

## Learning Engineering

Topic Name: “Tech Movies – Ice Breaking”

- To shift learning attitude of students from rote learning to analyzing, evaluating and creativity

Objective:

- To provide the bridge between current learning attitude to engineering learning attitude
- To introduce Bloom’s learning domains: **analyzing, evaluating** and **creativity** through tech movies
- Students should understand and apply **Bloom’s Taxonomy (Lower Order Thinking Skills to Higher Order Thinking Skills)** in Engineering learning

Activity:

1 Days [1 movies]

“An eye is powerful than an ear” (Sherman, 2003).

1. Watching I-Robot Movie ( Or any other Technical movie)
  2. Question-Answer in middle part of the movie
- Making of groups of students
  - Individual Questions to group of students

[**Example:** Question for **I-Robot** Movie:

(1) What safety and insurance regulations are necessary for Robot? Explain and Discuss.

(2) If a robot causes harm due to a malfunction or a wrong decision taken autonomously who is to take the blame and be made to bear the consequences, such as

Legal liability? Is it the owner, or the designer, or the seller or all three? Justify your Answer.]

- Discussion and summarization of answers

[Facilitator can explain students what is the purpose to show movie and the way they have started learning. As to answer movie questions students has to observe, analyze, evaluate, predict and present their ideas and thoughts. They will be applying Higher order thinking skills throughout the activity]

3. Completion of rest of the part of movie by giving questions prior to the part of movie
4. Introducing Higher order thinking skills : **Analyzing (Judging, reviewing, testing, defending)** and **Evaluating (Comparing, Organizing, Connecting, Examining)**
5. Discussion and summarization of answers on 2<sup>nd</sup> day
6. Same process for another tech movie with different and interesting questions on 2<sup>nd</sup> day

#### References:

[1] Padmini Sathyanarayanan and Sheenu Shekhar(2013), “Teaching Vocabulary to Engineering Students through Movies”, Indian Journal of Applied Research

[2] Berk, R. A. (2009), “Multimedia teaching with video clips: TV, movies, YouTube, and mtvU in the college classroom”. International Journal of Technology in Teaching and Learning

[3] Thomas A. Angelo/K. Patricia Cross, Classroom Assessment Techniques 2<sup>nd</sup> Edition. Jossey-Bass: San Francisco, 1993.

[4] Alison Morrison-Shetlar/Mary Marwitz, Teaching Creatively: Ideas in Action. Outernet: Eden Prairie, 2001.

[5] Silberman, Mel. Active Learning: 101 Strategies to Teach Any Subject. Allyn and Bacon: Boston, 1996.

[6] VanGundy, Arthur. 101 Activities for Teaching Creativity and Problem Solving. Pfeiffer: San Francisco, 2005.

Website : <http://www.nwlink.com/~donclark/hrd/bloom.html>

#### Outcome:

- Students will be able to start changing their perspective of learning by introducing Higher order thinking skills like: Analyzing and Evaluating