

Innovations in Teaching and Learning to Develop and Equip the Children of 21st Century

Nilesha Sisodiya

Podar International School Ahmedabad India

Abstract— Education has become competitive and so too 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 add value. Podar International School (PIS), which combines technology, management and social service education has identified and implemented innovations and best practices to differentiate itself among the competitors and to add value in its educational services. In this paper, I have discussed innovations, developed indigenously and implemented during last few years. 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 reading ability, blogs, Use of ICT, M learning, flipped classroom, mentoring, EBooks, Pi 5 radio channel for student's development. And few practices like Term wise planning by PIC, Microteaching, Peer observation, between us app, Report card App, Recording of best classes of teachers for training other co teachers.

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

I. INTRODUCTION

Science and technology are growing alarmingly and consequently the knowledge base of all disciplines are fast 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. Student centric focus is gradually shifting to student friendly approaches, and innovations and best practices are adopted to add value and get more mileage in the knowledge delivery. 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 aspect 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 part, 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]. By adding competency to the students and the system, through innovations and best practices, the institutions can

add value to the education system to address large social and economic challenges that began about a decade ago and are in full swing now. These include rapidly rising costs of tuition, a growing need for more and repeated education for employment, global market competition challenges etc. Competency-based education provides the flexibility students need, focuses on assessing learning mastery needed to be a well-functioning, and is affordable because it is scalable in ways that create efficiencies [6-7].

II. ABOUT PIS

Established in 1927, by Sheth Anandilal Podar, Podar Education Group has, from the very beginning been focused driven and motivated by the traditional Indian values of honesty, integrity and service. The father of our nation, Mahatma Gandhi, being the very first President of the Anandilal Podar Trust stands testimony to this fact. With over 92 years of experience within the educational space, the Podar group is now a network of 102 educational institutions spread across the nation, with a combined student strength of more than 1,20,000 and the support of 6,000 dedicated and loyal staff members.

Our constantly growing network of education institutions includes a wide spectrum of Pre-Primary schools under the brand name of Podar Jumbo Kids, Primary and Secondary schools under the brand name of Podar International School, Junior Colleges, Part-Time courses and teacher training institutes. The Podar network of schools also offers a wide choice of educational streams such as the Central Board of Secondary Education (CBSE), Council for the Indian School Certificate Examinations (CISCE), Secondary School Certificate (SSC), Cambridge (IGCSE) and International Baccalaureate (IB). Its scholastic record, innovative learning methods and strong commitment to delivering quality through integrity has helped to scale heights that few have managed in the field of education. As a result, Podar today is a trusted name and an acknowledged leader in the collective effort to shape the future of our children and the nation.⁸

A. Mission of PIS

“Our mission is to provide the children of India with the necessary skills to face the challenges of the 21st century.”

The Podar Education Group legacy is long and enduring. For over eight decades, the Podar family has made education a mission and quality the fulcrum of their commitment. We have been entrusted with their future, their careers and their lives ahead. We need to nurture them as learners, inculcate values and arm them with the necessary skills that will help them make the nation proud.

Our network of schools aim to fuse the strong cultural fundamentals of Indian society with advanced learning tools acquired from the world over giving education an exciting and dynamic direction.

III. INNOVATIONS IN TEACHING AND LEARNING AT PIS

Time tested innovations are implemented in the form of best practices when they are worked out into a system which is durable and endurable. Some of the best practices adopted and implemented in PIS are listed below

A. Few best practices for development of students

1) E books

In today's world we know that how heavy are the bags of the students, to solve this problem the institute has come up with innovative method that is e book. An electronic book (or e-book) is a book publication made available in digital form, consisting of text, images, or both, readable on the flat-panel display of computers or other electronic devices.⁹ The e version of the book is downloaded into their tablets. It even has a stored dictionary with it. While reading if they want to know the meaning of some words they can click on it and immediately they get the meaning of it. It's handy, easy to use, save paper, reduces the load of heavy bags etc.

Its disadvantage is more use of tablets by students, if it's not of good quality may damage the eyes of the student.

2) Blogs

Institution has its own blog. A blog is a regularly updated website or web page, typically run by an individual or small group that is written in an informal or conversational style. School blog is different for each class and is accessible even from home all important PowerPoint Presentations and notes are uploaded on blogs and are handy for students to use. It is especially beneficial for those students who are slow writers and could not complete their class work. Teachers can upload extra worksheets for students to practice at home. Its disadvantage is it needs internet access.

3) Use of ICT

Every class has one computer, projector, visualizer which helps both teacher and students in their teaching and learning process. All the ways of ICT like PPT, Videos, Listening Activities, Diagrams can be easily displayed. In subjects like English complete reading material is displayed under visualize. Teacher can show steps of construction, geometry, science experiments and drawing skills under visualize.

Its disadvantage is requiring all equipment's, proper maintenance and electric bill increases up to high limits.

