



Minnesota eLearning Summit

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2016

Jul 28th, 11:00 AM - 12:00 PM

Online Education Can Make Us Better Teachers

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Online Education Can
Make Us
Better Teachers

Marie Norman, PhD
Minnesota eLearning Summit
2016

Minnesota

"THE NORTH STAR STATE"

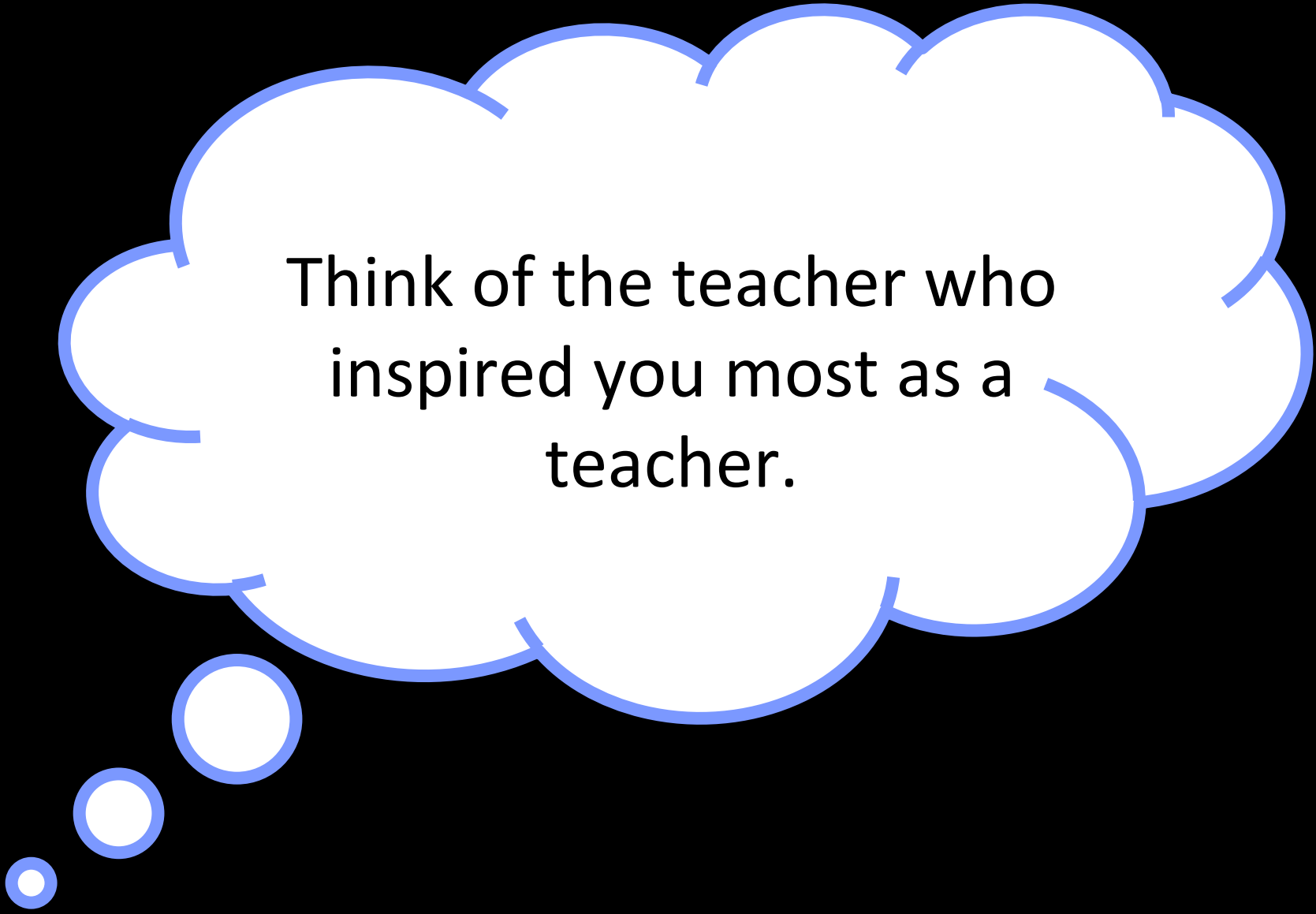


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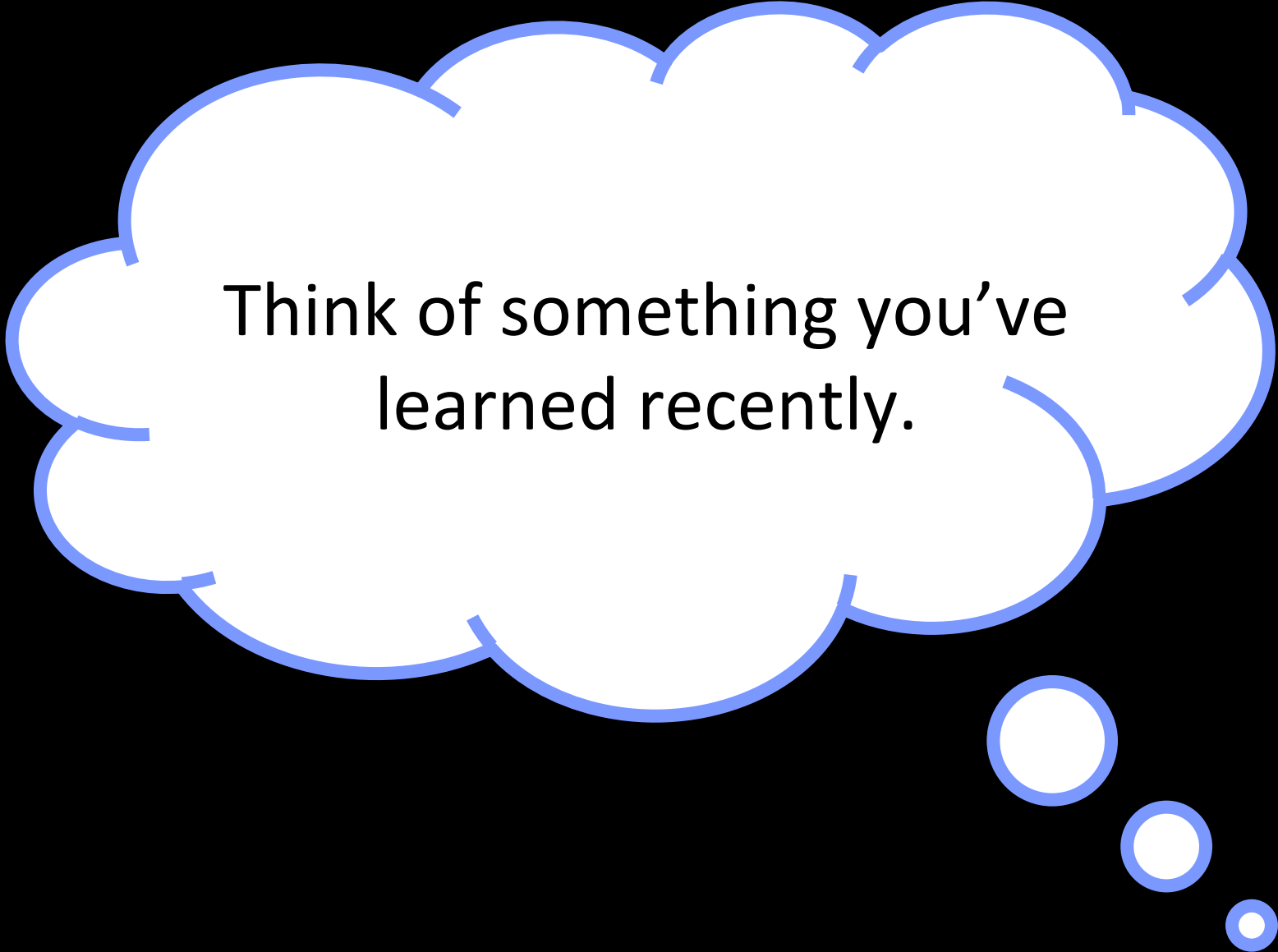
Objectives

- Explain why online education is ideally positioned to apply learning research.
- Identify 5 ways online education can help us teach more effectively.



