The “How People Learn” Framework for Instructional Design

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Introductions and Shared Expectations

Find someone you don't know and ask….

Who are you?

What brings you here on this Friday afternoon?

If _____ happens this afternoon I will say this was time well-spent (fill in the blank)

Learning Outcomes

1. Explore the concept of Knowledge transfer
2. Differentiate between routine expertise and adaptive expertise
3. Describe the “How People Learn” Framework
4. Apply findings to classroom/lab/clinical instruction

Father Guido Sarduci's University

https://www.youtube.com/watch?v=kO8x8eoU3L4

Knowledge Transfer

Literature is still not settled on Transfer and what it means.

- Direct Application or Sequestered Problem Solving (SPS)
- Preparation for Future Learning (PFL)

Research designs that “make us look smart” vs. ”make us look dumb”

Schwartz, D.L., Bransford, J.D., & Sears, D. (2003). Efficiency and Innovation in Transfer. IN Transfer of Learning and Perspectives (Mestre, Ed.).

Transfer “in” vs. Transfer “out”

Transfer “in” means bringing pre-learned (whether correct or not) knowledge and facts in to solve a new problem.

Transfer “out” means using new knowledge to solve new problems.

Examples

1

Transfer “in”

- Using principles of acid-base balance (learned in General Chem) to demonstrate understanding of Arterial Blood Gas Reports (ABG’s)

2

Transfer “out”

- Managing patients’ physiologic acid-base balance with complex contextualized factors (co-morbidities, medication profiles, etc.)

One is not better than the other.

Faculty need to be aware of what they want to accomplish with their instructional design AND more importantly does it match your assessments

Your turn

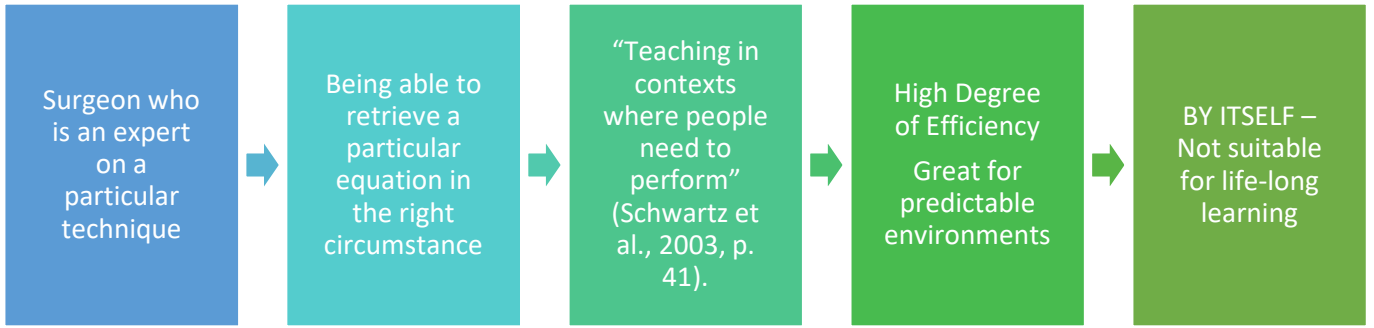
Share examples of Transfer “in” and Transfer “out” from your teaching experiences.

