Maximizing Teaching & Learning Through Faculty Development

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Harvard Medical School

Director of International Programs

Shapiro Institute, BIDMC

Education is at the heart of patient care.

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"A curriculum is the tangible expression of the soul of an institution"

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                    BIDMC
              Center for Education


  Undergraduate Med Ed                        Graduate Med Ed

                    Shapiro Institute for
                    Education & Research

  Education Technology                         Education Research


     Simulation and              Professional              CME Courses &
     Skills Center               Development          Millennium Conferences


  Multicultural Affairs                                     Assessment


  Academic Careers &          Rabkin Fellowship         BIDMC Academy of
  Faculty Development        in Medical Education        Medical Educators
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BIDMC Center for Education

- Created out of BIDMC Strategic Education Review
- Central administration of all educational activities
  - Undergraduate Medical Education
  - Graduate Medical Education
  - Professional Development
    - Rabkin Fellowship
    - Peer Observation of Teaching
  - CME Courses
  - Education Research
  - Millennium Conferences
  - Simulation and Skills Center
  - Consultations

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Hatem, et al Acad Med 2006
Huang, et al Am J Med 2006
Lown, et al JGIM 2007
Huang, et al Simul Healthc 2007
Schwartzstein, et al Acad Med 2008
Bell, et al Acad Med 2008
Krupat, et al Acad Med 2009
Huang, et al Acad Med 2009
Tess, et al Acad Med 2009
Hatem, et al Acad Med 2009
Lown, et al Acad Med 2009
Newman, et al Acad Med 2009
Gonzalo, et al J Gen Int Med 2010
Fincher, et al Acad Med 2010
Huang, et al Teach Learn Med 2010
Smith, et al Simul Healthc 2010
Roberts, et al Surg Innov 2011
Huang, et al Med Teach 2012
Newman, et al Acad Med 2012
Roberts, et al Med Teach 2012
Richards, et al Clin Teacher 2013
Huang, et al Teach Learn Med 2013
Schwartzstein, et al Acad Med 2013
Newman, et al MedEdPortal 2013
Smith, et al Acad Med 2014
Roberts, et al AnnalsATS 2014
Richards, et al Med Teach 2014

How did we get here?