Think of the teacher who
inspired you most as a
teacher.





Think of something you've
learned recently.



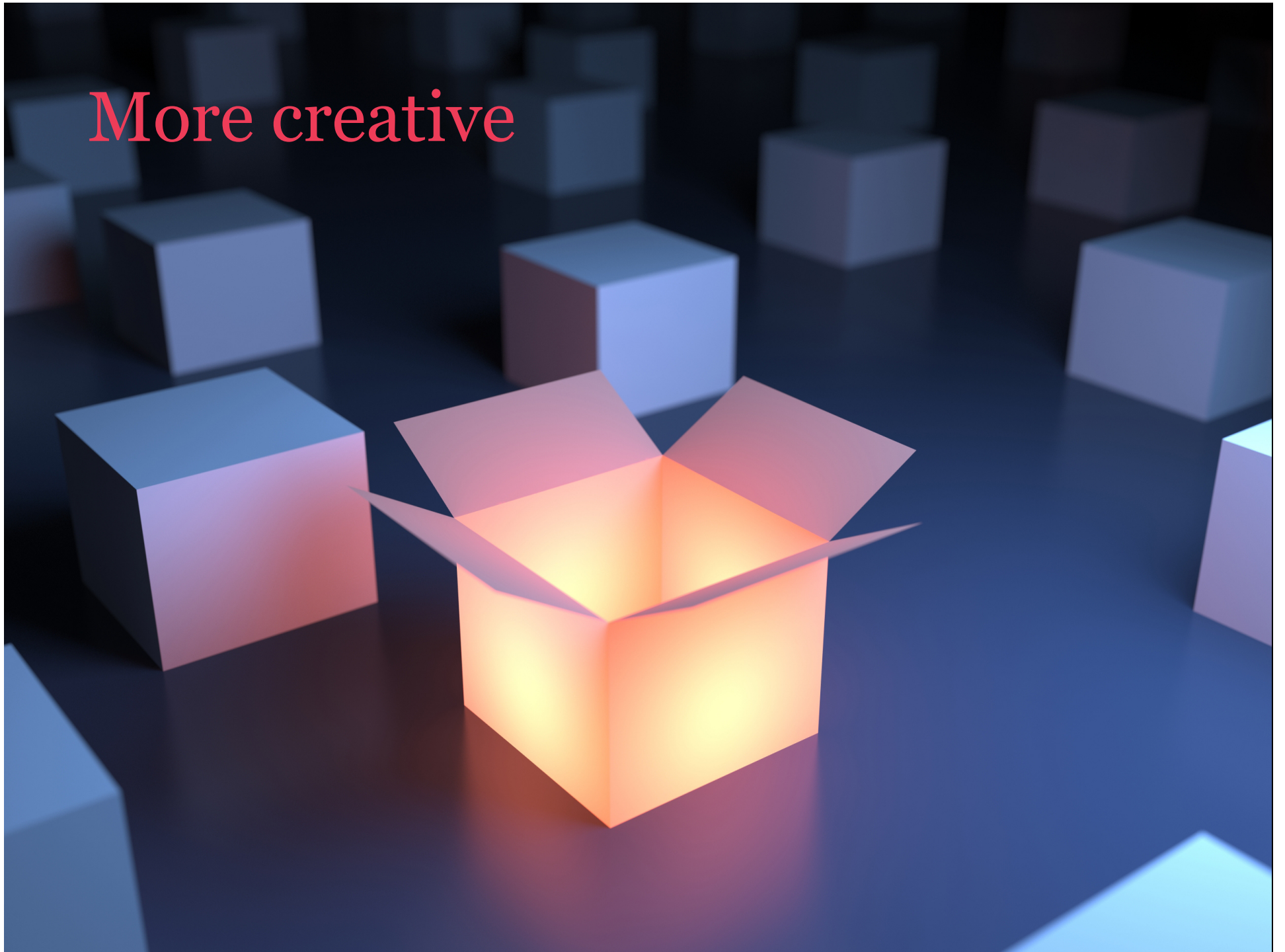




We lack models for
online *teaching*.

But we have many models
for online *learning*.