https://www.keepcalm-o-matic.co.uk/p/keep-calm-and-take-your-turn-already/

Notes about Expertise

Routine vs. Adaptive Expertise

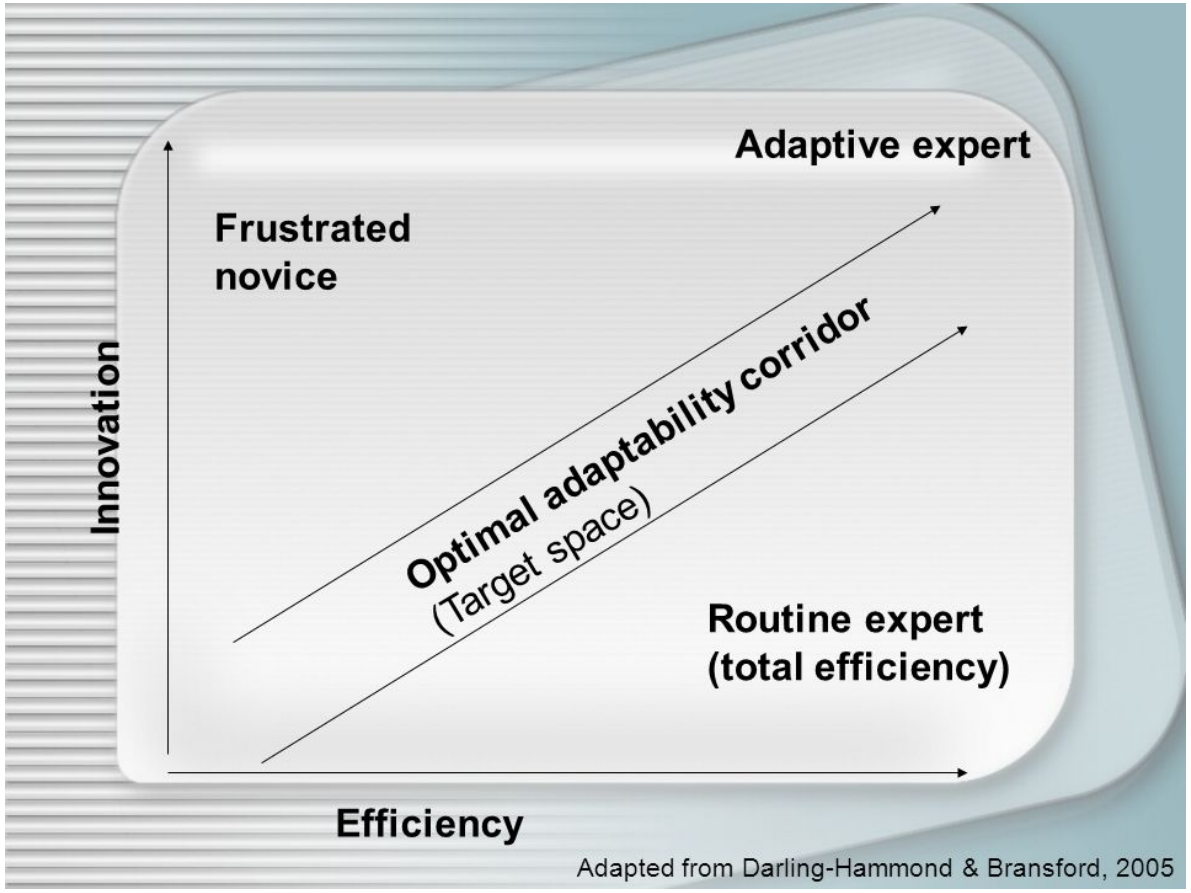
Routine Experts (Efficiency)



Adaptive Experts (Innovators)

Experts with flexible and adaptable knowledge to develop novel solutions as well as define new problems.

Innovation and Efficiency



Retrieved from https://slideplayer.com/slide/7044402/ on 10/20/2018

Schwartz et al. 2003., Page 55

Retrieved from https://www.someecards.com/usercards/viewcard/MjAxMi00ZTFkYmIzYWJkMzI1YjU0/ 10/20/2018

How People Learn: Brain, Mind, Experience, and School

Bransford, Brown, & Cocking

National Research Council

The HPL Framework

Links research from Cognitive Science to educational practice

K-12 focus, but applicable to all learning environments

Learning for transfer, adaptive expertise, life-long **problem-identification** and problem-solving

