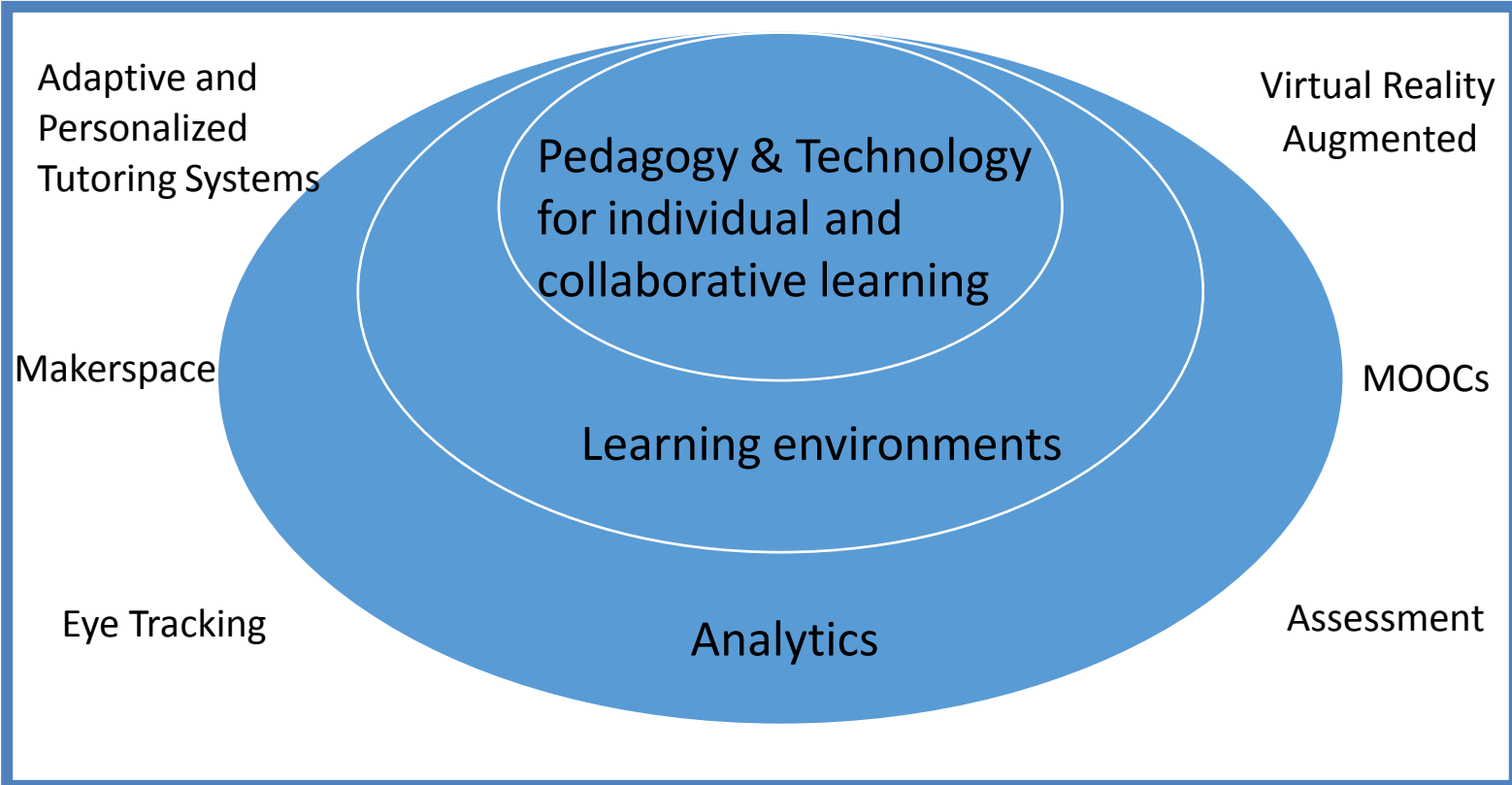


Educational Technology @ IIT Bombay

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Dept. of Computer Science and Engg
Indian Institute of Technology Bombay



What is Educational Technology?



Educational Technology, IIT Bombay



Inter-Disciplinary Program, started 2010

- 5 Core faculty
- Associate faculty from departments of Engg., Science, Design, H&SS
- 29 PhD research Scholars
- 14 PhDs graduated
- 8 students in M.Tech program

What do we do?



Research:

- *TELoTS*: Technology enhanced learning of thinking skills
- *TUET*: Teacher use of educational technologies
- *EDA*: Educational data analytics
- *Emerg*: Emerging technologies

Consultancy

Development:

- *MOOCs*: Massive open online courses – IITBombayX
 - Trained 5000+ college teachers, 5000+ school teachers
- *Tools*: To support teaching-learning process
 - iQuE, iSAT, CuVIS, ...

