IIMT College of Engineering, Greater Noida (India)

19th April 2019

www.conferenceworld.in



ISBN: 978-93-87793-82-8

Role of Innovations in Teaching-Learning and Best Practices in Transforming Higher Education Institutions

¹Rita Singh, ²Deepika Saroha, ^{1,2}IIMT College of Engineering, Greater Noida

ABSTRACT

It has become a constant challenge for the universities and Institutions to keep pace with always changing technologies. In order to survive the competition they have to make innovations and use best practices of the education industry. This has led the Higher Education Institutions (HEIs) to rethink and change their management and administration forms, in order to survive and compete in the current capitalist world, with new mechanisms of integration of societal knowledge.

Education has become competitive and so the educational institutions. In order to survive the competition, institutions have to improve the quality of their services. Changes in culture, aspiration and levels of skills required in securing employment for students, force higher education institutions today to rework on their educational models and add value to each and every aspect of their service. Innovations and best practices serve to enhance quality and addvalue. In this paper, I discussed innovations, small and big, developedindigenously and implemented by different higher educational institutions.. They are broadly classified under six key aspects namely " teaching-learning and evaluation, research, consultancy and extension, infrastructure and learning resources, student support and progression, and governance, leadership, and management". The paper also contains some of the institutional and individual faculty best practices having visible impact on the quality of higher education imparted by the institution. The best practices concern admission, fees, attendance, teaching, performance, skill building, employability, student involvement, collectively learning, value addition, ensuring transparency, information decapitations etc. Finally two institutional best practices are elaborated with its aim of practice, underlying principles and concepts, particular contextual features or challenging issues that have had to be addressed in designing and implementing the practice, and its implementation, including its uniqueness in Indian higher education, evidence of success, identifying the problems encountered and resources required to implement the practice.

IIMT College of Engineering, Greater Noida (India)

19th April 2019 www.conferenceworld.in

ISBN: 978-93-87793-82-8

Keywords: Innovations in Higher education, Best practices in higher education.

I. INTRODUCTION

With the fast growth in the field of science and technology, the knowledge base of different disciplines is also expanding. The educational system is invested with the responsibility of absorbing, assimilating and delivering the new knowledge to its incumbents. Higher education therefore has become competitive. It not only matters how much in terms of quantity but how good in terms of quality that it delivers the knowledge. Changes in culture, aspiration and levels of skills required in securing employment for students and cost of providing the service force higher education institutions today to rework on their educational models and add value at each and every aspects in their service[1-3]. This has become a high priority for institutions either struggling for existence or striving for excellence. Higher education is a change-resistant enterprise. Academic culture, faculty governance and an unusual bureaucracy all work together to slow down evolution. In fact, this has contributed to the enormous survival success of old branded higher education institutions. In order to improve the quality of higher education, institutions have to think beyond presently adopted credit based systems [4-5].

II.INNOVATIONS IN TEACHING-LEARNING

The institutes should introduce several innovations which help to create a positive impact on the functioning of the institutes. Table 1 contains the Innovations introduced and practiced in different colleges in NCR in recent years.

Table: 1

S. No.	Curricular Aspects	Teaching- Learning & Evaluation	Research, Consultancy & Extension	Infrastructure & Learning Resources	Student support & Progression	Governance, Leadership & Management
1	Website as	Use Video	Web links to	Inspirational	Wi-Fi Internet	Biometric
	information	Lectures of	online journals	quotations on	facility	attendance system
	resource	NPTEL		wall display		
2	Dual	Open book	Increased	Student activity	Celebration of	CCTV cameras in
	specialization	examination	reference	photos on	graduation	all classrooms
	offered by		facility for	display	day with	
	college		Research &		Gown &	
			Projects		scroll	

IIMT College of Engineering, Greater Noida (India)

19th April 2019 www.conferenceworld.in



ISBN: 978-93-87793-82-8

3	Separate departmental libraries	Compulsory chapter wise assignment	Social service programmes under own NGO	LCD fitted classrooms	Zero balance account for the students & ATM facility inside the campus	Attempt for solar based green energy campus
4	Value added chapters in all subjects	Weightage for attendance in internal assessment	Student group projects	Use of amplifiers in class	Counselling services	Student participation in organising events
5	Information on additional online courses like eDX.	Virtual investment training on share market	Establishment of Research centres to promote faculty research	CRT monitors replaced by LCD monitors	Photos of academic achievers on display	E-placement brochure and e- magazine
6	Book exhibitions in the college	Submission of assignment through E- mail	Computer literacy classes for poor children	Locker facility on rent	Job fairs to attract employers to campus	Honouring alumni as distinguished guests
7	Subject wise library books in college website	Regular faculty development programmes	Student programs in special schools for physically challenged children.	Access to high speed internet for students	Paid internship in NGOs	Medical insurance facility for students and staff
8	Provision for downloading old question papers from website	CCTV surveillance of University exams	Old cloth collection for supporting local NGOs.	Laptop computer charging facility in classroom	Photos of academic achievers on website	EDP cell to develop young entrepreneurs
9	Competitive exam books in library collection	Foreign professors in the college campus	Blood donation camp by social service cell	Barcode based identification of library books	SMS information to parents	Open door policy to meet Principal
10	Classes begin with silent prayer to recall the goal	Declaration in case of absence in class	Consultancy priority areas provided in website	Well furnished classrooms	Youth empowerment efforts through Vivekananda study circle.	Principal collecting feedback through regular class visit
11	Book bank facility	Additional alert mechanism for attendance shortage	Student developed software usage for library	Ramp facility for disabled students	Traditional day celebration by students	Verification of ongoing classes & documentation