Available as a free PDF at https://www.nap.edu/download/9853

4-Interdependent "Centerednesses" for effective learning environments

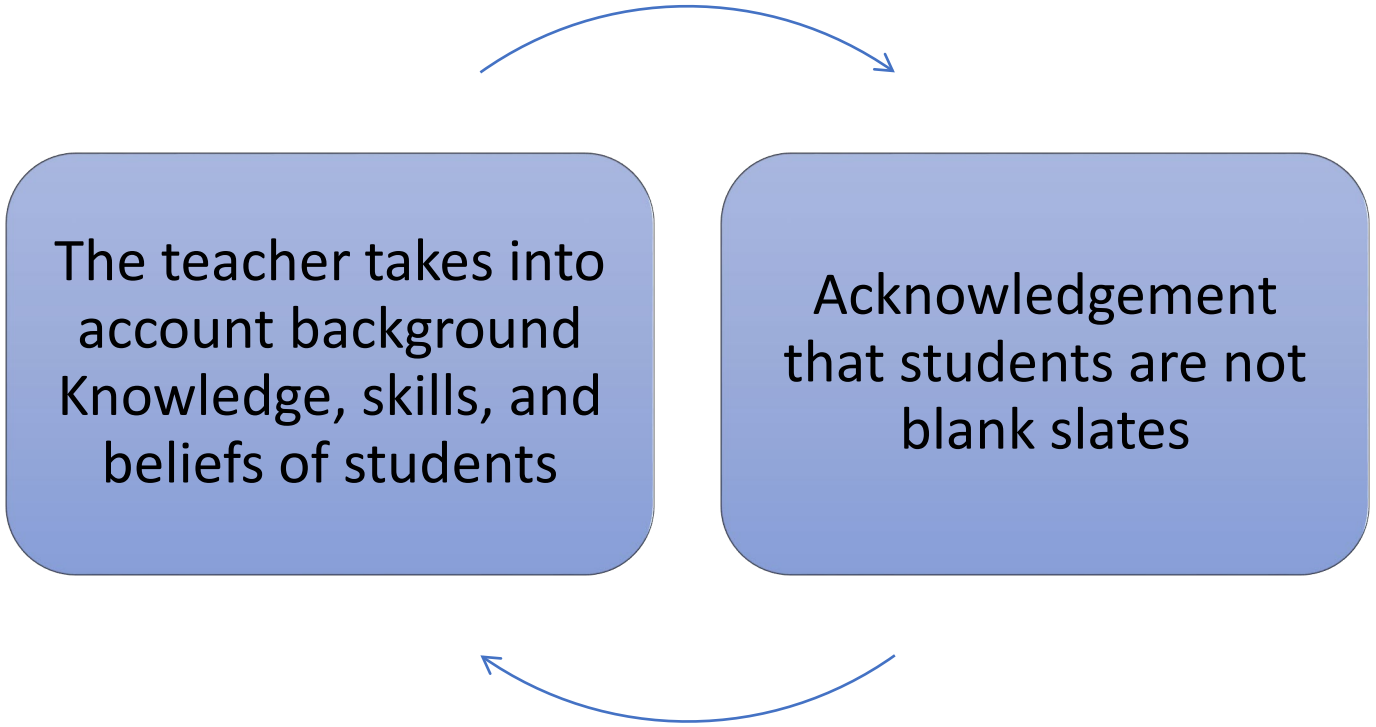
1 Learner

2 Knowledge

3 Assessment

4 Community

Learner-Centered Environments



How do you create Learner-centered Instructional Environments?

Knowledge-Centered Environments

- Teachers are very deliberate in what content they choose to present.
  - Organize around Big Ideas
  - Backward Design (Manage medication administration through the nursing process, know where to find accurate information about medications, Pass the NCLEX® examination)

- Students need time to play with concepts, try them out, deliberate, think of alternatives, make connections

*This CANNOT happen if the teacher's main concern is "covering the content"

http://www.heartofcheer.com/cheerleaders/let-go-cheerleader-style/ Retrieved 10/20/2018

How do you create Knowledge-centered Instructional Environments?

Assessment-Centered Environments

- Frequent formal and informal opportunities for feedback, constructive critique and reflection
- Serve to help students develop metacognitive skills
- Formative and Summative assessments that meet the course goals and are aligned with content (Knowledge-centered)

What formative Assessments do you use?
What summative assessments?

