

PROFESSIONAL DEVELOPMENT FOR EDUCATORS IN THE DIGITAL AGE: A CASE STUDY

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ABSTRACT

The study also elucidates the array of tools and technology available to educators, including LMS platform MOODLE, Google Forms, Google Meet and AI Enabled tools. Comparing Pre and Post COVID-19 eras and highlight the Pivotal role of learning Management System (LMS).

Keywords: Learning Management, Digital Technology in Education, MOOC (Massive Open Online Course).

Introduction

What is Education? Write about how it was happening in ancient times. 50 years back 10 years back? Now.

Mode of education in past and now. Opportunity.

Eligibility for becoming educators in past and now.

Educators

A person who specializes in a specific domain and is involved in Education for teaching and management is known as an Educator. In the Indian Education system a computer science college offers programs B.C.A., B.Sc. IT, and M.Sc. IT generally has an educator Lecturer, Assistant Professor, Associate Professor, Head of the Department, and Principal. Table I lists the professional duties they are involved in.

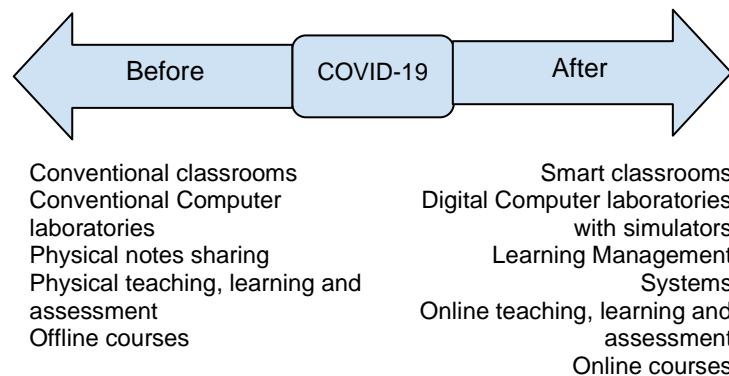
Table 1: Professional Duties of the Educators in a Computer Science College

| Designation | Professional duties |
|------------------------|--|
| Lecturer | Teaching: Lecture and Laboratory sessions |
| Assistant Professor | Teaching: Lecture and Laboratory sessions |
| Associate Professor | Teaching: Lecture and Laboratory sessions, Course design, Research projects |
| Head of the Department | Teaching, Management of teaching activities such as subject allocation, timetable, and resource management. Result Analysis, Implementation of Examination |
| Principal | Course Offerings, Assessment, and Evaluation |

Technology

The COVID-19 pandemic has brought significant changes in the world of education. Fig. 1 provides details about the evolution we observed in the use of technology for education after COVID pandemic.

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Before COVID-19 Pandemic Year

- Conventional classroom: In the physical classroom the teacher can closely monitor the students and can also adapt the teaching method as required of the student. Direct Interaction: Allow for immediate interaction between teacher and students and facilitate real-time feedback and clarification of doubt and discussions.
- Conventional Computer Laboratories: Specialized software applications that may not be readily available on their personal computer. So the computer lab is equipped with such special software tools and allows students to work on their projects and tools.
- Physical Notes Sharing: Physical notes sharing helps students to connect with the materials and understand them.

After the COVID-19 Pandemic Year

- Smart Classrooms: Interactive Learning: Smart classrooms facilitate interactive learning experiences by incorporating digital tools such as interactive whiteboards, tablets, and educational apps. enable teachers to engage students in multimedia presentations, interactive exercises, and collaborative activities, making learning more dynamic and engaging. Preparation for the Digital essential digital literacy skills, critical thinking abilities, and technological proficiency. These skills are crucial for success in higher education and the workforce.
- Digital Computer Laboratories with Stimulators: it means multimedia integrations which means multimedia elements such as video, tutorials, and interactive multimedia elements and online documentation and enhance and provide additional content.
- Simulation of Real-World Scenarios: Virtual computer labs can simulate real-world scenarios, such as network configurations, cybersecurity threats, software development environments, and system administration tasks. This allows students to gain practical experience and develop relevant skills that are applicable in professional settings.
- Online teaching, learning assessment: Digital Materials: Course materials such as readings, slideshows, videos, and interactive simulations are shared with students electronically via Learning Management Systems (LMS) or other online platforms Communication tools, chat rooms, and instant messaging, providing support, answering questions, and facilitating discussions.