- Image of Rube Goldberg contraption

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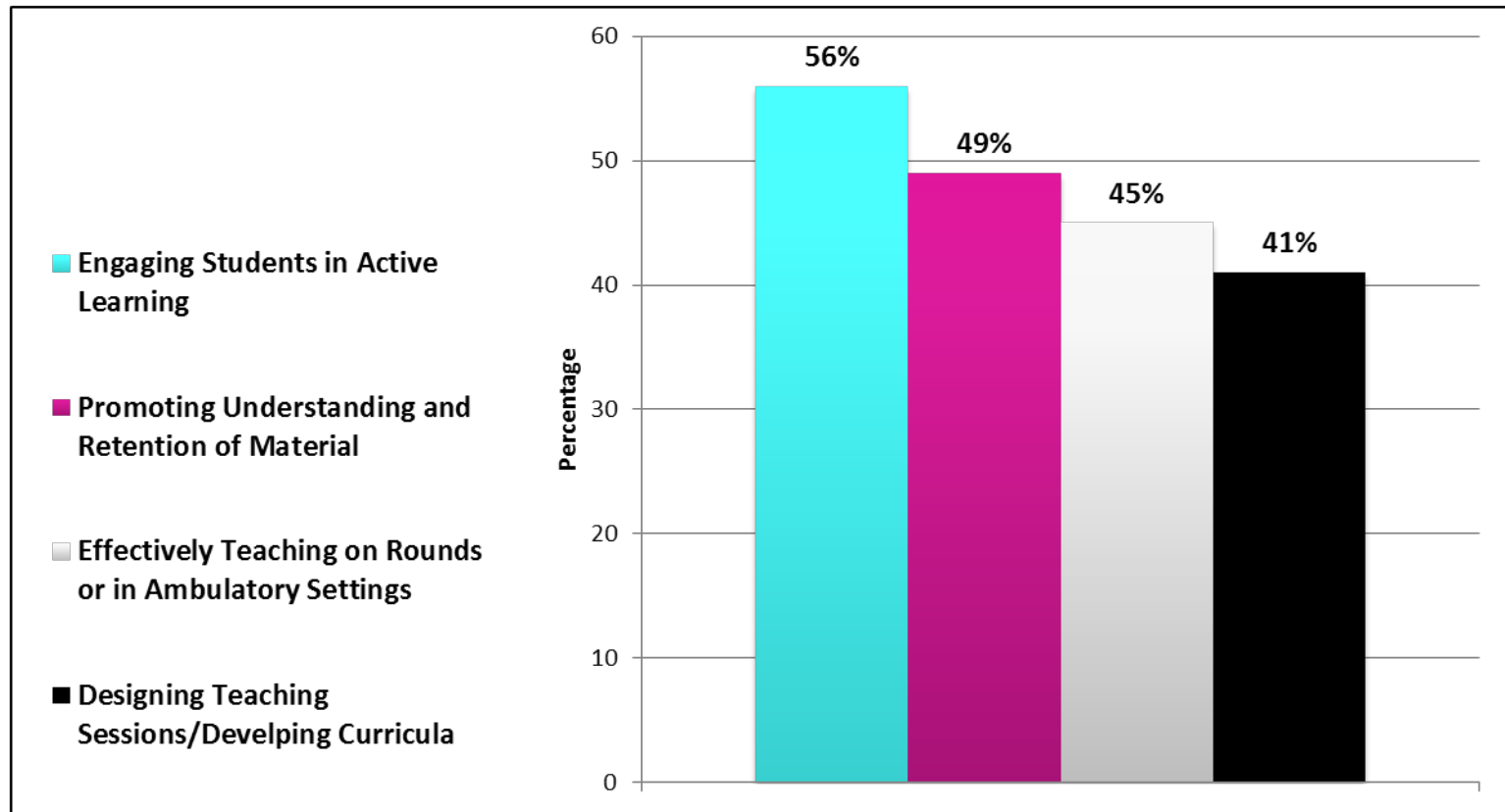A teaching hospital of Harvard Medical School

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You are motivated to learn and change

UofL School of Medicine Faculty Needs Assessment Survey, June 2015

Your future looks bright!
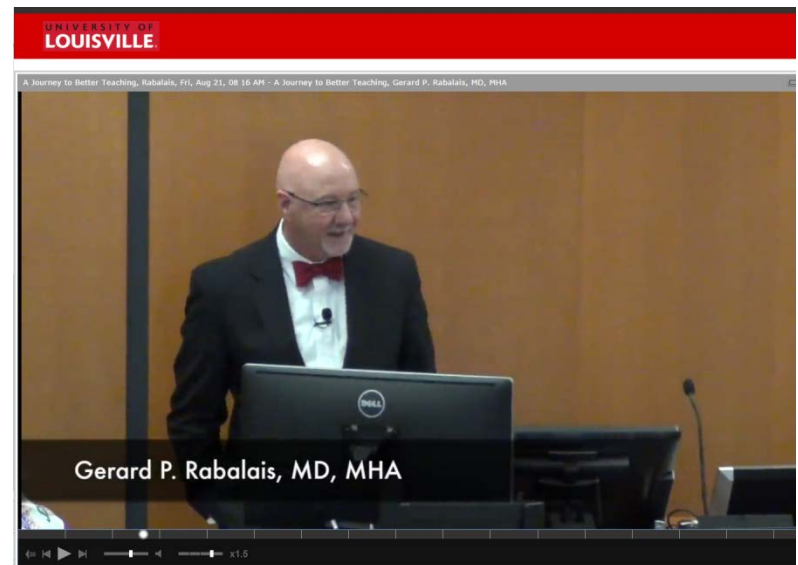
Toni M. Ganzel, MD, MBA
Dean of the School of Medicine

Gerard P. Rabalais, MD, MHA

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Who is in our learning community?

