Open Education Resource: Flipping the Classroom with MOODLE

Work done as part of FDP201x – 2018
"Pedagogy for Online and Blended Teaching-Learning Process"

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Topic: Education Technology

Team ID: 1173_011

Team Members:

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RC: Thiagarajar College of Engg., Madurai, Tamilnadu.

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OPEN EDUCATION RESOURCES (OER)

Flipping the classroom with MOODLE

1.0 Introduction:

Open educational resources are educational materials and resources offered freely and openly for anyone and available under a license that allows users to use, remix, improve and redistribute. Sharing ideas and resources and collaborating on projects as part of a community is key to the Open Education movement.

Learning Management systems like Moodle, Canvas, Gnomio, Wikispace Google class room ets are open educational resources, Using the above mentioned LMS, active learning strategies such as Flipped Class room, Quiz, TPS (Think pare share) Peer Instructions etc, can be carried out during the class hours. This document elaborates the procedure to develop a flipped class room with an example course Education Technology.

About the OER

The open education resource is a digitization of Teaching Learning Content. The students and peers can utilize this content, review and suggest through the forum and feedback forms.

Open Educational Resources are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and repurposing by others. OER include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge. ”This OER reveals about flipping classroom in the topic : “**EDUCATION TECHNILOGY**”

Topics Dealt in OER:

- Introduction to Education Technology

- Teaching Learning Centre and its Benefits
- Learning Management Systems and its Benefits
- Moodle

The following activities are planned and carried out :

- Videos using Screencast-O-Matic for out-of-class activities,
- Concept test using quiz,
- power point presentations as resources,
- LxT as an external resources
- LeD activities using quiz
- Discussion forum and survey questions.

✓ OER can be downloaded from https://kameshwarit.wordpress.com/

✓ **Target audience:** Sixth Semester- B.E - Undergraduate of CSE/IT.

✓ **Tags: Flipped Class room, MOODLE, Education Technology, Teaching Learning Centre, Learning Management, Moodle**

✓ OER has developed in MOODLE 3.4

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1.2 Learning Objectives

After using this OER, learner will be able to:

- Understand the origin of education technology-**Understand**
- Know about the difference between education technology and technology in education-**Understand**
- Know about the functions of education technology-**Understand**

- list down the domain of education technology-**Remember**
- understand major professional organizations and journals-**Understand**
- Create subject-based network of academicians willing to cooperate in searching and sharing of knowledge related to teaching & learning.-**Create**
- Stand by in Hi-Quality Research & Technology-**Understand**
- Promote Indian economy through World Class Education-**Apply**
- Know about Teaching Learning Centre in India-**Apply**
- Highlight the importance of LMS-**Understand**
- Identify the best practices of Moodle Activity-**Apply**

1.3 Tools Used for developing FC

1.3.1. For design and development of various topics and its activities in MOODLE (an Open Source Tool)

1.3.2. For video lecture preparation, use of Screencast-O-Matic (demo version)

1.3.3. For PPT, report preparation, use of MS office .

Section 2: Design Decisions

2.1 Types of Decisions taken

While creating the OER, three are three basic categories with respect to design decisions. They are given below:

1. Content Decisions
2. Pedagogic Decisions
3. Technology Decisions

2.1.1. Content Decisions

The content decisions are based on the following things.

- This team constitutes faculty from Mathematics, Chemistry & English.

- Common topic as **" Educational Technology** " is selected for OER activity.
- Different sub-topics have been identified by the committee as Teaching Learning Centre, Learning Management Systems, Moodle. The relevant resource papers, ppt, animation videos, technical videos, self developed videos using Screencast o matic are shared to learn the content of the topics.

2.1.2. Pedagogic Decisions

- Introduction and importance about " Education Technology " are taught inside the class room using PPT and black board in an interaction manner.
- Contents regarding " Education Technology" for flipped class room have been given to the target audience as videos, PPt, LxT, Quiz, Discussions, Google Forms .
- Clarifications will be done inside the class room.
  - **a.** Cognitive Levels of Questions to be asked along with the resources – mostly recall to apply level question for out of class and analyze level question for in class activity
  - **b.** Assessment Strategies – Multiple choice questions and Summary questions for out of class, Think –Pair-Share strategy for in-class

Technology Decisions :

While developing the out-of-class and In-class activities, the major technology decisions taken were:

a. **MOODLE** Lesson Plan Activities are used for out-classctivity

b. **Word Press** for disseminating content plans and ideas.

c. **GOOGLE Forms** are used for collecting surveys and content assessment from customers and students.

Section 3: OER Description

Active OER

For checking the active OER, you may access the Guest Course – "OER_Education Technology " in the Moodle Cloud

https://kamesh.gnomio.com/

https://kamesh.gnomio.com/course/view.php?id=4

id-admin

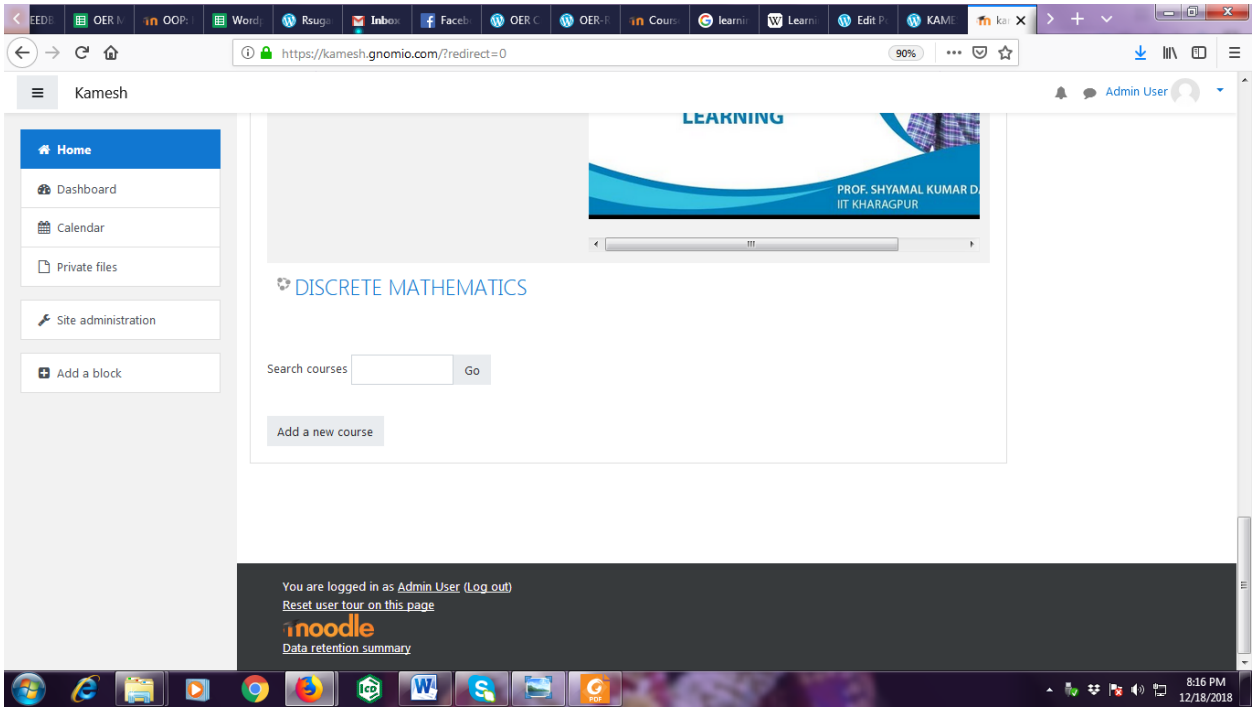
password-oi3Meeza

The guest password required for exploring the activity is**: self-enrollment available**

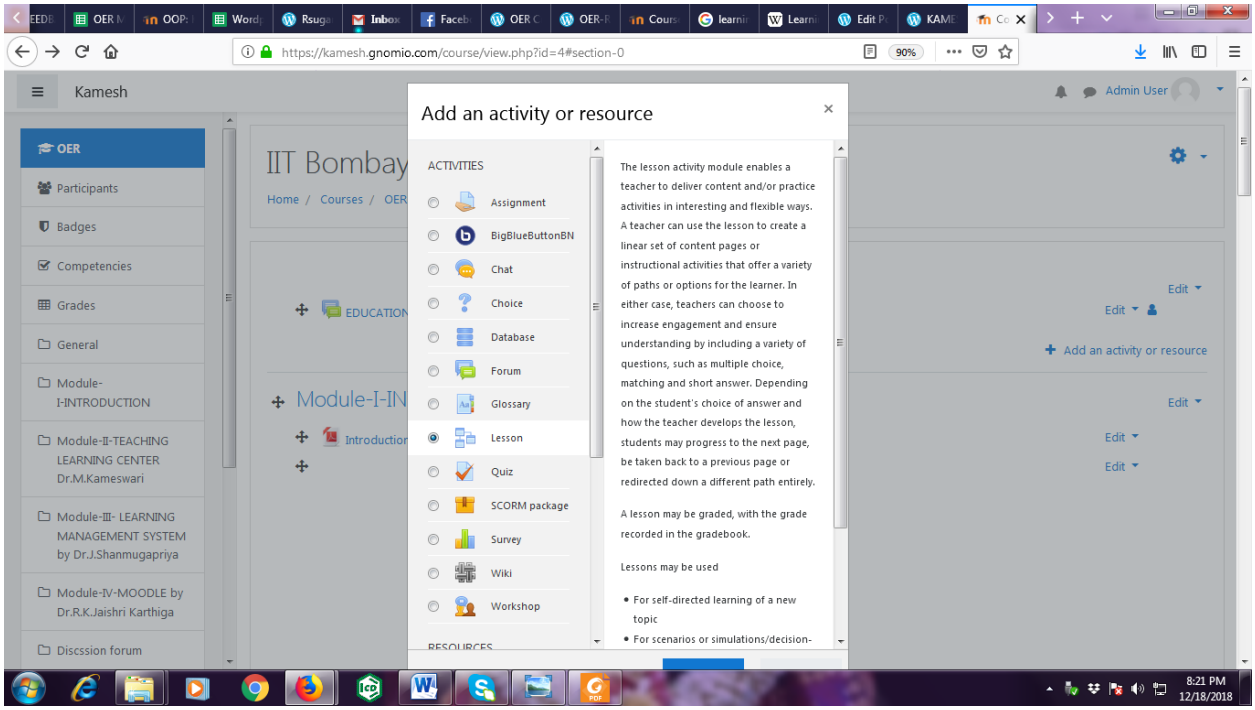
Lesson Settings

Screenshots 1-3 shows the general settings of a Lesson. This is same for all the lessons. If there are variations, then they are duly noted under each description.

