

- Abstract should clearly indicate the objective, methodology and the anticipated/achieved results of the study.
- The abstract should be neatly word processed (Times New Roman-12 points, 1.5-spaced, A4 size) in about 250-300 words, and sent to the convener at [istria@pilani.bits-pilani.ac.in](mailto:istria@pilani.bits-pilani.ac.in) by e-mail.

## National Workshop on Improving Synergy between Teaching and Research in Indian Academia (ISTRIA 2018)

### **Abstract submitted by:**

**Dr. Banashri Roy & Dr. Tamali Bhattacharyya**

### Paper Title:

**Application of SOLO Taxonomy as a Pedagogical Tool for Active Class Room Teaching**

**<sup>a</sup>B. Roy, <sup>b</sup>T. Bhattacharya**

<sup>a</sup>Department of Chemical Engineering, BITS-Pilani, Pilani, Rajasthan 333031, India

<sup>b</sup>TLC, BITS-Pilani, Rajasthan 333031, India

Students have different levels of motivation, different approaches about learning and their responses are different to the classroom. In today's world, effective class room teaching is a challenge. The students' level of engagement in relation to the level of learning required to achieve intended learning outcome, learning related activity that a teaching method is likely to stimulate and the academic orientation of the students. The teaching strategies need to be developed accordingly, which can interest students in class room, but at the same time promote, engage and enhance their learning. One way, we adopted is to motivate learners for active class room learning by using Structure of Observed Learning Outcomes (SOLO) taxonomy, which is a powerful metacognitive tool. Here we will present a study on the application of this taxonomy in an engineering (Materials Science and Engineering) class room teaching which acts as a significant tool in differentiating curriculum and providing cognitive challenges to the learners. In order to involve students actively in the subject, we asked them to develop question papers instead of only

answering questions, which actually need all round understanding of the subject in quantity and quality of thoughts. We developed different level of action plans to cater more learner centric approach rather than teacher centric. In this paper, we mainly focus to the pedagogical steps and analyze the change in the students' performance using active learning strategies in the classroom.