



# Med Ed 2.0

Medical Education and Why  
It's Important for Your Career

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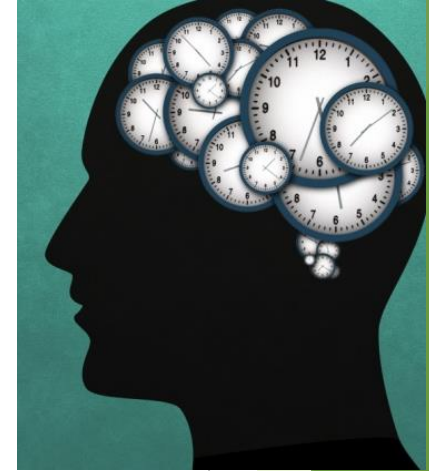
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The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic visual effect.

Think about your best teacher(s):  
What made them great educators?

# Perceived Barriers to Being a Successful Educator

- ▶ Time commitment
- ▶ Value of the time investment
- ▶ Preparation
- ▶ Keeping up to date, increasing complexity
- ▶ Not sure how much it benefits students
- ▶ Students learn in different ways



Smart

Fund of  
knowledge

Took time  
to teach

Your best teacher(s):

Enabled you to be engaged and  
think about the material

Approachable

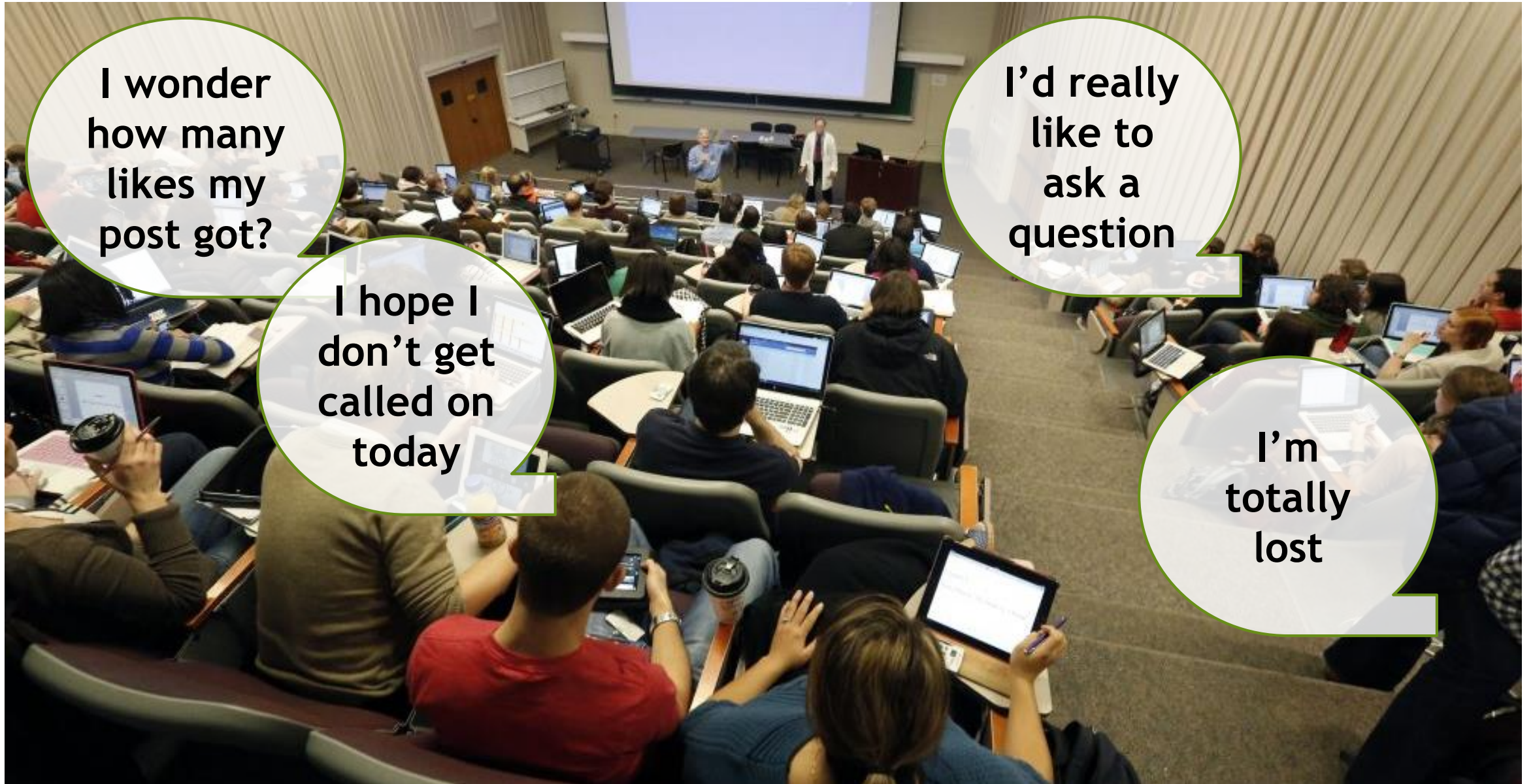
Experienced

Sense of  
humor

# Learning Objectives

- ▶ Describe how medical education is rapidly changing
- ▶ Describe how being an educator can advance your career
- ▶ Define the 4 different types of learners as classified by Kolb
- ▶ Identify opportunities to integrate teaching into your daily practice
- ▶ Recognize techniques for teaching in various clinical settings





I wonder  
how many  
likes my  
post got?

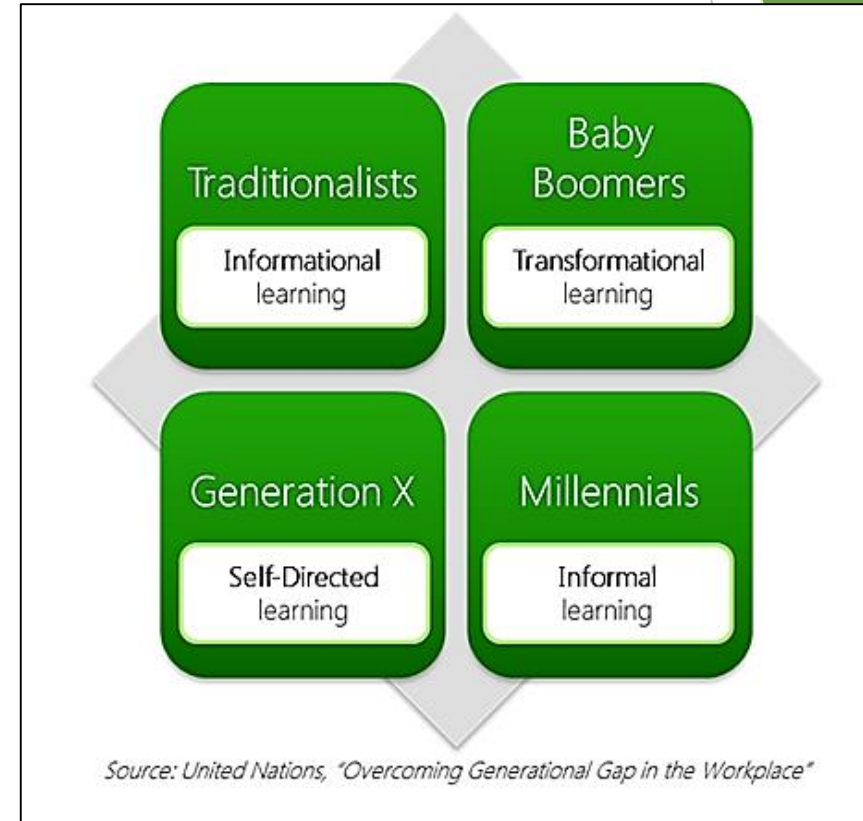
I hope I  
don't get  
called on  
today

I'd really  
like to  
ask a  
question

I'm  
totally  
lost

# Generational Differences

- ▶ Traditionalists (1909-1945)
  - ▶ Favor structured learning programs.
  - ▶ Classroom lectures are often preferred
- ▶ Baby Boomers (1946-1964)
  - ▶ Expect a more personally-focused learning structure.
  - ▶ They favor in-class participation, reflection, and feedback to bring them into the process
- ▶ Generation X (1965-1979)
  - ▶ Prioritize self-directed educational opportunities
  - ▶ Prefer to learn on their own schedule.
- ▶ Generation Y/Millennials (1980-2004)
  - ▶ Web-based learning
  - ▶ Information/feedback at the push of a button





# MedEd 2.0: change in focus from teacher to the student

- ▶ Learner depends on the teacher
- ▶ Pedagogy
- ▶ Standardized curriculum
- ▶ External motivation
- ▶ One size fits all
- ▶ Onus is on teacher
- ▶ Learner is self-directed
- ▶ Andragogy
- ▶ Application-based
- ▶ Internally driven
- ▶ No student left behind
- ▶ Onus is on student

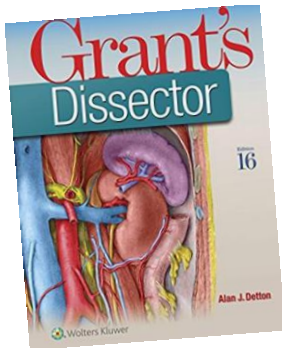
## References:

Schwartzstein et al. NEJM 2017  
Prober et al. Academic Med 2013

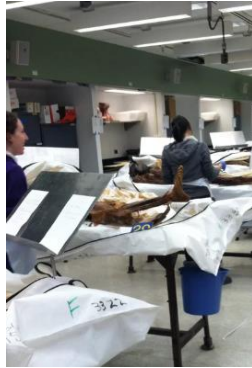
Kaufman, D. BMJ 2003  
Abela, J. Malta Med Jour 2009