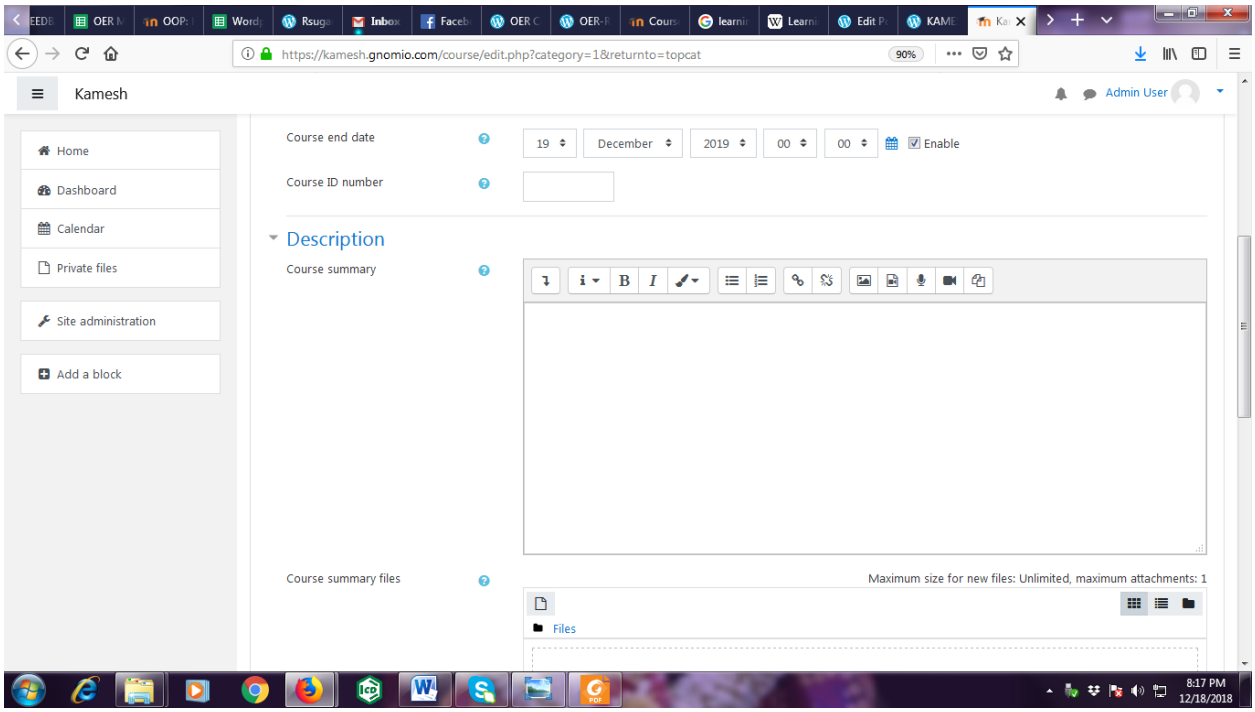
Screenshot-1-Addition of Lesson



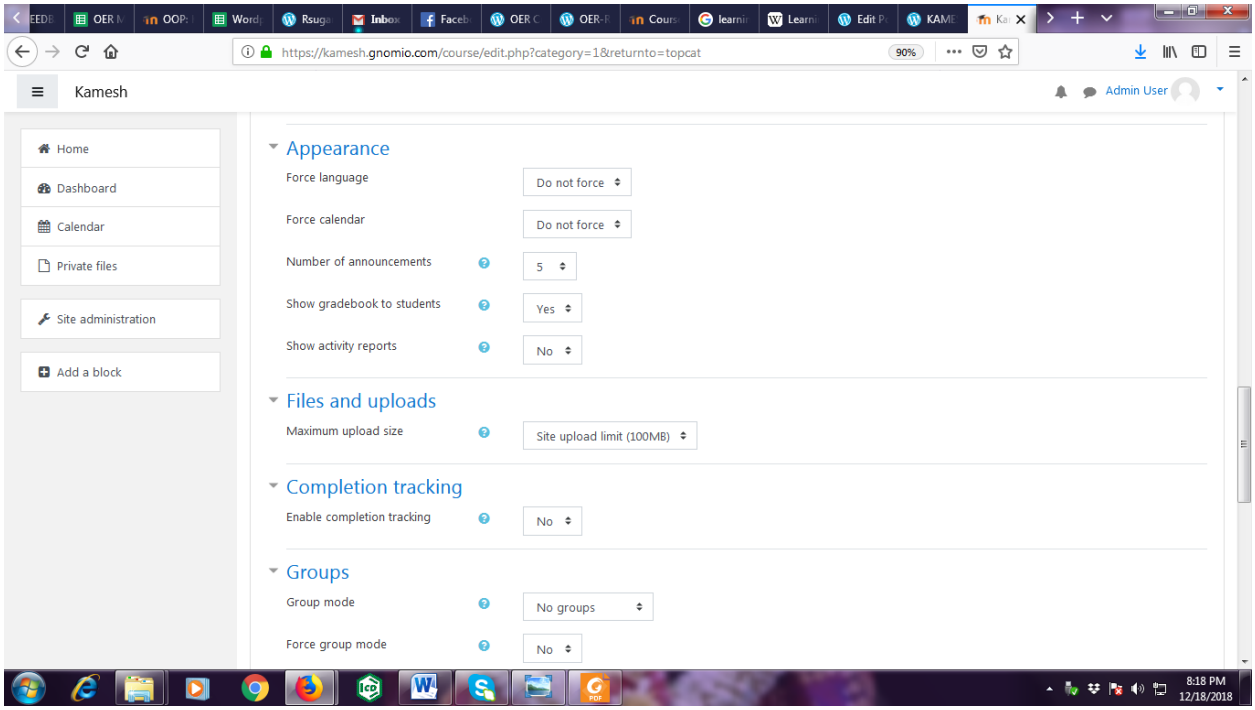
Screenshot-2-Addition of Lesson



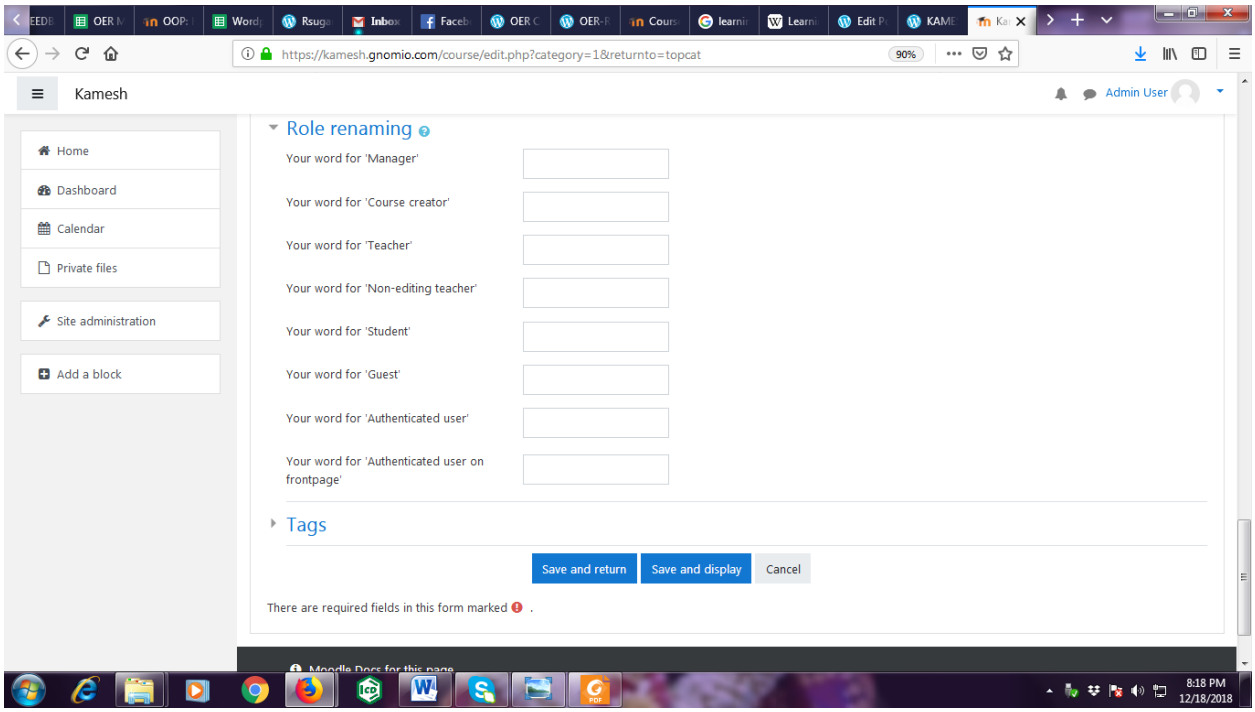
Screenshot-3-Addition of Lesson description



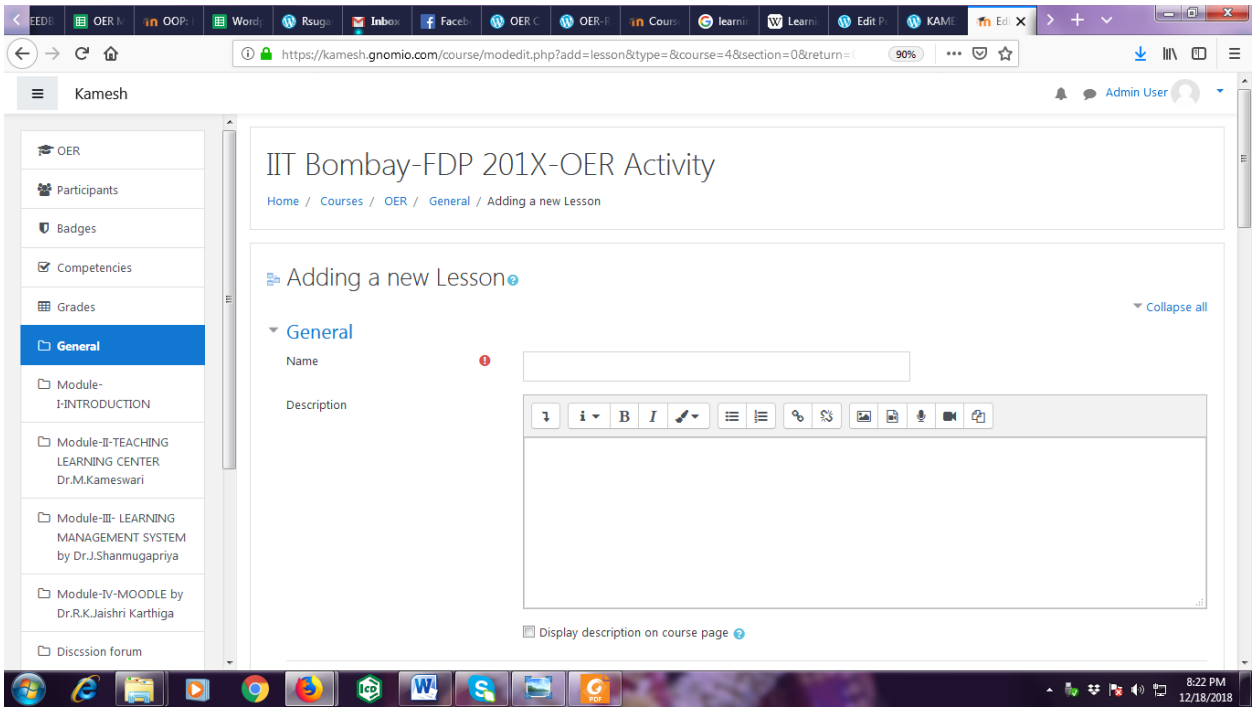
Screenshot-4-Addition of Lesson description