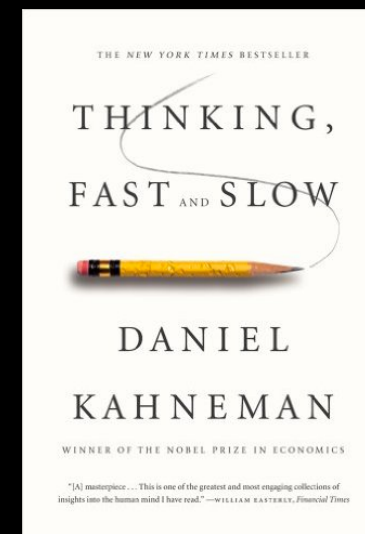
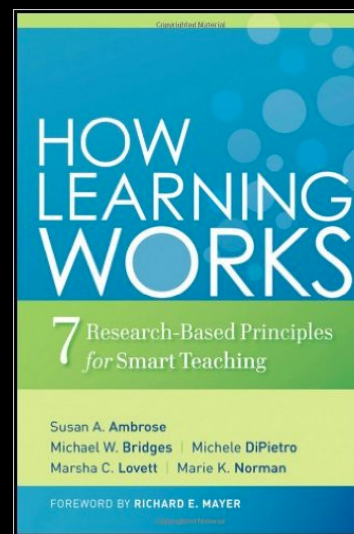
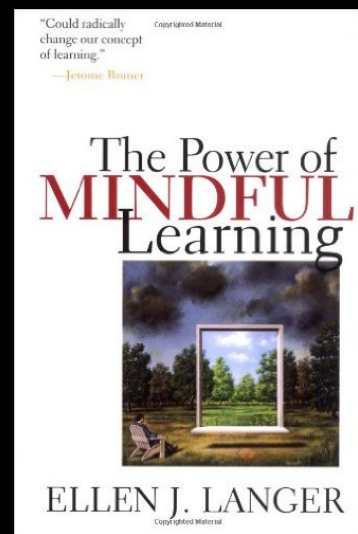
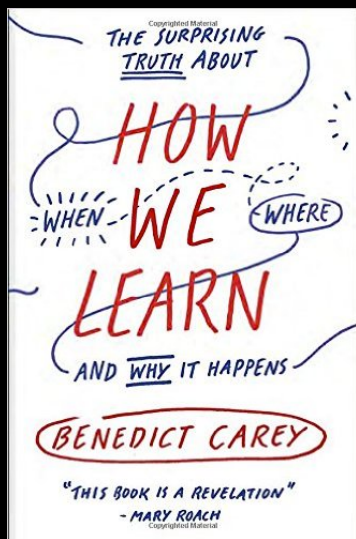
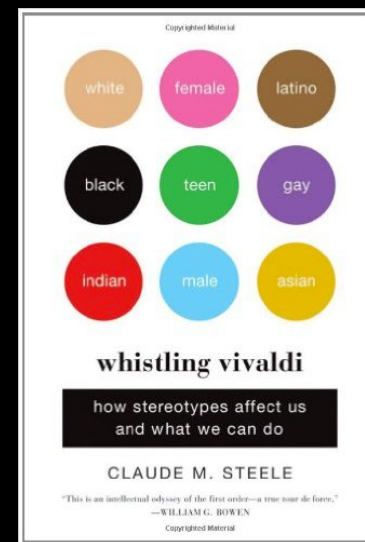
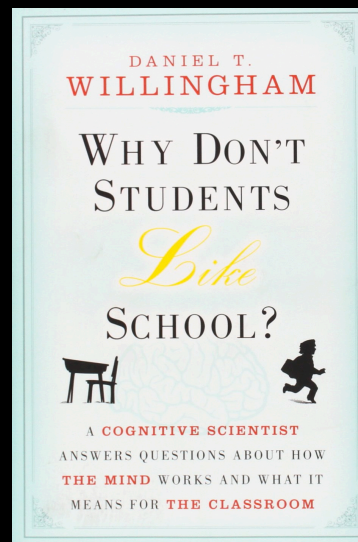
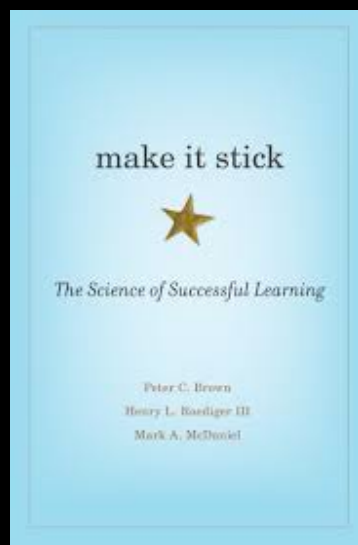
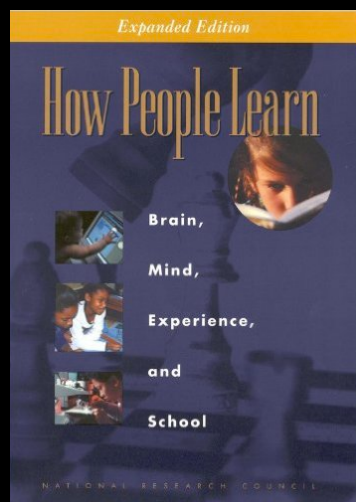
More creative



More
learner-
centered



More grounded in research



Research that is too often ignored...

Lecturing holds steady despite research challenging its effectiveness (Hurtado et al, 2012).

Misconceptions abound about learning styles (Rohrer & Paschler, 2012; Paschler et al, 2008).

We continue to believe that more content = more learning (Knight & Wood, 2005; Nelson, 2001).







Lessons from
online
teaching that
can make us
better
teachers
(online or
onsite)



1. Step away from the lectern.



The case against lectures

Freeman et al, 2013:

- Performance higher with active learning
- Failure higher with lecture

Hake, 1998:

- Lectures inferior to student-student learning
- No difference between best/worst lectures

Eddy & Hogan, 2014:

- Lecture particularly damaging for minorities/women




Use lecture sparingly



Keep lectures
short



Use what's out there



The Science of Awkwardness
by Vsauce ✓
3,621,320 views • 5 months ago

CC



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THIS AMERICAN LIFE FROM WBEZ

LAST THIS WEEK

532: Magic
SEP 4, 2015

When Jonathan Goldstein gave him a book that pretends to shoot mental laser beams that move solid objects with the power of your command — a book about mental power and magic — he revisited the book to try to figure out what's within. And we have other stories about words that have the power to live, with no magic or no magic.

PLAY DOWNLOAD

SEARCH

LATEST TWEETS

@alk_marie: RT @marketmachines: Do you listen to ThisAmerLife? See what content marketers can learn from the radio show. <http://t.co/V0vryj4TqH9> #http

@Kaliw6031: RT

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J Russell Teagarden: Tips for Great Medical Writing
ISMPChannel
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Effective Medical Writing
LifUddannelse

PEER REVIEWED | Gary Witherell, PhD

The Importance of Medical Writers to the Success of Clinical and Regulatory Documents

The new breed of highly skilled medical writers includes professionals with deep expertise in science/medicine, data analysis, process/team leadership, and document development for drugs, biologics, and medical devices, all leading to successful outcomes.

Contrary to the stereotype of medical writers being passive (possibly agoraphobic) individuals who work in basements, a new breed of highly skilled medical writers is bred is populated by professionals who have deep experience in medicine, data analysis, process and team leadership, development for drugs, biologics, and medical devices, all of successful outcomes.

What Makes a Medical Writer Highly Skilled?

The education, expertise, and experience of medical writers vary from one to another, and there are no standardized tools to measure the skill level of medical writers beyond minimum competence.

- Training and expertise in science and/or medicine. Typically, highly skilled medical writers are trained as scientists, veterinarians or pharmacists. A solid understanding of the scientific and clinical terminology, and logic is crucial, and advanced science (e.g., PhD, DVM, PharmD) are highly valued.
- Experience writing a large number and variety of clinical documents, including protocols, investigator brochures, clinical study reports.² Ideally, they have also worked on regulatory New Drug applications (INDs) and New Drug Applications (NDAs) sent to the U.S. Food and Drug Administration (FDA) on common technical documents (CTDs), although writing experience are far less common.
- Knowledge of drug development (e.g., pharmacokinetics, biostatistics, nonclinical and clinical research) and regulatory (e.g., regulations, guidance documents).^{2,3}
- Experience in the biotechnology and/or pharmaceutical industry. Since medical writers interact with a large variety of functions, hands-on

Medical Writing Basics: Cringe-Worthy Errors and How to Avoid Them

Laura Bruck
Published Online: Friday, June 15, 2012



As an oncology fellow, you are among the best educated individuals in the country. From basic science to applied clinical technique, what you didn't learn in the classroom you will continue to learn, every day you spend in the office, the clinic, the lab, and the operating room, as long as you practice. Over the course of what you hope will be a long and illustrious career, you will likely be expected to share the benefits of your research, education, and experience with your colleagues, primarily by writing articles for publication in reputable peer-reviewed journals and trade publications. If you are among the vast majority of physicians, however, you may not be properly prepared for this leg of your career journey. Your medical school curriculum likely didn't include a single course on clinical writing.

This reality notwithstanding, are physicians really expected to be effective writers? The answer to this question is both "yes" and "no." You might ask, "Isn't that what editors are for?" Certainly every medical publication has an editor (or a staff of editors) whose job it is to ensure that all accepted articles conform to the publication's standards and read as clearly, concisely, and error-free as possible. But the responsibility for producing accurate and effective articles remains with the author(s). In fact, the "cleaner" and more publication-ready the manuscript is as

THE BLOG

One Year Later: The Biggest Mistakes I Have Made as a Medical Writer

07/01/2013 10:40 pm ET | Updated Aug 31, 2013

Brian Secemsky, M.D.
Medical writing for patients, students and practitioners.

