

HS 525: Cognitive, Sociocultural and Critical Foundations of the Learning Sciences

Lecture 8: August 30, 2025
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Reflection

One thing I learned last time...

1. Mechanisms - tinkering, refinement with conversing the material
2. Knowledge is not objective, constructed by each individual - constructivism

One thing I found challenging last time...

1. Timetable in the class: 30-35 minutes, celebrating individual differences will be challenging to execute in the classroom
 - a. Challenging to implement
2. Constructivism vs objective theory of knowledge
3. Challenging- Epistemology of Constructionism understanding
 - a. Difference in nature of knowledge and nature of knowing
4. While learning by doing, no guarantee that conceptual understanding will happen

A case study of personal learning - evolving into an learning scientist

March 2012

- Joined as a project staff in ET
- MS in Electrical Engineering
- Career break
- Dominant identity - "Mom"

July 2013

- Enrolled in the PhD program in Educational Technology
- 1-year research experience in EdTech, 2 papers written
- Attended 1-EdTech conference and courses
- Became part of PhD student cohort before joining the program - social and intellectual partnerships
- Participated in senior students studies
- Adding identities as an EdTech researcher and PhD student

June 2015

- Attended Cognitive Science course and did a year long project
- Participated in Doctoral Consortium of CSCL Conference
- Understood language, tools, norms of the field of Learning Sciences
- Discovered an intellectual "home", a way to speak about a meaningful engagement with technology and learning
- Beginnings of an identity of a learning scientist

May 2019

- Graduated with a PhD and began postdoc
- Expert in LS research, expanding boundaries of theories and methods
- Developing expertise in teaching and mentoring LS novices
- Taking on more conceptualization rather than execution roles
- Full-fledged member of the LS community

August 2022

- Faculty at IITGN
- Providing a vision and direction for LS research
- Conceptualizing and planning projects, providing theoretical and methodological directions, writing papers
- Teaching and expanding the community of LS researchers at IITGN



The CoP of an EdTech research lab

- Practice: Research in EdTech area - methods, tools, language, regulations, and so on; writing papers, mentoring novice researchers, teaching/TAing courses, reviewing papers, organizing conferences, outreach to engineering teachers and students; shared goal of systematizing EdTech research in the country
- Community: Professors, postdocs and scientists, senior and junior PhD students, research assistants and interns all engaged in research and dissemination of best practices in the edtech; norms such as collaboration, lack of hierarchy, individual freedom and responsibility
- Identity: Becoming a member of the community of edtech researchers; additional identities through participation in “nearby” communities such as learning sciences
- Meaning: The ability to experience edtech, and my engagement with it as meaningful, as a valued enterprise

Becoming a learning scientist through LPP

PostDoc:

Participation: Freedom to set the agenda for Master and PhD students
Conceptualize projects and give theoretical and methodological direction
Access to all participants and mentoring newer participants in the community

Identity: Learning scientist

Reflective practice: engagement, imagination, alignment

Meaning derived from growing the LS community

PhD Student:

Participation: As before with freedom to explore and identify new areas of research, theories, methods, directions

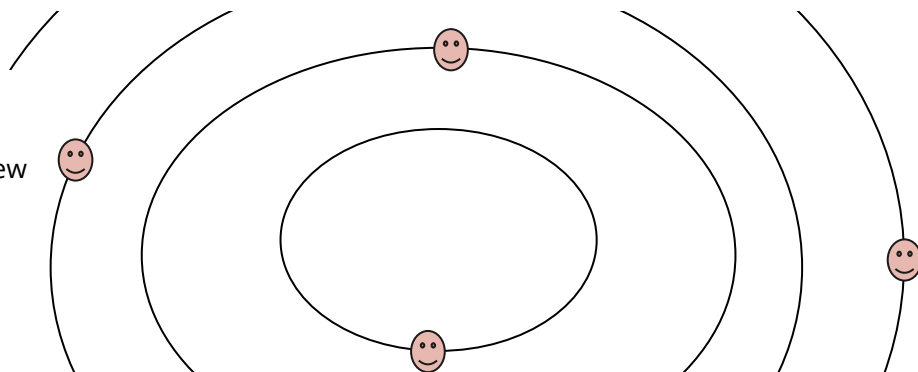
Develop connections with other nearby communities

Access to all other participants and mentoring newer participants in the communities

Identity: Learning Sciences doctoral student

Reflective practice: engagement, imagination, alignment

Meaning derived from **creating knowledge** in the LS community



Faculty:

Participation: Responsibility to set the agenda for Master and PhD students; Provide vision to the LS research
Access to all participants and mentoring newer participants in the community

Identity: Learning sciences faculty

Reflective practice: engagement, imagination, alignment

Meaning derived from exploring new research directions and growing the LS community

Project staff:

Participation: All team meetings, attend course, read papers, explore a new research area, start a small but important research project -> Mostly bringing to bear my competence in legitimate ways and through collaborations to **acquire knowledge and skills**

Access to all other participants regardless of expertise

Identity as EdTech researcher

Meaning derived from legitimate engagement with larger projects

Each one say one: List some examples of a community of practice you are in

- Learning Science class
- Journal club
- LPP during an internship
- Matrix Society, CIC, DU - creating an edtech games for math and present
- Was working for a policy think tank where we would regularly sit with the founders on a meeting and we discussed issues to cover. The best part of it was that hierarchy was absent, we all were equally debating and arguing
- sports club in my college
- Fiction reading club



A social theory of learning

1. We are social beings.
2. Knowledge is a matter of competence in valued enterprises.
3. Knowing is a matter of participating in the practices of such enterprises \Leftrightarrow active engagement and constructing identities.
 - a. Participation shapes what we do, who we are and how we interpret what we do
4. The goal of learning is meaning \Leftrightarrow our ability to experience the world and our engagement with it as meaningful
5. Components:
 - a. Meaning, Practice, Community, Identity
 - b. Identity and practice are centered
6. Communities of practice are everywhere

Think: How does constructivism connect with social theory of learning? (Individual, 3 min)

<https://padlet.com/sameerss/think-individual-5-min-is-constructivism-related-to-the-soci-86p5fxk7mutqbuqq>

Share: How the two theories are connected or not.

1. Learning as active engagement is common in both
2. Both are meaning making, but constructivism is individual and social learning is in a context, and places an emphasis on identity + 1
3. Constructivism is broader and social learning theory is an extension of constructivism
4. In both the knowledge isn't objective, based on experience, social factors and participation
5. Acquisition (individual/acquisition) and participation metaphor (participation/practice)