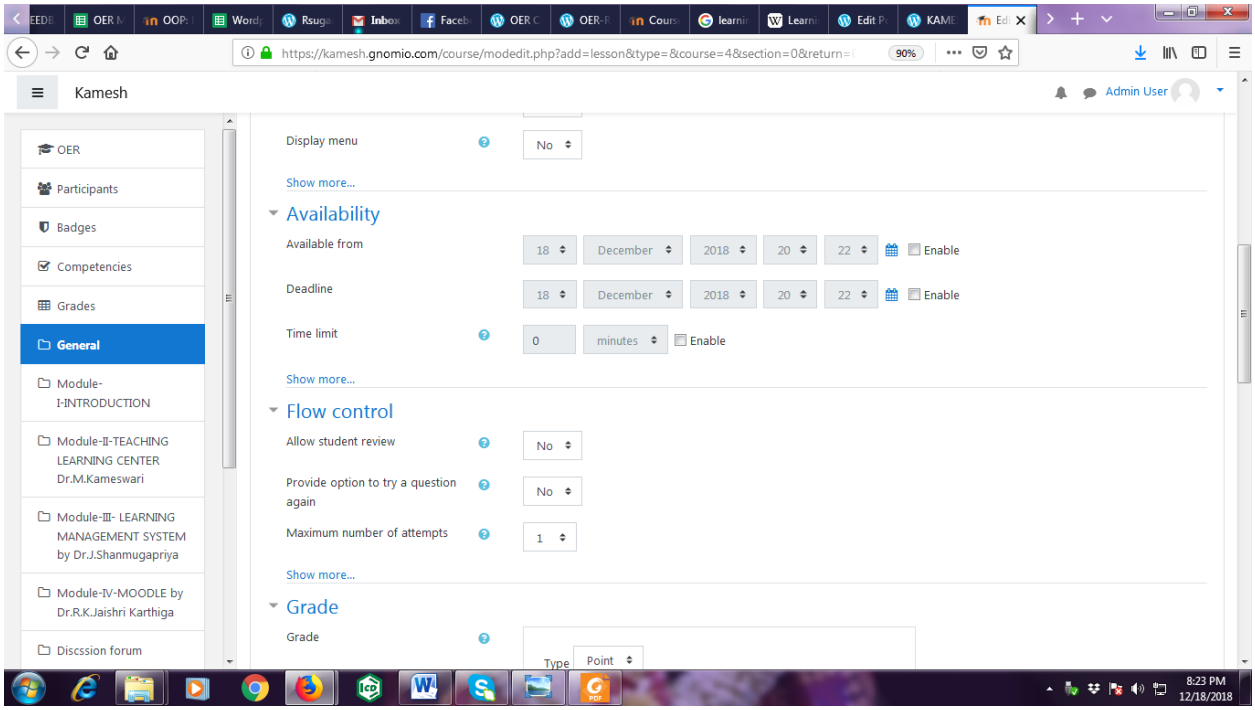
Screenshot -5-Lesson description



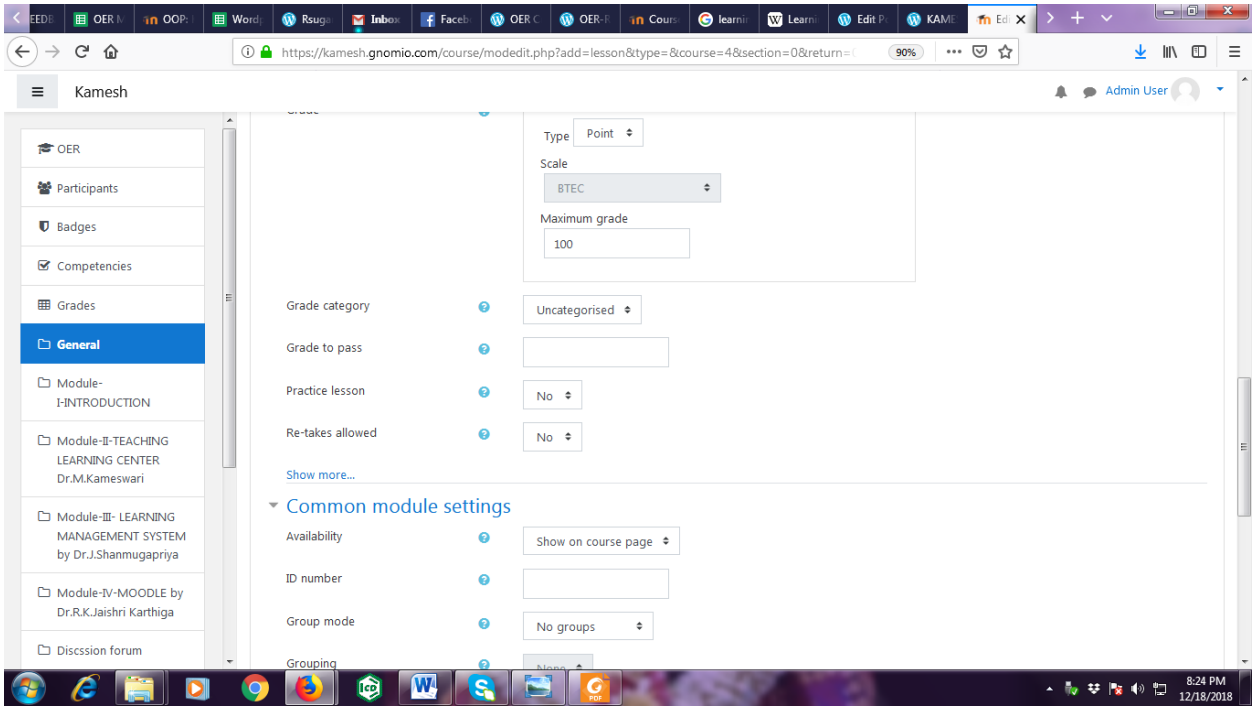
Screenshot -6-Lesson description



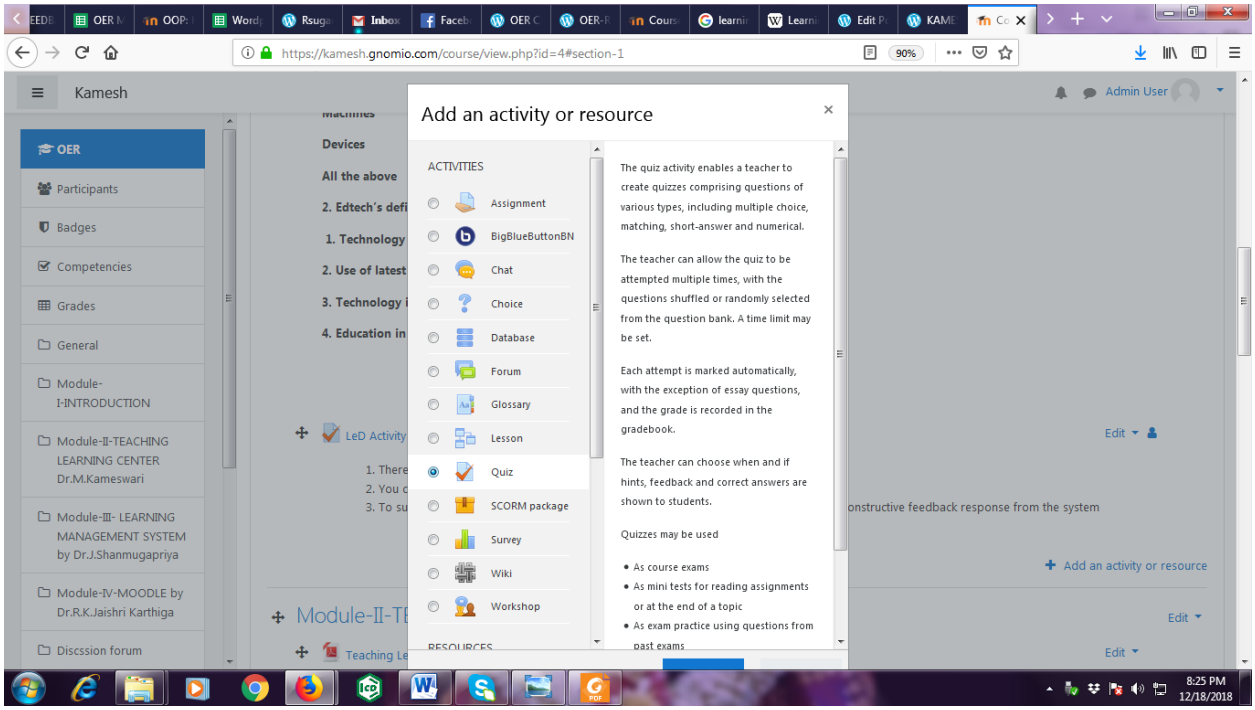
Screenshot -7-Lesson description



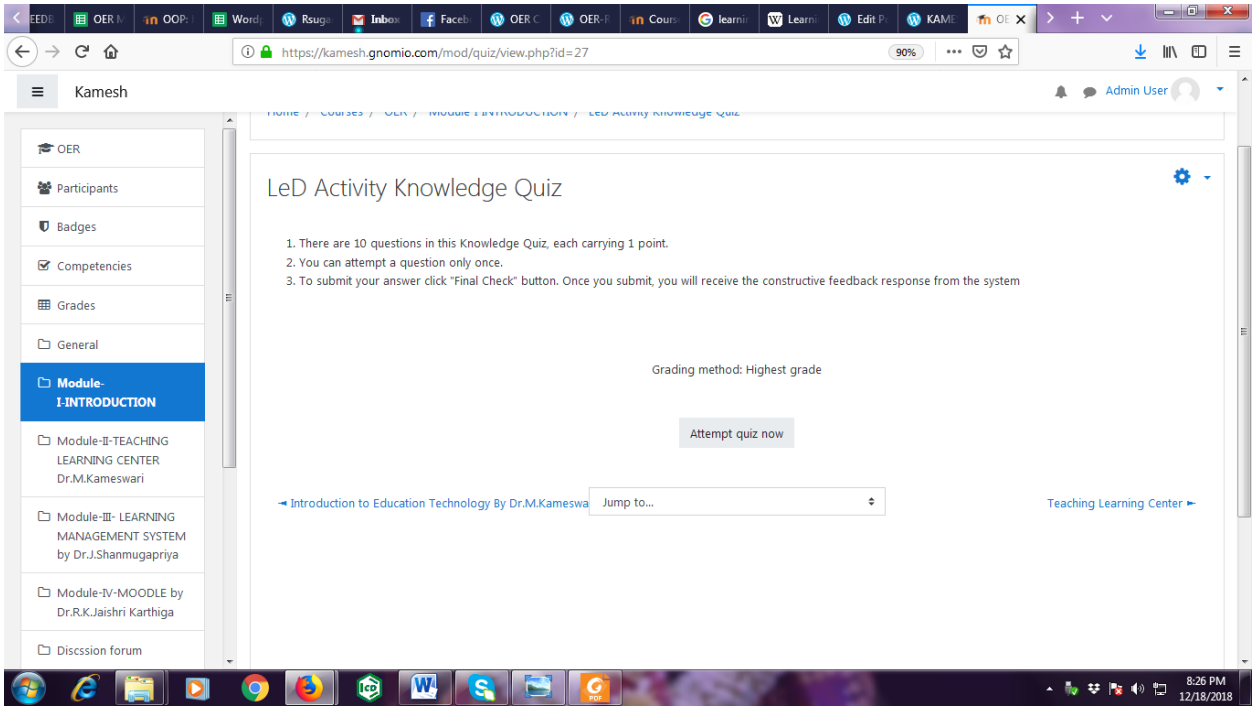
Screenshot -8-Lesson description

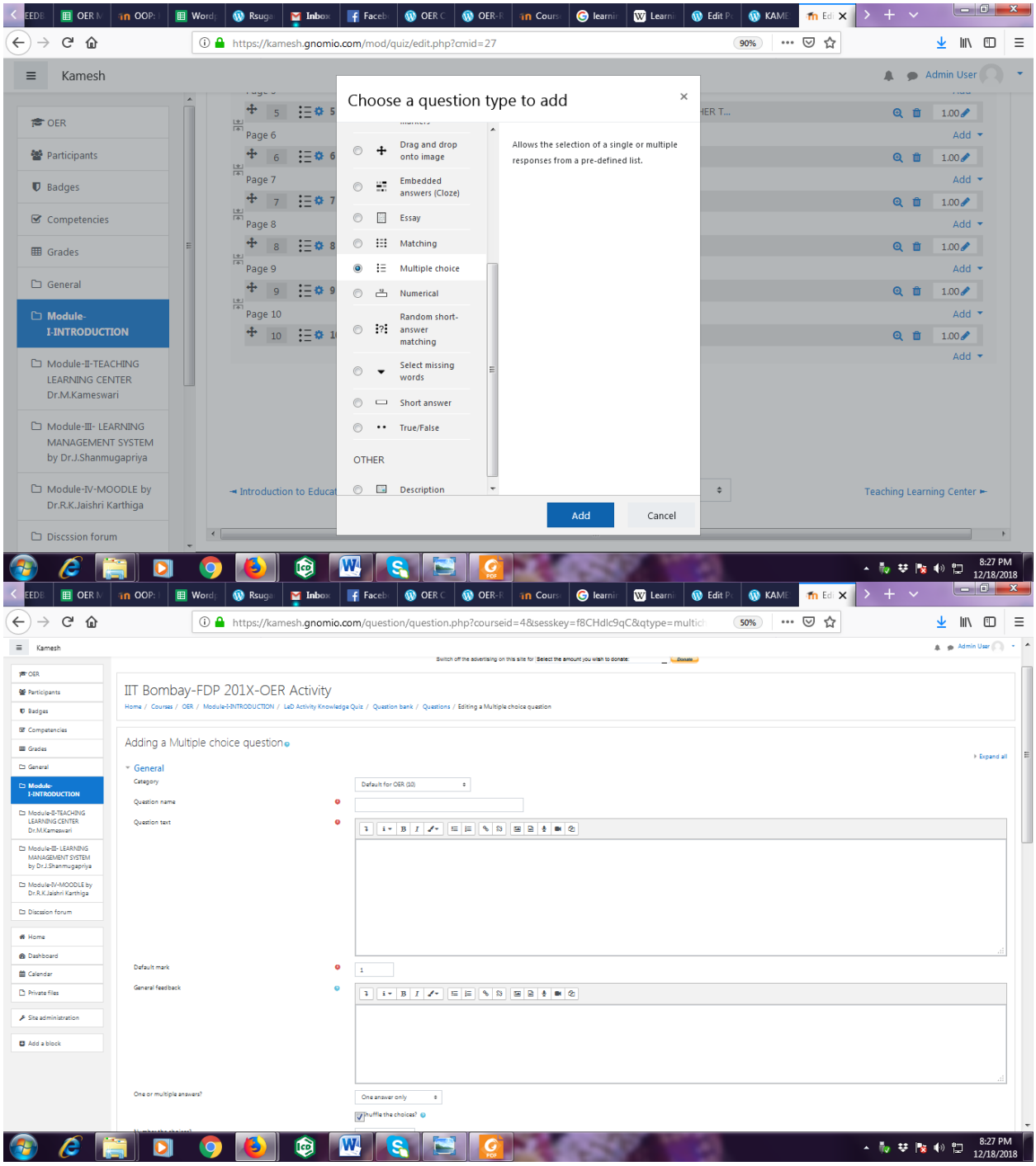


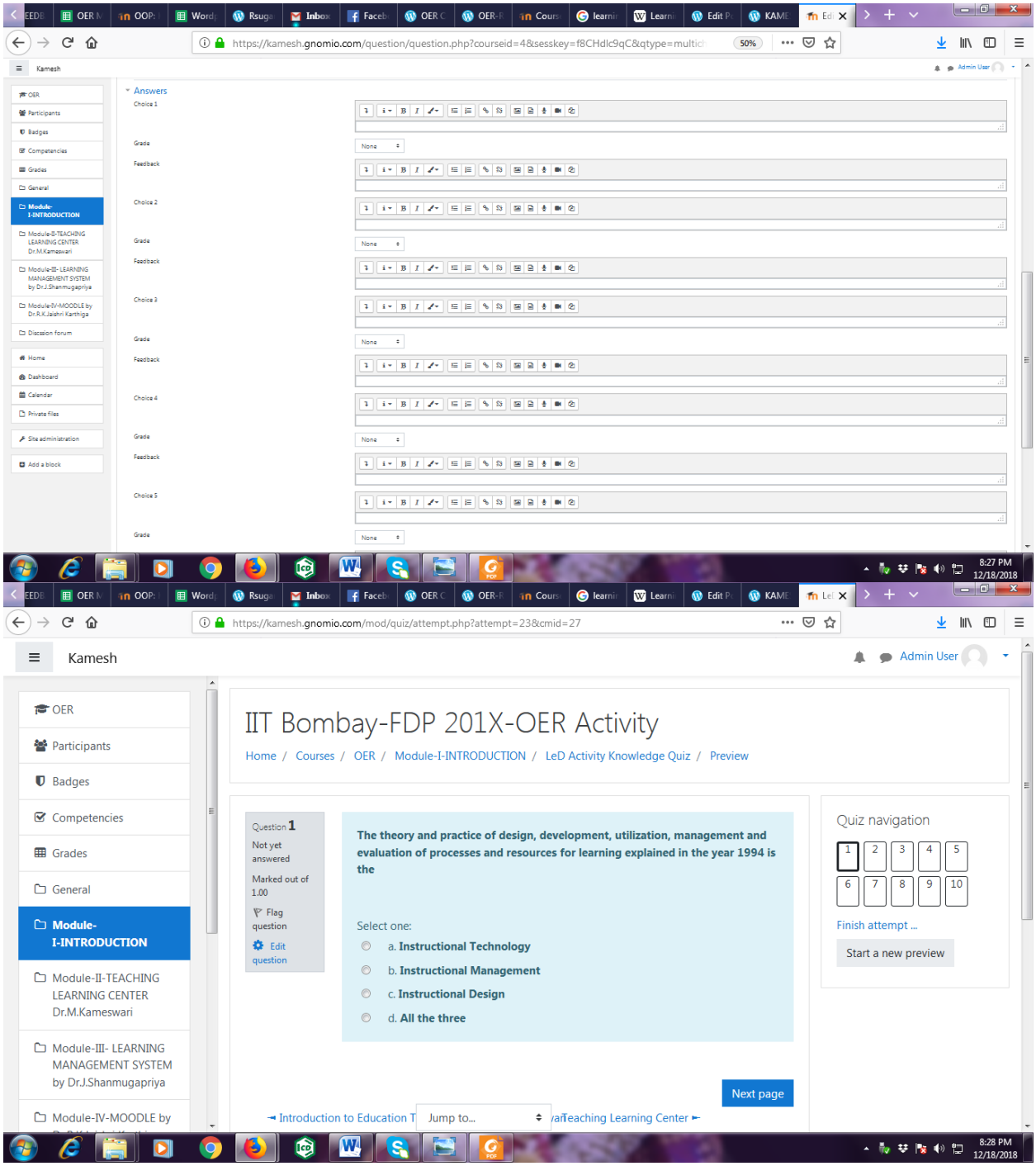
Screenshot -9-Quiz- description



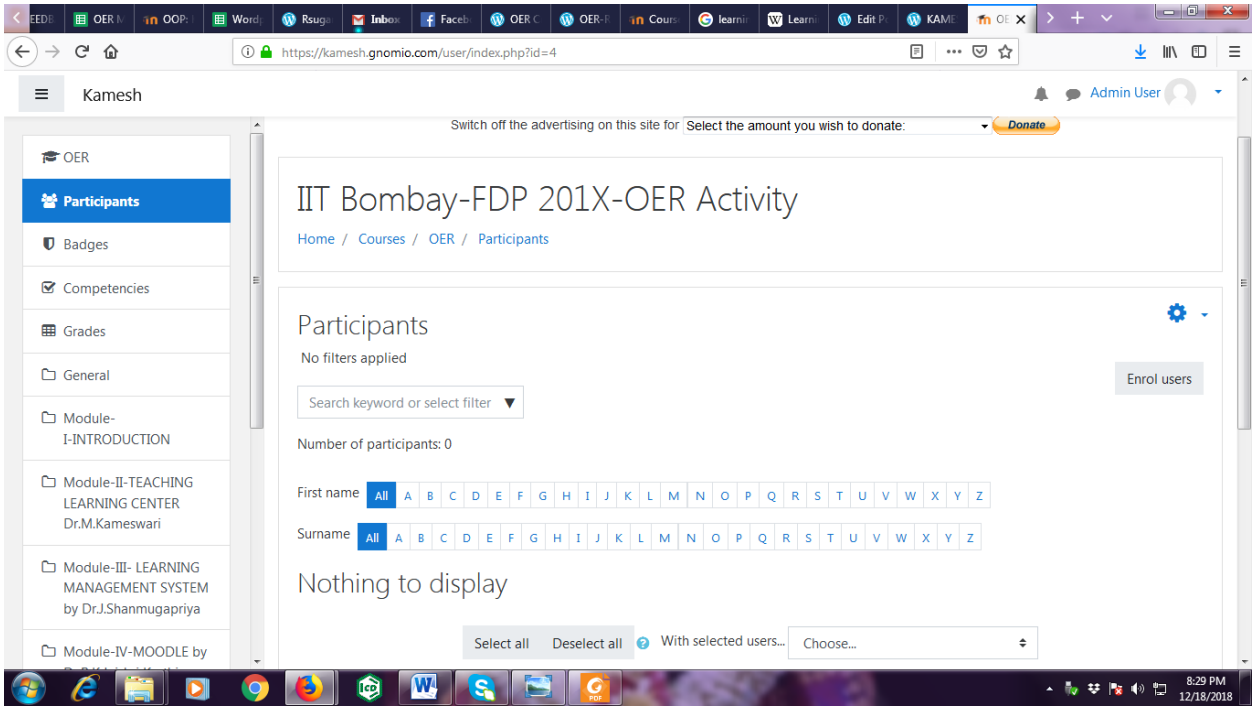
Screenshot -10-Quiz- description-Multiple choice description


https://kamesh.gnomio.com/mod/quiz/view.php?id=27
Kamesh
Admin User
OER
Participants
Badges
Competencies
Grades
General
Module-I-INTRODUCTION
Module-II-TEACHING LEARNING CENTER Dr.M.Kameswari
Module-III- LEARNING MANAGEMENT SYSTEM by Dr.J.Shanmugapriya
Module-IV-MOODLE by Dr.R.K.Jaishri Karthiga
Discssion forum
LeD Activity Knowledge Quiz
1. There are 10 questions in this Knowledge Quiz, each carrying 1 point.
2. You can attempt a question only once.
3. To submit your answer click "Final Check" button. Once you submit, you will receive the constructive feedback response from the system
Grading method: Highest grade
Attempt quiz now
Introduction to Education Technology By Dr.M.Kameswa
Jump to...
Teaching Learning Center
8:26 PM
12/18/2018