This last month marks the first anniversary of two very important milestones in my career in medicine: I began training as a physician and started writing about medicine. Although perhaps not equally as demanding, both of these new activities in my life required overcoming steep learning curves and involved constant self-reflection and personal change.

Writing medical humanities pieces for different media outlets has been and continues to be a source of personal enjoyment and provides an incredible sense of community with those who take interest in reading and writing about medicine. You should try it, seriously.

But beware. On occasion, the time-intensive activity of medical writing can feel like a huge burden to those already dedicated to a profession infamous for high stress and long hours. The metaphorical "burnout" that physicians are known to experience during the workday also applies to physician writers who consume odd hours outside of an already overbooked week to practice this additional passion within their field.

In order that new emerging medical writers avoid a similar sense of burnout early on in the writing process, I have listed just a few of the many mistakes I have made during my inaugural year of shameless rants that would behoove one to avoid.

Writing about something I was uninterested in

The first few pieces that I put together for friends and family essentially wrote themselves. This was in part due to the sheer excitement exploring a new creative outlet and otherwise due to the simple fact that I had something to write about that I personally found interesting (e.g., male-pattern baldness! genital warts!).

Ask, don't tell

- Pose a question
- Ask students to find answers
- Discuss, vet, and compile info together

SCAVENGER LEARNING



Lessons for teaching in any modality

- Limit use of lectures
- Keep lectures short
- Use what's out there
- Ask, don't tell



2. Make students do the heavy lifting.



Herb Simon, Nobel Laureate

“Learning results from what the student does and thinks and *only* from what the student does and thinks.

The teacher can advance learning only by influencing what the student does to learn.”

Participatory Culture

Low barriers to artistic expression

Low barriers to civic engagement

Strong support for creating and sharing

Ability to shape the flow of media

Jenkins et al (2009)



Emmarr™
@EmmarrButler

#IfTheyGunnedMeDown I wonder which way we'd be portrayed
@Stoop_Kid24

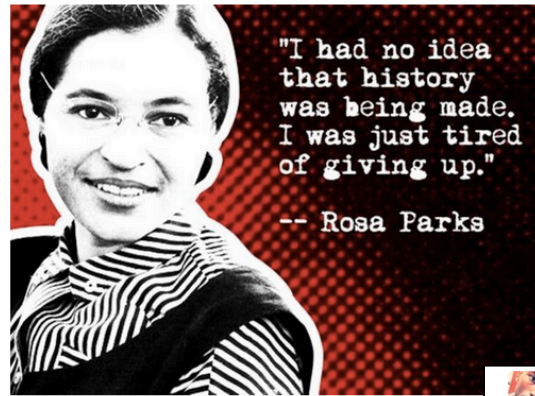
11:00 AM - 11 Aug 2014

19 16



Black History Heroes @HistoryHeroes · 18m

I had no idea that history was being made. I was just tired of giving up. ~Rosa Parks #BlackTwitter #BlackLivesMatter



RETWEETS
7

FAVORITES
3



Dev @DevinDinero · 1h · ... More

#IfTheyGunnedMeDown they'd say i was a thug
pic.twitter.com/JsLxga0uww



117

63

View photo



deray mckesson @deray



Follow

There is no rank order to injustice.

We fight for #Mizzou, #PrayForParis, and seek justice for #SandraBland -- at the same time.

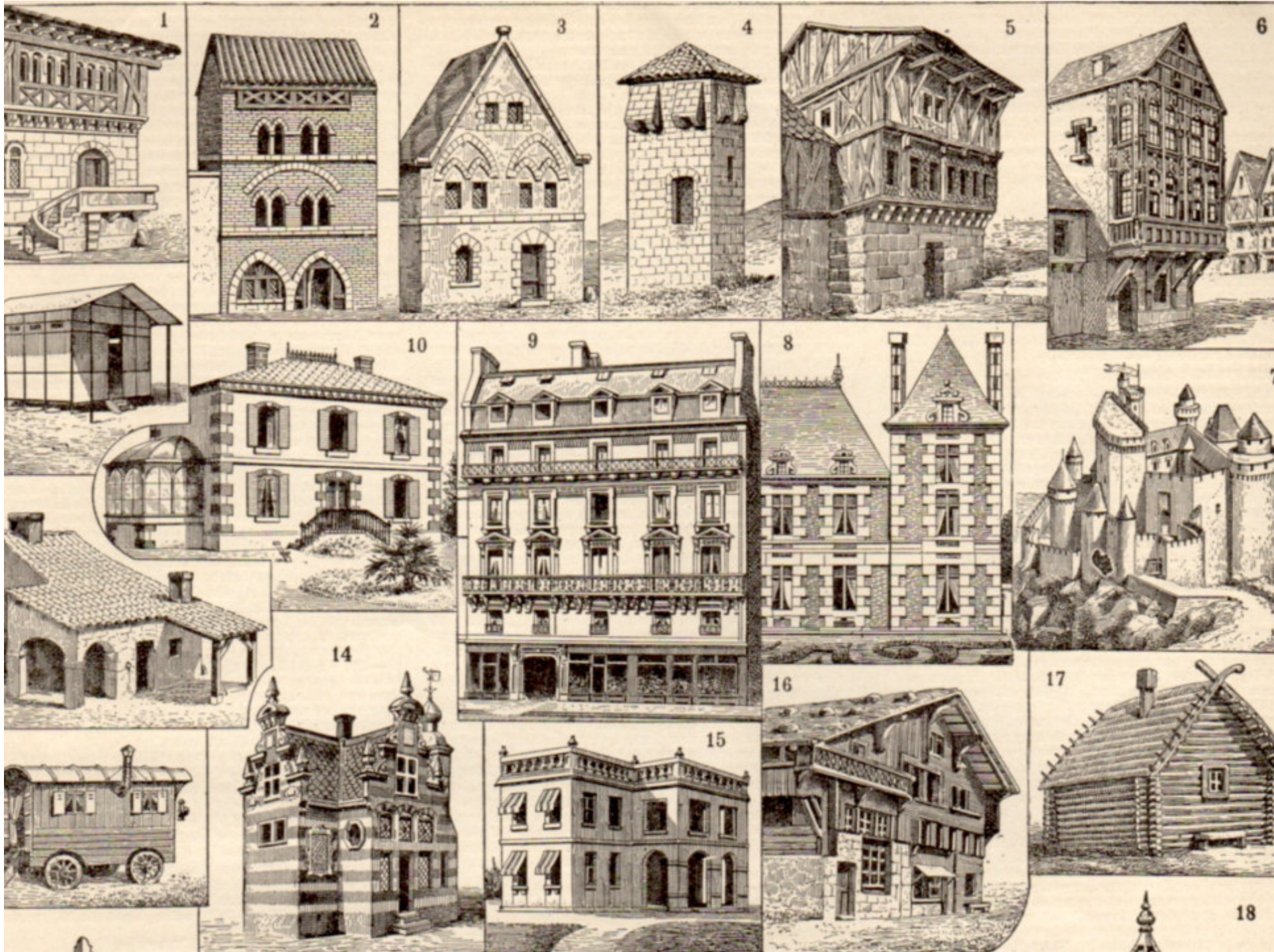
RETWEETS
4,142

LIKES
4,419



2:41 AM - 14 Nov 2015





**WIDWICHES
ALADS**







Cancer Research UK
@CR_UK

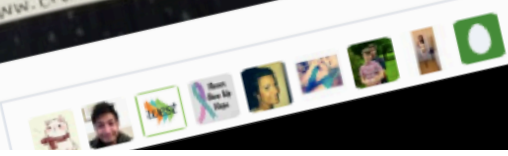
We're loving your #cancerawareness #nomakeupselfie pics! The campaign isn't ours but every £ helps #beatcancer sooner

Reply Retweet Favorite More



(Ts and Cs on www.cruk.org.)

