

A Study of Faculty Development Programs in India to Assist Pedagogy and Curriculum Development

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Abstract: - All sides of every education debate agree that quality learning happens when knowledgeable teachers use sound pedagogy. Many deliberations of pedagogy make the fault of considering it as principally being about teaching. There has been a lot of research about how to build a positive climate for learning, improve student curiosity, and enhance classroom association. However, these things can only be facilitated when teachers are equipped with better teaching techniques that use sound and accurate pedagogy. Pedagogy is the science and art of education. Its aims range from the full development of the human being to skills acquisition. In India, a project named Mission 10x has been started by an esteemed IT Corporation Wipro as a faculty development programme (FDP) that particularly focuses on elements that facilitated teachers in developing curriculum and new pedagogies that can lead to improvement in student engagement. This paper presents a study of these FDPs and examines the parameters that help teachers in building new pedagogies and the extent to which appropriate usage of pedagogy is improved after the conduct of FDPs. The results suggest that the usage of pedagogy was more benefitted after conducting these FDPs and application of novel approaches in conducting classes.

Keywords: -- Student engagement; critical thinking; achievement; student learning, pedagogy.

I. INTRODUCTION

The usage of good pedagogies in the classroom is an important factor that research has reported to be critical in enhancing student achievement. It is not an easy term to define, yet we hear it everywhere. Pedagogy requires to be studied through the thinking and practice of those people who look to accompany learners; care for and about them; and bring learning into life [Smith, 2012]. Teaching is just one aspect of their practice. Students are engaged when they actively participate in classroom activities and do quality work that results in higher academic achievements [Newmann, 1986]. Therefore, teachers need a large variety of instructional strategies to engage a variety of students [Garcia-Reid et al., 2005]. The current research about student engagement reveals that there is a close association between students' engagement and usage of appropriate teaching techniques. It is observed that students learn best when they are engaged in persistent and interesting work with teachers that are dedicated to make their lectures exciting and innovative with the usage of new pedagogies. These novelties in lectures make students feel a strong sense of belonging. Student engagement occurs when students make a psychological investment in learning. Students are engaged when they are occupied in their work regardless of challenges and obstacles, and feel pride in

accomplishing their work. Learning tasks that engage students have peculiar features. They require sound pedagogies and involve critical thinking. They engage the student in interesting investigation. They are realistic and relevant for students. They require students to cooperate and be meaningfully involved with teachers as well. A number of methods have been used in the research to determine if students are engaged in their learning when teachers used interesting teaching aids as well as sound pedagogies. Traditionally, methods have focused on behaviors' such as attendance and quantitative data such as achievement and graduation rates. However, recently qualitative data is focused upon to understand engagement in learning. For example engagement can be calculated by the degree to which students classify schooling outcomes, have a sense of belonging with institute, participate in activities, and make efforts of personal investment in learning. We have also used simple rating measure of students for our preliminary investigation to reflect this qualitative data.

II. LITERATURE REVIEW

In the recent years awareness has grown about the importance of pedagogy within discussions of education. The momentum has come from different directions. There are people who are seeking a 'pedagogy of the oppressed'

or ‘critical pedagogy’; practitioners attempting to redraw the boundaries of care and education through the idea of social pedagogy; and, most extensively, governments working to restraint the activities of teachers by requiring obedience to preferred ‘pedagogies’. The most widespread way of understanding pedagogy is as the art and science of teaching. This is now seen by a wide range of academicians who are working in this area as a very narrow way of looking into the relation between a teacher and his pupils. The historical origin of the word pedagogy can give us useful insights about both its meaning and implications. This will also give us opportunity to connect further with its crucial areas of theory and practice. We will explore the origin and spread of this concept in this section. In short as we will understand at the end of this section, pedagogy can be explored as the process of accompanying learners; caring for and about them; and bringing learning into life [Smith,2012].