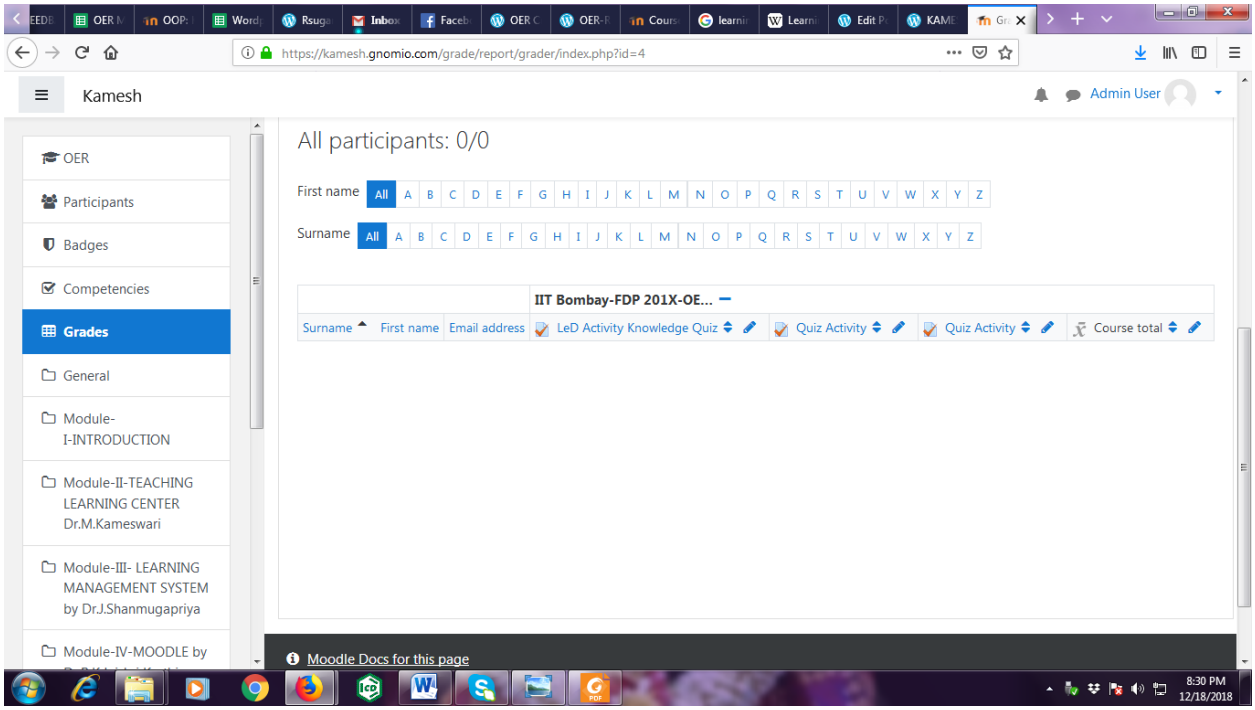

Choose a question type to add
Drag and drop onto image
Embedded answers (Cloze)
Essay
Matching
Multiple choice
Numerical
Random short-answer matching
Select missing words
Short answer
True/False
OTHER
Description
Allows the selection of a single or multiple responses from a pre-defined list.
Add
Cancel
IIT Bombay-FDP 201X-OER Activity
Adding a Multiple choice question
General



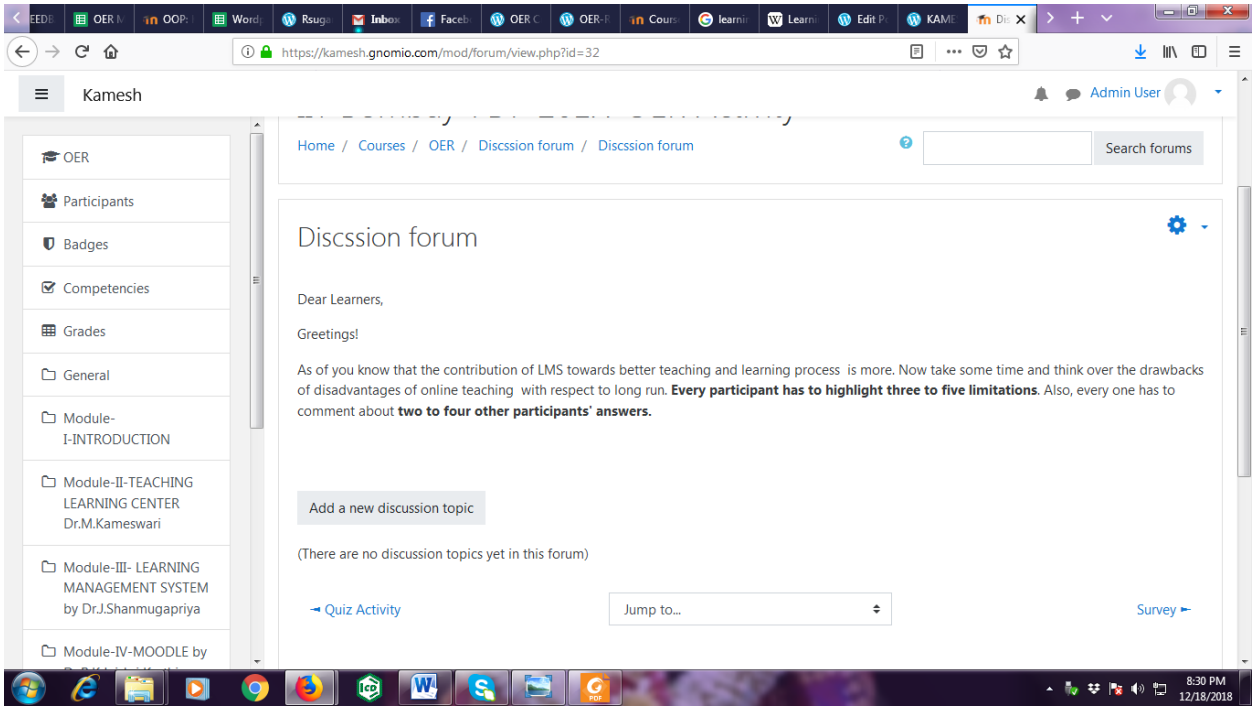
Screenshot –11-Grading of Participants-Quiz- description



