An Overview & Introduction to the Learning Environment

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Framing the Topic

- All of you live in a learning environment.
  - How would you describe it? Is it good? Bad?
  - What are the key features?
  - How does it "work"?

Framing the Topic

- Imagine you wanted to understand the LE so you could make it better
  - What else would you want to know about the LE?
    - Exploratory research question (hypothesis generating)
  - What interventions might you try?
    - Experiment question (hypothesis testing)

First Things

- Definitions
  - Dependent and independent variables
  - Key terms and concepts
- Theory
  - What things matter and what can be ignored
  - How things work together
- Measurement
  - Can't do research without measuring variables and concepts
  - Not just quantitative, but qualitative as well

Definitions

- Descending from the Middle French preposition *environ* "around," environment, in its most basic meaning, is "that which surrounds"

- A social system that includes the learner (including the external relationships and other factors affecting the learner), the individuals with whom the learner interacts, the settings and purposes of the interaction, and the formal and informal rules/policies/norms governing the interaction

AMA 2007

Definitions

- The learning environment refers to the social interactions, organizational culture and structures, and physical and virtual spaces that surround and shape the learners' experiences, perceptions and learning.

Josiah Macy Jr Conference, 2018

Features of the Learning Environment

- Physical facilities
- Class size
- The faculty
- Relationships with peers
- Teacher competence
- Group size
- Patient population

- Leisure time
- Curricular interventions
- Grading systems
- Institutional culture
- Assessment methods and frequency
- Clinic settings
- What ISN'T part of the learning environment?

Synonyms and Related Terms

- Educational climate, social environment, psychological climate, work environment

- Context
  - Context as a target of learning, e.g., understanding the patient's psychosocial context, the context students learn <u>about</u>, part of the curriculum
  - Context as influence on learning, the context students learn <u>in</u>, non-curricular, learning environment

Theoretical Lenses

Lens: Curriculum vs. LE

	Intentional	Unintentional
Content of learning	Official curriculum	Hidden curriculum
Context of learning	Official learning environment	Hidden learning environment

Lens:
Gruppen, Irby, Maggio, Durning (2018)

- Sociocultural Dimension
  - Organization (sociology)
  - Social (social psychology)
  - Person (psychology)
- Spatial Dimension
  - Physical environment and learning affordances
- Technology Dimension
  - Virtual learning spaces

Personal

Identity formation, resilience, well-being

Personal growth and goal direction

Engagement and emerging autonomy

Social

Scaffolding relationships with others

Becoming part of a community

Interactions for teaching, learning, patient care

Physical & Virtual Spaces

Adequacy of physical space for learning and practice

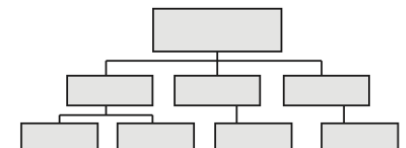Adequacy of virtual space for online learning

Organizational

Accreditation rules

Organizational culture, practices, policies

Curriculum resources structure, placements

Psychosocial

Psychosocial

Material

Psychosocial

Learning

Personal Level

Social Level

Organizational Level

Physical Space

Virtual Space

Measuring the Learning Environment

Measuring the LE

- Numerous instruments in medical education
- Three recent systematic reviews of instruments (Soemantri, et al., 2010; Schönrock-Adema, et al., 2012; Colbert-Getz, et al., 2014)
- (Almost) all are questionnaires completed by learners
  - Learner reports of their personal perceptions -> solipsism?
- Differences in target setting and item focus

Illustrative Items

- My work tasks are relevant to the learning objectives. (Org)
- I feel I have influence over my learning in this placement. (Org)
- Supervisors, nursing staff, other allied health professionals and residents work together as a team here (Soc)
- My program director reserves time to supervise/counsel me (Soc,Org)

Fixing the Learning Environment

Change the Curriculum

- *Effect of curriculum change on student perceptions of the learning environment*. Robins, et al., 1996
- Single institution, major curriculum change
  - Department- to organ-based structure, small groups, case-based, p/f grading, extensive use of SPs, formative feedback, etc.
  - Found a moderate to large effect size advantage of new over old curriculum LE
  - What made the difference? Impossible to tell

Satisfied Faculty

- *Key factors in work engagement and job motivation of teaching faculty at a university medical center*. van den Berg, et al., 2013
- National survey of university medical center faculty, engagement in teaching predicted by:
  - teaching about my own specialty
  - noticeable appreciation for teaching by my direct superior
  - teaching small groups
  - feedback on my teaching performance
  - freedom to determine what I teach

Faculty Development

- Faculty as contributors to and recipients of the learning environment
- They represent the personal, group, and organizational levels of the environment – often the societal level as well
- Faculty development for LE improvement not necessarily the same as faculty development for teaching skills

Reduce Student Mistreatment

- AAMC definition and student interpretation
- Punitive vs appreciative perspective on LE
- One event represents entire LE
- Like questionnaires, still student defined

Build Learner Community

- The social component of the LE

- Promote cooperation rather than competition

- Promote more interaction with faculty members

- Coercive element to participation (e.g., required reflections) may have unintended consequences

Space

- New medical education buildings proliferate
- Partially, a recognition that the physical environment matters
- Not just architecture, but a value statement
- Cannot ignore the 'hidden' learning spaces: Starbucks, home, private, group

Some Conclusions

- Social science and educational phenomena are typically complex
  - Many inter-related influences that are difficult to measure
- Learning environment is particularly challenging
  - Definition varies by learning target and situation
  - Measurement is problematic
  - Challenging to include variables from each of the key dimensions of our theoretical model

Nonetheless…

- The LE is critical to issues of stress, burn-out, suicide, productivity, patient care
- Failures in the LE can be expensive (e.g., regulatory consequences, legal actions)
- Cannot ignore or neglect it just because it is messy
- Changing the LE requires a clear definition of the starting point and goal