# Students sometimes learn not because of what we teach, but despite how we teach

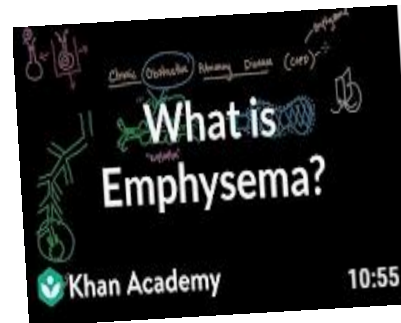
Textbooks



Gross anatomy



Online learning modules



Modern labs...or virtual labs



Study carols



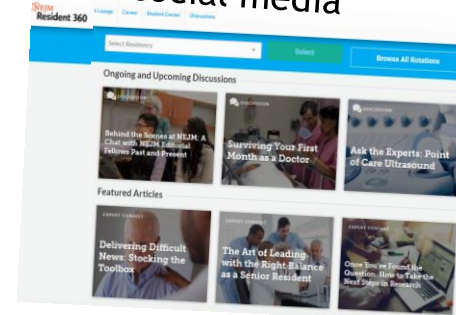
One-way rounds



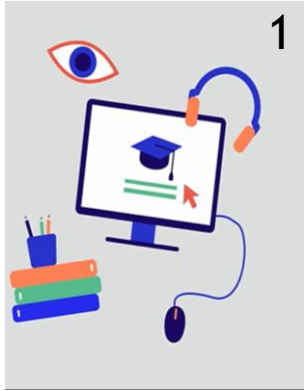
Team-based learning



Message boards/  
social media



# How Millennials Learn: The 5 R's



1

## Research

- Collaboration
- Group work



2

## Relevant

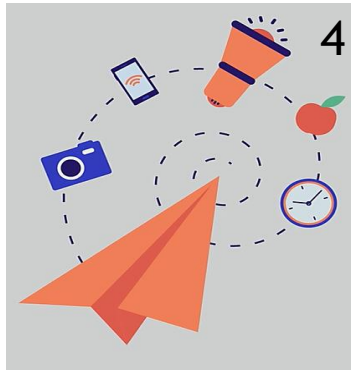
- Online tools
- Value relevant information



3

## Rationale

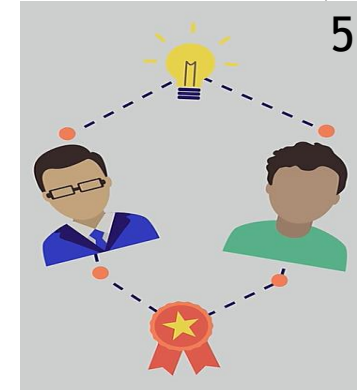
- Authoritarian teaching is ineffective
- Explain instructions



4

## Relaxed

- Laid back
- Empathy



5

## Rapport

- More attention
- Quick to bond with instructors

### References:

Price, C. (2009). Why Don't My Students Think I'm Groovy? *The Teaching Professor*, 23 (1), 7.  
Price, C. [Five Strategies to Engage Today's Students](#). Magna Online Seminar. 1 Nov. 2011.

# Example at NYU Long Island SOM: Mixing PBL cases with lectures

MON 8	TUE 9	WED 10	THU 11	FRI 12
Hematology-Oncology				
PBL Case 1 & 2 Presentation 8:30 – 10am	Anemia and Hematopoiesis - Lecture 8:30 – 10am	PBL Case 1 Discussion 8:30 – 10am	Clotting cascade - Lecture 8:30 – 10am	PBL Case 2 Discussion 8:30 – 10am
Anatomy 10:30am – 12:30pm	Hemoglobinopathies - Lecture 10:30am – 12pm	Transfusion medicine - Lecture 10:30am – 12pm	Pharmacologic approach to bleeding - Lecture 10:30am – 12pm	Thrombocytopenia - Lecture 10:30am – 12pm
Lunch 12:30 – 1:30pm	Lunch 12:30 – 1:30pm	Lunch 12:30 – 1:30pm	Lunch 12:30 – 1:30pm	Lunch 12:30 – 1:30pm

# Making Education “Count” as Scholarship

- ▶ Know your institution’s promotional tracks
  - ▶ May have specific metrics for advancement
  - ▶ Keep track of your teaching activities
- ▶ Develop a niche
  - ▶ Develop an educational research project
  - ▶ Take your teaching on the road (e.g. conference)
- ▶ Opportunities for leadership and collaboration
  - ▶ Conference planning
  - ▶ National education committees of individual societies
  - ▶ Administration
  - ▶ Consider being involved in faculty development
- ▶ Potential for teaching awards
- ▶ Increase visibility through social media dissemination



**Faculty Titles at NYU School of Medicine**

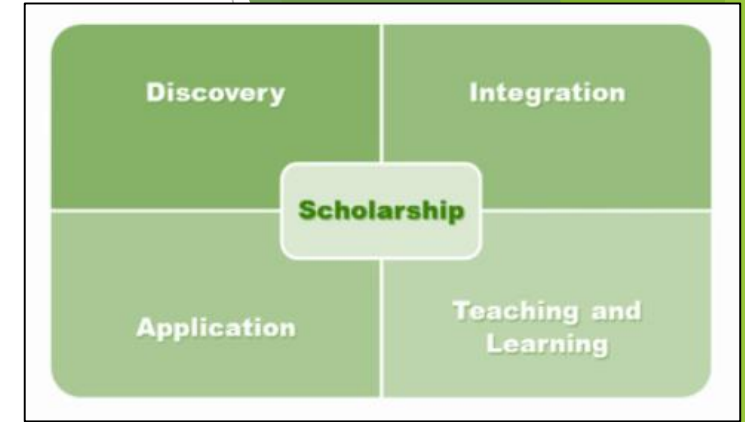
TENURE TRACK (ICE/IE/Librarian)		SCHOLAR TRACK (CIE/RE)		LIBRARIAN TRACK (Nontenure)	CLINICAL / RESEARCH TRACK	
Investigator Educator Track or Investigator Clinician Educator Track	Librarian Track	Clinician Investigator Educator Track	Research Educator Track	Librarian Nontenure Track	Clinical Track	Research Track
Assistant Professor	Assistant Curator	Assistant Professor (Clinical)	Assistant Professor (Research)	Assistant Curator	Clinical Assistant Professor	Research Assistant Professor
Associate Professor	Associate Curator	Associate Professor (Clinical)	Associate Professor (Research)	Associate Curator	Clinical Associate Professor	Research Associate Professor
Professor	Curator	Professor (Clinical)	Professor (Research)	Curator	Clinical Professor	Research Professor

# Make it Count Twice (or More): Why Skill as an Educator is Important for Your Career

## Clinician-Educator Track

Designed for those who spend time caring for patients (usually 80-90%) as well as supervising trainees (10-20%)

- ▶ Often fewer productivity requirements than other research tracks
- ▶ May already integrate with your everyday activities
- ▶ Adds your value to your institution
- ▶ Often recognizes you as an outstanding physician and role model
- ▶ Determine your institution's guidelines for promotion
  - ▶ May be more than one track
  - ▶ Some have opportunities for tenure
  - ▶ You may need to achieve certain milestones



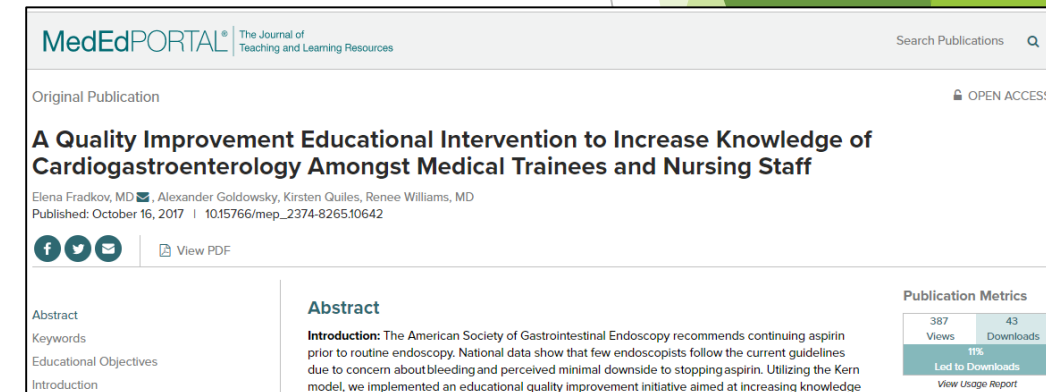


# Starting Out: Questions to Ask Yourself

- ▶ What is your favorite teaching activity?
  - ▶ Rounding with a team
  - ▶ Teaching in a classroom or lecture hall
  - ▶ Work with small groups
- ▶ How can you incorporate innovative techniques?
- ▶ How can you turn your activity into scholarship?
- ▶ How much time do you have to prepare and publish your work?