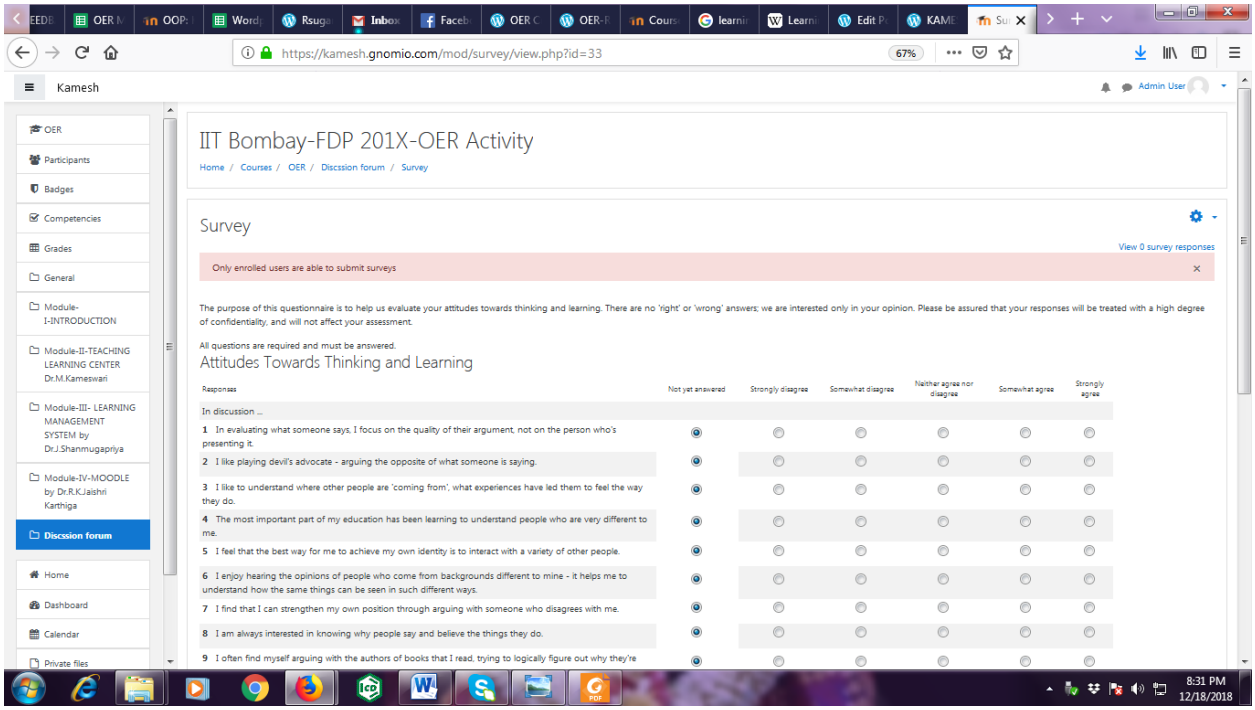
Screenshot -12-Participants



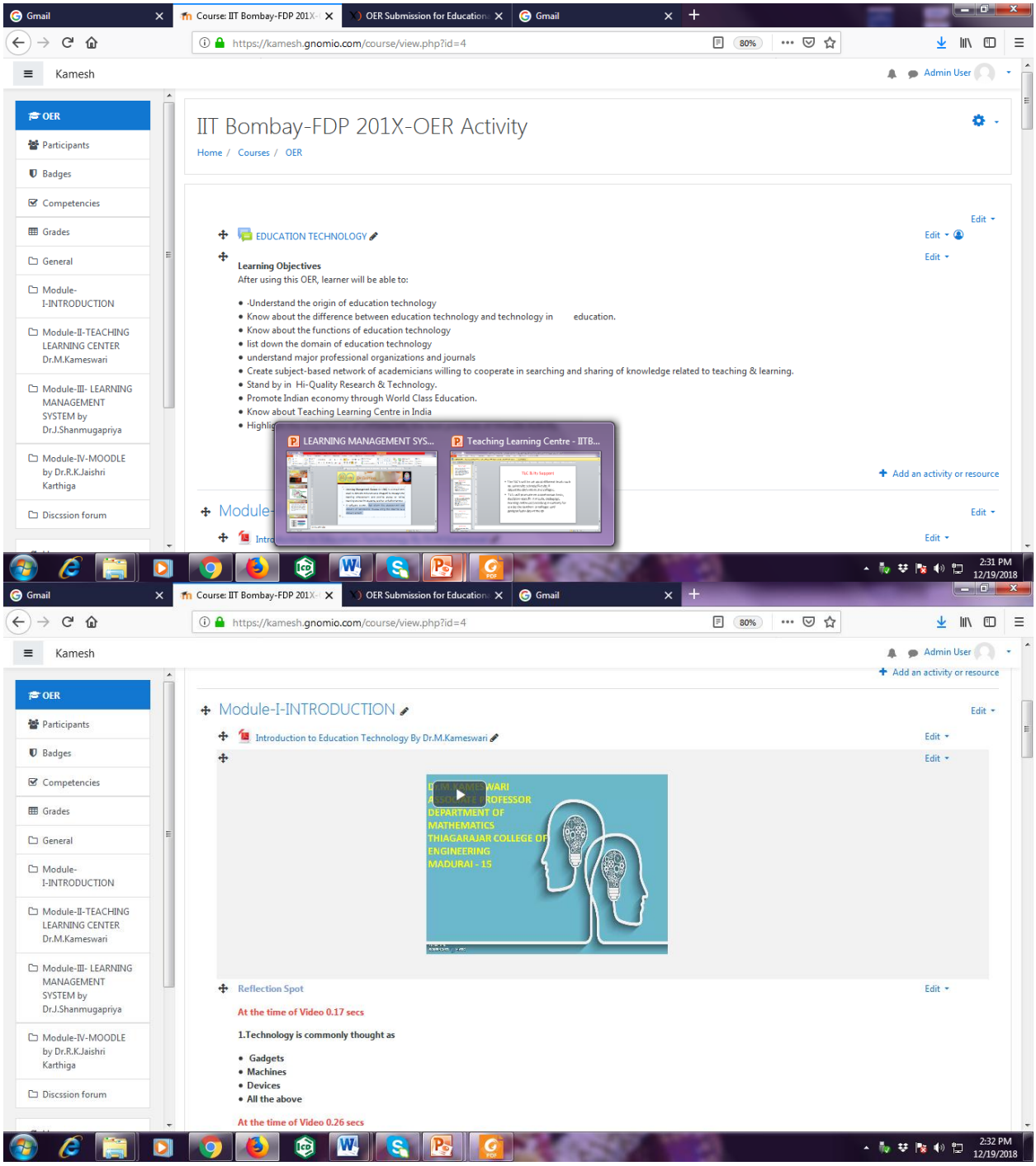
Screenshot -13-Discussion forum

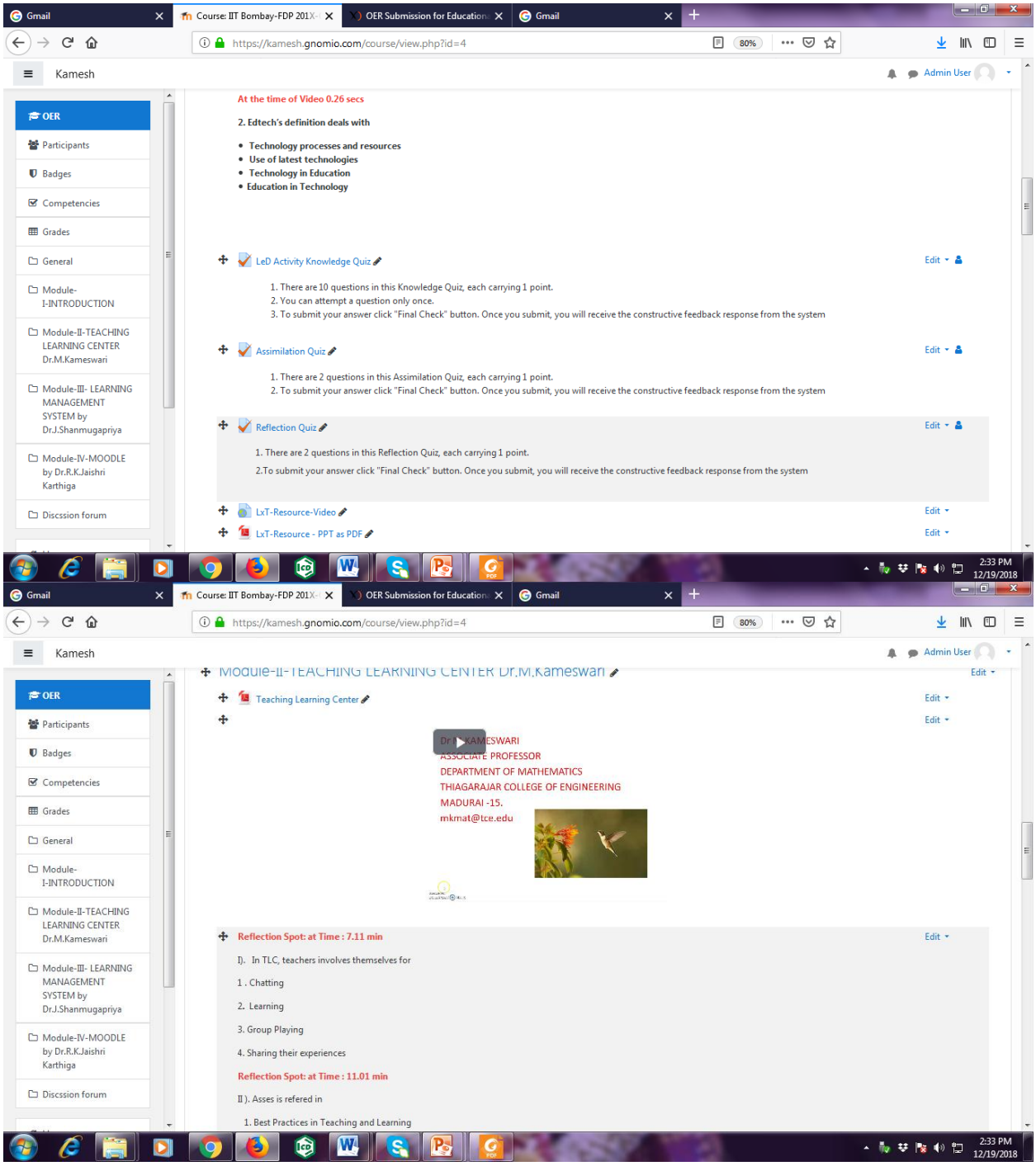


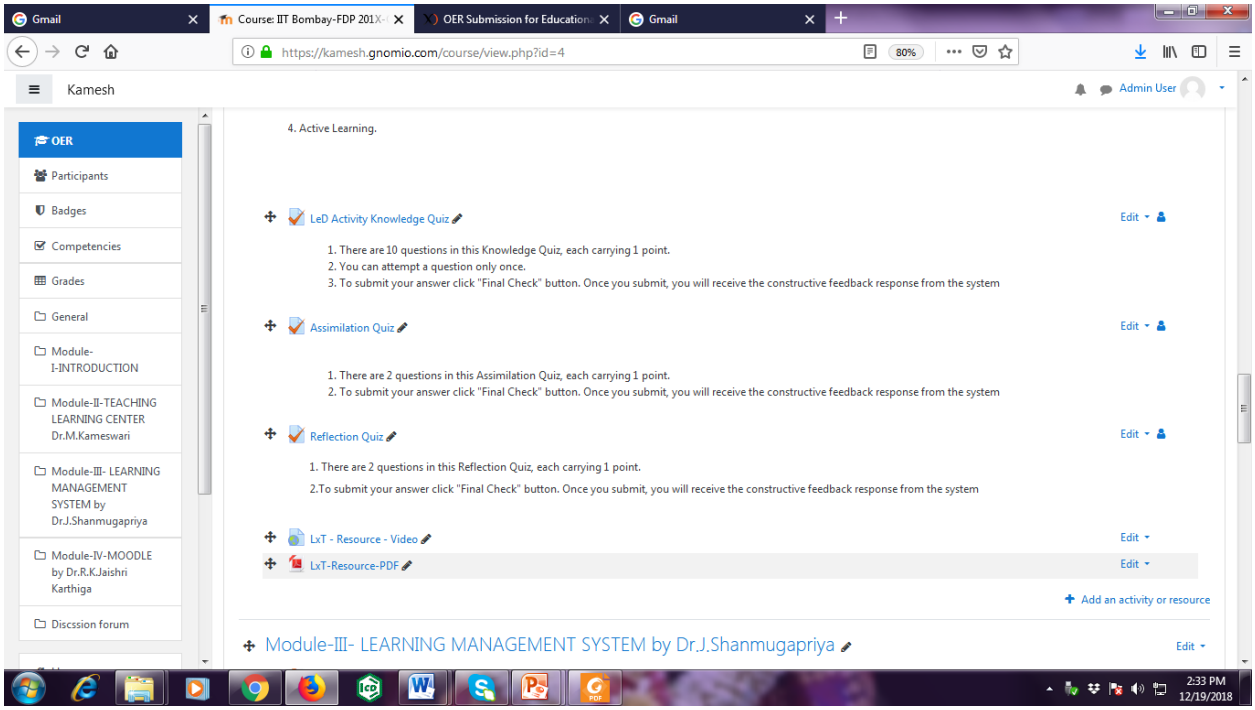
Screenshot -14-Survey- and feedback collection



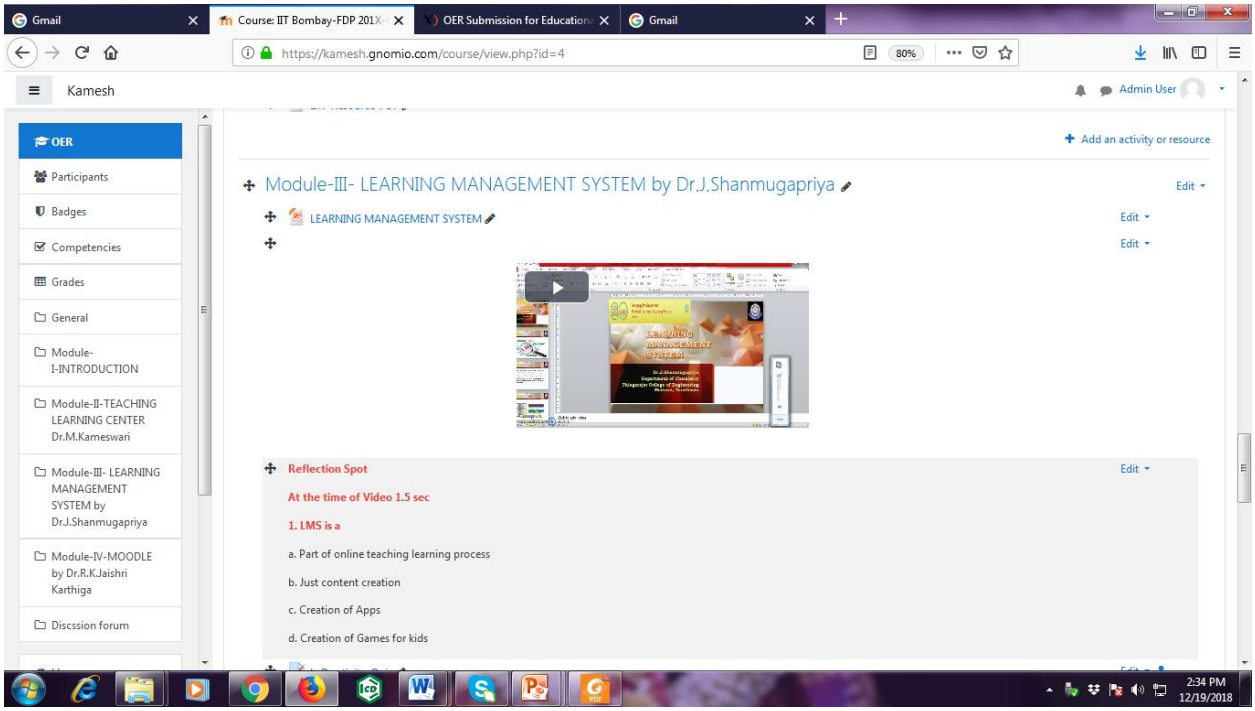
Screenshot -15-Introduction-Dr.M.Kameshwari