- Diversity of backgrounds and expertise
- Shared goals
- Common interests and questions
- Desire to build community

Let's get to know each other

What do you hope to gain from today?

How did I get where I am today?

Image of airport moving walkway

Gaining teaching skills while working is like….

Flying the plane…..

While fixing the wing….

Why Invest in Professional Development?

- To improve your teaching
- To become an educator in addition to being a teacher
- To develop an accepted set of "core skills" as a medical educator
- To advance your career within academic medicine
- To increase your satisfaction ("renewal")

Yet, we all lead busy lives…

Being an educator may protect against burnout!

Maslach burnout inventory (scored low, medium, high)	Emotional exhaustion % high	Depersonal-ization % high	Personal accomplish-ment % low	Total %
Clinician	53	23	20	63%
Educator	10	0	23	30%
Significance (Wilcoxon Signed Ranks Test)	p<.001	p=.001	p=.803	p<.001

Data and Slide c/o Anne Dembitzer, MD at NYU

One model of learning*

LADDER OF COMPETENCE

Unconscious incompetence
Ignorance, misplaced confidence

Conscious incompetence
Aware of limitations

Conscious competence
Growing confidence and skills

Unconscious competence
'Autopilot', risk of complacency

Mindful competence
Fully present, sensitive to context and opportunity

*Modified from Noel Burch, Gordon Training Institute, 1970

Can we apply this approach to the acquisition of teaching skills?

We seek to provide the questions to all the answers that we see, hear and use every day.

Are there other perspectives on teaching?

Image of "square" watermelon grown in lucite cube

**Practice does not make
"perfect"**

**Practice makes
permanent**

News Flash!

There are better ways to learn and retain information!

Learning sciences

Cognitive learning theories

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Two great resources on cognitive learning

What do we mean by learning sciences?

- Learning is deeper and more durable when it costs effort
- Retrieval practice is more effective than review
- Problem solving before being taught solutions leads to better learning
- New material put into context enhances retention
- Interleaved concepts provide synergy
- Spacing of repetition or practice is key

Learning Takes Work!

- Durability of learning is linked to effort and to the context associated with the experience