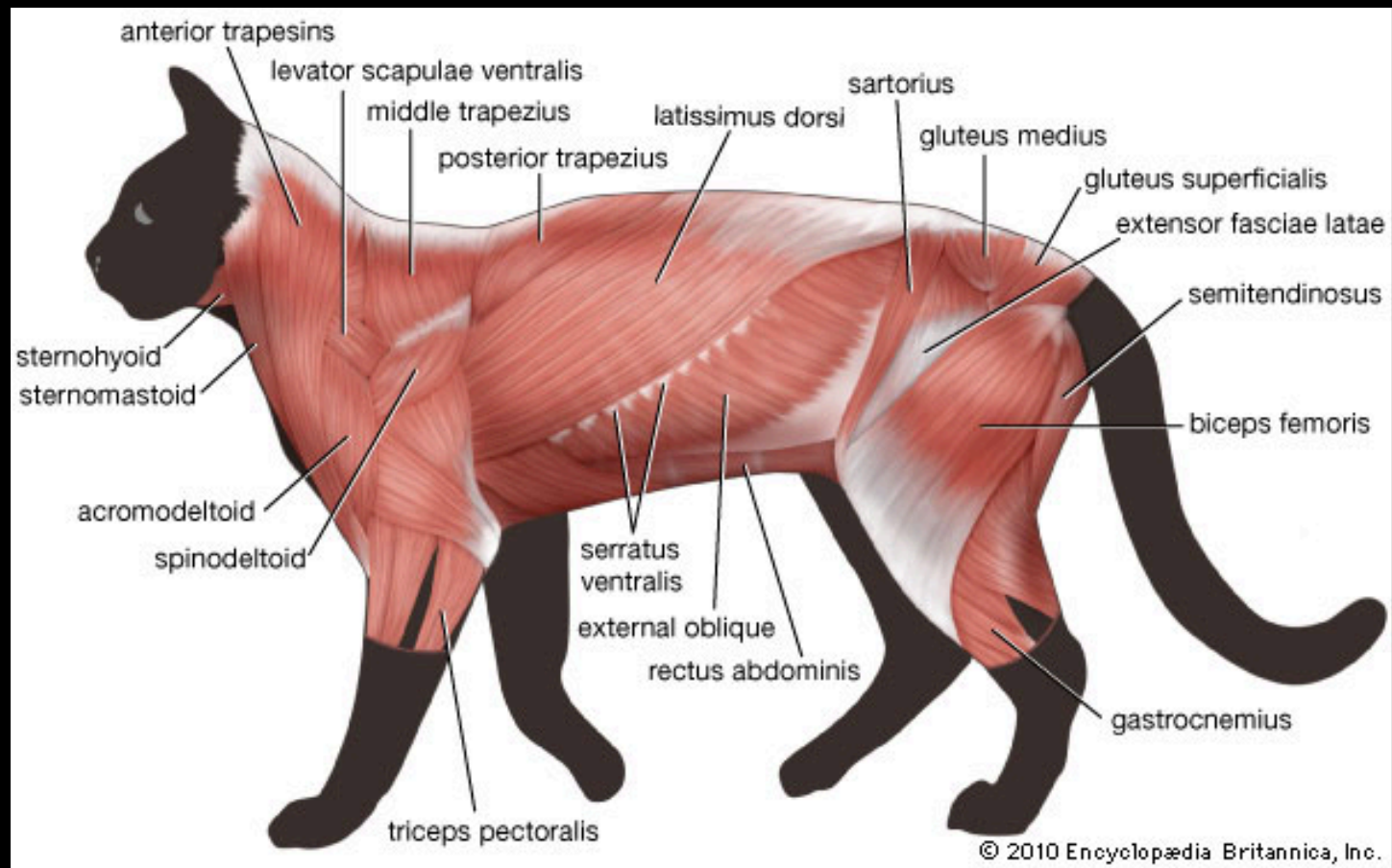
FAVORITES



Protégé Effect

Students learn more when they teach others than when they are learning for themselves (Chase et al, 2009):

- Sense of responsibility
- Deeper understanding
- Consideration of audience



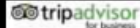


Lessons for teaching in any modality

- Have students create content
- Have students teach one another
- Do less; make students do more



3. Take a (cognitive) load off.



Gunnar Schäfer name is James Bond
Visitors in James Bond Museum Sweden

JAMES BOND MUSEUM

WWW.007MUSEUM.COM SWEDEN NYBRO 0481-12960



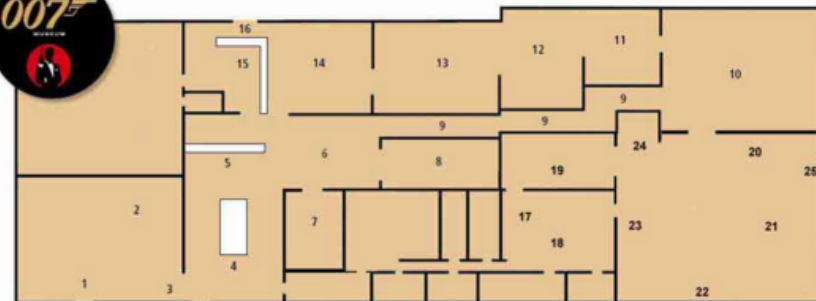
Since 1959 Booking
James Bond 007 Museum Sweden Nybro.
The 007 museum over 1000 sq.m
Emmabodav. 20. 38245 Nybro



Contact: 007museum@telia.com Phone +004648112960 .Open Daily 10 -17 (lunch 13-14) Sat 10-14. Donations Media JAMES BOND THEME PARTY Omega Bmw Swatch Bic Bollinger Corgi Posters Specials James Bond store Cd Game PPKGuns Member Guest Links Buy/info

James Bond 007 Museum closed/stängt 18 juni - 3 juli.