The use of technology in education has changed with time and with the help of resources like Smart Board, and Projector the teaching method has become virtually, and as well as learning method has been changed effectively

The Education Reform Act in 1988 made [ICT] compulsory for all schools. While today's generation is proficient with the new technology like smartphones and laptops, how to use them in an educational environment. The main purpose of bringing digital technology into the world of education is to teach students how to use the new technology correctly and effectively in the education field and what are the advantages and disadvantages of using interactive whiteboards, VR and AR, Mobile devices, tablets, and laptops.

Advantages

- It creates an engaging and effective learning environment.
- Improves their communication and their interaction.

Remote Access

Learning management System - Through the pandemic year.

Tools and Technologies for Educators

- **LMS**

LMS stands for Learning Management System, software designed to manage efficient learning. Here in LMS, the teachers can upload their materials and the students can access these materials. This system provides face-to-face classes as well as virtual classes. By using LMS we can communicate, and track the progress of students as well as we can keep a record of all important data of Students. The Fig. 2 shows the facilities provided by a LMS.

- **Google Form**

It is a free online tool provided by Google that allows users to create different forms as well as edit them and share them with other people. Educators can also use Google Forms for assessing their students from the beginning of the class. With the use of Google Forms, feedback can be given to students and received from both students and parents.

- **Google Meet**

Google Meet is a platform that provides video Conferencing facilities and is developed by Google. Google Meet is very useful in the educational Sector as it provides face-to-face interaction and screen-sharing options. It allows educators to present slideshows, educational videos and materials to students.



- **Competitive coding platforms**

Competitive programming is a mind sport for solving coding problems using algorithms and data structure. The participants need to write code under various restrictions like memory limits, execution time, the limit of coding, space, etc. The winner of competitive programming is declared based on problems solved and time spent writing successful programming solutions. However, it also includes other factors like quality of output produced, execution time, program size, etc

Here are the benefits of competitive programming:

Competitive programming helps you to ameliorate your logical and logical chops *It improves your algorithmic knowledge. *It's an excellent addition to your CV. *Ameliorate your network of musketeers who are also passionate about programming *It's supported by world- notorious associations like Google, Amazon, Facebook, IBM, and others.

Fig. 1 shows the popular and effective competitive coding platforms used across the world. Hacker rank is a platform where programmers from all over the world come together to solve problems in a wide range of computer Science like algorithms, Machine Learning, Artificial Intelligence, etc. Here the users can practice different programs.



Fig. 2: Popular and Effective Competitive Coding Platforms

- **MOOCs**

Shows the popular and effective competitive coding platforms used across the world. Hacker rank is a platform where programmers from each over the world come together to break problems in a wide range of computer wisdom like algorithms, Machine literacy, Artificial Intelligence, etc. Then the druggies can exercise different programs. Popular and effective competitive coding platforms A massive open online course a model for delivering literacy content online to any person who wants to take a course, with no limit on attendance. A might be patterned on a council or university course, or it can be less structured. Although they do not always offer academic credits, these courses frequently offer a instrument, enhanced employment openings, or farther studies. generally, MOOCs are used for advanced education, upskilling, and career advancement. MOOCs have dramatically changed the way the world learns shows the meaning of it. Fig. 4 displays a list of dominating it is platforms in online education. NPTEL Stands for National Program on Technology Enhance Learning. It provides high-quality education to the scholars as well as the preceptors. This is used for engineering and wisdom courses. Coursera is an online operation for studying and can be used by anyone and at any place. It provides different instrument courses, degree courses, tutorials, etc to scholars and preceptors. Udemy is also an online operation for studying. It can be used by anyone. it is used in the entire world. It is dominating online education AI- enabled tools The AI tool is software that uses artificial intelligence algorithms to perform different tasks and break different problems. The AI tools are used to make the task easy and accessible for preceptors as well as scholars. Generative AI can be useful for the entire education ecosystem, including scholars, preceptors, and parents.