4) Mentoring

The School conducts mentorship programs to support students, faculty serve as mentors. Mentoring is most often defined as a professional relationship in which an experienced person (the mentor) assists another (the mentee) in developing specific skills and knowledge that will enhance the less-experienced person's professional and personal growth.¹⁰

We follow the system of mentoring for our students of class 10 and 12. Mentors are the teachers and students are distributed accordingly. Each teacher gets a group of 10 to 12 students and the mentor becomes the school parent for that group of students and look into each and every aspect

and over all development of their groups and works hard for the betterment of their results

Its disadvantage is the teacher has to give all her free periods in mentoring those students and do not get any free time for self.

5) M learning

M-learning or mobile learning is "learning across multiple contexts, through social and content interactions, using personal electronic devices".¹¹ A form of distance education, m-learners use mobile device educational technology at their time convenience.¹²

M-learning technologies include handheld computers, MP3 players, notebooks, mobile phones and tablets. M-learning focuses on the mobility of the learner, interacting with portable technologies. Using mobile tools for creating learning aids and materials becomes an important part of informal learning.¹³

M learning is mobile learning in which specific apps (padlet) are used to prepare lesson plans and are shared with the students. The students go through it before coming to school as pre preparation. Assignment and home work are also done with the help of mobiles. Innovative ways to use mobile in different classes like Maths, Science and English are used.

Its disadvantage is students have to bring mobiles in school and the school has to arrange a high power wifi system.

6) Pi5 Radio Show

A School Radio station run by the students and for the students will help build an inclusive atmosphere in the school. Radio is all about communication and running a radio show takes commitment and teamwork in order for it to be a success. Our systems are easy enough to use that all students, regardless of age or ability can get involved. Most people find talking to a 'mic' in a closed room far less intimidating than appearing on camera or on stage. This allows students to express their views and build their confidence whether it is discussing important issues or sharing ideas, radio gives your students a confident voice within your school.¹⁴

Pi 5 is our own radio show in school, during school times in which students become radio jockey and there is a lot of interview sessions between students and staff. They share many information's through it. It is played during break times. Even songs are being played so students enjoy it and eat their food properly and get freshen up for next classes.

Its disadvantage is the breaks become too noisy

7) Learn a Word a Day

The concept is aimed to enrich the vocabulary of students. Enrichment of vocabulary is achieved through a practice of one word a day. Word of the day with its meaning and few sentences on that word to know the implementation of that word is displayed in the corridors and stair case which is visible to the student every time he passes through these places.

8) Dramatization and movie making

This is the method mostly used to explain English stories where the students perform the drama of the chapter in the text or make movies on it. This helps them to learn and remember the chapter in a better way as well as help them to

enhance their skills of performing arts, vocabulary and make them learn a lot about computer software and movie making. Students 10th std of the year 2016-17 have made movies on most of the chapters from English textbook. They played the role of all the characters and recorded it in their I pads and made movie. It was a group activity.

The only disadvantage of it is that this activity is very time consuming.

9) School Movies

Students are shown different movies under school movie program. these movies carry values into them and with the entertainment the values are inculcated in to the students which help them to develop them self as a good individual with all values and morals important for their life to be a good human.

10) NIE (Newspaper in Education) Enrichment Activity

The students were asked to select any two different articles (science/maths, beauty/hygiene, literature/technology, emotions/chocolates, music/stress or any common topic like: pets/depression) of their choices from the NIE. And then they were asked to read, interpret, understand and make 5-6 pointers for each article and then finally amalgamate them into one report/write-up/poetry/article, where they needed to bring a connection in between the two and state how one is beneficial for the other. The reason for giving such an activity is to test their creative and innovative skills of compiling totally unmatched topics into one by bringing some commonality and how the usage can bring a revolution for the user. This gives them an outlook towards journalism with regular newspaper reading and then writing different articles and reports. It develops their Vocabulary.

11) Flipped Classroom

Podar School is the first school in the country to pilot and adopt different variants of the flipped method of learning for all its students. The Flipped Class is an attempt to break away from the passive, assembly-line form of teaching that limits our current educational system.

The flipped learning technique that was introduced as a pilot project in mid-2012, was formally introduced in December 2012. This technique involves teachers recording their lectures beforehand and sharing it with the students, so that the latter can view the lectures at home and come prepared to class. This way, since the students are already aware of the subject to be discussed in class, classroom time is spent discussing, solving queries and problems. The conventional way of teaching involves teachers giving lectures in class and students solving problems at home. "With this technique, the roles have been flipped—students need to study at home and revise and clear their doubts in class,"

Its disadvantage is recording the classes and editing it is time consuming as well as it is expensive. All the students need to have internet connectivity and it gadgets at home.

12) Motivation

Best students of the year is awarded with prize annually, to encourage the quality of research projects by the students. Even awards for Subject expert students from each class are given every year.

13) Wall Magazine

A wall magazine is a periodical run on a notice board, especially in an educational institute. Wall magazines are a medium within the educational institutions for the students to express their creativity. It can also be utilized as a medium to increase interaction between students by having regular fortnight quizzes, so making it widely known. Certain topics can be discussed by regular posts on an open section. This way to give extra knowledge of what's happening in science now a day through Science wall magazine Scintilla. It's a bimonthly wall magazine. It consists of information like Scientist of the month, Myths and facts in Science, Words of the month, Highlights of the month, Nobel Laureate of the month and latest in science.