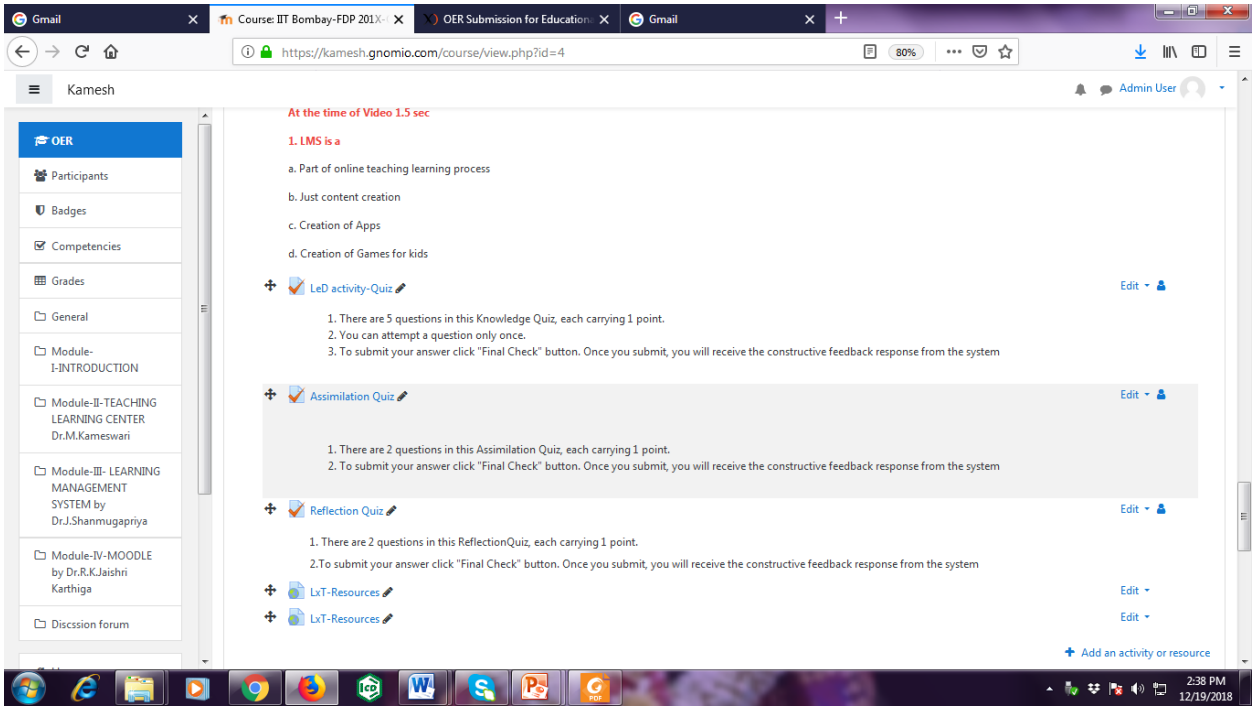

Gmail
Course: IIT Bombay-FDP 201X-
OER Submission for Education
https://kamesh.gnomio.com/course/view.php?id=4
Kamesh
Admin User
OER
Participants
Badges
Competencies
Grades
General
Module-I-INTRODUCTION
Module-II-TEACHING LEARNING CENTER Dr.M.Kameswari
Module-III- LEARNING MANAGEMENT SYSTEM by Dr.J.Shanmugapriya
Module-IV-MOODLE by Dr.R.K.Jaishri Karthiga
Discssion forum
IIT Bombay-FDP 201X-OER Activity
Home / Courses / OER
EDUCATION TECHNOLOGY
Learning Objectives
After using this OER, learner will be able to:
·Understand the origin of education technology
Know about the difference between education technology and technology in education.
Know about the functions of education technology
list down the domain of education technology
understand major professional organizations and journals
Create subject-based network of academicians willing to cooperate in searching and sharing of knowledge related to teaching & learning.
Stand by in Hi-Quality Research & Technology.
Promote Indian economy through World Class Education.
Know about Teaching Learning Centre in India
LEARNING MANAGEMENT SYS...
Teaching Learning Centre - IITB...
Add an activity or resource
Edit
2:31 PM
12/19/2018
Module-I-INTRODUCTION
Introduction to Education Technology By Dr.M.Kameswari
DEPARTMENT OF MATHEMATICS
THIAGARAJAR COLLEGE OF ENGINEERING
MADURAI - 15
Reflection Spot
At the time of Video 0.17 secs
1.Technology is commonly thought as
Gadgets
Machines
Devices
All the above
At the time of Video 0.26 secs
2:32 PM
12/19/2018


Gmail
Course: IIT Bombay-FDP 201X-
OER Submission for Education
https://kamesh.gnomio.com/course/view.php?id=4
80%
Kamesh
Admin User
OER
Participants
Badges
Competencies
Grades
General
Module-I-INTRODUCTION
Module-II-TEACHING LEARNING CENTER Dr.M.Kameswari
Module-III- LEARNING MANAGEMENT SYSTEM by Dr.J.Shanmugapriya
Module-IV-MOODLE by Dr.R.K.Jaishri Karthiga
Discssion forum
At the time of Video 0.26 secs
2. Edtech's definition deals with
Technology processes and resources
Use of latest technologies
Technology in Education
Education in Technology
LeD Activity Knowledge Quiz
1. There are 10 questions in this Knowledge Quiz, each carrying 1 point.
2. You can attempt a question only once.
3. To submit your answer click "Final Check" button. Once you submit, you will receive the constructive feedback response from the system
Assimilation Quiz
1. There are 2 questions in this Assimilation Quiz, each carrying 1 point.
2. To submit your answer click "Final Check" button. Once you submit, you will receive the constructive feedback response from the system
Reflection Quiz
1. There are 2 questions in this Reflection Quiz, each carrying 1 point.
2.To submit your answer click "Final Check" button. Once you submit, you will receive the constructive feedback response from the system
LxT-Resource-Video
LxT-Resource - PPT as PDF
Edit
2:33 PM
12/19/2018
Module-II-TEACHING LEARNING CENTER Dr.M.Kameswari
Teaching Learning Center
ASSOCIATE PROFESSOR
DEPARTMENT OF MATHEMATICS
THIAGARAJAR COLLEGE OF ENGINEERING
MADURAI -15.
mkmat@tce.edu
Reflection Spot: at Time : 7.11 min
I). In TLC, teachers involves themselves for
1 . Chatting
2. Learning
3. Group Playing
4. Sharing their experiences
Reflection Spot: at Time : 11.01 min
II). Asses is refered in
1. Best Practices in Teaching and Learning

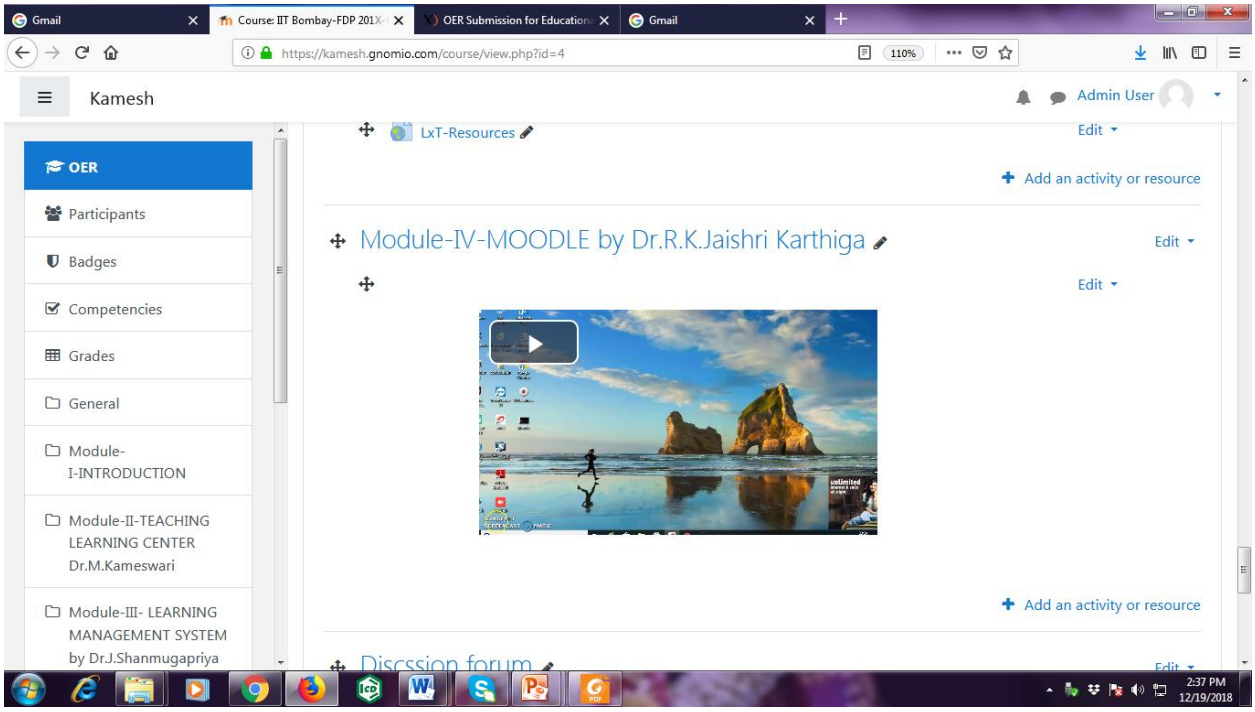


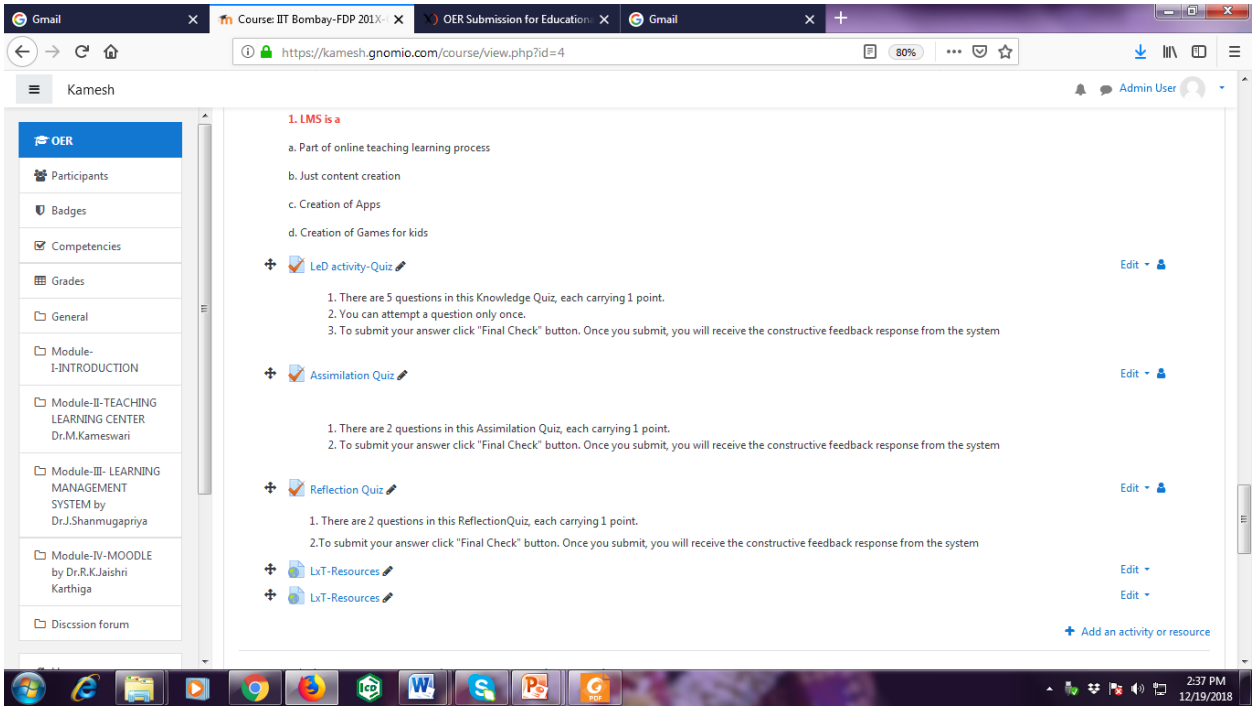
Screenshot -16-LMS –By Dr.J.Shanmugapriya



