Innovative Teaching Technology for Optimum Skill Development; The Paradigm Shift towards Quality Education as per NEP

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ABSTRACT

What we are practicing today constitutes a traditional style of learning where as new education policy 2020 is looking forward to emphasize upon increasing GER & developing employable skills in the students through optimum learning methods. Since necessity is the mother of invention, so we need innovative learning pedagogy at distinct stages of education i.e. Primary Level, Secondary Level and Higher Education Level. As different age group learners get education at different aforesaid levels and therefore pedagogical styles may vary at Primary, Secondary & Higher Education level of education. Traditional teachers centric pedagogy as on today is gradually shifting towards more effective Learner's Centric Pedagogy which provides learners a stress free environment, More flexibility and a greater participation than ever before in the history of learning.

The paper attempts to investigate most recent innovative teaching practices and futuristic approaches particularly at Higher Education Level (Student Age 16 & above), that would help in developing employable skills in the learners to cater industrial needs. I wish to urge top decision makers to think a while over the findings of the paper for academic excellence especially in the context of higher education.

Keywords-- Innovative Teaching Pedagogy, Higher Education, Employable Skills, Teacher's Centric Learning, Student Centric Learning

I.   INTRODUCTION

The educational methods and quality has always been a major concern right from primitive edges of ancient period to recent times. Quality education can transform society and civilization as a whole, over a period of time. We know that real education provokes a learner to gain conceptual clarity and vis-à-vis ability to apply conceptual knowledge over practical world in the interest of society and human mankind. Different educational practices were adopted time to time in the past, in history of human civilisation.

Gurukul Parampara during Treta Yug and onwards, Macaulay's education system in pre-independent india and Traditional education pattern and Open Schooling in post independence regime are note worthy.

Learning pedagogy has been changing over a period of time since beginning. Gurukul Parampara was entirely a different learning experience than that of the later patterns in vogue up to now.

Traditional teachers centric pedagogy as on today is gradually shifting towards more effective Learner's Centric Pedagogy which provides learners a stress free environment, More flexibility and a greater participation than ever before in the history of learning.

Empoyable optimum Skill development has become an emerging word in the wake of new educational policy. The major emphasis is towards real learning and skill development in learners rather than providing traditional education. A positive change in learning pattern seems imperative and subject to intensive research for further studies.

II.   STATEMENT OF PROBLEM

Lot many graduates and post graduates are unemployed across the country as on date and they are called educated unemployed. Employment Gap in educated mass is a serious concern for any nation. It affixes a question mark and opens up two basic questions to be interrogated.

2.1 Do we witness Employment Gap in educated students?
2.2 Are existing educational methods/ pedagogy sufficient to develop students?

III.   OBJECTIVE OF THE STUDY

3.1 To study existing teaching practices at higher education.
3.2 To study scope of innovation in teaching practices at higher education.
3.3 To access the cause of gap between education and employment.
3.4 To Search Stress Free Learning Approaches in the Class Room.

IV.   REVIEW OF LITERATURE

We had been observing various learning approaches right from ancient period over the years. Modern Literature highlights four major pedagogical approaches in this regard. These approcaches are note worthy and can be studied further for the development of a new innovative model as an extension, in pursuit of academic excellence.

1. Behaviourism Theory: THORNDIKE (1911), PAVLOV (1927) AND SKINNER (1957) supported Behaviourism pedagocial approach. The approach advocates direct learning instruction by a way of lecture based lessons. Teacher is a sole authority in this pedagogy who solely decides all matters in the class room. We can call this approach as a teacher centric approach of learning. It is also known as traditional style of learning.

2. Constructivism Approach: Constructivism thory lead some changes over the previous approach. Supporters of this approach were of the opinion that students learn through doing on their own experiences.

PIAGET wrote younger children work through physical doings whereas older children are tackled through symbolic and abstract ideas.

3. Social Constructivism: Cognitive psychologist LEV VYGOTSKY developed social constructivism approach by extending the work of PIAGET and said learning is a collabotrative interactional process between students and a teacher.

4. Liberationism: Liberationaism pedagogy is developed by Brazilian educator PAULO FREIRE. He insisted upon critical upbringins in the class room from student's point of view.

V.   IMITATION OF THE STUDY

The particular study is based upon Higher education Learners for age group ranging 16 & above. Primary education learners may have separate issues of learning to be dealt differently.

VI.   TEACHING PRACTICES

Teaching practices were revised according to the need in the contemporary world. Perhaps Past pedagogy patterns over span of times were also appropriate but with the centuries ahead they became obsolete. Evolution process is dynamic in nature and requires continuous updation.