- Most of us can not tell whether we are learning something

Retrieval Practice (testing or self-quizzing) outperforms studying and concept mapping
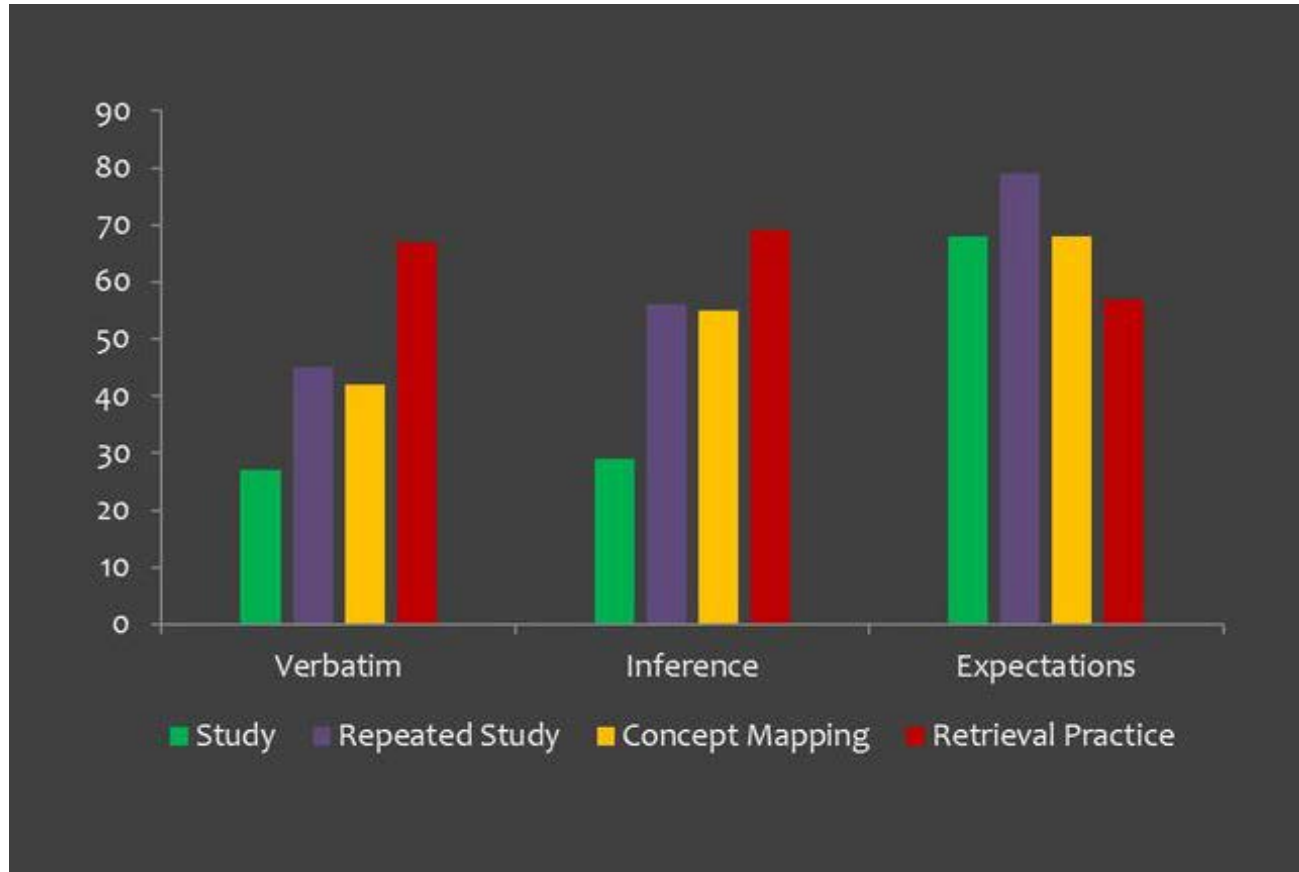
Karpicke, Bulunt; Science, 2011

Generation of ideas and theories

- Making errors and correcting:
  - Establishes memory connections
  - Identifies gaps in knowledge
  - Creates **cognitive dissonance**
  - Stimulates curiosity
  - Benefits from feedback

Value of saying, "I don't know, but I'll try"...

Trying (effort) to come up with the answer or solve a problem rather than having the answer given to you (problems before solutions), leads to better learning and longer retention of the correct answer or solution, even when your attempted response (generation) is wrong.