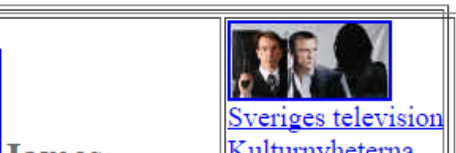
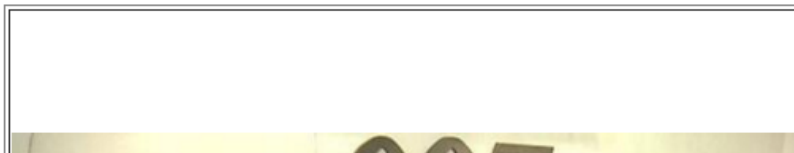
Welcome to The [James Bond 007 Museum Sweden Nybro](#) Booking open mon-fri 10-17, sat 10-14



NYBRO SWEDEN
0481-12960
JAMES BOND 007 MUSEUM
NYBRO SWEDEN
WWW.007MUSEUM.COM

1. Entre Hall Information
2. Museum Butik/shop. Exhibition
3. Ingång/Entrance
4. Die Another Day Icepalace Exhibition
5. Champagne Bollinger Bar 007 Bond
6. Computer room PC Dossier Bond
7. Bond bathroom mosaik and Tv
8. James Bond Cinema Biograf
9. Hall of James Bond posters
10. Exhibition cars Jaguar E-Type, BMW
11. Ian Fleming Library/Bibliotek
12. Roulette, Black Jack room
13. Gameroom, PS, Gamacube, Nintendo 64 Goldeneye Pinball, Jack Vegas, chess
14. Restaurang/Cafe Exhibition sign photo
15. Bar Dry Martin, Champagne Bollinger
16. Exit, Nödutgång
17. Die Another Day, Snowmobile
18. Tomorrow Never Dies, MC BMW 1200
19. Goldeneye Car BMW Z3
20. Aston Martin Vantage 2007, Casino Royale
21. Live And Let Die Boat Gastron 150 GT
22. Gondola from Venice (Moonraker)
23. Chess, Rrom Russia With Love
24. Engrave Glass 007 logo
25. Exit, Utgång

Booking! Call or emejl +46(0)48112960 . 007museum@telia.com MAP OVER THE JAMES BOND 007 MUSEUM IN SWEDEN NYBRO over 1000 square meter
Travel to Sweden and visit the James Bond 007 Museum by airplane and train or car... [James Bond Museum Sweden Nybro](#)





TRACK A WHALE SHARK

Watch the real-time movements of the world's largest fish

TRACK





Giampiero Bodino

I. Giampiero Bodino

II. Capi d'Opera

III. Ad Personam

IV. Villa Mozart

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<http://www.giampierobodino.com/>

Long-term memory



Working memory



Cognitive load theory

- Excessive cognitive load compromises learning and performance.
- To facilitate learning, increase *germane* cognitive load and decrease *extraneous* cognitive load.

Van Merriënboer & Sweller, 2005

Sweller, 1988



Center for
Causal
Discovery

Pittsburgh
Health Data
Alliance

Carnegie Mellon University UPMC

Center for Commercial Applications of Healthcare Data
University of Pittsburgh

The Role of Biomedical Informatics Innovation in Transforming Healthcare through Big Data

Presented to Health Services Research Seminar – 4/7/16

MD PhD (presenter), Chairman, Dept Biomed Info @ Pitt

MD, PI/PDs for PCORI CDRN

MD PhD, Co-Leads NCATS ACT

MD MSIS, Pittsburgh Genome Resource Repository

PhD (VC, DBMI), PI/PD Causality Center BD2K Effort

Co-Director, Center for Commercial Applications (CCA) of Healthcare Data

PCORI – PaTH towards a Learning
Health System for the
Mid-Atlantic Region



PaTH Network

CTSACTS




TIES v5
information extraction



University of Pittsburgh
Dept. of Biomedical Informatics



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Course Index



Module 1: Introduction

Aug 4 - 10 +

Module 2: Fieldwork

Aug 11 - 17 +

Module 3: Practical Dilemmas

Aug 18 - 24 +

Module 4: Ethical Dilemmas

+

Module 5: Epistemological Dilemmas

+

Module 6: Political Dilemmas

Aug 25 - 31 +

Module 7: Controversies

Sep 1 - 7 +



18-652 Foundations of Software Engineering Estimation and Planning



This video provides an introduction of software project planning and estimation. After viewing this video, you should be able to:

- Help plan a project by:
 - Articulating the project constraints
 - Identifying a planning strategy
 - Contributing to one or more multi-level plans
 - Identifying a prioritization strategy
- Estimate the work by:
 - Overcoming estimation challenges
 - Applying Planning Poker

Why watch the video? Because you need to be able to plan and estimate your team's work at the beginning of each iteration of the SE project.



🕒 11:00 AM - Tuesday Sep 9

Length of Video:

16m 55s

Watch the Video 

Close Panel

The aesthetics of ~~online~~ course design are too readily neglected. Courses that are fair of (inter)face are better places to learn and teach.

Online Learning Manifesto, U of Edinburgh

<https://onlineteachingmanifesto.wordpress.com/the-text/>

Lessons for teaching in any modality

- Make sites, slides, and documents beautiful
- Attend to the aesthetics of learning
- Learn and incorporate design principles



4. Make climate change your
business.



Learning is social/emotional

- Social interactions facilitate cognitive processing
- Social obligations create accountability
- Relationships pave paths into disciplines
- Positive emotions promote learning
- Negative emotions impede learning

Research Areas

- Instructor immediacy
- Stereotype threat
- Reappraisal
- If-Then planning
- Social presence
- Motivation
- Grit



A large, bold, red "EXIT" sign is centered on a white background. The sign is flanked by two vertical black bars, one on the left and one on the right. The letters are in a sans-serif font, with the 'E' having three horizontal bars, the 'X' having two diagonal bars, the 'I' being a single vertical bar, and the 'T' having a horizontal top bar and a vertical stem.

EXIT

Asynchronous interaction

The screenshot displays the Flipgrid interface for an asynchronous interaction. At the top, there is a navigation bar with a "Return to Questions" button, a "Sort by" dropdown menu set to "Date", and other sorting options: "Random", "Name", "Likes", and "Views". The date "13 August 2013" is displayed on the right. Below the navigation bar is a grid of 20 video thumbnails arranged in two rows of ten. The first thumbnail in the top row is a green square with a white plus sign, indicating a missing video. The other thumbnails show various participants. One participant, a woman, has her name "Stacy" and a heart icon with the number "6" next to her thumbnail. Below the grid is a large white text box with a blue border containing the instruction: "Please introduce yourself to the ACOG group and share your title, organization, experience, and any personal background (i.e. hobbies, family, interests, etc.).". At the bottom of the interface, there are controls for "Fullscreen" and "Slideshow", both set to "Off". The Flipgrid logo is in the bottom right corner, along with a "Support" link and the copyright notice "© 2013 LT Media Lab, University of Minnesota."



0:09 / 44:17



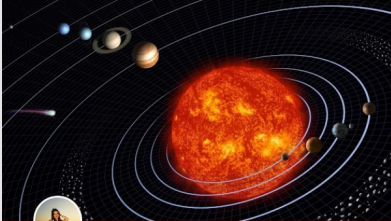

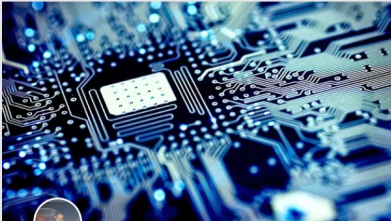
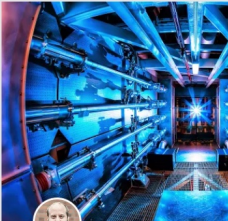