14) Entrepreneurial learning in higher secondary

To develop entrepreneurial learning by understanding theory based on practice. The students were asked to develop any innovative product/service. They had to develop a business-plan to sell the same. They had to analyze the break-even point of sales, such that their business opportunity becomes viable. They set-up a market to sell their products to students from Std 4 to 11. The students understood the loopholes between estimations and actual practice

15) Integrated Projects

It is an innovative way to give projects to the students. It is a collaborative way to involve each subject in one project. This helps the student to relate the same topic in all the subjects and even reduces the work of different projects of different subject. Earlier the projects were given in each subject which had made the work tedious for the students. This method has given a great relief to the students and at the same time has increased the thinking skills and creativity in students. For e.g a topic was given to class 5 "Tea" In which in science they have to find different nutritional values of different types of tea, in mathematics they have to statistical calculation about the consumption of different types of tea, In social science they have to do map work about cultivation of these types of tea, In language they have to write a poem or a story on tea so in this way it included all the subjects with one topic. This helps the student to get overall information about that topic.

B. Best practices for development of teachers

1) Term wise teaching, planning and research activity by PIC

Podar is a chain of schools with same teaching process. So to enable that we have Podar innovative cell (PIC). They prepare lesson plan for each chapter and each class followed same in all the schools. They also send worksheets, power point presentations, videos assignments etc. This is a special group which makes work of teacher very easy and the teacher can focus on teaching activities. It reduces the time to search related articles and help the teacher to focus on classroom activities. The lesson plans are made using different reference books too with their details. So the teacher gets data of different reference books along with text book to help students with more content available. The lesson plans are made keeping blooms taxonomy in mind. The also provide with different worksheets and assessment sheets and question bank. This reduces teachers time and effort to prepare the same. With all these things available

handy the teacher has to now focus only on the teaching in class.

2) *Micro Teaching*

Micro teaching is followed in school too. The subject teachers sit together in a specific subject meeting and do micro teaching on the current chapters going on so that they could keep on exchanging and sharing their teaching skills. Here teachers can show different skills to teach a single topic.

3) *Peer observation*

Every teacher has a specific way of teaching and everyone is unique in few specific styles. So peer observation is a way in which the colleague can see their co teacher teaching and observe their classes and learn from their classroom environment and even can later share their knowledge and skills with them

4) *Between us app*

As discussed earlier that the PIC prepare the lesson plan and then shares it with the concern teachers through app. Every teacher has their own user name and password. Teacher has all the Lesson plans, study material in this app. This app is also shared with the parents they can see their wards attendance, PPTs, videos, assignments at home. It is also an app used to send message and have interaction between teacher and parents.

5) *Beanstalk app*

Result preparation is one of the important work on teacher's job. This app has made it very easy for Podar teachers, where the sub teachers has to do all the entries and the software itself prepares the result in the required format.

6) *Recording of classes*

Few classes have camera and mike and the live classes are being recorded by final editing a proper class of particular chapter is prepared and shared with all Podar teachers So that they can also use the best class practices in their classes too.

7) *In House Trainings*

Teachers are given training to develop different skills to teach their subject in innovative way. School calls for different resource person to come and take workshops for teachers Some of the highlights of our teacher training programme include: Training from Authors and Publishers, Training from International academicians and industry leaders, Training in Soft skills, etiquette, and work life balance.

IV. CONCLUSION

Based on our experience and approach, we have designed a set of goals that we ensure our students achieve by the time they are ready for the next level of learning. With the help of above practices we could find these changes in our students.

- Independent Thinkers: The students from a very young age are trained and encouraged to be independent thinkers and to take on an approach of innovation and ingenuity. Therefore, when faced with a problem or a situation, our students do not simply look for ready answers but use their imagination and analytical abilities to create pragmatic solutions.
- Communicators: We believe that it is not enough for our children to just have great ideas. It is equally, if not

more important that they are able to communicate these ideas effectively. We train our children to be effective communicators, armed with eloquence, assertiveness and clarity in thought to put forth their points with ease and without hesitation, irrespective of the audience or the occasion.

- Adaptors: Students are steadfast in an ever changing environment and think out of the box, using their skills and core competence to make sure their success is not a probability but certainty.
- Modern Citizens : The Podar approach to learning imparts our future generations with the necessary technical know-how and the awareness of the fundamentals of each technology so they are unfazed by changes and always up to the challenge.
- Good Human Beings It is a matter of pride for Podar International School that we don't just make our children knowledgeable – we nurture the little saplings of wisdom, inculcating values and standards that will help achieve not just numerical success but also win the hearts of the world along the way.
- Along with all these above changes could even find difference in results of our students is far better than others. We have a 100% result consistently. Can even find changes in the attendance of students, Students are enthusiastic to come to school and get involved in all scholastic and non-scholastic activities.
- We have an on-going teacher development programme that makes sure our teachers are up-to-date with the trends, technologies, methodologies, best practices and breakthroughs in the field of education

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