IIMT College of Engineering, Greater Noida (India)

19th April 2019 www.conferenceworld.in



ISBN: 978-93-87793-82-8

III. BEST PRACTICES Time tested innovations are implemented in the form of best practices when they are worked out into a system which is durable and endurable [8-11]. Some of the best practices adopted and implemented in are listed in Table 2:

Table 2: Best Practices

1. Admission

The first come first serve model of the institution provides equal opportunity for students irrespective of their caste, religion, nationality, gender and poor academic performance.

2. Fees

Admission to backward students on subsidized fee lower than University approved fee in selected courses helps the students from backward community to access their education.

3. Attendance

The Save a Year programme of the institute enables students with marginal attendance shortage to make up for the requirement by attending additional classes to avoid losing a year.

4. Earnings

The Earn while you Learn programme of the collegesencourage and provide opportunity to students to support themselves by taking part-time jobs along with studies.

5. Teaching

Entry test and summarization of the class is used as a teaching technique

6. Performance

The college conducts mentorship programmes to support students, faculty serve as mentors

7. Employability

A variety of certification programmes customized to suit the needs and requirements of students bridge the gap in curriculum based learning.

8. Skill building

Skill development programmes have been introduced to build job-specific skills.

9. Improving proficiency

Group/team projects for the students particularly in computer science increases their proficiency in developing various application software.

10. Motivation

Best project of the year is awarded with prize annually, to encourage the quality of research projects by the students.

IV. INDIDUAL BEST PRACTICES

Apart from above practices different faculties suggested one best practice in his/her teaching. A gist of the individual faculty's best practice is provided below:

1. Entry Test - Summarization Teaching Model

This model developed by Prof. Aithal combines both positive and negative motivation and integrated into a best practice. According to this model each class of one hour duration starts with **silent prayer** for one minute to recall the career objective or goal of individual students.

The

IIMT College of Engineering, Greater Noida (India)

19th April 2019 www.conferenceworld.in



ISBN: 978-93-87793-82-8

summarization opportunity for the students keep the students alert throughout the class writing down the gist of the session and concentrate in the topic discussed in the class.

2. Contextualization

Making meaning by connecting curriculum to teaching and students experiences and skills is contextualization. The concept of contextualization involves applying various theories and concepts to everyday context in the student's life. The student is motivated to explore and think of examples where the particular context figures in their day to day life.

3. Modified Brainstorming:

Brain storming is an effective technique for ensuring participation in the learning process. But almost everybody is afraid to use it because of the difficulty in managing complex and diverse ideas which come in the process.

4. Oral story telling (OST)

We have a profound need to tell and hear stories. It is how we share experience, understand each other, and create continuity. Every conversation is full of personal anecdote; every effort to explain shared customs and values need a tale; every bit of wisdom is best expressed by a story. The very way our minds think is in essence a story.

5. Milly (Most Important Lesson Learnt Yesterday)

This practice is being followed to achieve the goal of keeping the students continuously in touch with the subject. This is practiced by way of discussing with the students what they consider as most important learning in the last class.

6. Z to A approach

Z to A approach is working backwards. It attempts to explain application first and then the concept. Personalized reflection about an experience and applying learning to arrive at the concept is the core of this best practice.

7. TBX- (**Team building exercises- From competition to collaboration**) The goals of this way of learning is to build better motivated students, bringing in creativity in class room, and better problem solving skills. In this process, emphasis on team building through activities, whether they are five-minute games or week-long assignments, to teach essential collaborative skills.

8. Exploding the Syllabus for topic based assignments

The Lecturer has to explode the syllabus of the subject which he teaches, to smaller topics. Each of these topics can be given to the students as Assignment to cover all the aspects

IIMT College of Engineering, Greater Noida (India)

19th April 2019 www.conferenceworld.in

ISBN: 978-93-87793-82-8

related to the topic, which becomes a knowledge-bank on that subject.

9. Business practice simulation

Virtual trading is a practice used for teaching finance management to students to show how online platforms can be used to replicate the real market scenarios so as to make the students aware of the nuances of Stock Market. Through interactive sessions using online platform and live market on display, students are made to learn the trading and investment in stock market by means of virtual trading.

10. Corporate Lessons & Concepts (CLC Model)

This is a method by which the faculty familiarizes certain ways of the corporates such as language, style of working and jargons used by them, explained by means of story. The students are then asked to find out the latest concepts in the industry of their choice & share the same in the class.

11. Teach the teacher

Today's students belong to a much smarter generation -technologically and otherwise. It is indeed a challenge for the teacher to keep them engaged and engrossed in the classroom discussions and ensures that there is continued involvement and assimilation of the concepts taught, ideas shared learning imparted and skill development.

