Mahatma Education Society's
Pillai HOC College of Engineering and Technology, Rasayani

Best Practices (Academic Year 2020-21)

Best Practice 1: Digital learning to enhance teaching learning process during Pandemic

Goal:

- To provide students with an online space to showcase their learning
- To explore new online teaching platforms
- To enhance building capacity of Teachers and students by exploring online platforms.
- To provide active and personalized education to all students through digital learning to complete curriculum.
- To identify MOOC platforms for various courses to give continuous experience learning to teacher and students beyond curriculum.
- To provide tools and visualizations that motivate the students to participate and collaborate within the class
- To explore digital learning environment for laboratory experiments through virtual lab.
- To develop digital library for E-resources and study material with students

The Context:

Education system has evolved since old times where it was only classroom teaching through textbooks. Now, we live in an era of rapidly developing technology with widespread use of computer science and information technology, which have entered almost all areas of life. In the field of education, emerging technologies provide opportunities for enhancing and improving the learning and education process and using technological tools effectively in the teaching process which will help change learning and communication methods.

The COVID-19 has resulted in schools and colleges shut all across the world as a consequence of which children are out of the classroom. And most important of all, as a result of the pandemic, education has changed dramatically, with the distinctive rise of digital learning, whereby teaching is undertaken remotely and on digital platforms. In response to significant demand, many online learning platforms are offering free access to their services.

Practice:

To continue teaching using the modern technologies, we use digital tools like Google Classroom, Google Meet, Zoom, Virtual Laboratory, Digital Library etc. Every faculty in PHCET makes use of Google classroom and Google meet for each and every subject they teach. All communications with the students related to the course will be made through

Google classroom. Course Academic Plan, Study materials, Lab manuals, Power point presentations, Tutorials, previous year question papers are shared with students through Google classroom. Assignments are given through Google classroom which are evaluated online. Internal Examinations are also conducted through Google classrooms which are assessed online.
The Broad areas of Virtual Labs are covered according to the syllabus. Subject-In-Charges decide the experiments to be conducted in virtual lab platform. Subject-In-Charges will provide the link of the various relevant experiments in Virtual Lab to students which they will be performing during their dedicated laboratory sessions following which the feedback of the experiment will be submitted. Effective time utilization is done by PHCET with a tie up for Edx and Coursera Online Campus Essentials to enhance knowledge in interdisciplinary subjects and soft skills. Faculty and students of PHCET has actively enrolled in numerous courses pertaining to different fields. For arranging webinar and events on technical. social and research fields, Youtube and Zoom platforms are extensively used by PHCET. Digital Library which has a collection of study material, Course Academic Plan, Question banks, previous year question papers, lab manuals, tutorials, assignments, power point presentations of every engineering subject which is a contribution of each faculty of PHCET creates a vast knowledge gaining platform for students of PHCET.

Evidence of Success:
A large number of students were benefitted through digital learning as it is evident from the results of examinations conducted. One can access digital learning sites from anywhere and at any time you want to. They are available 24/7 and you can get access to these from your mobiles as well as PCs. The digital learning courses are designed keeping in mind a specific timeframe and the progress you make in that period is recorded. Every activity is designed to test the areas where you are weak and the subject teachers work on these to ensure a student's success. When learning something online, most of the time it is done because you want to and not because someone forces into doing it like in your offline classes. Fewer distractions allow to concentrate better on the topics you are trying to learn. This gives the confidence that you can study and understand easily which motivates to study longer.

Problems Encountered and Resources required:

- Students may miss out on the hands-on experience that could be a value in later education
- Availability of internet can be a concern for some students who live in remote villages.
- Digital Learning is a new, innovative approach to learning, and navigating them well is a skill in itself. Some students may find the shift from traditional to digital learning to be jarring.
- Students can learn something useful from a full sensory experience in a real world like weird noise and smell, random error, faulty machinery, etc.
- The use of technology can generate mental laziness in students. These tools simplify the resolution of tasks or activities with a single click, preventing them from analyzing in detail what they are learning.
- Students run the risk of finding erroneous, false and even fraudulent content in digital learning.