The origin of the word “pedagogy” comes from the Greek word *paidagōgus*. In the ancient Greek society, a strong emphasis was placed between the activities of pedagogues (*paidagōgus*) and subject teachers (*didaskalos*). The first pedagogues even though were slaves – often foreigners, but still were very learned persons [Young, 1987]. They were trustworthy as well as learned members of rich households who accompanied the sons of their ‘masters’ in the street, oversaw their meals etc., and sat beside them when being schooled [Smith,2012]. These pedagogues were commonly seen as representatives of their wards’ fathers. The primary task for such *paidagōgus* was moral supervision. They were considered more important than teachers because while teachers only taught a child his letters, but the *paidagogos* taught him how to behave, a much more important trait in the eyes of his parents. Even though he was a slave, but still he was a member of the household and always in touch with the ways of the father’s authority and views. The teachers do not have a close contact with his pupils.

The difference between teachers and pedagogues, teaching and assistance, and education for school or life was a feature of debate among academicians for many centuries. Immanuel Kant (1724-1804) in *On Pedagogy (Über Pädagogik)*, a book first published in 1803 exploring education, he talked as follows: “Education includes the *nurture* of the child and, as it grows, its *culture*. The latter is firstly *negative*, consisting of discipline; that is, merely the correcting of faults. Secondly, culture is *positive*, consisting of instruction and

guidance (and thus forming part of education). *Guidance* means directing the pupil in putting into practice what he has been taught”. Hence there is a difference between a private teacher who merely instructs, and a tutor or governor who guides and directs his pupil. The one trains for school only, the other for life [Kant, 1900].

In Europe, apprehensions with the process and content of teaching and instruction developed significantly in the sixteenth and seventeenth centuries. There is a growing literature about instruction and techniques aimed at schoolteachers in those periods. Different areas of knowledge were also grouped together in syllabi which depicts what needs to be instructed and in which manner. There was also a lot of focus placed on the development of schools and concerned organisations [Hamilton, 1999].

In the same era, there was emphasis on ‘the separation of the activity of “teaching” from the activity of defining “that which is taught” [Dewey, 1963]. This led to a growing interest in the process of teaching and the collecting examples, guidance and knowledge in the form of what became known as *didactics*. The most important landmarks of this era was the publication of John Amos Comenius’s book *The Great Didactic [Didactica Magna]* (first published in Czech in 1648, Latin in 1657 and in English in 1896). In his book, Comenius [1907], enlists the elementary aims of education that create the basic principle of *Didactica Magna, omnis, omnia, omnino* – that is to teach everything to everybody thoroughly, in the best possible way. Comenius believed that every human being should strive for perfection in all that is fundamental for life and do this as thoroughly as possible. Every person must strive to become (1) a rational being, (2) a person who can rule nature and him or herself, and (3) a being mirroring the creator [Gundem, 1992]. He also developed sets of rules for teaching and set out the basic guidelines. After Kant and Comenius, the major landmark in this field were provided about teaching through the growing influence of one of Kant’s successors in the Chair of Philosophy at Königsberg University: Johann Friedrich Herbart (1776-1841). As Hamilton [1999] rightly said, Herbart [1892] sought to develop an educational system and has worked towards providing a general theory of pedagogics. His theory of education and of schooling revolves around the idea of ‘educational teaching’ or ‘educating instruction’ (*erziehender Unterricht*). These theories were then converted into the form of books and manuals about teaching – especially those linked to Herbart. The foremost example of one such book was Alexander Bain’s *Education as a Science* (first published

in 1879 and then reprinted 16 times in the next 20 years). However, the influence of these ideas does not seem to put a lasting impression on the educational institutions. This is perfectly explained by Brian Simon [1981] in a widely cited paper 'Why no pedagogy in England?'. In this paper, he has argued that with changes in schooling in late 19th century and growing government intervention there was a little emphasis upon the intellectual growth and much more emphasis on containment. However, in Europe with comparison to Britain and north America until the 1970s and early 1980's, interest in didactics and pedagogy remained comparatively strong and there were considerable debates and developments [Gundem, 2000].

The interest in pedagogy was renewed by the decision of Paulo Freire to name his influential book as *Pedagogy of the Oppressed* (first published in English in 1970). The book then became a key reference point on many education programmes in higher education and central to the establishment of explorations around critical pedagogy [Smith, 2012]. Another book that greatly influenced this era was Basil Bernstein's [1971] 'On the classification and framing of educational knowledge'. He studied people having different levels of education and then positioned them in relation to the different degrees of control people had over their lives and educational experience according to their class position and cultures. He also studied content carried by different pedagogies [Bernstein, 1990]. Finally there was another major landmark in this era from the work of Jerome Bruner's *The Culture of Education* (1996). He debated about the need of teachers to pay particular attention to the cultural contexts in which they are working and of the need to look to 'folk theories' and 'folk pedagogies' [Bruner, 1996]. He emphasised that 'Pedagogy is never innocent, It is a medium that carries its own message'.