6.1 Ancient Period Practices

Gurukul Parampara was a powerful educational philosophy in ancient days. A student was supposed to undergo into barahamcharya stage during shiksha-diksha. Migration from parent's house to Guru's Venue was highlighted in the stories of those times. The approach had a positive aspect for a learner in the sense that if he or she remains distant from parents then they could have concentrated better themselves. Moreover Gurus could have an eye over their 'Shishya' continuously. These practices had been continuously changing over the years in their development phase. Maculey in the pre independent India criticized Ancient Indian educational system and motivated to adopt English educational system of learning.

6.2 Post Independent Period Practices

Post independent teaching regime witnessed chalk and Board system of teaching. This teaching method was referred as one way flow of information. A teacher acts as a sender to deliver his message to the students. Simply providing material from the text book and passing information to students had been a prime practice in this period. The content is delivered as per teacher's choice and hence traditional method looks more like Teacher's centered approach.

Two major pedagogical methods are note wortht i.e.

1. Teachers Centric pedagogy
2. Student Centric Pedagogy

A comparative analysis of teacher centric and student centric approach:

Teacher's centric Approach	Student's centric Approach
Actvities Derive as per teachers mood A pre-conceived lesson plan is utilized. Information flows from teacher to student A student is a recipient most of the time during session. A teacher requires less efforts in imparting knowledge . Students witness less participation during learning. Book Knowledge is shared mostly in traditional learning. Teachers may feel at ease in this approach as the study material once developed is used in many subsequent years. Less fun and less creativity observed. Systematic coverage over syllabus is observed. Less practical exposure observed in subject. Useful for beginners and new teachers. Useful for weak to medioker students. Useful for primary to higher secondary level.	Activities Derive as per student mood Class Moves as per student demand. Pre concived educational plan hardly executed in real sense during class room sessions. Sessions begin and moive as per learner's requirements and take shape spontaneously. More creativity is observed in these sessions. Both way communication is sought and students dialogues are observed rather being recipient only. Much student's participation is observed. Students are observed psychologically more confident and satisfied. More fun more creativity and participation. Teacher part is challenging in this approach and he / she must be a master in their respective field. Case study, role play leads to practical exposure to students. Useful for experience teachers with high intellect. Useful for creative students mediyoker to meritorious students. Useful in higher education level.

VII. EMPLOYMENT GAP

Employment gap refers to the difference between employable people and the availability of jobs. It means the shortage of jobs as compare to the population are called employment gaps in common parlance, whereas educated unemployed means the educated employable people that are idle either of shortage of jobs or shortage of required skill in themselves. . One thing is pretty sure that both the situations (Emplyoment Gap and Educated Unemployement) are not good for the nation. Broadly, Employment Gap may be studied under following categories:

7.1 Scarcity of Jobs as compare to Employable People.
7.2 Employable People Short Of Employable Skills.

VIII. RESEARCH METHODOLOGY

8.1 Random sampling at graduation level and Census study at Post Graduation level was administered to obtain primary data.

8.2 Hypothesis:

Null: H0 (1): There is no association between Education and Unemployment.
Alternative Ha (1): Education and Employment significantly influence each other.
Null H0 (2): Students do not expect a change in the existing Learning pedagogy.

Alternative Ha (2): Students wish a change in learning Pedagogy.

IX. FINDINGS AND RESULT

The study supports and recommends 'Student Centric Approach' of learning as an innovation at higher education Level. Suggested workings are meant for developing employable skills in the students rather than imparting book information simply. The innovative teaching pedagogy to be implemented at higher education is suggested as below with the explaination of Employable skills.

9.1 Employble Skills

"Education for the sake of getting degree is no education." The statement is very much true because the very purpose of education gets defeated if we as academicians could not develop employable skills in the learners.The employable skills make people competent to get employment vis –a –vis capability of transforming knowledge into practical applications at work. Employable skills tend to the number of skills which can be understood as follows:

Communication Skills: Reading & Writing Skills, Verbal & Non Verbal Skills, Group Discussion & Interview Skills, Soft skills etc.

Self Manangement Skills: Physical Health Awareness, Mental Equilibrium, Time Management, Personality Development, Stress Management & Resilience.

Enterpreneurial skills: Working Abilty, Risk taking abilty, Problem Solving Ability, Leadership Quality etc.

Green Skills: Natural Resourse Management, Sustainable Development.

Information Technology Skills: Knowledge of Computer & Electronic Devices.