Christian Zibreg
dujkan@gmail.com

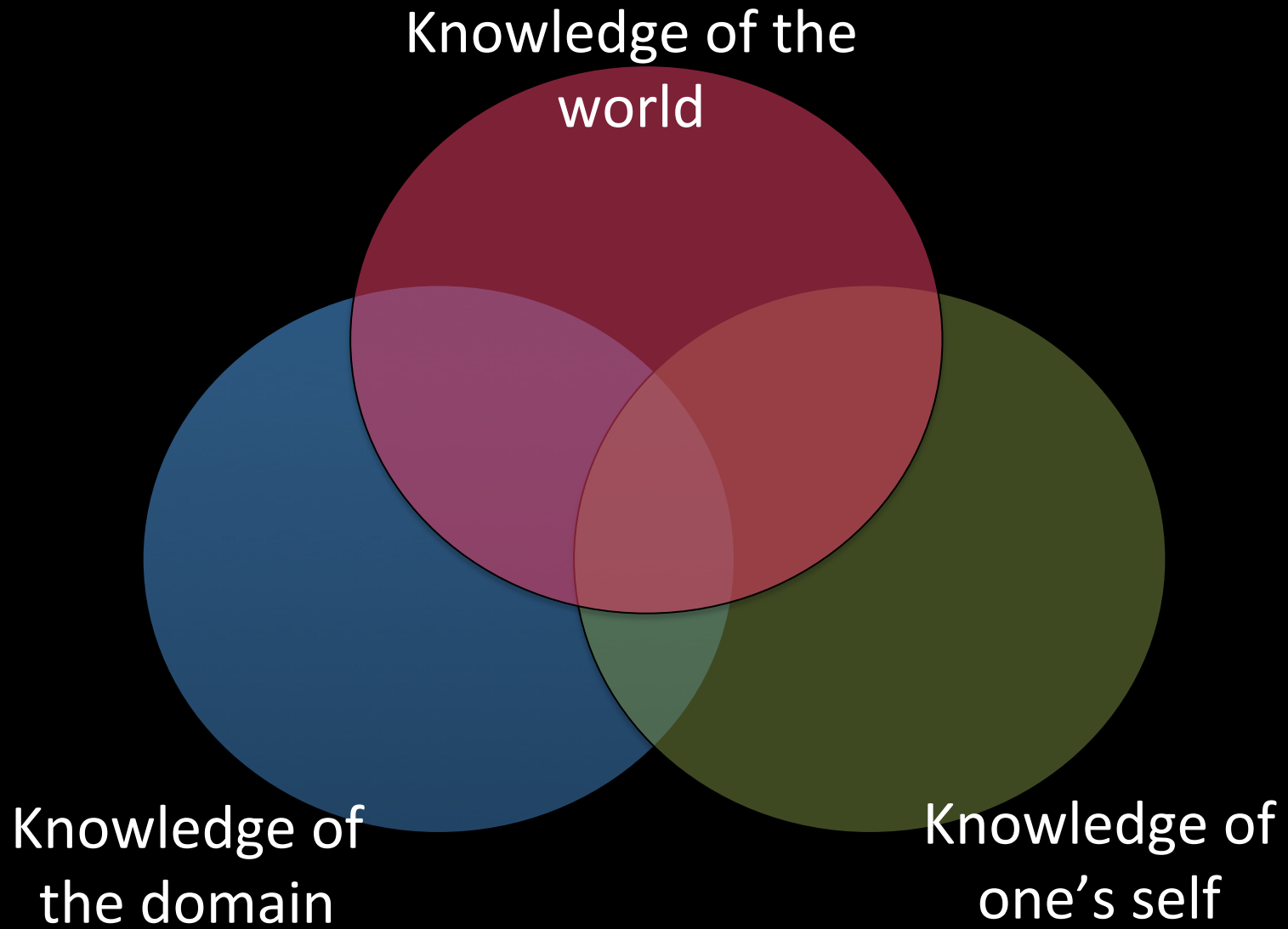
- Home
- Collections
- Communities
- People
- Photos
- Locations
- Events
- Hangouts

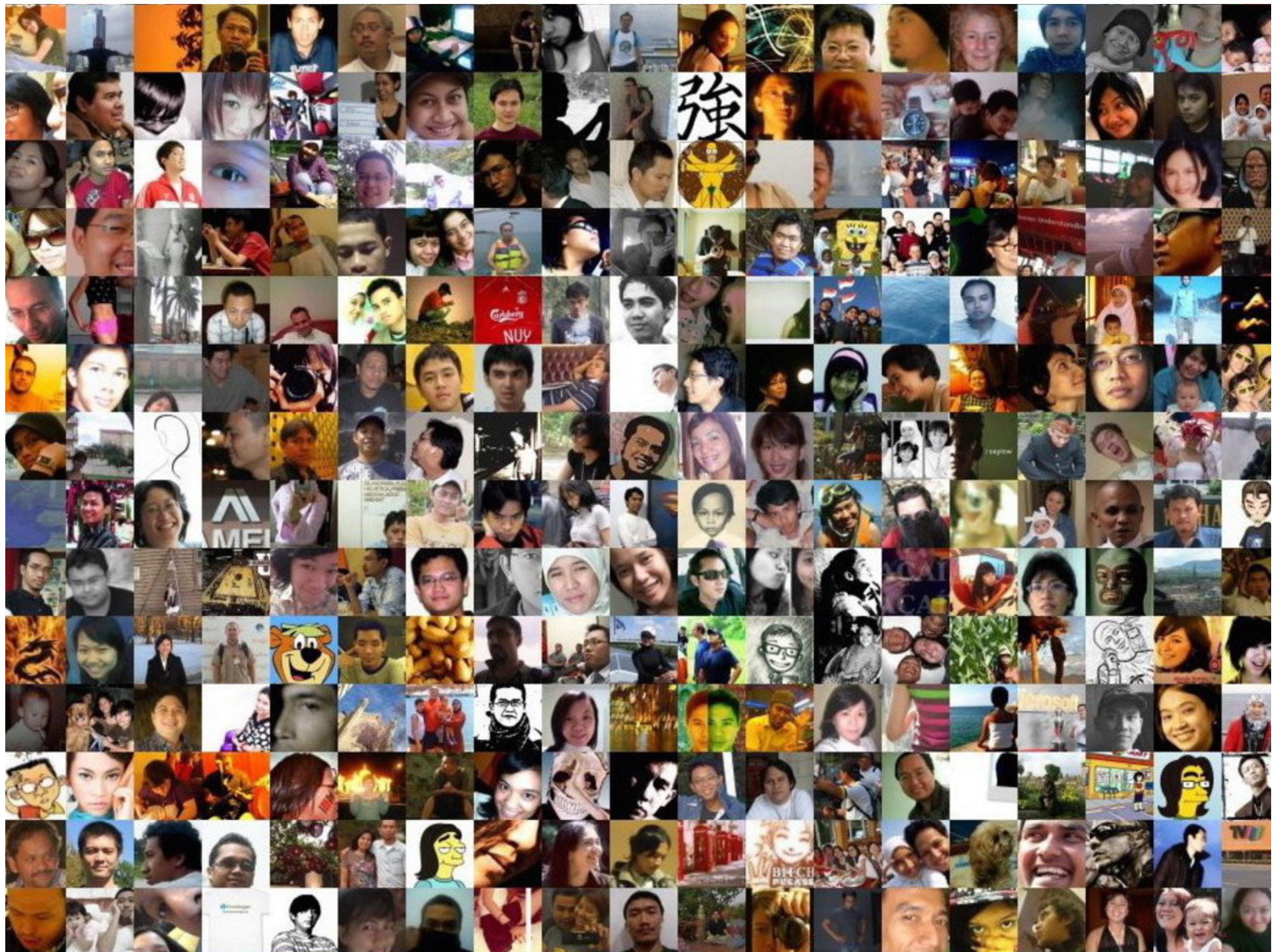
09:41

Collections

Featured Following Yours

 <p>SOLAR SYSTEM annarita ruberto FOLLOW</p>	 <p>CALIFORNIA elizabeth lopez FOLLOW</p>
 <p>Into Technology Steban Hernández FOLLOW</p>	 <p>Science, Tech and Futurism Dewet Diener FOLLOW</p>
 <p>In and Around</p>	 <p>NEUROSCIEN</p>





