish the same ending. Many websites offer the case studies like <https://case-solvers.com>, [https://cals.arizona.edu/classes/aed460/problem\\_solving\\_&\\_case\\_studies.htm](https://cals.arizona.edu/classes/aed460/problem_solving_&_case_studies.htm), etc.

### **Benefits -**

- i. Involves analysing a real life instance of an event to gain greater insight into what could be done in future occurrences.
- ii. Its natural impulse for anyone to solve problems and provide solutions to situations in everyday occurrence.
- iii. Engaging your audience in this fashion and allowing them to interact in the lesson provides a highly personalized learning experience and encourages a student's retention levels.

## **General Guidelines for Assessment**

1. Use more formative assessments that are designed to get students to work together and use online resources.
2. Use plagiarism checkers whenever students submit individual work
3. Interview students about their work using a synchronous chat with audio or video feeds, if possible
4. Check login time, collaboration data, and submission types to see how often and long students are involved with assignments. Very short assignment involvement times may indicate students are submitting unauthenticated work.

## **Recommended types of assessment which should be used by online teacher**

### **i. Summative assessment**

“When information about student learning is gathered and analyzed at the conclusion of a course in order to determine whether students have achieved identified goals, it is called Summative assessment”. Summative assessments typically result in a score or grade and are thus evaluative. e.g. A culminating project, final exam, performance task, or test.

### **ii. Diagnostic assessment**

“Diagnostic assessment should be used to gather information about students’ prior knowledge and to identify misconceptions. It precedes instruction and should not be graded”.

Diagnostic assessment can be done using knowledge probe, 1-2 open ended questions, 3-4 MCQ, 1-2 short answers, knowledge survey, focus listing, misconception check

### **iii. Formative assessment**

“Assessment is formative when it gathers information in an ongoing manner throughout a course. That information is then used to guide teaching and to improve learning and performance”. In an online setting, formative evaluation can be done through Quiz, Poll, Survey, Minute paper, The muddiest point, One sentence summary, Student generated questions and answers, Electronic feedback, Mind mapping, Games etc.

### **iv. Assessment as learning**

Assessment as learning is to use assessment to facilitate learning. This involves giving students an assessment task which will require them to go through an authentic experience or perform an activity, and thereafter submit a report. For example, students could be given interesting and goal directed assignment which require to interact with certain subjects, read about the topic, and compile their findings and submit their learning in the form of a report. This kind of assessment erases the artificial divide between learning and assessment. This also promotes self-directed learning.

## **Following are the strategies and methods through which assessment can be integrated:**

- Multiple choice questions and its variants
- Short answer questions
- Online polls
- Picture based questions based on audiovisual clues
- Objective structured video examination (OSVE)
- Survey



- Concept maps & mind maps
- Projects
- Reflections
- E- Portfolios
- Problem solving
- Case studies
- Research projects
- Presentations
- Discussion forum
- Performance task
- Presentation report
- Situation analysis
- Reflective writing
- Digital poster
- Blogging
- Videos
- Podcasting

### **Points to be incorporated**

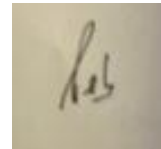
- Evidences of learning are manifested in the form of Videos, PPTs, Answer sheet, Reports, Pics, Certificates, Experiences, Reflections, Blog and Essay etc.
- Ask Higher order questions from BTL
- Ask integrated questions
- Use rubrics

### **Feedback**

Teacher should use audio, video and graphic mode to give feedback along with written feedback. In student centered education, students should be involved in the process of assessment. The peer feedback also should be given due weightage in the process.

## SOPs on preparing Learning Outcome (LOs) and Program Outcome (POs) for online courses

- LOs and POs are expected to be aligned closely with Graduate Attributes (GAs).
- LOs and POs should describe knowledge, skills and behavior of students as they progress through the program as well as by the time of graduation.
- LOs and POs must assert the skill development perception to analyses the problem and design the solutions
- LOs and POs must be designed to assess societal, health, safety, legal and cultural issues
- LOs and POs should designate ethical principles and commit to professional ethics and responsibilities.
- LOs and POs should describe effective individual learning and team work approach.
- LOs and POs should emphasis on communication skills for effective presentation and clear instructions.
- LOs and POs must comprise management principles for applicability.
- LOs and POs should stress on the concept of lifelong learning.



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