Best Practice 2: Library Space Digital Learning Repository (LSDLR)

A digital library, also called an online library, a digital repository is an online database of digital objects that can include text, still images, audio, video, or other digital media formats.
Library Space (LSDLR) is a centrally hosted repository for Study Materials, co-curricular and extra-curricular information.

Objectives:

- To collect, collate, disseminate and act as gateway to digital learning resources to users
- To preserve and provide seamless access to information whenever and wherever users need
- To create and update a comprehensive database of Academic Information in the field of Engineering & Technology
- Promote use of ICT
- Support teaching-learning activities

Context:
The primary issue is that of the technical architecture that underlies any digital library system. Libraries need to enhance and upgrade current technical architectures to accommodate digital materials. Library purchased a rack Server for the configuration of Processor: Intel® Xeon (R) CPU ES – 2620 v4 @ 2.10GHz 2.10, 64 GB RAM, 5 TB Hard disk.
One of the major issues in creating digital libraries is the building of digital collections. Obviously, for any digital library to be viable, it should eventually have a digital collection to make it truly useful. There are essentially three methods of building digital collections:

1 Digitization: Converting paper and other media in existing collections to digital form
2. Acquisition of Resources: Collecting Study Materials from Faculty Members and other academic related materials from various sources like Google, social media, and Newspapers, etc.
3. Access to Resources: By collating the resources, digitizing it and uploading it on the Digital Library. And for external resources by providing pointers to Web sites of E-resources and other relevant information. And providing remote access to the resources through public IP.

Practice:
Library Space is a well-structured and maintained digital learning repository. All these resources are made available to each and every user. Recording of events stored in LSDLR ensure information and knowledge shared by the expert is archived. Being an online portal, retrieval and updating of information are convenient. Updating LSDLR is considered an integral part of the academic process and it is handled by the dedicated team. A timely update of resources helps users to access latest resources. Integrity and consistency of the resources is managed by using the role-based access control. User has to login to the system using his/her credentials like institutional email ID and Admission/Employee ID.

It contains fifteen main Course Categories like Study Materials; Career, Internship, Training, Jobs, Scholarships & Competitions; Conferences, Seminars, Webinars & Events; Institutional Magazines, Brochures, Newsletters, etc.; Project Report, Dissertation & Thesis, Rare Documents, etc. Users can refer Career, Internship, Training, Jobs, Scholarships & Competitions and Conferences, Seminars; Webinars & Events related information for their Personal Development and Career.

The Study Material Course Category contains Lecture Notes, PPTs, Lab Manuals, Assignments, Experiments, Syllabus, Question Papers and all the other Academic relevant materials required by the users. These are very helpful to users for their academic point of view. Students and faculty members doing project work and research can refer to the existing projects, dissertations, and e-resources.

Advertisements, Notifications, and Admission related information is useful for Students and Administration staff.

Evidence of Success:

LSDLR has made the access of the study material especially for the students easy and efficient. During COVID-19 pandemic it played important role. Sometimes students were not able to attend the live sessions, but students did not miss the learning as they were able to access the recording of the sessions anytime from anywhere. Along with students it also helped faculty members preserve and distribute study material to students. Also made other events recording, publication, research material etc. available on single click. And before designing the LSDLR, students and Faculty Members were consulted about their expectancies. All the suggestions are incorporated. Users need, Information quality, Service Quality, Usefulness, and Ease of use is taken into consideration for users' satisfaction.

Problems Encountered and resources required:

Damage to the hard disk or CPU is a problem and is addressed by frequent back-ups. The software may slow down the process and the software must be updated regularly. Delay in updating leads to ambiguity. Authorization and authenticity must be monitored closely. Inconsistency in data entry can generate errors. Measures need to be taken to prevent false information.

Resources Required:

This is the digitization of all resources in the collection. While E-resources already held by the library are not considered to be part of this collection, links are provided to the same. Technical resource tools like Content Management Software System, Scanners, Servers, etc. are required.

Link for LSDLR

URL: http://114.143.219.19/libspace/