

## **Innovative Methods of Teaching and Pachhunga University College**

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**Introduction:** Pachhunga University College is the Constituent College of Mizoram University. The college offers Undergraduate degree courses in Arts, Science and Commerce. The college was established on 15th August 1958 as 'Aijal College' to become the first institution of higher education in Mizoram. The college was provincialized by the Assam Government in 1965 and it became Pachhunga Memorial Government College (PMG). On April 19, 1979 the North Eastern Hill University (NEHU) adopted and upgraded it as its only constituent college to become a pace-setting institution. The college eventually received its fourth (third?) name Pachhunga University College (PUC). After the establishment of Mizoram University, the entire management was handed over to the new university in July, 2001. The college offers undergraduate courses in 21 subjects: 11 subjects in the Arts stream, 9 subjects in the Science stream and Commerce.

**Technological innovations:** The use of technology- projectors, smart boards, video shows, web based learning resources, students' presentations, students' database, computer laboratories, etc- was introduced at the college from 2007. The manner in which these technologies are utilized is as follows:

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1. **LCD/LED projectors and smart boards:** The lecture-cum-discussion method is the main method of teaching and is supplemented by the use of PowerPoint and video materials. The college initially had 19 LCD projectors and 19 laptops which were distributed to each academic department in 2008. All projectors were mounted on a ceiling to optimize their utility. Currently, all the classrooms are equipped with ceiling-mounted LCD/LED projectors. Two projectors are also available at the Principal's office and Internet Resource Centre for common use. Training was given to senior faculty members to enable them to utilize these technologies. Students are also given instruction on how to use these technologies for presentation of their assignments and projects.

The use of LCD projectors has benefits and drawbacks. It enables the faculty members to integrate their lectures with visual/pictorial guides and academic film shows. Training of faculty members and students is an important component of these technology enabled learning processes. One impact of this innovation can be seen in the academic results, which have improved. Presentations by students using such technology have also increased.

The main drawback of this innovation is the cost of maintenance of the equipment. Another problem is that faculty members who prepare PowerPoint presentations for their classes are often forced to cancel them if the power supply goes out. The introduction of smart boards in a college classroom, while theoretically good, is still problematic owing to the fact that smart boards are costly and have limited productivity.

2. **Video show and web based learning:** The introduction of LCD and LED projectors connected to a sound system

enables the faculty members to give academic film shows. Several academic films/videos are available with Khan academy, YouTube, Academic earth, etc. Web based learning is encouraged by training the students on how to obtain viable information from the internet. The college also takes initiatives by uploading study materials and presentations on the college website.

3. **Students' presentations:** One of the most important objectives of ICT based learning is to encourage students' presentations. Students are given instruction on how to prepare PowerPoint presentations and present their assignments/project reports. This gives students' the confidence to speak in front of large groups of people. It also enhances their ICT skills. Students may also present their project findings in state level seminars. Though readymade presentations are available on the web, the faculty members do their best to ensure that all presentations are original.
4. **Computer laboratory and internet connections:** The college has a 100 mbps leased line internet connection through the NIC. The following computer facilities are available to students – an Internet resource centre(containing 20 PCs), a computer laboratory(containing 30 PCs), a language laboratory (containing 30 PCs) and a GIS laboratory (containing 10 PCs). The Internet Resource Centre was established in 2008. It allows students to browse, retrieve and print information from the internet. This enables departments to conduct web based courses like Bio-informatics, Chem-informatics and basic internet courses. Printing facility is readily available for students provided they have the paper to print on. The language laboratory is equipped with state of the art software and enables students to improve their spoken English. A general computer

laboratory was created in 2014 to enable computer based courses in Physics, Mathematics, Statistics and Commerce. It is also utilized to conduct courses in basic IT and DTP. The college also has two GIS laboratories in the department of Geography and Geology. This laboratory is utilized for curricula based courses.

The college is the first college in Mizoram to provide free Wi-Fi internet connection to students. It started doing so in 2008. The college currently has 6 Wi-Fi hotspots for students. Wi-Fi facilities are also available in each department faculty rooms. This allows the students to obtain information from the Internet.

5. **Students Database:** The college Mathematics department has developed a students' database system which can be accessed via LAN. This database contains the basic information of students along with their academic performance. This makes student counseling more effective.

#### **Innovations in teaching and learning process:**

The college is a student centric institute. The all-round development of students is the main focus while planning and implementing the teaching and learning process. Apart from the regular academic process, the college introduces innovative methods like on-the-spot lecture system, co-curricular activities as part of the academic time table, students' exchange programs, students' training, students' exposure, etc.

The introduction and integration of Co-Curricular Activities (CCA) into the academic routine enables the college faculty members, student's union, clubs and departments to conduct programmes without disturbing the regular academic classes. This also enables students' personality development through participation and leadership training.

Non curriculum courses are conducted to supplement the normal curricula. The college conducts various certificate courses and personality development courses. Other courses like the self-financed finishing school, a UGC sponsored coaching class for entry into services, banking service training, call centre and BPO training, etc. have been conducted. New scholarships and departmental awards have been created to motivate students. Introduction of “Earn While Learn” scheme enables students with poor financial backgrounds to support themselves while studying. Private sponsorship of meritorious students is also available.

Students’ exposure programmes greatly enhance students’ outlook and overall development. Since the college is located in a remote part of India, the students require good exposure. 28 national/regional study tours and 27 study tours/field visits inside the state have been conducted in the past 5 years. The total budget utilized during 2011-15 for these exposure programmes is 37,92,248.00 (thirty seven lakhs, ninety two thousand two hundred and forty eight lakhs). This indicates the commitment of the college towards student exposure. On-the-spot lectures are organized at different places having historical, economic, and environmental significance. The college has also organized 2 International, 25 National and 7 State-level seminars and workshops. Faculty members and students participate in these programmes for better exposure.

Hands-on-training programmes are conducted in Science departments through the DBT STAR college scheme and through the Institutional Biotechnology hub. Since 2012, students and faculty members have been given training in modern biological techniques under the DBT sponsored scheme. Students’ exchange programmes and students’ training in other institutes are also a common feature.

Classrooms have been re-arranged to make the learning process more effective. Departmental faculty rooms have also been re-organized to ensure better student-teacher interactions. Each department's faculty room is placed in the immediate vicinity of the classrooms where their Core students take their classes. This is to enable easier access, better interaction, counseling and consultation.

**Conclusion :** Technological innovations have to be incorporated with the lecture and discussion method to maximize the effectiveness of the teaching and learning process. The administration and technical support system also play an indispensable role in these innovations. Innovative ideas without proper implementation can hamper the academic atmosphere. The advantage of having a computer literate administrator cannot be overemphasized. IQAC analysis of result and feedback system, review meetings, and interaction with stakeholders plays an important role in the overall development of the college. Educational institutions must keep pace with the developments in science and technology. However, every technology has its own advantages and disadvantages. Identifying potential and maximizing utility ultimately depends upon the users and the system. It is largely due to the incorporation of technology into the teaching and learning process that the college has become one of the best colleges in Mizoram in terms of academic results and students' progression.

#### **References:**

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