12. Idea Tracking Enablement Method (ITEM)

It is essential that teachers have to be effective speakers because their job itself is talking. In order to convey the idea best, it is essential that preparation be done before going to the class. This means that a good grasp of the subject is important. No lecture can be effective without properly organizing the thoughts.

13. UTARA (Unified Technique for Achievement Related Action)

Self motivation is developed in students who are de-spirited by deprivations, through identifying poor performers and engaging them in conversation and counselling employing different techniques such as personal attention, problem clarification, insight stimulation, engagement, mutual encouragement and self-realization.

14. Summarization and clarification

Towards the end of each session ask two or three students to summarize the session which was discussed in the class. This will help the students to recollect the points and clarify or supplement once again if they missed any points. This will also make the students more alert and teacher will get the feedback as well.

IIMT College of Engineering, Greater Noida (India)

19th April 2019

www.conferenceworld.in



ISBN: 978-93-87793-82-8

15. Consistent Picture Learning

This is a technique which simplifies learning through picturization of the concept. Everyday glance at the picture will enable the person to imprint the idea in mind. The practice is aimed to educate the slow learners who cannot remember concepts.

VII. CONCLUSION

The introductions of innovations and best practices in different colleges have resulted in changed philosophy and approaches to teaching-learning process. The managerial theory namely -Theory X and Theory Y propounded by McGregor as applied to students in an educational institution has given way to new set of assumptions based on theory Y. The following are the modified assumptions based on theory X.

following are the modified assumptions based on theory X.
$\ \square$ Most students are basically lazy and do not want to study. They are coming for studies
because of their parents who force them.
☐ They have no interest in attending classes and writing assignments.
☐ Internal marks are serving as motivators.
☐ They do not take examinations seriously.
\Box High marks as a desire is cherished by most of the students, but they are not prepared
totoil and get it.
☐ They have taken the course only for the sake of getting a job.
The following are the assumptions based on theory Y. \Box All students are not basically lazy.
Their interest in studies could be created by the teacher using improved methods of teaching.
$\ \square$ With constant support and advice, they will attend all classes. $\ \square$ Students take
examinations seriously if evaluation is suiting to reward their capability. Wrong methods of
evaluation and wrong practice of examinations make it meaningless. Innovations have no
end. They continue to influence the quality of education and therefore higher educational
institutions should constantly pursue adopting more and new innovations and convert them
into best practices.

IIMT College of Engineering, Greater Noida (India)

19th April 2019 www.conferenceworld.in



ISBN: 978-93-87793-82-8

REFERENCES

- [1] Boyce, Mary E., "Organizational Learning is Essential to Achieving and Sustaining Change in Higher Education", Innovative Higher Education, Vol. 28, No. 2, pages 119-136, 2003.
- [2] Ray Land, *Agency, context and change in academic development*, International Journal for Academic Development, 6:1, pages 4-20, 2001.
- [3] Robert B. Barr & John Tagg, From Teaching to Learning A New Paradigm For Undergraduate Education, Change: The Magazine of Higher Learning, Volume 27, Issue 6, pages 12-26, 1995.
- [4] Gopal K. Kanji, Abdul Malek Bin A. Tambi & William Wallace, *A comparative study of quality practices in higher education institutions in the US and Malaysia*, Total Quality Management, Volume 10, Issue 3, pages 357-371, 1999. [5] Mohammad S. Owlia, *Quality in higher education-a survey*, Total Quality Management Volume 7, Issue 2, pages 161-172, 1996.
- [6] Silver Harold, *Managing to Innovate in Higher Education*. British Journal of Educational Studies, Vol. 47, No. 2 (Jun., 1999), pages 145-156, 1999.
- [7] D. Randy Garrison, Heather Kanuka, *Blended learning: Uncovering its transformative potential in higher education*, The Internet and Higher Education, Volume 7, Issue 2, 2nd Quarter 2004, pages 95–105.
- [8] Rogers, D.L., A Paradigm Shift: Technology Integration for Higher Education in the New Millennium. AACE Journal, Charlottesville, VA: AACE, 1(13), pages 19-33. 2000.
- [9] Paul D. Umbach, Matthew R. Wawrzynski, Faculty do Matter: The Role of College Faculty in Student Learning and Engagement, Research in Higher Education, Volume 46, Issue 2, pages 153-184, March 2005.
- [10] George D. Kuh, C. Robert Pace, Nick Vesper, *The Development of Process Indicators to Estimate Student Gains Associated with Good Practices in Undergraduate Education*, Research in Higher Education, Volume 38, Issue 4, pages 435-454, August 1997.
- [11] McGregor, D. The Human Side of Enterprise, New York, McGrawHill. 1960.
- [12] P.S. Aithal & P.M. Suresh Kumar, *A study on Innovations and Best Practices in Higher Education Institutions : A case study of SIMS*, Proceedings of National conference changing trends in Management, IT, and Social sciences, Manegma 2014, Mangalore, 09/04/2014, ISBN No. 978-81-929306-0-2, (February 2014).