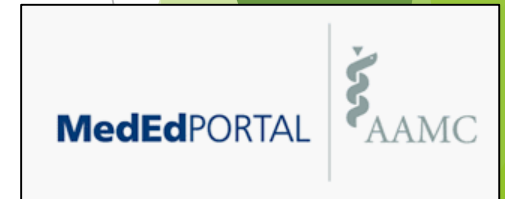
# Scholarship in Medical Education

- ▶ Annual lecture: make it count twice
  - ▶ Review paper
  - ▶ Textbook chapter
  - ▶ Other specialty grand rounds (locally/nationally)
  - ▶ National meetings
  - ▶ Social media
- ▶ Questionnaires: assess pre/post test knowledge
- ▶ Educational intervention
- ▶ Quality improvement
- ▶ Speak with colleagues/your Chair to see what resources may be available
- ▶ Know your institution's policies for research, including IRB review



# Where Can I Publish Med Ed Research?

- ❑ Decide journal audience
  - ❑ Type of manuscript
    - ❑ Research question
    - ❑ Quality project
    - ❑ Approach to teaching
    - ❑ Editorial/commentary
  - ❑ Indexed by Pubmed
  - ❑ Impact factor
  - ❑ Potential publication costs
- ▶ Annals of Internal Medicine
  - ▶ Academic Medicine
  - ▶ Medical Education Journal
  - ▶ J of Graduate Medical Education
  - ▶ J of Hospital Medicine
  - ▶ MedEdPORTAL
  - ▶ Medical Teacher
  - ▶ BMC Medical Education
  - ▶ The Clinical Teacher
  - ▶ Advances in Health Sciences Education



THEORY  
PRACTICE

# Why Education Theory is Important for Your Career

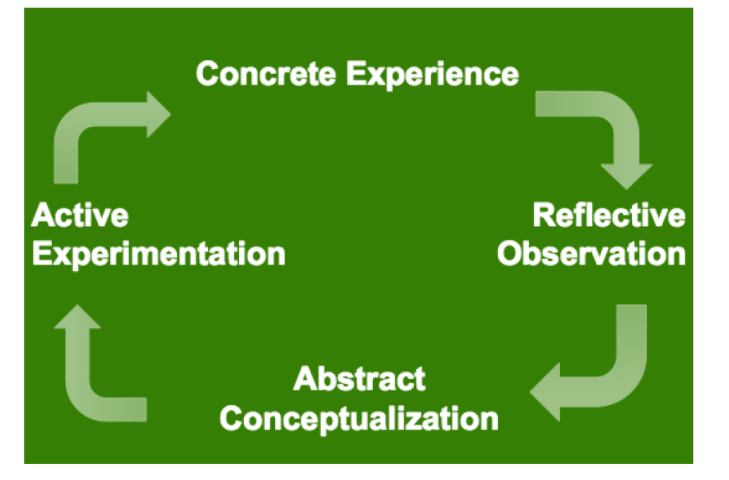
- ▶ Academic
- ▶ Clinical
- ▶ Leadership

# David A. Kolb

- ▶ Born 1939
- ▶ American Educational Theorist
- ▶ Founder of Experience Based Learning Systems

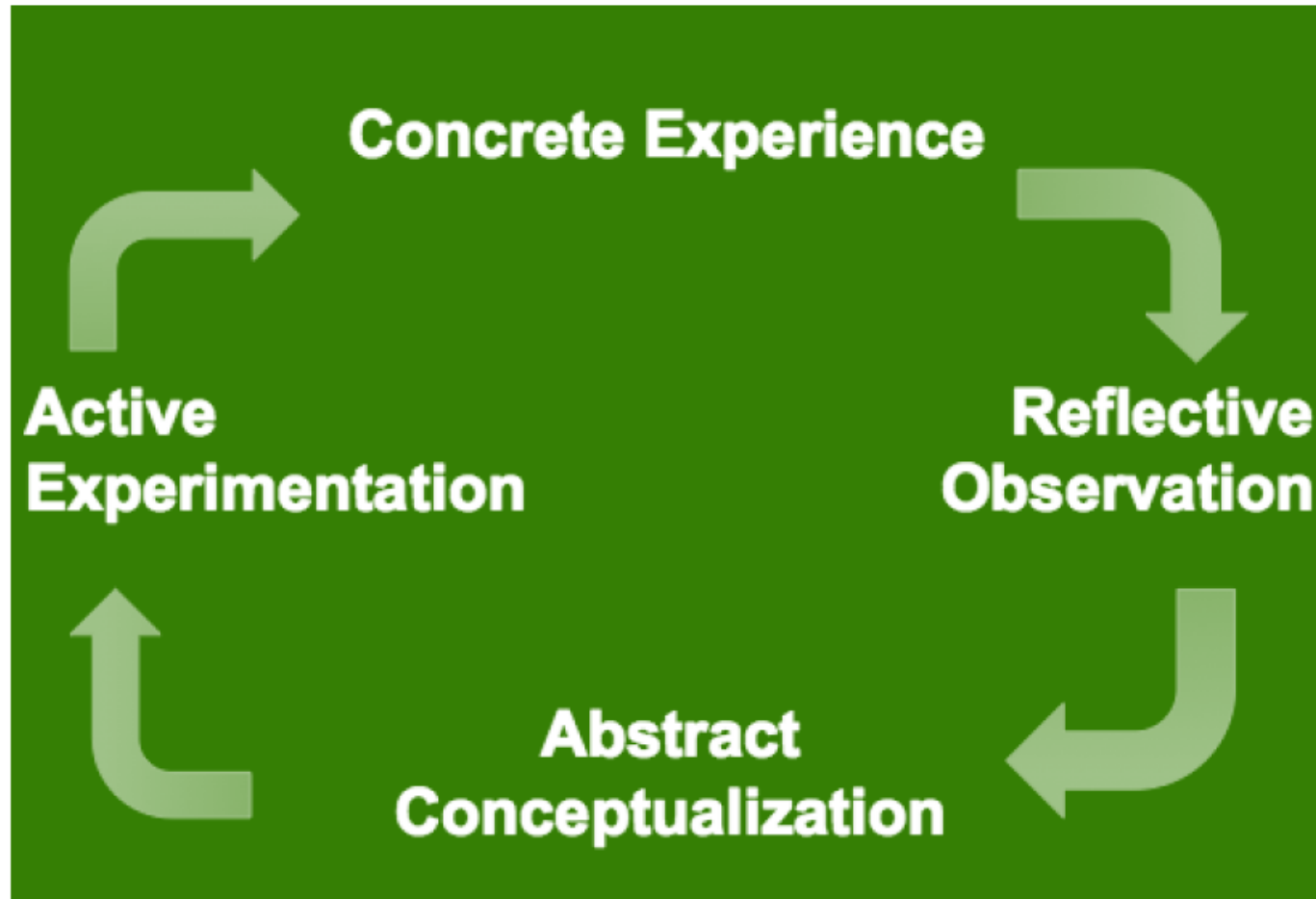


"Learning is the process whereby knowledge is created through the transformation of experience."- Kolb (1984)

