

Department of Computer Science
Rollwala Computer Center
Gujarat University

National Webinar
On
“Use of Technology in Education”



DEPARTMENT OF COMPUTER SCIENCE
Gujarat University, Ahmadabad

CELEBRATING ONE YEAR OF NATIONAL EDUCATION POLICY 2020


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NATIONAL WEBINAR : USE OF TECHNOLOGY IN EDUCATION


Dr. JYOTI PAREEK
Professor & Head
Dept. Of Computer Science, Gujarat University


PUSHPDEEP MISHRA
Senior Project Manager
Virtual Labs, IIT Bombay

on Tuesday, 10th August, 2021 | Time : 03.00 p.m.

On the occasion of “celebration of one year of National Education Policy 2020”, Department of Computer Science, Gujarat University, Ahmedabad, Gujarat Organized a National Webinar on “use of technology in education” on Tuesday, 10th August 2021 at 3.00 PM. The event was live on Facebook and YouTube. The session started with a brief Inaugural session followed by the Invited talk. The speakers were Dr. Jyoti Pareek, Prof. and Head of the department, Computer Science, Gujarat University and Shri Pushpdeep Mishra, Senior Manager, working with Virtual Labs, IIT Bombay.



Dr. Jyoti Pareek

Dr. Maitri Jhaveri

Pushpdeep Mishra

Gujarat University

વંદન-અભિનંદન..(5)
ગુજરાત યુનિવર્સિટી આપણી..(2), વિદ્યા તણું તપોવન..
વંદન-અભિનંદન..(4)

રાષ્ટ્રચેતના, કલાસાધના, ખેલભાવના વિકસે,
વિશ્વમાનવી બની ગુજરાતી વિશ્વ સકલમાં વિલસે,
સ્નેહ, સંપ, સહકારની સાથે દેતી તું સન્મતિ,
સૌના સાથ ને સંગાથે સૌ સિદ્ધ કરે ઉન્નતિ,
પ્રેમ, બંધુતા, સમાનતાનાં પલ પલ પ્રસરે સ્પંદન
વંદન-અભિનંદન ..(7)

The Inaugural session began with the University song and a formal welcome of the guests and participants. Dr. Jyoti pareek talked about the importance of technology in the education and the focus it's given in NEP 2020. She emphasized on use of multimedia, interactive whiteboards, and virtual tour in teaching. She talked about digital India and the role of learning management system in 'anytime anywhere learning'. She also talked about current trends in technology for education, such as gaming, AI, VR/AR and robotics. She also talked about challenges in online education.

Celebrating One year of Education Policy NEP 2020

Department of Computer Science
Gujarat University

Single Image Is Equivalent To Thousand Words

Digital Weighing Machine

The slide on the right shows a detailed circuit diagram for a digital weighing machine. It features several integrated circuits (ICs): IC1 (7805) for power regulation, IC2 (MC145532) as a microcontroller, and IC3 (ATmega328) as the main processor. The circuit includes a load cell for weight measurement, an ADC (IC4) to convert the analog signal to digital, and a display (IC5) to show the weight. It also includes a power supply section with a transformer, bridge rectifier, and filter capacitor.

Learning Management System

LMS

- Tracking of learning
 - Student performance
- Testing
 - Self-assess
 - Quiz
 - Exam
- Registration
- Offline Course Material
 - PDF
 - HTML
 - ACS
- Online course materials
 - Audio
 - Video
 - Animation
- Delivery
 - Web
 - Mobile phone
- Communication
 - Chat
 - Forum
 - E-mail

GAMIFICATION

USER ENGAGEMENT, REWARD, ACHIEVEMENT, MOTIVATION, LEARNING, CHALLENGE

- ✓ Educational content needs to be engaging enough to capture the interest of young learners as they attempt to grasp complex concepts.
- ✓ Once the entire content is gamified, it becomes fun to learn and concepts become easier to retain.
- ✓ The idea of winning prizes and moving into the next stage of the game can be exhilarating for young kids.
- ✓ Complex STEM concepts become relatively easy to understand through a game format, encouraging active peer competition as well.