A fundamental constituent in the growing significance in the field of pedagogy was a shift in government focus in education in England. They were seeking control over classroom activity via the curriculum as well as there was a movement to increase the monitoring of classroom activity via regular scrutiny by senior leadership teams and a much enhanced Ofsted evaluation schedule for lesson observation [Ofsted, 2011; 2012]. Key indicators for classroom observation included a variety of learning styles addressed, pace, dialogue, the encouragement of independent learning and so on [Ofsted, 2011]. Also, there were a number of popular guides that were developed to help teachers on their way such as *The Perfect Ofsted Lesson* [Beere, 2010]. Although these

concepts looked progressive, and the practices have had their merits, yet the problem was the structure in which it was placed. Alexander [2008] has defined it as the 'pedagogy of compliance'. 'You may be steeped in educational research and/or the accumulated wisdom of 40 years in the classroom, but unless you defer to all this official material your professional judgements will be 'uninformed' [Alexander, 2008].

III. PARAMETER THAT HELP TEACHERS IN BUILDING NEW PEDAGOGIES

The way pedagogy is defined still resemble show it was focussed on teaching that Herbart [1892] argued years ago. For example, the now defunct General Teaching Council for England, described it as: Pedagogy is the stuff of teachers' daily lives. Basically it's about teaching. Now a days, the focus of educators have been on taking a broad view of teaching as a complex activity, which include more than just giving education. In other words pedagogy can be defined as [Smith, 2012]:

- ❖ the art of teaching – the responsive, creative, intuitive part
- ❖ the craft of teaching – skills and practice
- ❖ The science of teaching – research-informed decision making and the theoretical underpinning.

It is also significant to understand that all these activities are grounded in ethical principles and moral commitment that conveys that teaching is not just an instrumental activity, a question just of technique. In reality, teachers are essential element in fostering student engagement (Akey, 2006; Garcia-Reid et al., 2005). Generally, they are the most influential person in student's educational experience as they work directly with the students. Teachers can foster student engagement in the classroom by developing interactive and relevant lessons and activities that can be taught by FDPs, creating a culture of achievement in their classroom, and being encouraging and helpful to students. Therefore, the development of Teacher should be the first priority before expecting better academic results in any educational Institution. This could be enhanced through FDPs. An Initiative named Mission 10x has been implemented by an esteemed IT corporation in India, Wipro that conduct FDPs across various engineering colleges in the country. This was done after Wipro conducted a survey and found that around 50% of engineering graduates passing in India were unemployable. The study of Mission 10x Project found that following parameters helped teachers in building new pedagogies:

a. Integrity Of The Teacher: As Palmer [1998] has argued, ‘good teaching cannot be reduced to technique; good teaching comes from the identity and integrity of the teacher’ (emphasis in the original). However, the focus of teachers currently is around qualification and communication that takes them away from the questions of identity and integrity. Infact, their authenticity and the extent to which they can form a bond with the student should be given utmost importance and should be the vital considerations for becoming a teacher.

b. Availability Of The Teacher: Teachers have to be around for people; in places where they are directly available to help, talk and listen. They need to be there for students ready to help them out in any situation and accept the challenges to be faced [Smith and Smith, 2008].

c. Attention Of The Teacher: The relationship of a teacher and student has a very important place in the personality of a young person. And this is a relationship that can ‘develop only when the persons involved pay attention to one another’ [Barry and Connolly, 1986]. An efficient teachers works with his students in a highly skilled way, drawing on, through various stages in the process, a range of different roles and capacities. The role of a teacher seems seamlessly through these various stages, but always there is a unifying centre and that is the relationship between teacher and the student [Collander-Brown, 2005].