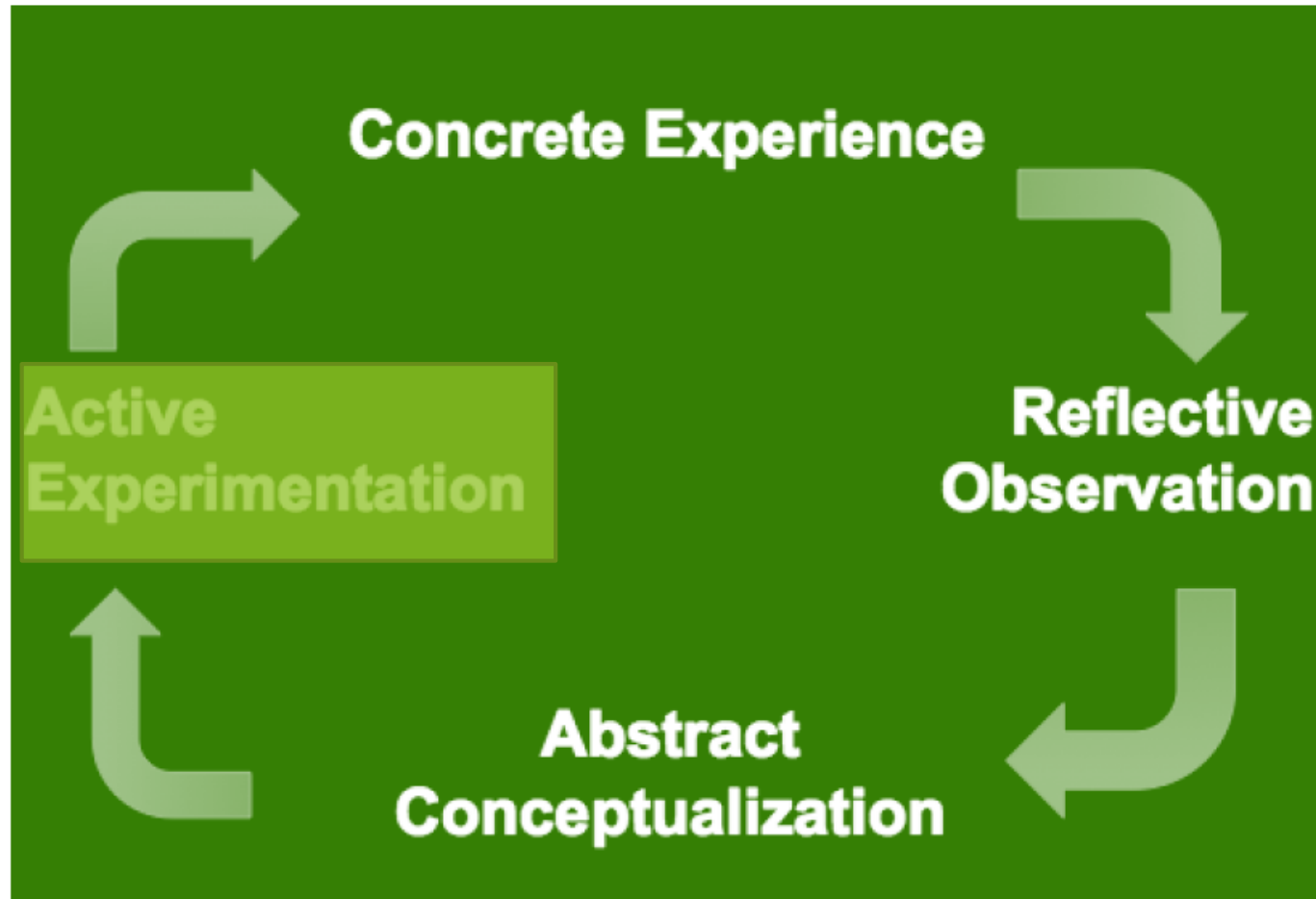




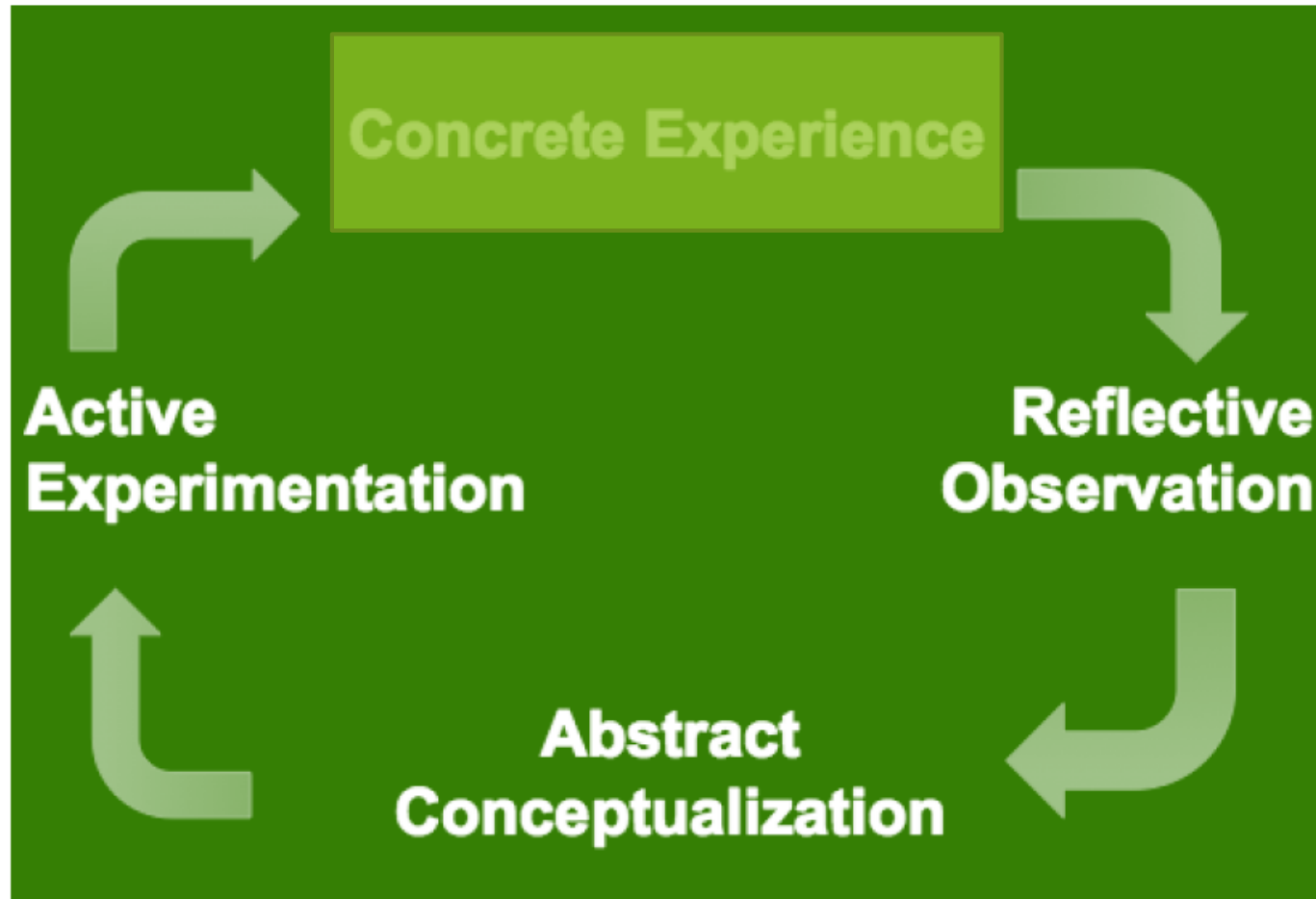
# Kolb's Cycle - Diabetes Management



# Kolb's Cycle - Diabetes Management



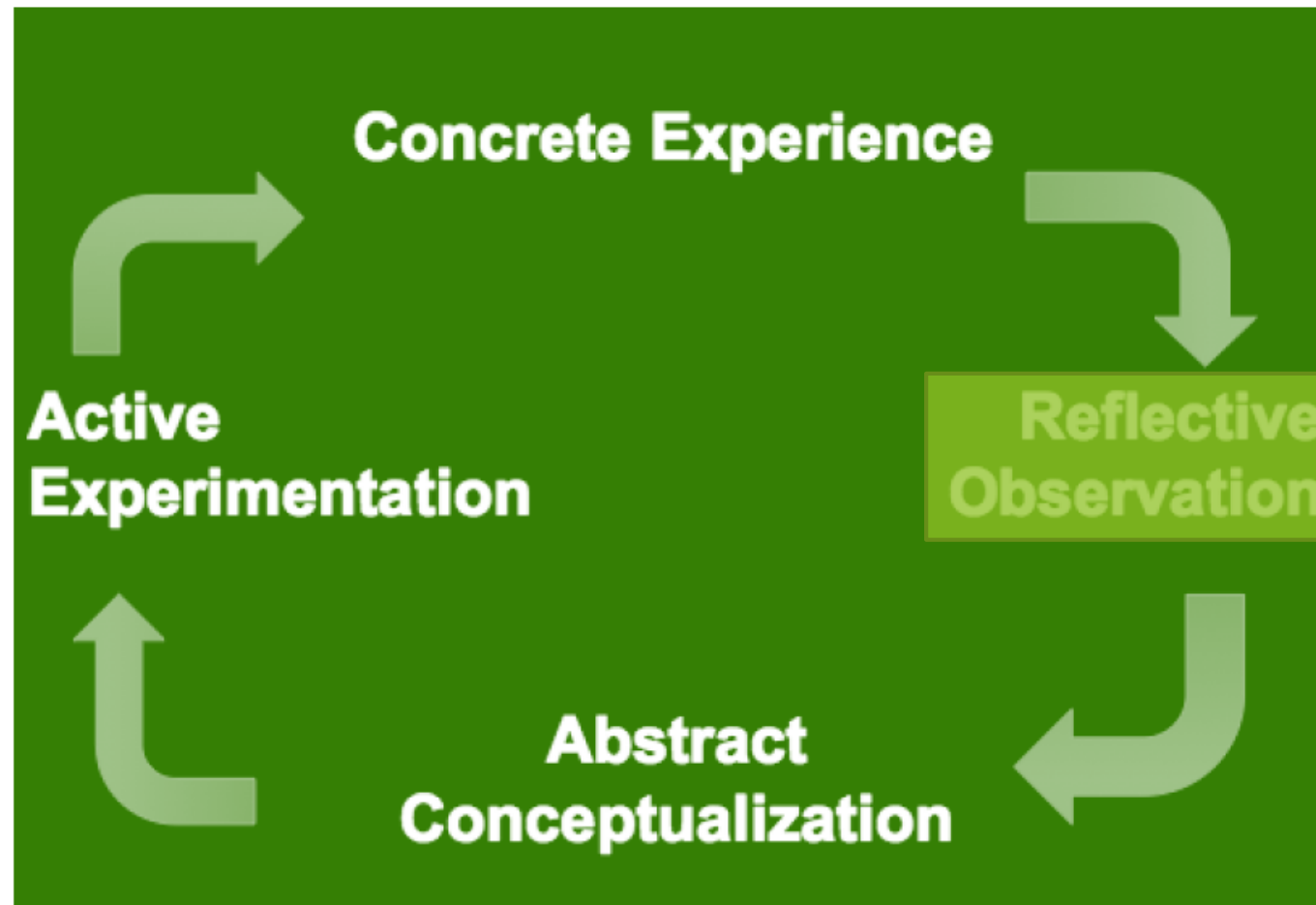
# Kolb's Cycle - Diabetes Management



## Concrete Experience

- This is the act of having an experience
- If the learner does not have an experience, one can be imparted by the instructor