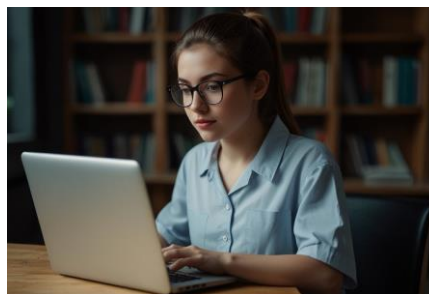


Fig. 3: MOOCs Dominating Online Education

- **AI-enabled Tools**

The illustration of AI tools are ChatGPT, Grammarly, Github, etc. Fig. 4 depicts a list of popular AI tools used by scholars and preceptors across the world. Popular AI tools revolutionizing Education Case Study Digitization is far and wide in Education at the UG position starting from registration of admission to convocation use of technology is enormous. The registration of the pupil is done through the LMS system. This helps maintain pupil's particular, and professional records in one place. also, the scheduling and allocation of coffers are supported by the LMS for effective use of coffers. Subject allocation to preceptors and schedule operation are also supported by the LMS system. The accoutrements can be participated among peers and scholars using a digital system and attendance can be marked in the digital system. Assessment and evaluation can be carried out in online or physical mode and also entry of marks can be made through the LMS system. scholars can see their marks and

other details collectively. LMS systems can give colorful reports for preceptors, scholars, parents, and operation improvising decision- timber. LMS can link scholars' results and degree instruments with ABC for digitized access from anywhere in the world. latterly, scholars can request indistinguishable documents and reiterations through LMS for purposes like unborn studies).

Primary education inpost-corona period New times-new trends. Postmodern Openings. Council Designation Professional duties Lecturer Teaching Lecture and Laboratory sessions Assistant Professor Teaching Lecture and Laboratory sessions Associate Professor tutoring Lecture and Laboratory sessions, Course design, Research projects Head of the Department Teaching, Management of tutoring conditioning similar as subject allocation, schedule, and resource operation. Result Analysis, perpetration of Examination star Course Immolations, Assessment, and Evaluation.

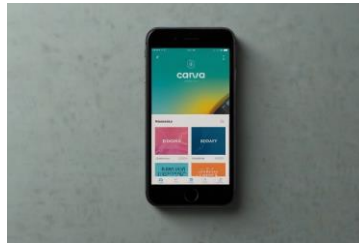


Fig. 4: Popular AI tools revolutionizing Education

Case Study

Digitization is everywhere in Education at the UG level starting from enrollment of admission to convocation use of technology is enormous. The enrolment of the student is done through the LMS system. This helps maintain student's personal, and professional records in one place. Then, the scheduling and allocation of resources are supported by the LMS for effective use of resources. Subject allocation to teachers and timetable management are also supported by the LMS system. The materials can be shared among peers and students using a digital system and attendance can be marked in the digital system. Assessment and evaluation can be carried out in online or physical mode and then entry of marks can be made through the LMS system. Students can see their marks and other details individually. LMS systems can provide various reports for teachers, students, parents, and management improvising decision-making. LMS can link students' results and degree certificates with ABC for digitized access from anywhere in the world. Later, students can request duplicate documents and transcripts through LMS for purposes like future studies.

Conclusion

As technology continues to evolve, educators must remain agile and innovative, continually adapting their practices to meet the evolving needs of learners in the digital age.

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The heading of the Acknowledgment section and the References section must not be numbered.

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