d. Listening Ability Of The Teacher: The relationship of a teacher and a student is not just give and take. It goes beyond being a helping relationship. It ‘involves listening and exploring issues and problems with people; and teaching and giving dvice; and providing direct assistance; and being seen as people of integrity’ [Smith and Smith, 2008].

e. Caring Ability Of The Teacher: The foundation for pedagogical activity and in turn teaching is governed by a caring ability of the teacher [Noddings, 2002]. When teachers carefully listen to their students, they gain their trust and, therefore in this relation of care and trust, the students are more likely to accept what the teacher is trying to teach. The students will not see the efforts of teachers as “nosiness” but, rather, as helpful work happening from the reliability of the relation formed between them. Moreover, when teachers engage students in conversation, they learn about their requirements, interest areas as well as talents. This will help teachers in building our lessons and plan for their individual progress. Finally, when teacher acquire

knowledge about students’ requirements, they are motivated to increase their own skills [Noddings, 2005].

IV. METHODS

Our methodology has used a phenomenological approach focusing on eliciting the student voice. We have achieved this through the use of a mixed-methods approach incorporating online questionnaires nominal group technique, individual interviews and focus groups. Our sample population has covered a broad range of different student groups. At Maharishi Dayanand University, for example, the population surveyed for this current project includes Computing, and Electronics students (circa 450 students). At Murthal University the whole first-year cohort was surveyed (circa 530 students). The same reflects the demographics at both institutions, a mix of first-generation entry students, mature students, students from widening participation backgrounds, commuter students, and, minority ethnic students. The demographic populations of both institutions are very diverse, which provides richness for this research. Our assumption is that all students, whatever their cultural, educational or social background, will benefit from access to the resources developed during these FDPs. Our hypothesis, being tested in this current large-scale survey undertaken at a couple of institutions, is that these FDPs will demonstrate improved self-confidence for the teachers and improved motivation for students whilst students are making the transition into educational institute.

V. PRELIMINARY FINDINGS AND IMPLICATIONS

Our findings indicate that students Involvement with teachers have been improved significantly after conducting these FDPs and usage of sound pedagogies by teachers in actual practice in classroom. Usage of sound pedagogies could help in generating encouraging environment that could establish students positive engagement with teachers and this could lead to overall better academic performance by the educational institute. We have found that the FDPs enable teachers from all background are able to develop key skills that can make students more comfortable about their positive engagements with the institution. FDPs equipped teachers provide educational institute a friendly face that makes it more approachable and human. Feedback obtained from students demonstrates how these FDPs has changed their teachers and made them more accessible and clear with their teaching goals. This has greatly improved the environment of the educational

institute. Teachers and students have reported following observations after conduction of FDPs:

VI. USAGE OF PEDAGOGIES IMPROVED AFTER THE CONDUCT OF MISSION 10x FDPS

- ‘The FDPs are great as you can meet fellow teachers and share experiences to develop new teaching aids and activities’. Teacher A
 - ❖ ‘You’ve got his huge infrastructure and facilities but what you really need is people that can encourage and interact and its made possible with FDPs’. Student A
 - ❖ ‘I recognize the faces before but now i know them and they know me too as the interaction has been hugely improved since the introduction of these new pedagogoes introduced to us during our FDPs.’ Teacher B
 - ❖ ‘Most of the things that related to the serious aspect of classrooms learning has been now changed with new pedagogies and new learning tools’. Student B
 - ❖ ‘It was good to be able to interact with teachers and get feedback from them which has been hugely improved after FDPs’. Student C

Institutional Difference In Terms Of Their Ability To Convert USGE Of Improved Pedagogies Into Academic Performance Via These FDPS

- ❖ ‘This FDP is great. I am so pleased that it has helped me build new pedagogies and novel learning aids to talk to the new students and get to know them better’. Teacher C
- ❖ ‘The students did seem a lot more self-reliant with getting themselves involved and getting going with things.’ Teacher D
- ❖ ‘I thought I was too old to do all this [leaning new tools and pedagogies for classrooms] but it’s not as hard as you think and the students obviously seem to benefit from it’. Teacher E

VII. RESULTS

The number of respondents while conducting survey depends on how confident you need to feel in your results. The more confident you want to be, the less of a margin of error you'd likely be willing to accept. To

calculate the number of respondent’s one need to take our survey, we have used the following formula, where:

N= the size of the entire population one wish to represent

e= the percentage margin of error one is willing to accept (in decimal form)

$$\frac{N}{(1 + N * e^2)}$$

As we wish to represent 2,00,000 and we are willing to accept a 3% margin of error, the respondents of our survey are around 2,200 Although a full analysis of the large-scale survey cannot be presented here but briefly findings indicate:

- ❖ Engagement with the FDPs has helped teachers develop confidence about usage of new pedagogies in a newer way by developing new lesson plan with these new pedagogies.
- ❖ Students felt more comfortable about learning after introduction of new curriculum and pedagogies leaned by teachers during FDPs.
- ❖ Usage of pedagogies taught during FDPs as introduced by teachers in classrooms settled nerves and allowed students to feel more confident about ‘what they already know’.
- ❖ Students expressed their expectations of themselves coming to the educational institute and of the educational institute which has provided invaluable further data for analysis after teacher become more interactive once they attended these FDPs and learnt about pedagogies.

Following Table and figure presents a sample data of the average rating of students of a particular class and their assessment of learning environment for them to be engaged before and after the conduction of FDPs to learn new pedagogies. It clearly assesses the changes in the classroom environment after the conduct of FDPs to learn new pedagogies; the ratings have positively increased in all cases, although the difference is not very significant in some cases.

Table 1. Maharishi Dayanand University (B.Tech Computer Science students)

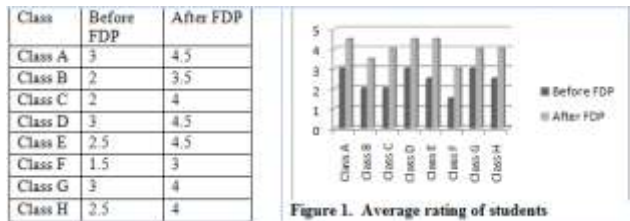


Table 2. Maharishi Dayanand University (B.Tech, Electronics students)

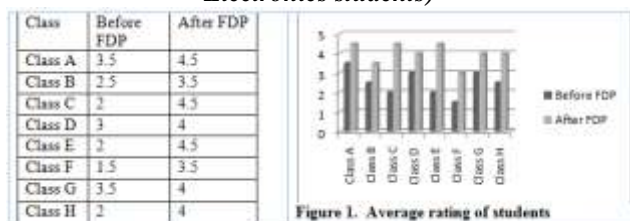
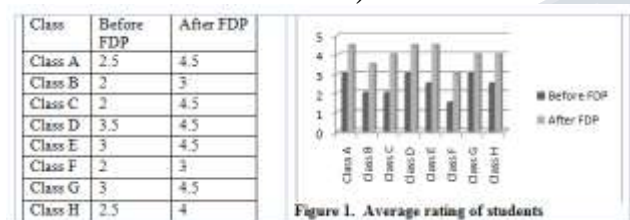


Table 3. Murthal University (B.Tech first year, all streams)



VIII. CONCLUSION

Implementing Mission 10x FDPs workshops does not require extensive capital investment. It does, however, require the commitment of both the institution and individual staff to ensure appropriate materials are made available in a format that meets student needs as developed by these FDPs. However, the benefits to individual students appear to be significant. We propose that the burden of adjustment in the implementation of these FDPs is a shared responsibility of private and public sector where both the universities and the corporate sector can work together to improve the employability of fresh graduate which is a huge problem in a developing economy like India. The way in which both the institution and the individual teacher can make a huge contribution through appropriate usage of sound pedagogies to the well-being of students is enormous. We believe that the model of supporting students 'engagement at educational institute can be significantly aided by conducting these FDPs. These FDPs can make teacher aware of new pedagogies in

classroom learning and this way they can instill the confidence that students need to provide the foundations for strong academic performance. There are many strategies through which appropriate usage of sound pedagogies can be implemented by teachers and school leaders that can greatly enhance student engagement and motivation and all this can be learned through such FDPs. However, in order to be most effective in sustaining positive student engagement in learning and increasing academic performance, all of these efforts should be consistent and continual throughout the academic career of a teacher and throughout each student's educational career and for that separate FDPs are required.

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