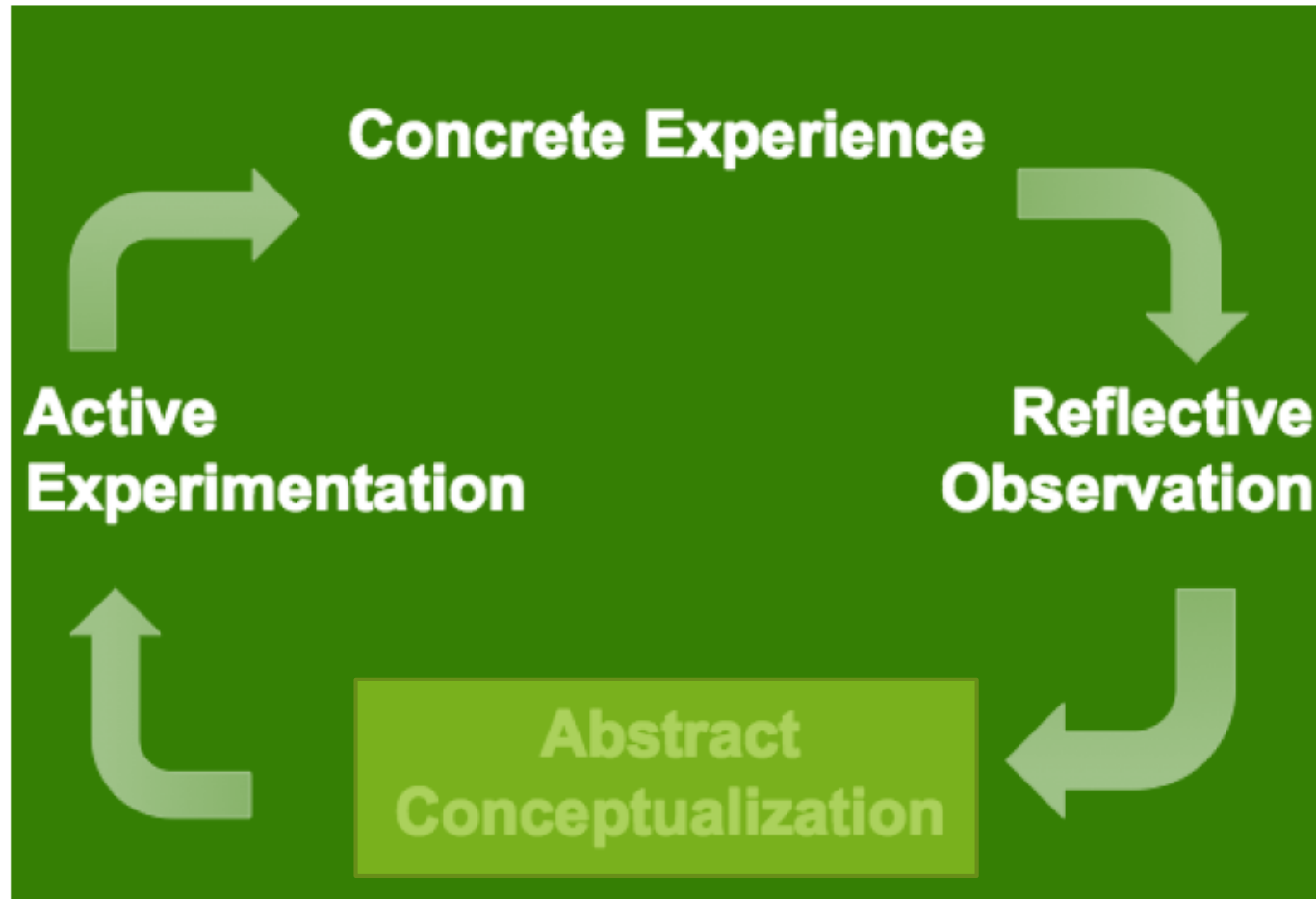
# Kolb's Cycle - Diabetes Management



## Reflective Observation

- This is the act of reviewing or reflecting on an experience to understand the situation from a different point of view
- Learners are encouraged to review prior experiences in order to explore and debrief

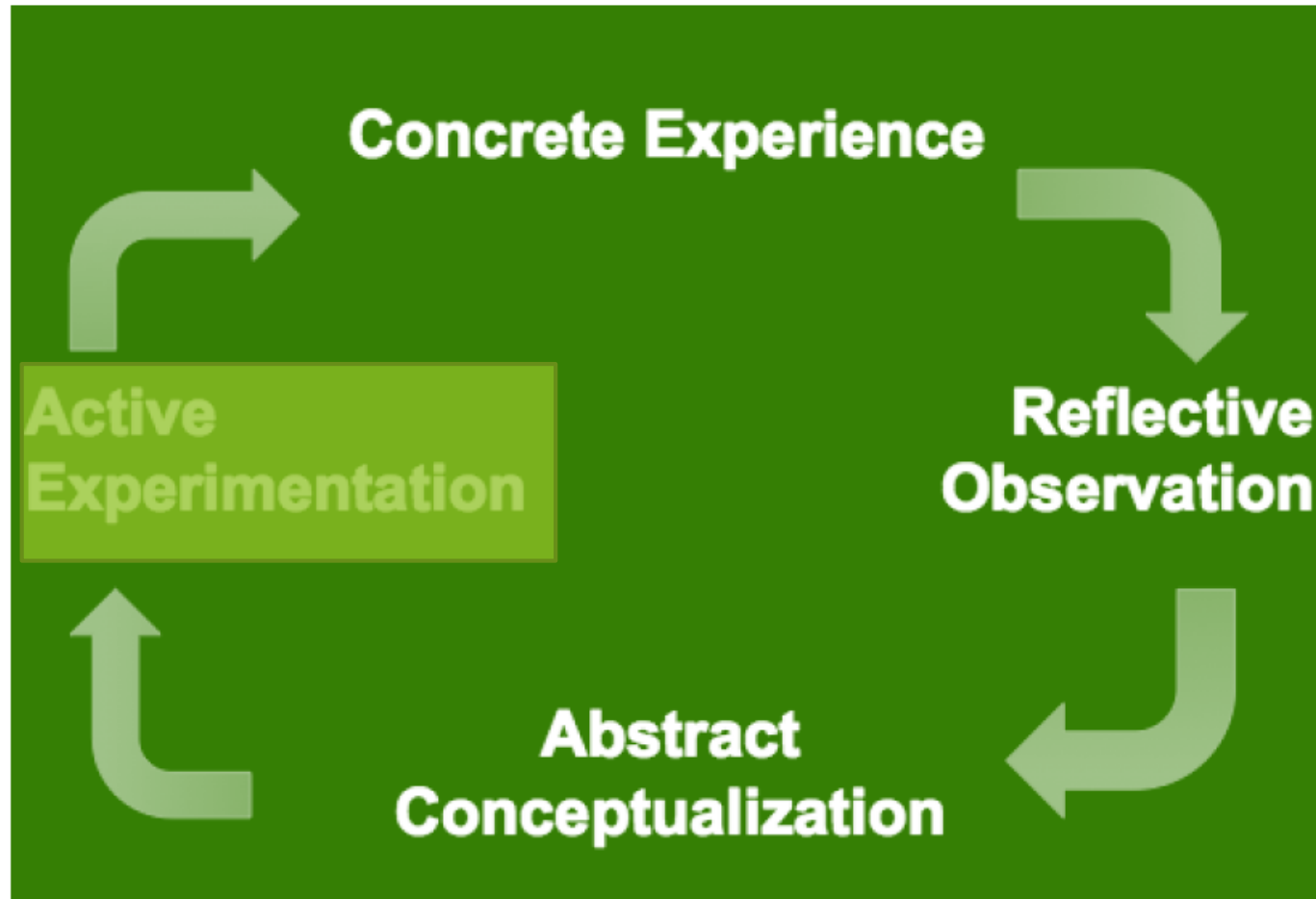
# Kolb's Cycle - Diabetes Management



## Abstract Conceptualization

- During this stage the learner can learn from specific experiences
- New information is added and re-contextualizes prior experiences

# Kolb's Cycle - Diabetes Management

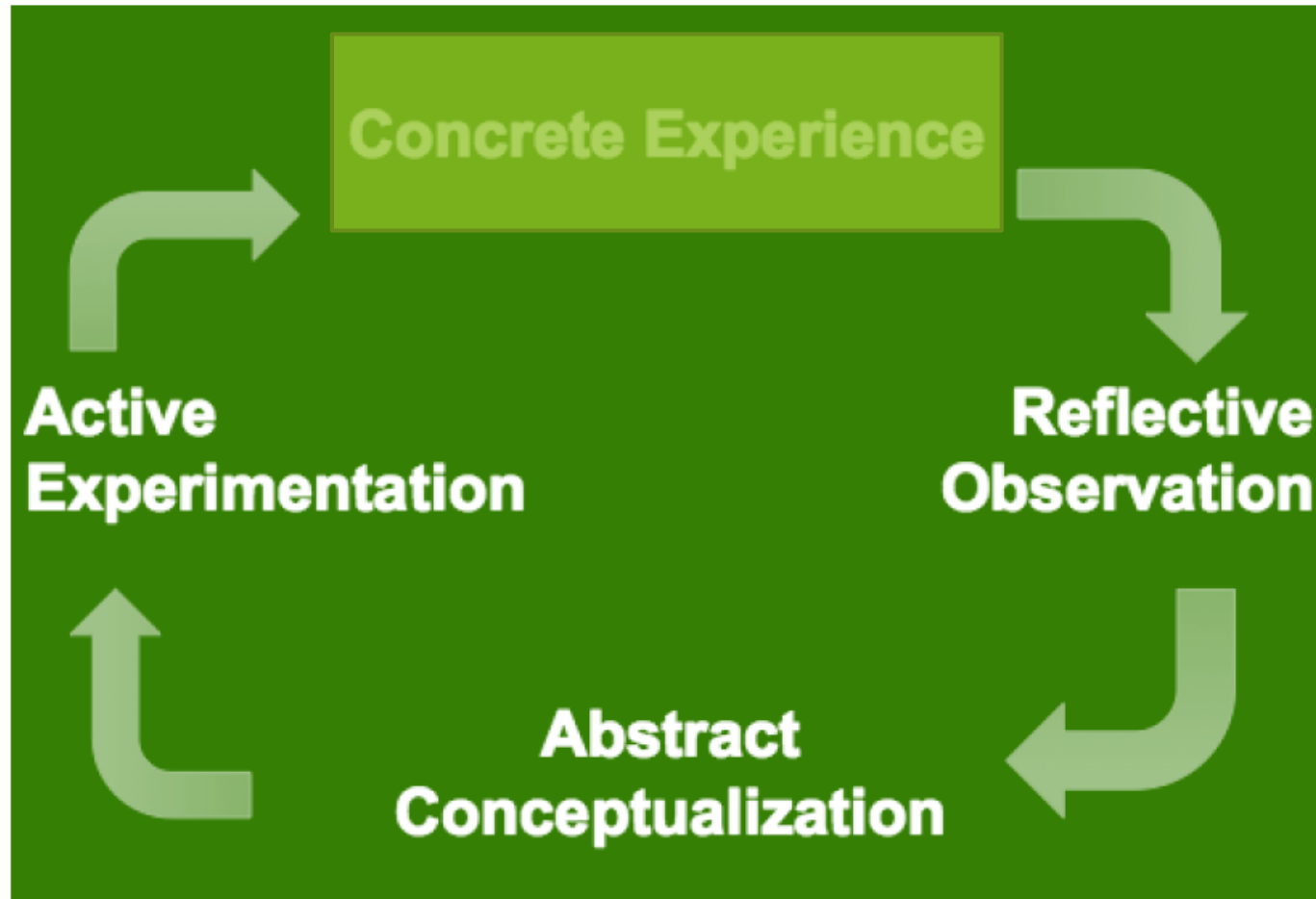


## Active Experimentation

- Learners can plan or try new information that they have learned
- Once this new information is used experientially, then a new concrete experience is formed



# Kolb's Cycle - Diabetes Management



## Concrete Experience

- This is the act of having an experience
- If the learner does not have an experience, one can be imparted by the instructor