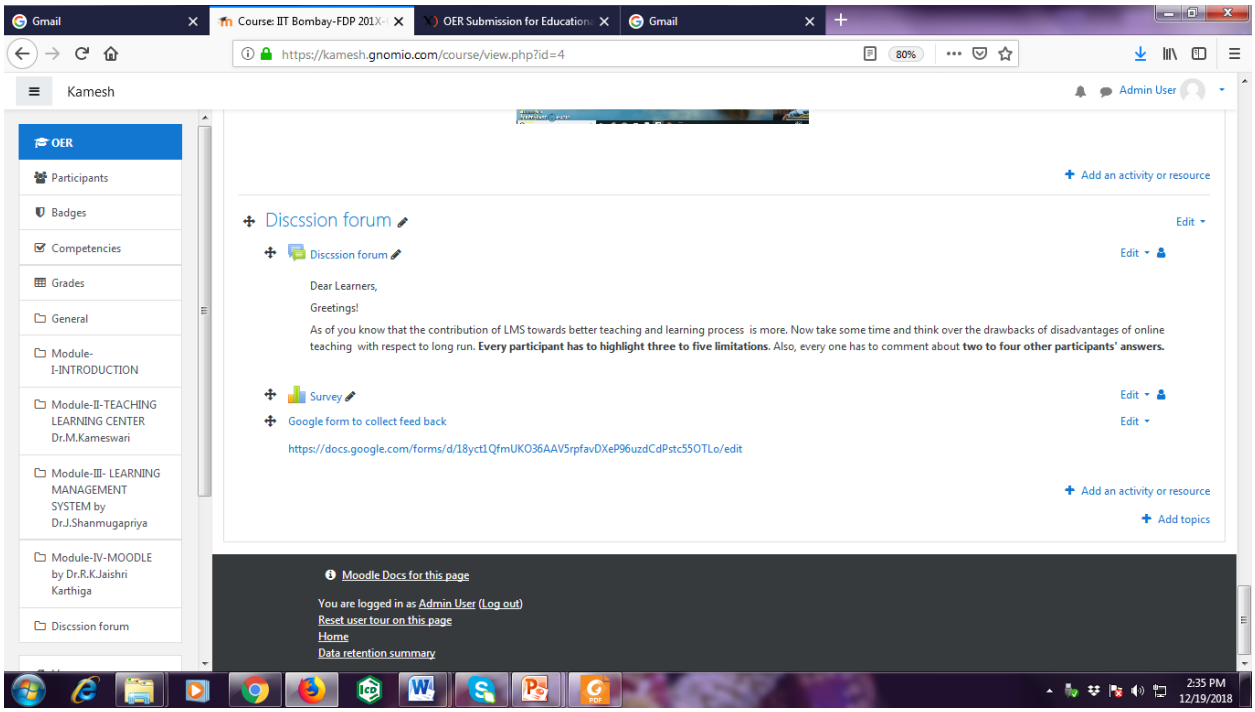


Screenshot -17-Moodle –By Dr.R.K.Jaishrekarthiga





Discussion Forum



The instructions provided clearly explain how to download and use the OER in a teaching-learning context.

- Step 1: Download these backup files into your local machine
- Step 2: Login to your MOODLE course with your admin login and click “Turn editing on”
- Step 3: Choose the “Restore” option from Course Administration block
- Step 4: Upload one file at a time and then click restore
- Step 5: Repeat the steps 3-4 for the other two files
- Step 6: Once the restore is finished, move the lessons to the appropriate section

Section 4: Evaluation of OER

At two levels, the effectiveness of OER can be assessed:

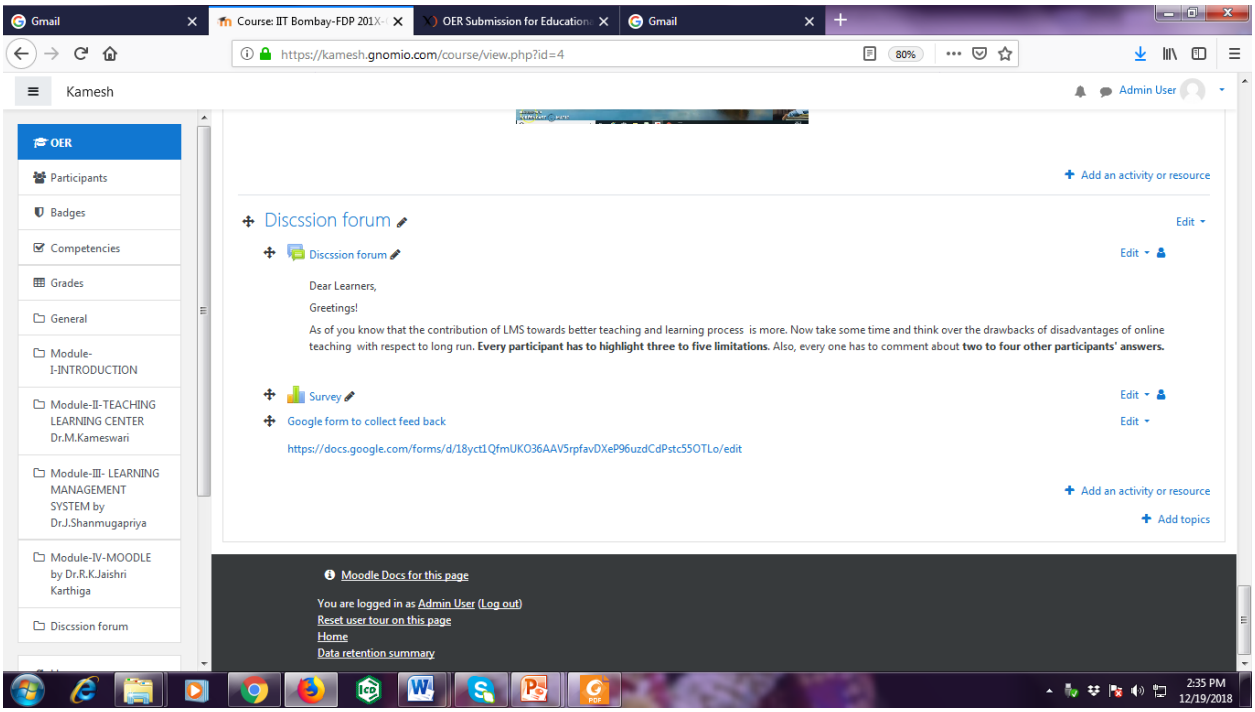
1. At the student level
2. At the consumer level

4.1 Effectiveness at the student level

- Using metrics with respect to resource access by each student and student learning the effectiveness can be monitored.
- The Moodle lesson report can be used to evaluate this effectiveness, with the report showing the total number of students who accessed the reports (along with time) and their marks (based on their answers to MCQs). Additionally there is an option for teacher to
- By using the Moodle lesson report, we can evaluate the students. Also we can grade the students based on this report.

4.2 Effectiveness at consumer (teacher) level

- This level is meant for teachers who want their students to learn about " Education Technology". Linking a survey on four main constructs – Introduction to Education Technology, Teaching Learning Centre, Learning Management System, Moodle can help in identifying the effectiveness of this OER at consumer level. This has to be done as a following activity.



Implementing Survey:

The survey will be asked through google forms for finding out the effectiveness of the contents to all students and customers through the link given below:

https://docs.google.com/forms/d/18yct1QfmUKO36AAV5rpfavDXeP96uzdCdPstc55OTLo/edit

https://docs.google.com/forms/d/18yct1QfmUKO36AAV5rpfavDXeP96uzdCdPstc55OTLo/edit

Section 5: Consolidated Log of Team Work

The consolidated log of team work is as given below:

Activity	Team member	Amount of time	Additional logs if any
Discussion	M.Kameswari	Nearly 1.5 Hrs	OER creation ICT tools are decided – Moodle cloud and Word press are decided as Information transferring medium
	J.Shanmuga Priya		
	R.Jaishree Karthiga		
Tool Exploration	M.Kameswari	2.5 Hrs	The Online tools used for OER. The Moodle cloud is the medium to execute the OER.The word press site is used for Knowledge dissemination to the students.
	J.Shanmuga Priya	1.5 Hrs	
	R.Jaishree Karthiga	1.5 Hrs	
OER Creation	M.Kameswari	2.5 Hrs	Decided the following: Learning Objective Course Material MCQ,Feedback & Student Enrollment
	J.Shanmuga Priya	2.0 Hrs	
	R.Jaishree Karthiga	2.0 Hrs	
OER Documentation	M.Kameswari	3.5 Hrs	Section 3 & 5
	J.Shanmuga Priya	3.5 Hrs	Section 1 & 2
	R.Jaishree Karthiga	1.0 Hrs	Section 4 & 6
Individual Reflection (Diary Logging)	M.Kameswari	30 min	Reflection is monitored by Whatsapp.
	J.Shanmuga Priya	30 Min	
	R.Jaishree Karthiga	30 Min	
OER Evaluation	M.Kameswari	45 Min	Suggestions are incorporated and
	J.Shanmuga Priya	45Min	

	R.Jaishree Karthiga	30 Min	same has communicated via email and whatsapp.

Section 6: Building a Community of MOODLE and Flipped Classroom Adopters

Community Building - Possible Sources

- Already ICT used community teachers who use MOODLE and Flipped class room strategies can be in touch with each other and develop a community.

Plans for Community Building

- Students' community can be built using the mail ids of the registered participants. Using some forum/groups, they can be in touch and can build the relationship.

Works Cited

1. MOODLE. (2018, December) Moodle Docs. [Online].
   https://docs.moodle.org/
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2. Screencast O Matic [online]
   www.screencast-o-matic.com/
3. NPTEL and EDX videos