Outreach

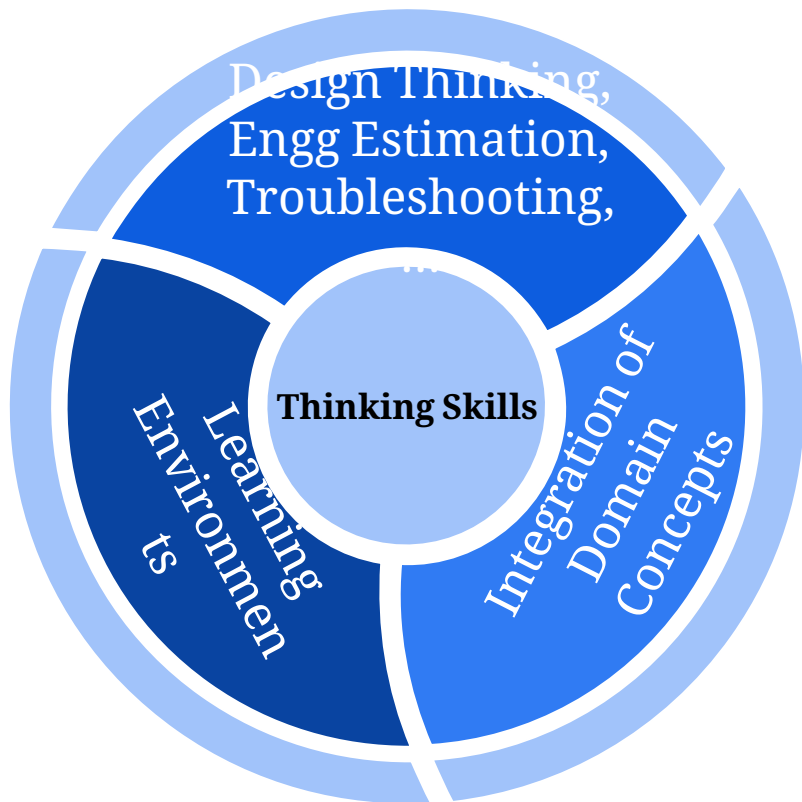
Sponsored Projects

Sponsored Research Labs

Research Area - TELoTS



IIT BOMBAY



Pedagogical agent to guide student

Personalized feedback

Interactive simulation for virtual experimentation

On-demand hints

Scratchpad

This is incorrect. You need to make careful observations and answer the rest of the questions. Go back and vary voltage and observe what happens in the microscopic model of the PN Junction

Micro World: IF THIS...

Macro World: THEN THAT...

PN Junction

Zoom In!