Digital India

- investment in digital infrastructure
- development of online teaching platforms, tools and digital content
- creation of virtual labs and digital repositories
- training teachers to become high quality online content creators
- designing and implementing of online assessments
- establishing standards for content, technology and pedagogy for online teaching-learning.

Artificial Intelligence

A surge in artificial intelligence to create more personalized content is on the horizon.

- ✓ As an AI system reads and evaluates an individual's behavior, it will tailor content accordingly adjusting the complexity of the content based on the responses of the child and enables him/her to learn at their own pace.
- ✓ This will aid in curating content to meet individual learning needs and abilities.
- ✓ AI can help develop auto evaluation tools.

Shri Pushpdeep Mishra, started his session with bloom's taxonomy of learning objectives. He talked about the outreach programs and working of virtual labs and its applications. He demonstrated various experiments using virtual labs. He demonstrated the vlabs community portal. He also talked about the evolution of boot camps during last few years. He talked about roadmap for improving pedagogy and functionality of virtual labs

Virtual Labs
An MHRD Govt of India Initiative

Pushpdeep Mishra
On behalf of Prof. Santosh Noronha
(PI- Vlabs IITB.) noronha@iitb.ac.in

VlabsDev
IIT Bombay
Vlabs Community Portal
vlabs.iitb.ac.in/vlabs-dev/

Monitoring Project Status

152 MODAL CENTERS 11193 FACULTIES TRAINED 190071 STUDENTS TRAINED 955730 TOTAL GRADES

Hardware to Software

Reservoir Suction Valve Pump Manometer

Test Section Control Panel

This example from Hardware to Software is contributed by Dr.Nitin Bhatte, Regional Coordinator MSU Baroda.

He commented on the contribution made by Gujarat University in the content development.

Labs developed by the Community		New Lab Development	
Lab Name	Expts in lab	Developer Name	Developed by the
Numerical Methods Lab	14	Prof. Manish Nagoshe	PVG's COET Pune
Digital Applications Lab	14	Prof Tanuja Khatavkar	PVG's COET Pune
Introduction to PHP	13	Prof.Minal R. Apsangi,Prof. Urmila .Kalshetti	PVG's COET Pune
Digital Logic Design Lab	8	Prof. Meenal Apsangi, Prof Tanuja Khatavkar	PVG's COET Pune
Machine Learning Lab	11	Prof. J H Nirmal	K J Somaiya COE, Mumbai
Heat Transfer Lab	3	Prof. Nitin Bhatte	MSU Baroda
Computer Networks Lab	1	Prof. Abhilasha Mishra	MIT, Aurangabad
Database Lab	5	Prof. Jyoti Pareek,Prof. Bhumika Shah	Gujarat University, Ahmedabad
Computer Graphics Lab	8	Prof. Anil Bhadgale	PVG's COET Pune
Polymer Processing Technology	1	Prof.Prashant Gupta	MIT Aurangabad
Manufacturing Processes	1	Prof.Trishul Kulkarni	MIT Aurangabad
Engineering Physics	1	Prof.Bhagwan Toksha	MIT Aurangabad
Cryptography and Network Security	1	Prof.Pradeep Kumar Singh	Jaypee University, Solan.
Natural Language Processing	1	Prof. Mansi Joshi	Gujarat University, Ahmedabad

A formal vote of thanks was presented by Dr. Jyoti Pareek.



The program was anchored by Dr. Maitri Jhaveri, Department of Computer Science very gracefully. The technical support was provided by Dr. B.S. Agrawal, Director, Rollwala Computer Center, Mr. Dharmesh Sonagra, Ms. Jinali and Ms. Vaidehi from Department of Computer Science. All participants received e-certificates.