Lessons for teaching in any modality

- Proactively connect with students
- Help students connect with one another
- Make it our job to create community



5. Use common sense(s)

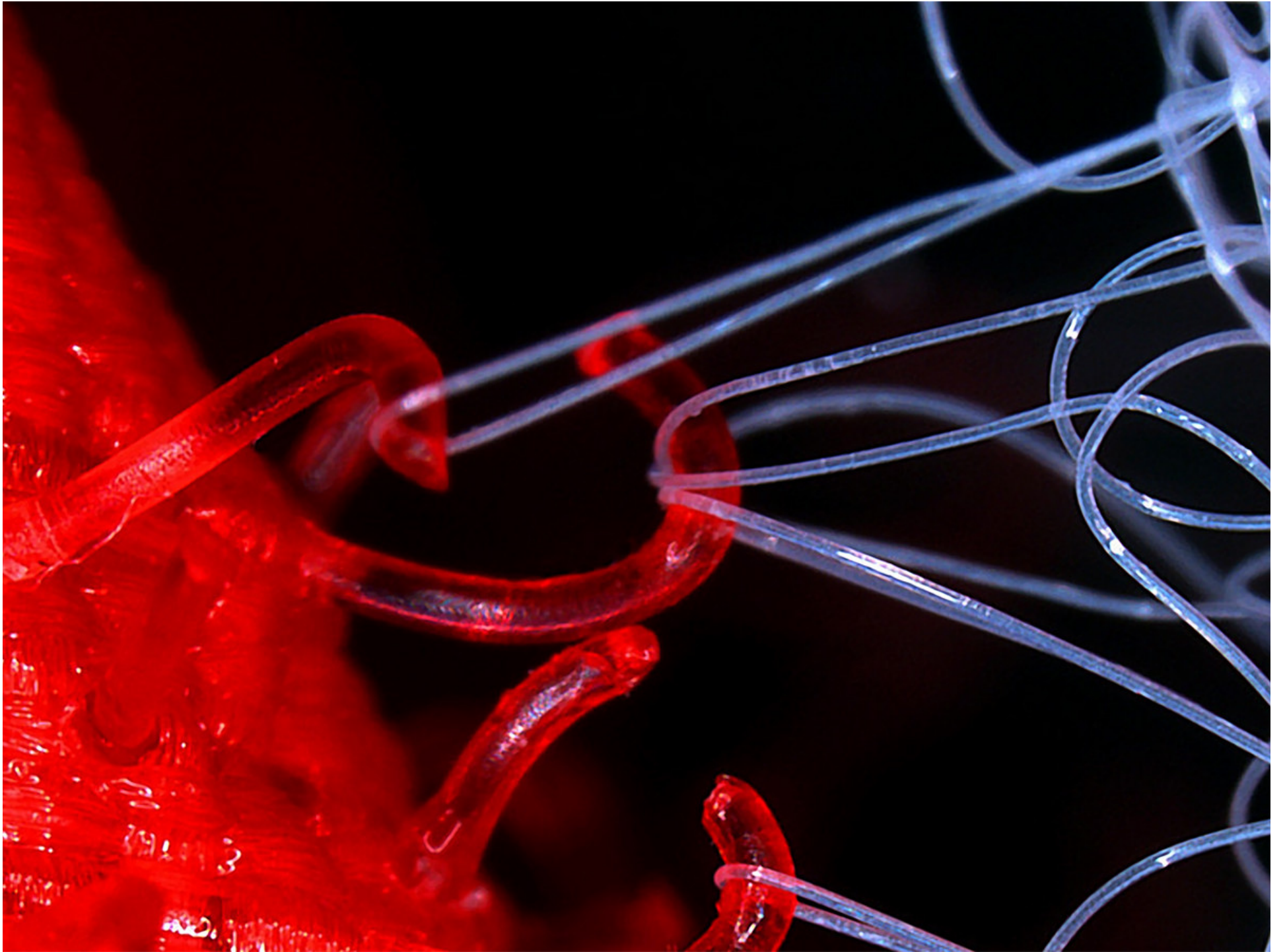


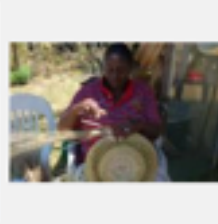




Multisensory Learning

- We learn best when using multiple senses (Willingham, 2009; Goswami, 2008).
- Visual images are more powerful than words (McBride & Doshier, 1997).
- We process and remember pictures better than words (Seifert, 1997).





MAASAI INITIATION CEREMONY - YouTube



<https://www.youtube.com/watch?v=GPfiNSEvEIE>
Feb 19, 2011 - Uploaded by Lawi Njeremani
This is a 2004 Production. Takes viewers through the **Maasai** Initiation Ceremony.

Maasai Eunoto initiation ritual Kenya - YouTube



<https://www.youtube.com/watch?v=pZdF7lhydKA>
Sep 18, 2011 - Uploaded by Ton van der Lee
Eunoto ritual filmed in Kenya by JanDries Groenendijk from our DVD Secrets of the **Maasai** by Ton van der Lee ...

Warrior Initiation - National Geographic



video.nationalgeographic.com/.../warrior-initiation-bci
By killing lions, **Maasai** warriors protect their livestock and officially become men.

Boys to men: Maasai boys undergo the Enkipaata initiation ...



<https://www.youtube.com/watch?v=KnepcE3hzRo>
Aug 16, 2015 - Uploaded by NTV Kenya
More than 300 **Maasai** boys aged between 6 and 15 years from Ilkiramatin village in Kajiado county have ...

Maasai initiation - YouTube



<https://www.youtube.com/watch?v=b1aE7r2Sa3Y>
Apr 24, 2015 - Uploaded by Oscar Wagenmans
Young boys learn to get tough in the mountains. Tanzania 2004.

The Maasai initiation ceremony - YouTube



<https://www.youtube.com/watch?v=ydLdXVvD3G8>
Feb 21, 2010 - Uploaded by worldswonders
The **Maasai** initiation ceremony. All wonders of our ... Start Aboriginal initiation ceremony in Borroloola ...

Live. Love. Africa: My Initiation into the Maasai Tribe ...



<https://www.youtube.com/watch?v=7blbCjCXg6w>
Jan 3, 2016 - Uploaded by Search for Uhuru
Video of my initiation into the **Maasai** tribe. Initiation consisted of sacrificing a goat, then drinking blood from ...





Lessons for teaching in any modality

- Tap the multisensory resources of the web
- Utilize students' own environments
- Bring more senses to bear on learning



Recap: Lessons from Online

1. Step away from the lectern.
2. Make students do the heavy lifting.
3. Take the (extraneous cognitive) load off.
4. Make climate change your business.
5. Use common sense(s).

Caveat



Lead the way!



I'd love to hear from you!

mkn17@pitt.edu

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