DEVELOPING THE MASTER LEARNER: IMPLICATIONS FOR THE LEARNER, THE TEACHER, AND THE LEARNING ENVIRONMENT

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Objectives

- Your objectives
- Role model teaching that develops the master learner
- Translate the theories of the educational “bench” to the clinical bedside
- Apply the theories to identify practical strategies for the learner, the teacher, and the learning environment
Setting the Stage

Shift to competency-based medical education

Predicated on learner-centeredness and self-directed learning

Reframes the approach to developing master learners
Questions for Consideration

- Motivated Learners: An oxymoron?
- Self-directed Learners: Fact or fiction?
- Self-assessment: A tragically flawed construct?

What are the implications of all of the above for the learner, the teacher, and the learning environment?
Team-Based Learning
Self-Determination Theory

Developmental Progression of Self-Determination

- Amotivation
- Extrinsic Motivation, External Regulation
- Extrinsic Motivation, Introjected Regulation
- Extrinsic Motivation, Identified Regulation
- Extrinsic Motivation, Integrated Regulation
- Intrinsic Motivation, Intrinsic Regulation

Developmental Trajectory of Lifelong Learning Skills

- Internalization of Values, Regulations, Professional Responsibilities
- Development of Reflection and Self-Monitoring Skills
- Development of External Information Seeking
- Development of Self-Directed Assessment Seeking
Learners’ natural tendency toward being self-determined is driven by 3 innate psychological needs:

- Sense of relatedness
- Sense of competence
- Sense of autonomy

Ryan and Deci, 2000
3 Innate Psychological Needs

- **Sense of Relatedness**
  - Feel part of community, team, profession

- **Sense of Autonomy**
  - Acting of one’s own volition
  - NOT acting on own without others

- **Sense of Competence**
  - Feel like one knows something or is able to do something

Ryan and Deci, 2000
Self-directed Learning (SDL)

- **Central Tenet:** Individuals take primary responsibility for all phases of learning
  - Identifying needs
  - Planning to meet those needs
  - Working to meet those needs
  - Reflecting on what has gone well and not well in learning efforts

- **Major Pitfall:** Inaccuracy of self-assessment
Self-Assessment
Self-Assessment

- Comparing self to ideal standard

- Three types:
  - Predictive
  - Concurrent (in the moment)
  - Summative

- Concurrent self-assessment is more accurate than predictive or summative self-assessment
Constructs in Self-Assessment Accuracy

- Self-concept
- Self-efficacy
- Illusory superiority
- Situated cognition
- Gap filling
Self-concept

- Comparison of self to others
- Affective and cognitive components
- Can be domain specific, but is not context-specific or task-specific
- Domain-specific: “I am a good pediatrician”
Self-efficacy

- Comparison to master level
- Task-specific and context-specific
  - “I am skilled at endotracheal intubation.”
- Experience important to self-efficacy
- Higher self-efficacy increases likelihood of success and lower self-efficacy decreases likelihood of success
Illusory Superiority

- Tendency to view self as above average when compared to others
- Worst performers are the most inaccurate!
  - Unskilled and unaware (Kruger and Dunning, 1999)
  - Unable to correct misperceptions on own
  - Can calibrate if receive training (Kruger and Dunning, 1999)
- Highest performers under-estimate abilities by over-estimating abilities of others
  - False consensus effect (Ross et al, 1977)
  - Can correct misperceptions by observing others
INCOMPETENCE

When you earnestly believe you can compensate for a lack of skill by doubling your efforts, there's no end to what you can't do.
Situated Cognition

- All learning is constructed from/linked to the environment, situations, and culture (Kolb, Dewey)
- Learning environment Learner
- Cognitive apprenticeship (Brown et al, 1999)
  - Involves the master teaching the skills and the thought processes behind the skills
Gap Filling

- Poor ability to identify gaps
- Poor motivation to fill gaps even if identified!*
  - Energy related to filling gap
  - Difficulty of the material
  - Interest level in the material
- Tendency to focus on reviewing what one is already familiar with**
- Best strategies:
  - reading new material
  - Testing after a time delay**

* Regehr and Eva 2006
**Rohrer and Pashler, 2010
Mitigating the Inaccuracy of Self-Assessment
Mitigating Self-Assessment Inaccuracies

- Reflection and self-monitoring
- External information
Reflection

<table>
<thead>
<tr>
<th>Reflection for action</th>
<th>Reflection in action</th>
<th>Reflection on action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predictive self-assessment</td>
<td>Concurrent self-assessment</td>
<td>Summative self-assessment</td>
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</tbody>
</table>

Not that great  
Provides hope!  
Not that great

Self-monitoring

Eva and Regehr, 2005
How can the learner, the teacher, and the learning environment contribute to mitigating the inaccuracies of self-assessment?
Mirror, mirror, on the wall...

Self-directed Assessment Seeking
Small Group Work

1) Rank order your top two interventions based on your table’s discussion

2) Plan to present your favorite idea!
What are your take home messages?
Take Home Points

- Learning theories inform strategies for learners, teachers, and the learning environment
- “Motivated Learner” is not an oxymoron but requires attention to enhancing autonomy, competence, and relatedness in the learner
- Self-directed learning is a team sport
- To avoid a distorted image, effective self-assessment requires more than a mirror