# Applied Education Theory and Physician Leadership

- ▶ Real World Example
  - ▶ IM Chief Resident -> APD
  - ▶ Medical Student Course Director  
(Medicine ACE and Business of Medicine Quality and Value)
- ▶ Hospital Chief Transformation Officer
  - ▶ Reports to the CMO
  - ▶ Leads Hospital wide change initiatives including HIT implementations
  - ▶ Founding Director of NYU Winthrop Physician Informatics Team

# David A. Kolb

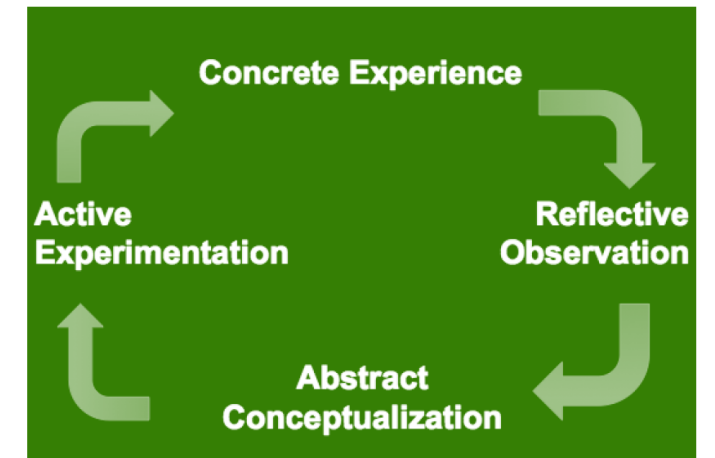
- ▶ Born 1939
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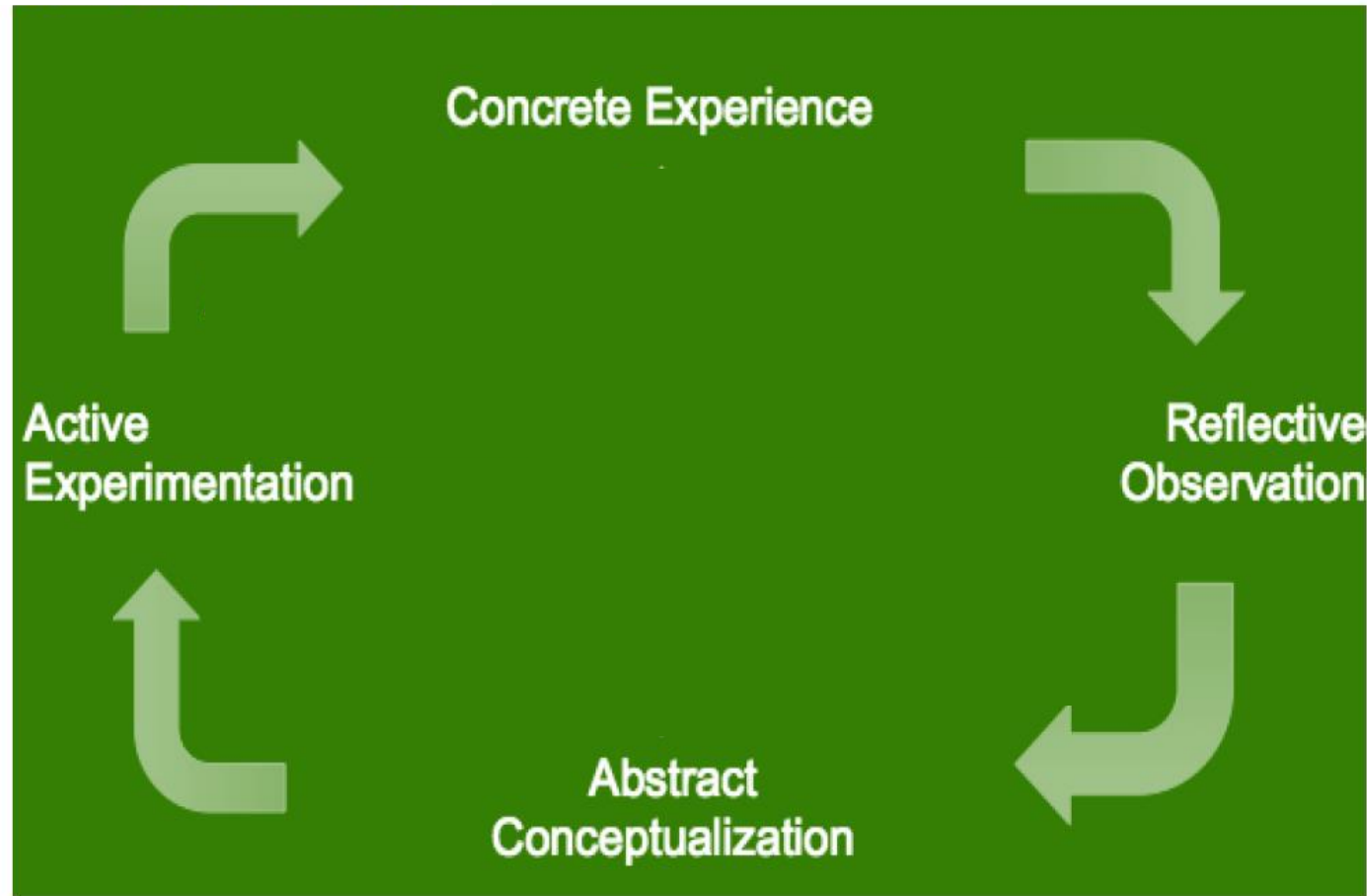
Learning is a social construct that is interactive and engaging.

Learning styles reflect individual differences based on preference for phases of the learning cycle.