Your Answer

Val They Match

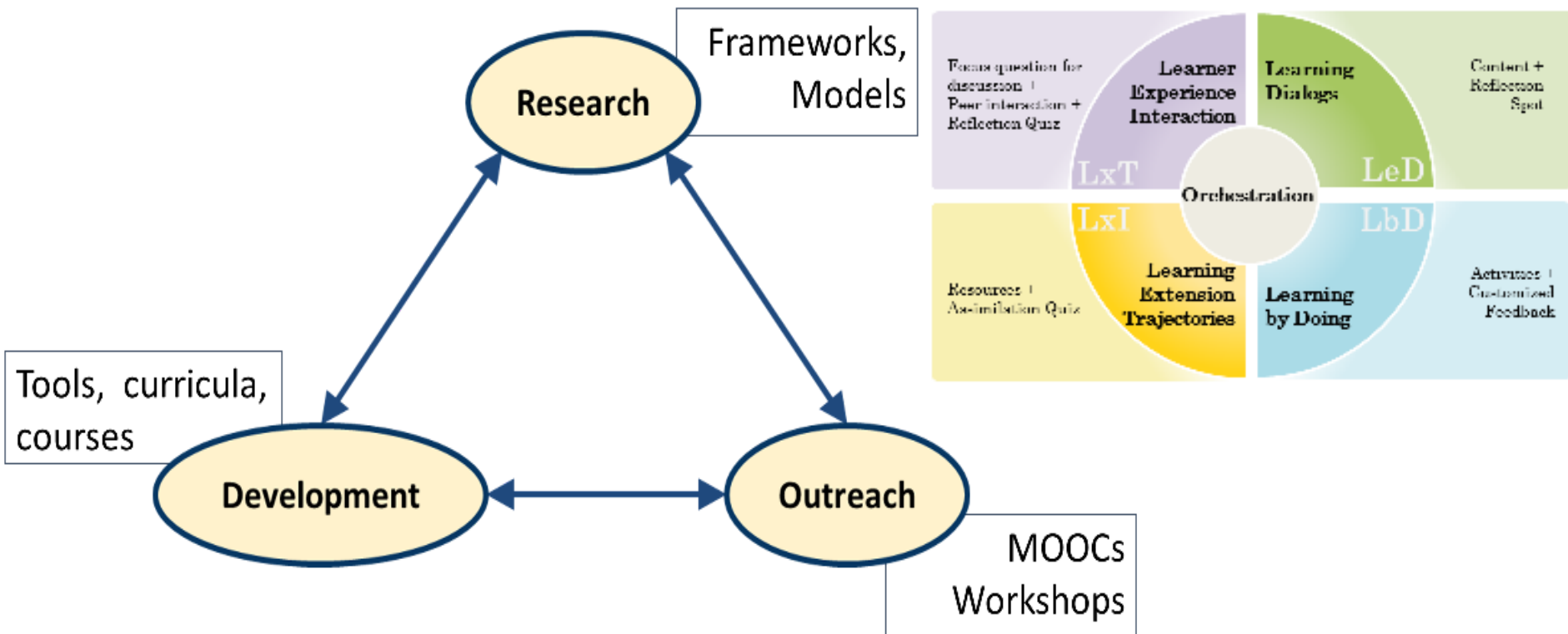
Experimental Graph from Laboratory

Help Predict Graph

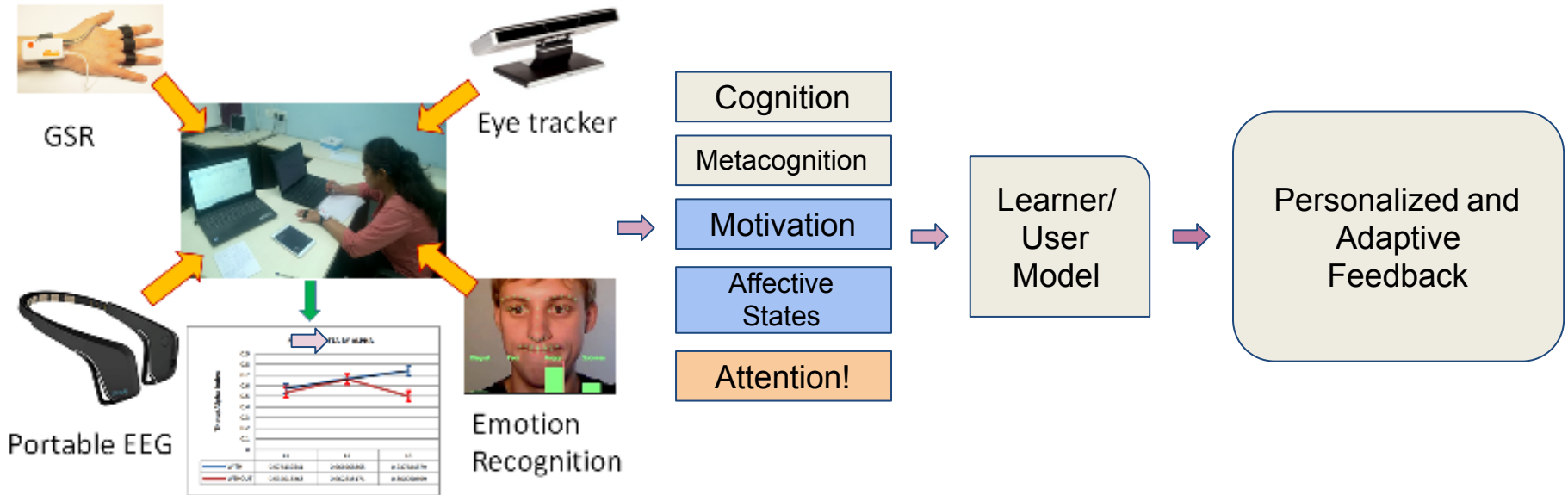
Reset



Research Area – Teacher Use of Ed Tech



Research Area – Educational Data Analytics



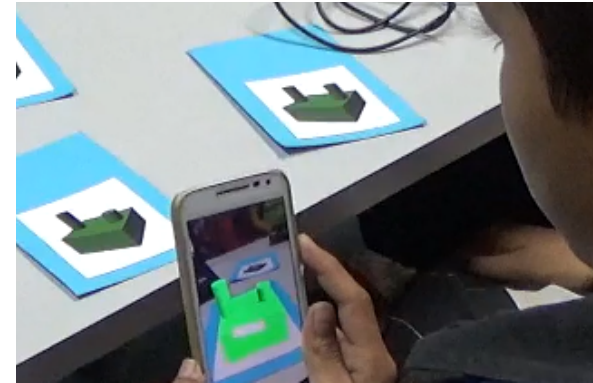
Research Area – Emerging Technologies



Wearables



Augmented Reality



3D Visualization

What can we do for industry?

- Consultancy
 - Multimedia content creation, instructional design
 - Curriculum redesign, development of training programs
 - Benchmarking / Evaluation of educational content and implementation
- Training
 - Incorporation of learner centric pedagogy in training
 - Creation of online courses and MOOCs
- Sponsored Projects: various R&D projects in educational technology
- **Industries worked with so far:** InOpen, Next Education, NIETT, MTNL

What are our students trained in?

- Theories of learning and pedagogy
- Design and evaluation of learning environments that effectively integrate pedagogy and technology, including face-to-face and online/remote settings
- Research methodologies, application of statistical methods, multimodal and mixed-method data analysis
- Work collaboratively on complex interdisciplinary projects

Hire them for: Learning & Development roles; Training-related products

Other EdTech related projects at IIT Bombay



National Mission projects (MHRD)

- NPTEL
- IITBombayX
- Spoken Tutorial
- Virtual Labs
- eYantra

Centers

- Center for Distance Engineering Education Programmes
- Parimal and Pramod Chaudhari Center for Learning and Teaching



IIT BOMBAY

Thank You

www.et.iitb.ac.in