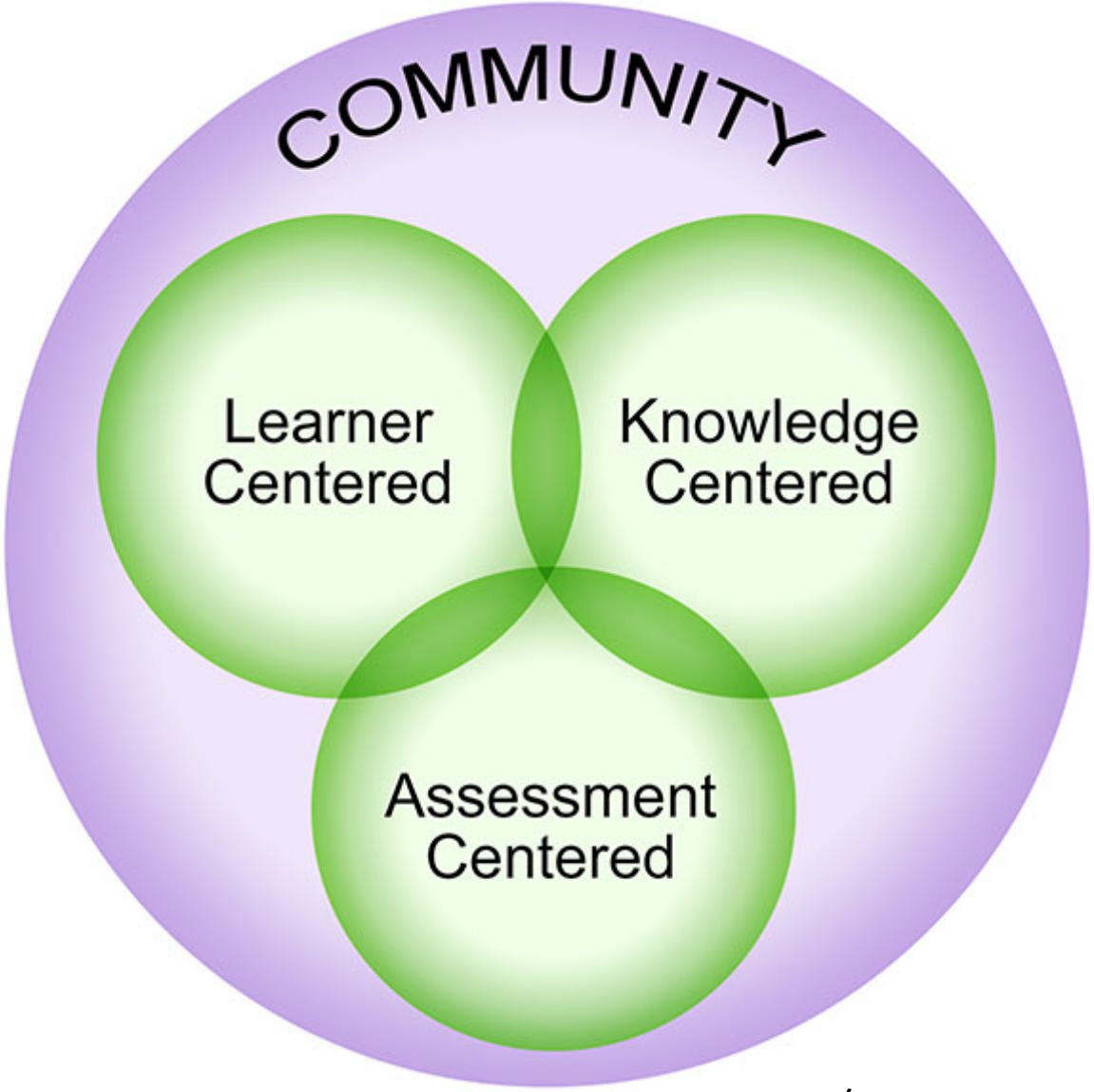
How do you determine which to use and when?

Community-Centered Environments

- Teachers provide a “safe” community for learning
  - Mistakes are good!
- Provide ways for students to learn from one another
  - Teamwork, cooperation
- Connect classroom learning to the larger community (profession, community of citizens, etc.)

Are there opportunities for students to make mistakes in your classes? How do you encourage and provide a “safe” environment?

How do you connect what you are teaching to the larger community or profession?



https://iris.peabody.vanderbilt.edu/_archive/iris-and-adult-learning-theory/

Putting it all together

https://www.lma-consultinggroup.com/blog/synthesize-results

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