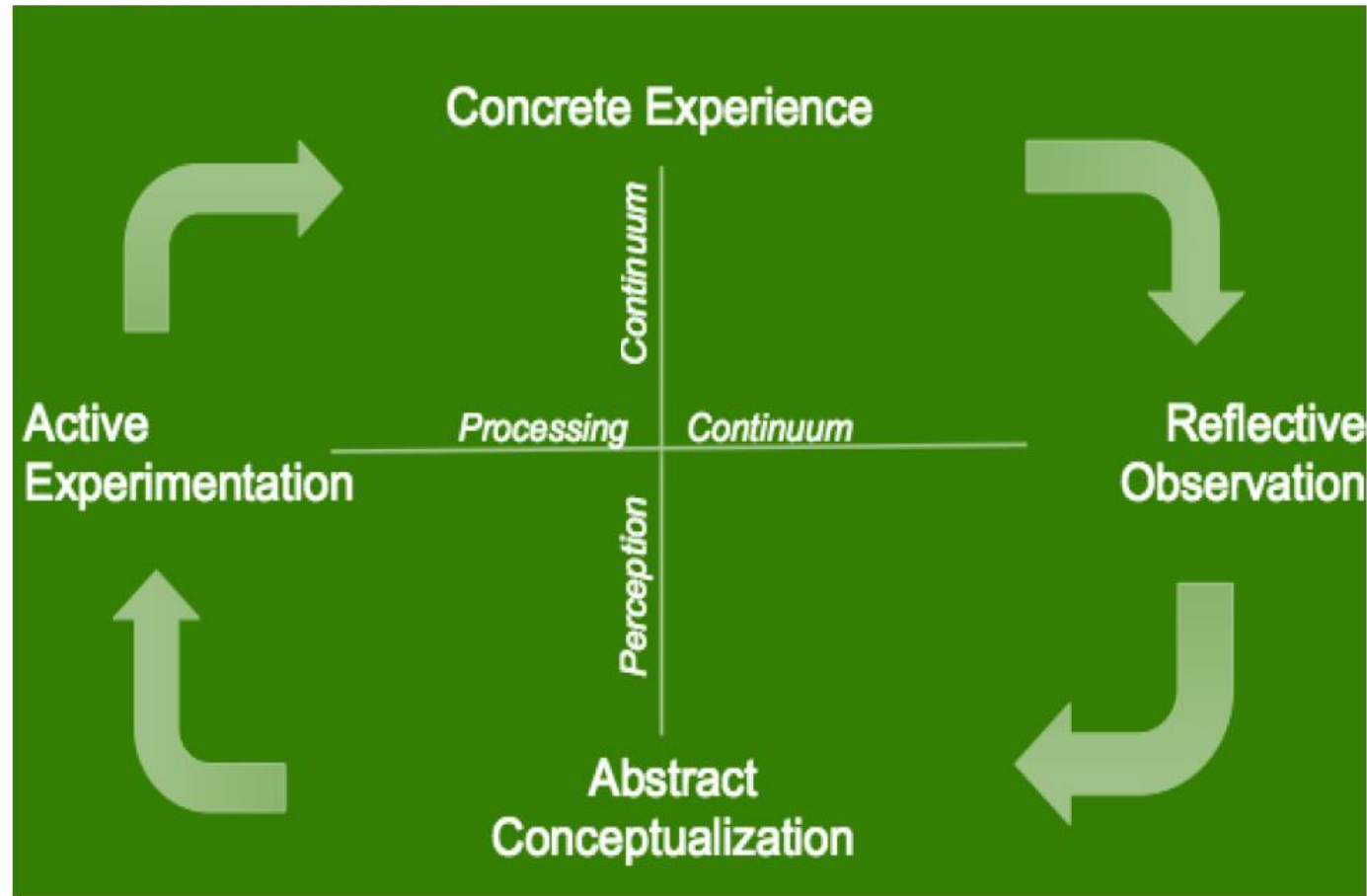
- David A. Kolb



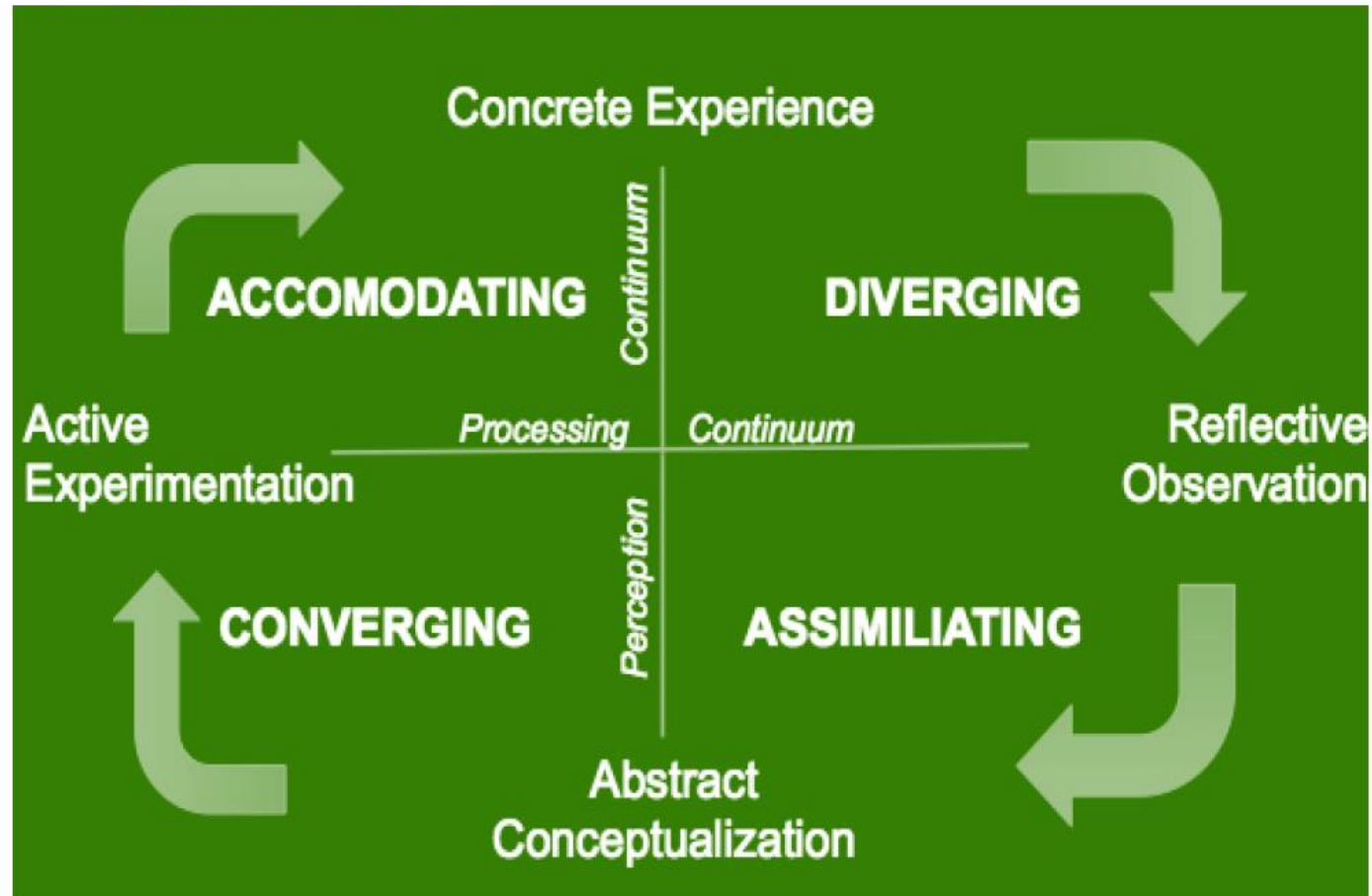
# Kolb's Cycle - Learning Styles and Strategies



# Kolb's Cycle - Learning Styles and Strategies



# Kolb's Cycle - Learning Styles and Strategies

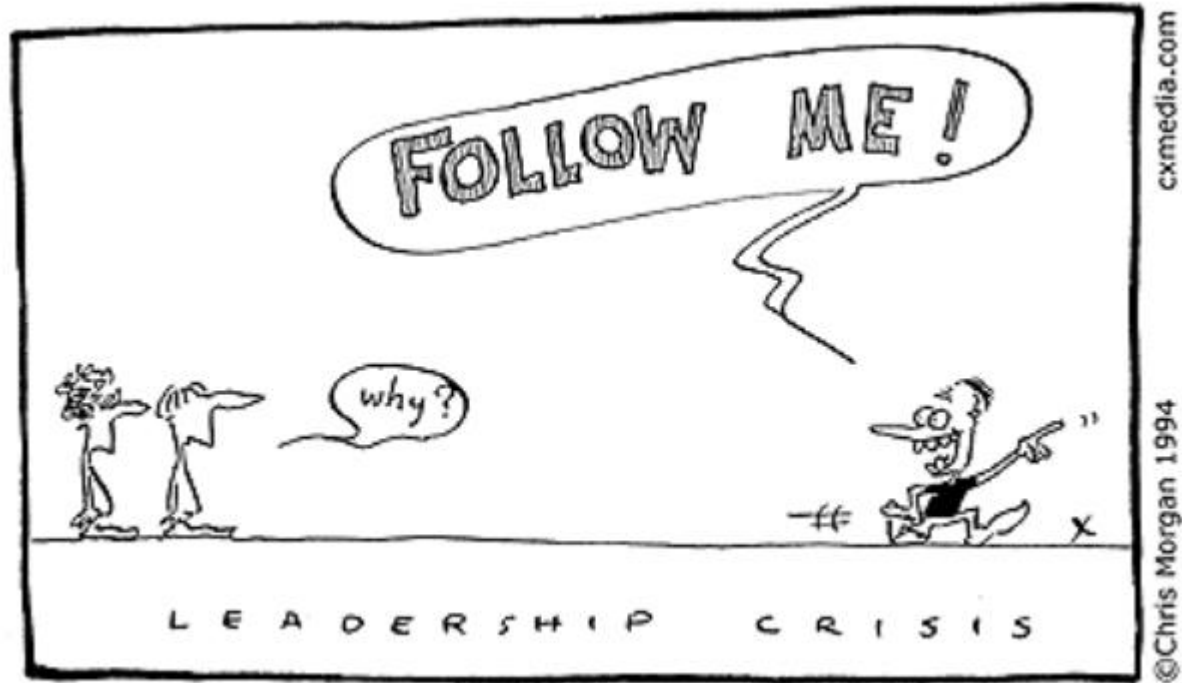




# Kolb's Cycle - Learning Styles and Strategies



# Leadership Challenge



# Engagement - Styles and Strategies

} Think'ers

} Do'ers

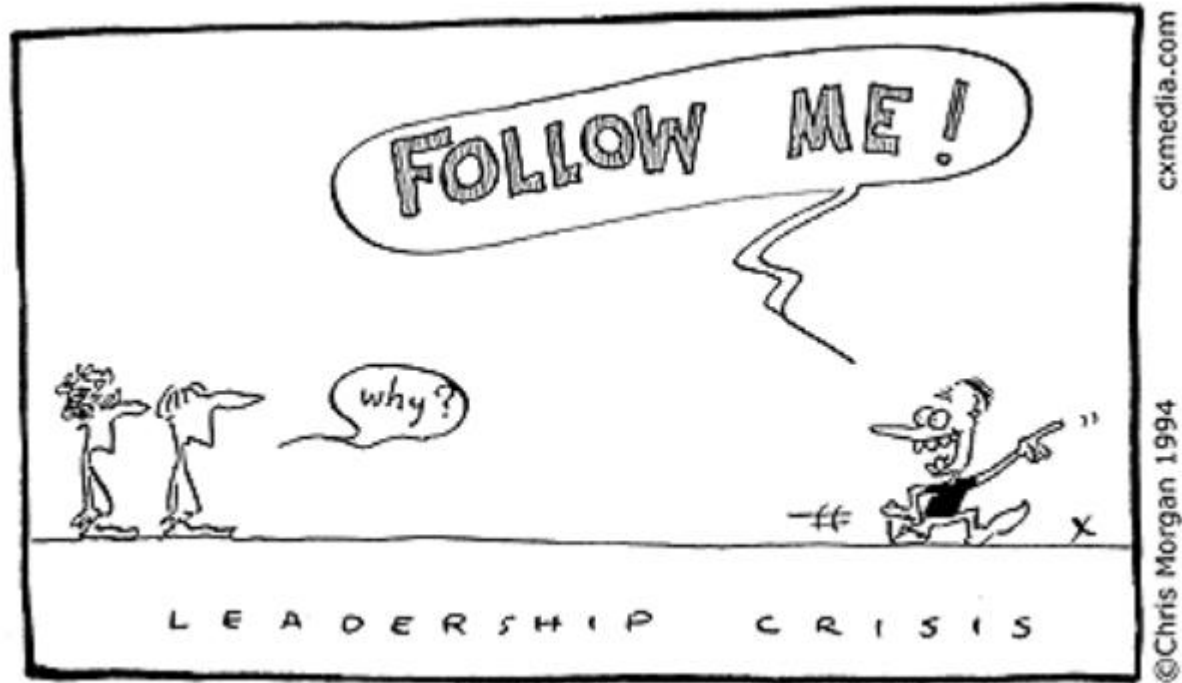
# Engagement - Styles and Strategies

- ▶ Divergers - take experiences and reflect upon them; this group likes to ask the 'why' questions
- ▶ Assimilators - have a cognitive approach and prefer to create organized and structured understanding of the material at hand
- ▶ Convergers - think about concepts and then try out their ideas to see if they work in practice
- ▶ Accommodators - have the most hands-on approach, with a strong preference for doing rather than thinking

} Think'ers

} Do'ers

# Leadership Challenge



# Why Education Theory is Important for Your Career

- ▶ Academic
- ▶ Clinical
- ▶ Leadership

Original Publication

 OPEN ACCESS

# Introduction to Curriculum Development and Medical Education Scholarship for Resident Trainees: A Webinar Series

Shannon K. Martin, MD, MS , James Ahn, MD, Jeanne M. Farnan, MD, MHPE, H. Barrett Fromme, MD, MHPE

Published: September 16, 2016 | 10.15766/mep\_2374-8265.10454



 View PDF

## Abstract

Keywords

Educational Objectives

Introduction

Methods

Results

Discussion

Author Information

References

Copyright

Citation

## Abstract

**Introduction:** A common career aspiration among residents is to become a clinician-educator, though standard postgraduate training may not prepare trainees for the academic and scholarly requirements of this career. To address this need, we designed and implemented an asynchronous, interactive webinar series detailing a systematic approach to medical education research and scholarship. The series was piloted as part of a new track at the University of Chicago for residents interested in additional training and completing an educational learning project in medical education.