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Information has a half-life

"Spaced" education enhances the kinetics of memory and learning

Interleaving concepts enhances retention
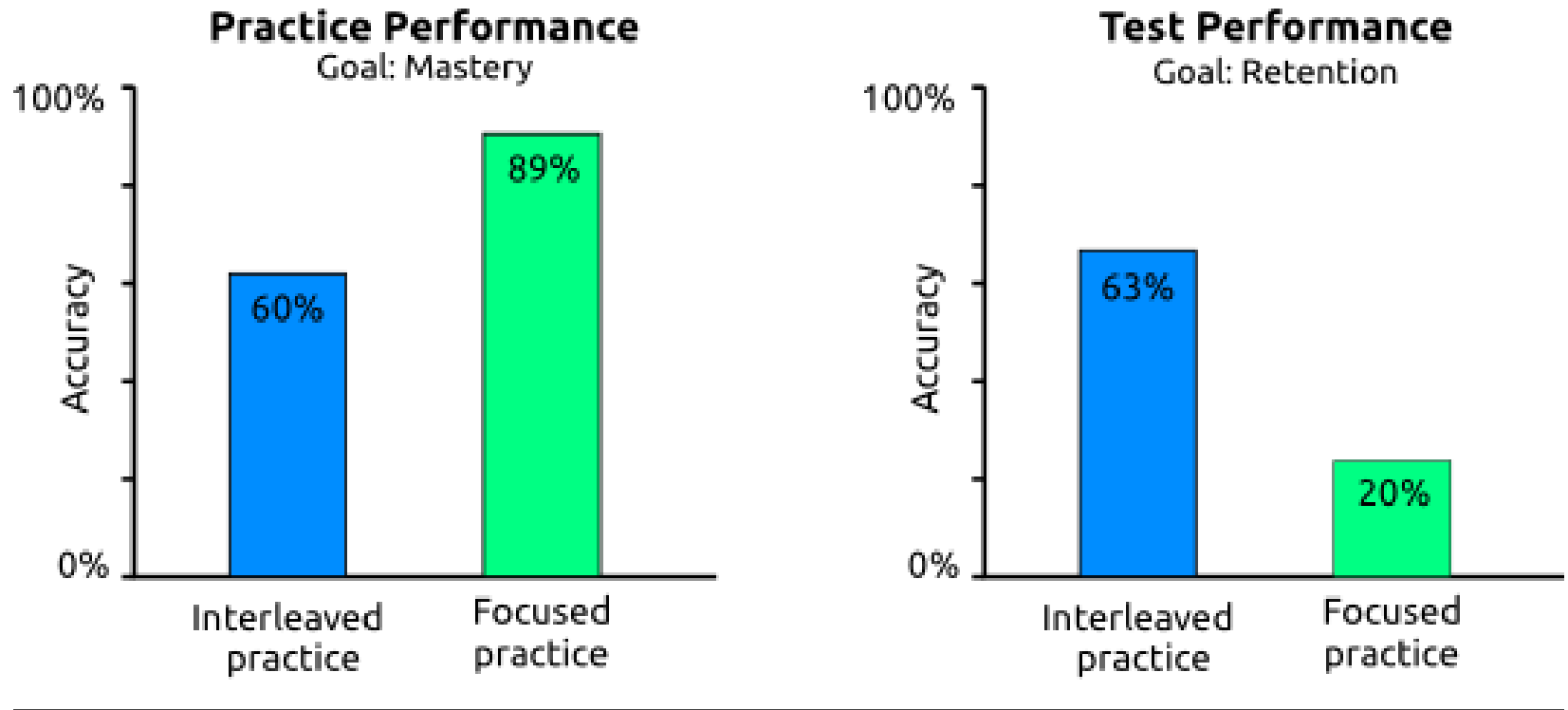
Taylor and Rohrer; Applied Cognitive Psychology, 2010.

Interleaving creates more and stronger cross-links in our memory

Deliberate Practice and Feedback

- Push yourself to the limit of your skillset and expand your abilities

- Requires self-reflection and good feedback

Expert Performers are Made, Not Born

"Acquisition of expertise requires **sustained, deliberate practice** over years." (Kneebone, Med Ed, 2004)

"One of the fastest ways to improve performance is to improve **feedback**." (Lemov, Practice Perfect, 2012)

"**Feedback** can change clinical performance when it is systematically delivered from **credible sources**." (Veloski, Med Teach, 2006)

From theory into practice

- Today's sessions
  - Lecturing skills
  - Prepping learners for feedback
  - Teaching critical thinking
- Your cases
- Reflection on current and future states

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Bolus vs Drip…

- Success requires sustained attention to faculty development
- What will that look like?
- Who will that involve?
- How will you recognize success?

Can we leverage education technology to enhance our teaching and our lives?

Automatic authentication enables rapid download of article in pdf format

Read App
by QxMD

A few other ideas to consider

- Peer observation of teaching
- Writing for scholarship groups
- Education journal clubs

There are MANY models of faculty development

Teaching must remain fun!

From the stage, to the balcony...

Ask yourself, why is this material being taught like this?

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Keep the following in mind…

- We hope to go beyond <u>in</u>formative

Keep the following in mind…

- We hope to achieve real and profound change – to be <u>trans</u>formative

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As described by Prof. Robert Kegan, HGSE, Harvard-Macy Institute

What should your faculty development programs look like?

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Throughout the day today...

- How can I take this one step further?

- How can I apply this in my own teaching?

- How can I study this in our new curriculum?

- How can I lead change in this area?