9.2 Suggested Approaches to Attain Employable Skills

In this modern era, the traditional teaching methods are turning out to be less popular among smart students of matured age group. Traditional teacher centric approach has become obsolete now and new innovative approach has to be introduced as modern approach. This approach shall work from student's angle and hence we can call it as Student Centric Learning Approach. Let us see how student centric approach shall work? We think from student's perspective in this approach. For example if I had to open the class, I shall ask my students, what you want to study today instead of insisting to learn the topic which I prepared. However teacher's accuracy and higher efficiency is required to meet student demand instantly. The paper suggests major innovative changes to be implemented in the following heads.

     9.2.1   Content Generation & Presentation
     9.2.2   Inclusion of Audio Visual Aids
     9.2.3   Dynamic Interactive Learning
     9.2.4   Content updation and Improvisation
     9.2.5   Instructional Medium
     9.2.6   Instructional Methodology
     9.2.7   Learning Environment Enrichment
     9.2.8   Learner's Participation & Autonomy

9.2.1 Content Generation & Presentation

Content generation is first step in imparting meaningful knowledge. The accuracy of content makes the lecture influensive and accurate. Teaching at higher education is a previlage and honour and Professors are role models to the students. In my opinion content should not be confined to the books only, It should have professor's own input to the knowledge as an addition. Professors are required to prepare the content comprehensively and carefully.

Once the content is ready, Presentation part constitutes equal weightage as far as overall lecture efficiency is concerned. Presentation is an art that makes the content lucid, graspable and at the same time creates lively environment. Instructor should understand that learners are smart enough with google support at internet. They are always online to verify the content being delivered by you. One mistake of yours may shrink your image at all. However learners should understand that all the information supplied at internet is not processed and refined so they should resort to professor in case of any ambiguity. Accuracy and artistic way of presentation, the blending of these two qualities do miracles in the class room as per the study.

9.2.2 Inclusion of Audio Visual Aids

In this digital edge one must include audio visual multimedia aids while addressing students. It is proven that the use of audio visual aids give value addition to your delivery and have a long lasting impact over audience. Some of the popular examples are

    1. PowerPoint presentation
    2. Audio Vedio Content
    3. Learning through image content
    4. Smart Boards etc.

9.2.3 Dynamic Interactive Learning

Dynamic Interactive Learning refers to the online real time educational experience for both professor and the students over electronic devices. A virtual classroom model represents the same environment. In this approach, direct teaching is taken outside the classroom and put online on the learning platform using lecture videos and presentations, enabling the learners to learn anywhere at any time as per their convenience. The biggest advantage of virtual class room is you have simulation class effect. It means you can interact with your queries to the instructer in real time online. Virtual class room is very useful for openlearning as the learner stays physically distant from real instructor.

9.2.4 Content Updation and Improvisation

External world is dynamic in nature undoubtedly. It keeps on changing every time and the information become obsolete over time span. Regular Content updation improvises the content as per the changes and makes sense to the user. Use of old transperencies and slides are required to be updated every year at Higher Education Level. Justifing knowledge at higher level is a challenging task indeed and it needs improvisation again and again as a never ending process.

9.2.5 Instructional Medium

We found in our research that students come from different backgrounds and mediums to study. We observed mix mass of Hindi medium and English medium students. The situation makes it difficult for an instructor to choose medium of instruction to deliver a lecture. Lecture either in Hindi or in English was not found fruitful because a part of the student mass was not in a position to understand with clarity. Result shown that the professor of student's choice was bilingual and he deliberately used all the deliveries in both the languages simultaneously during a lecturer. It is suggested that one should use language as per the target receipients and if possible should use more that one languages for better understanding. There is no harm in using local language even for some explanations. The role of linguistics in teaching can not be over looked as it provides the best description and learning opportunities to learners.

9.2.6 Instruction Methodology

It matters a lot which method are you going to adopt for your instruction as an instructor. Actually Selection of Methodology depends upon certain factors like subject to be taught, age group of student and the availability of resources etc. Innovation in methodology not only enhances student ability to grasp but also generates long lasting impact over minds. Some of the models that have worth are given for consideration.

Learning through Storytelling

Many of us must have seen 'VIKRAM –BETAL' Serial on television, a unique example of learning through story telling. Every story was followed by a rational decision taken by the King Vikram with a message to learn. Fantastic way of learning I would say. We can also adopt in one way or other into the class room. It provides the participants an opportunity to listen to and consider a variety of viewpoints. There is ample scope of exploration at higher education under this methodology.

Role Playing

Role playing is a dramatic method of teaching where an artificial simulation model is created exactly as per the demand of the topic to be taught. Some participants play different roles as per the requirement and rest do observe the acts played by the students as suggested by the teacher concerned. When one or more participants play a certain role in a simulation modelling it creates a practical & real environment to study. The particular model became popular among students during Marketing Lectures.