**Methods:** We aimed to use this series to introduce relevant frameworks in curriculum development, program evaluation, and learning theory. Materials associated with this publication include six webinars and corresponding summary reference handouts, discussion assignments, and answer keys. Additional materials include a faculty course director packet and sample feedback for discussion assignments. Each webinar is an 8- to 20-minute narrated presentation with goals and objectives, an overview of each session's content, and example vignettes. Residents viewed presentations and completed a two-part discussion assignment for each webinar, which included reflection on the educational material and vignettes, faculty feedback on this reflection, and

## Publication Metrics

2420	352
Views	Downloads
15%	
Led to Downloads	

*View Usage Report*

## Related Publications

Helping Trainees Develop Scholarship in Academic Medicine From Community Service

Getting Promoted: Turning your Clinical Work into Scholarship

A Curriculum to Teach

Learning Goals Development

<https://www.mededportal.org/publication/10454/>



# Practical Tips: From Theory to Delivery

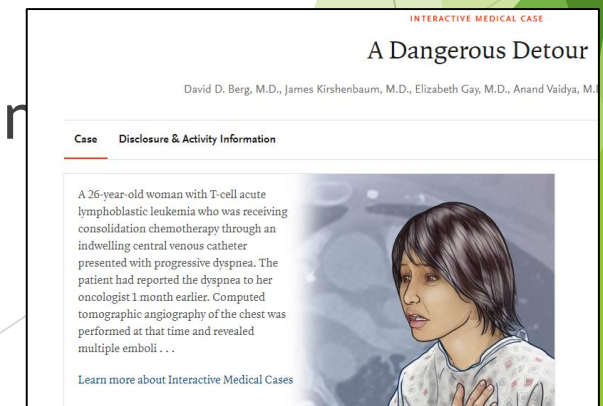
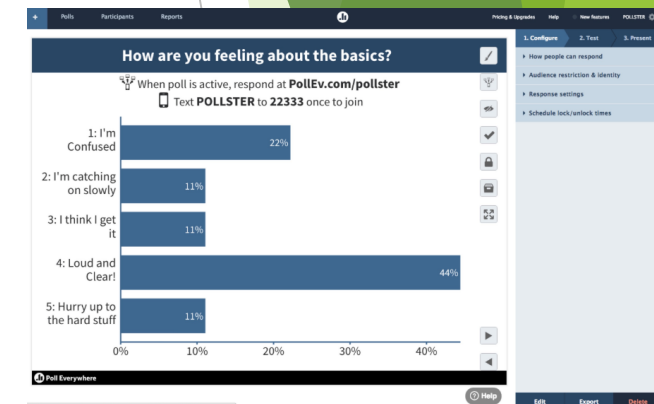


- ▶ There is no one style of teaching that fits all
- ▶ Goal is to promote active learning: engage, participate, collaborate
- ▶ General rules:
  - ▶ Provide context (We have a patient here with a GI bleed...)
  - ▶ Prior-knowledge (The first step is to insert a large bore IV...)
  - ▶ Outlines/summaries/flowcharts (Here is my approach to GI bleeding...)
  - ▶ Present examples (A patient now presents with hematemesis...)
  - ▶ Assess learning (What would be your next step...)

# Making Learning Interactive

- ▶ Workshops/Simulation (e.g. central line placement)
- ▶ Games
  - ▶ Jeopardy: powerpoint templates available online
  - ▶ Poll Everywhere
- ▶ Interactive modules (e.g. NEJM interactive cases)
- ▶ Role playing/standardized patients
- ▶ Debates (e.g. target BP in elderly patients)
- ▶ Peer learning: Team-based and problem-based learning

## Medical jeopardy



# Types of Group Learning



## Team Based Learning (TBL)

- ▶ One teacher with several small teams
- ▶ Teacher provides pre-class work
- ▶ Teacher identifies content to learn and presents the problem
- ▶ Information is progressively disclosed
- ▶ Questions are given to teams to work on
- ▶ Fosters team debate and discussion, builds toward exam questions
- ▶ Better for a single session



## Problem Based Learning (PBL)

- ▶ One teacher for each small group
- ▶ Teacher provides a problem
- ▶ All information to solve the problem is not initially given
- ▶ Learners identify what they need to know and use appropriate resources
- ▶ Learners do most of the teaching
- ▶ Fosters self-learning and communication
- ▶ Better for multiple meetings over several weeks

# Designing Lectures

- ▶ Decide/list learning objectives
- ▶ Consider teaching one part of a subject rather than covering the entire topic
- ▶ Start with an engaging question or a case
- ▶ Avoid too much information on slides
- ▶ Gamification, such as medical jeopardy
- ▶ Include conclusions and review questions

## To Save The Science Poster, Researchers Want To Kill It And Start Over

June 11, 2019 · 3:45 PM ET  
Heard on All Things Considered



NELL GREENFIELDBOYCE



### Initial Management of GI Bleeding

- Assess patient and obtain vital signs
- Insert large bore IV
- Start IV fluids
- Obtain labs including CBC, CMP, FOBT, electrolytes
- Draw type and screen
- Obtain EKG
- Imaging including C
- Contact blood bank

### Initial Management of GI Bleeding

- INSERT LARGE BORE IV

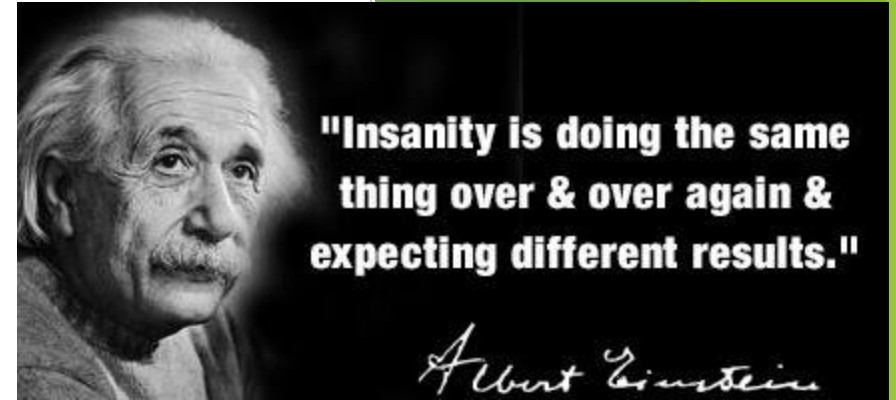
# Effective Teaching on Rounds

- ▶ Do what works for you, but aim to make it interactive
- ▶ Review the patient census, focus on 1-2 patients/conditions
- ▶ Sit down rounds are often more convenient for didactics
- ▶ Bedside rounds are more effective for demonstration
- ▶ Consider giving handouts, such as figures from literature or algorithms to help guide the discussion
- ▶ Ask questions to engage learners, let them do the teaching
- ▶ Assign focused topics to students and residents
- ▶ Everyone has a smart phone, encourage the group to use them to find the information. Can also email slides for everyone to view





# Evaluation and Feedback



- ▶ Feedback is critical to honing your skills
- ▶ Clerkships often end with attending-driven feedback
- ▶ This is a chance to receive feedback, hopefully honest:
  - ▶ What topics did you feel you learned best?
  - ▶ Which teaching techniques were most effective/ineffective?
  - ▶ Is there anything we didn't cover that you wish we did?
- ▶ Consider handing out post-session survey
  - ▶ Include Likert scale and also open ended questions

Strongly disagree	Disagree	Agree	Strongly agree	Not applicable
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

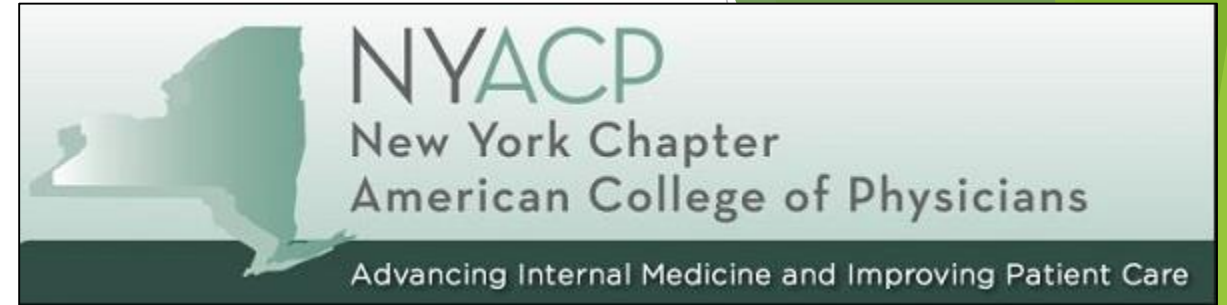
# If you have no time to prepare...

- ▶ It's perfectly reasonable to teach on the fly
- ▶ Never underestimate how much experiential or bedside teaching you can offer
- ▶ Practice makes perfect- over time you will accumulate a compendium of recurring topics in your comfort zone
- ▶ Examples:
  - ▶ How to ask parts of the history (e.g. social history)
  - ▶ Bedside exam maneuvers (e.g. reflexes)
  - ▶ Journal club- assign a paper and review it as a group
  - ▶ Career topics (e.g. surviving residency, what's an RVU)
  - ▶ Go through MSKAP or other question banks
  - ▶ Review an interesting case from your practice





# Thank you!



- ▶ Karen Tucker LaBello (NYACP)
- ▶ Steve Shelov, MD: Founding Dean of NYU Long Island SOM

