Problem Based Learning – A Tool to Teach English and Soft Skills

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A Trust in USA, in the recent past, gave $600,000 to the University of Delaware and a similar grant to Samford University in Alabama to investigate restructuring traditional instruction along problem-based lines. This incident speaks volumes about the importance of this method of imparting knowledge. In addition, one can be sure that Problem Based Learning will be a great way to teach and train or students of engineering and technology to perform and excel intra and inter national scene.

It all started in 1970s in Canada's McMaster University where they started posing problems – real life situations – to students who are supposed to draw conclusions or find solutions in groups, where the teacher will facilitate and help students to work to reach their goal (Boud & Feletti, 1991). As it was started in a medical institution, the method was used in medical and allied professional institutions initially. Only in the recent past institutions related to other disciplines started adopting this method. The teaching learning process' focus then shifted to the learning process from the teaching process (Barr and Tagg 1995). In other words it changed to learner-centric.

How it is done

- A class is divided groups of five or six. The group then identifies what knowledge based issues the problem given to them presents. Then specific roles are allotted for every member. The learning is tailor-made to the learner's style. The students then research the problem and collect data needed by sourcing and employing an array of resources like internet, books, reports, and individuals. Then they develop, and write out the problem statement in their own words.
- A problem statement should come from the individual's or the group's analysis of what they know, and what they need to know to solve it. This whole process will be complemented by the teacher's assistance. If there are several groups in a class, there may even be a need for more teachers for assisting and directing the groups towards the goal.
- Once the students have enough material to work on the problem they get back to the problem and use the material, they gathered to analyze and solve the problem.
- The teacher's role in PBL is very crucial because: a) they decide on the problem issue, b) they need to work with groups (which the teachers might not be exposed to), c) they should also guide the group without letting them to know the solutions / conclusions.

It helps students to scrutinize and attempt what they know and also to learn what they need to learn. This method, in addition, builds up their people skills for attaining high performance in teams, improves communications skills, helps

them to accept others opinion without letting their ego to surface. However, the learners may have some resistance towards this system as it is different from the customary lecture method which they are more exposed to.

Apart from the teachers' and peers' assessment of the students the efficiency of the PBL is evaluated through several other ways. According to Ewing, the assessment may be done through the learners' reports, essays, presentations etc., (Ewing, 1998).

Why PBL for our students of science, engineering and technology:

According to researches, the students have trouble in applying, what they have learnt in classes, in real life situations. (Schmidt 1983). It is in this situation; Schmidt strongly argues that PBL will be of use to the learners, as it helps them to solve the real-life problems with what they learn in their institutions. In order to understand how the PBL is of use one needs to understand the features of the PBL.

PBl is characterized by the following:

- student-centered learning
- teacher is more of a facilitator
- allows learners to analyse, study, brainstorm, propose, and solve in small teams
- the real-life compound problems provide the base for learning
- evaluation is enhanced by self and peer assessment.

The PBL will be of great advantage to our students of science, engineering and technology. One cannot deny the fact that our institutions that are affiliated to the universities cannot have their own syllabus. They need to follow the syllabus that are prescribed and changed only once in five years or so by their respective universities. These affiliating bodies also cannot be blamed, as they need to cater to a larger heterogeneous population of learners. Therefore, when authentic problem situation, related to their field of specialization, is given to students, it usually helps them to get exposed to the in-vogue concepts. Even if a problem that is not related to their specialization, they will be exposed to other issues – social or otherwise. The PBL also helps to learn soft skills that will help the students to be 'industry ready' when they leave the college. When learners occupy in independent learning to examine and study the information needed to solve the issue and when they find materials that would help them solve the problem, their organization skills improve. When they read materials, the learners' reading and comprehension skills are tested. They need to 'skim' and 'scan' the passages, in order to identify the relevant thoughts and ideas. Then while they discuss their ideas with the group members, the students are forced to employ their presentation, debating, and negotiating skills. In addition, the students take up roles of moderator or leader (when they take control or direct the discussion), problem solver or effective manager of time (when they find solution to the problem posed, with in a given time) – which are few of the skills that they would be applying when they are employed. Above all the PBL gives the learners a

break from the monotonous classroom lecture. In other words, they profit from working collectively and in the process benefit from teaching each other (Annis, 1983; McKeachie, et al., 1986). Teachers who use this method also believe the students are more involved, motivated and their participation is tremendous in comparison to the usual chalk and talk method of teaching and learning process. Allowing students to engage in this kind of measures can allow us to assess important learning by examining and judging the students actual or simulated performance on significant tasks (Worthen, 1993).

Conclusion

The students of engineering, who are not exposed to real life situations, will be greatly benefited by the problem based learning. It is also helps learns to hone their people skills which is more essential for their success in their student as well as professional life. More than anything the PBL when implemented by a teacher in an effective manner it will make the learners 'industry ready'.

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