Brainstorming

The brainstorming technique is a structured form of discussion to be implemented by a way of breaking a class into reasonable groups. The core objective is to generating new ideas about the problem and enchancing group cohesiveness ability. Some times this approach is implemented to explore maximum possible alternatives of the given problem. It is basically a problem solving method.

Case Study

Case study method is suggested over here for the students engaged in learning complex issues particularly in the senior classes. It makes student learn how to take decision under complex situation. In this Methodology, Real Cases are often selected from the industry to give actual industrial scenario. Case studies are found useful as a tool for analysis and discussion at Post Graduation Level.

Learning Enviroment Enrichment

Have we ever thought why one Professor is polular among students where as other is not? Our study reveals the fact that the instructor who have had competency to break monotony became more popular and effective among student. There are many ways to enrich class and hence following methods are suggested to be implemented at higher education that makes the class lively and effective.

Creating Humor

When teachers share a laugh or a smile with students, they help students feel more comfortable and open to learning. Using humor brings enthusiasm, positive feelings, and optimism to the classroom. The timing of humour is again very very important. Cracking jokes or creating humour to break monotony is the biggest quality of a professional teacher. Our research suggests that houmour once in a lecture of 45 minutes makes the class more effective, lively and humerous. It helps to detach audience for a moment and again enabling them to concentrate over serious issues being taught.

Gamification of Learning

Gamification of Learning means learning through games. This is a psychological way of reducing fear of study from student's mind. Stress free learning is one of the most innovative phenomenons of the era. Student should not feel studies a burden by any means, otherwise they may reluctant to learn. Gamification is one of the means of stress free learning. Research supports that management games series were very very popular while teaching management through Management Games. Other subjects may also have such games. It works on the notion that a free mind has the ability to think out of box beyond normal parameters.

Learner's Participation and Autonomy

On the basis of the discussion with respondents I thoroughly recommend greater participation and autonomy to the students in the class than ever before. Their involvement and participation is the key to success. Educational Learning is not one way traffic between instructor and students. It should always be a two way traffic or bi directional communication process. Some times instructor speaks and students listen and other time students speak and teacher evdevours to listen and summarise. Student's participation and autonomy is solicited for better results. Actually Shy students never come forward on their own and they require stimuli by a professor to come up. Similarly all the students do not have same IQ level and hence low IQ students require more attention. We observed that average students were reluctant to speak out for their problems. It is the duty of an expert to involve each and every student of the class including the weakest and the shyest student of the class. In lack of participation only few students shall participate by volunteering answers and contributing to discussions.

9.2.7 Hypothesis Analysis

H0 (1) the null hyopothesis was rejected and study proved that Education and Unemployment are correlated with each other. Moreover the quality of education has been proved a strong variable responsible for getting employment.

H0 (2) the second null hypothesis is again rejected and alternative hypothesis selected with the conclusion that students are optimistic towards new methods of learning so that they may get rid off monotonous teaching environment in the class room**.**

ESSENCE OF THE STUDY OR CONCLUSIOIN

1. Study Supports and extends Student Centric Approach of Learning to fetch optimum results.
2. Lecture must be opened as per student requirement.
3. First 5 Minutes of session should be given to assesss student's requirement and existing knowledge over topic to be taught. Professor should decide the point of opening the discussion afterwards.
4. The content generation has to be absolutely accurate in this digital edge of learning. Students are smart and recheck the content through internet.
5. Accuracy and artistic way of presentation, the blending of these two qualities can magically attract learners in the class room.
6. Simple language and lucid syle is obligatory which is easier to understand.Multilingual instructors are found more effective among students. Use of two languages should be preferred for a mix mass of students (Hindi medium /English medium).
7. Audio vedio aids enhance effectiveness of delivering a lecture where as virtual class room is an opportunity to the students and instructor to interact online in real time.
8. Content is required to be updated every year as something is added every year to the knowledge world and it needs improvisation again and again as a never ending process.
9. Different learning methodologies should be used as an innovation like Role Play, Story Telling, and BrainStorming & Case Studies etc. Case studies are suitable for Post Graduation students.
10. Students prefer enriched environment during session instead of monotony. Gamification and humour play important role in stress free Learning.
11. Participation of learners shall have to be increased for better results. Instructors are adviced to movtivate shy and low IQ students to participate in the class.
12. Professors are expected to work on developing optimum employable skills as explained in New Education Policy 2020 rather than merely imparting information to pass the exam.

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