



# Increasing Active Learning in the OB Clerkship: A Pilot Project

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Executive Sponsor: Dean Toni Ganzel

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# ACTIVE LEARNING

## BACKGROUND

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- Need within the medical school curriculum
- Approach within the OB clerkship
- Benefits perceived by students, faculty, SOM
- Competition to our approach



# ACTIVE LEARNING: NEED

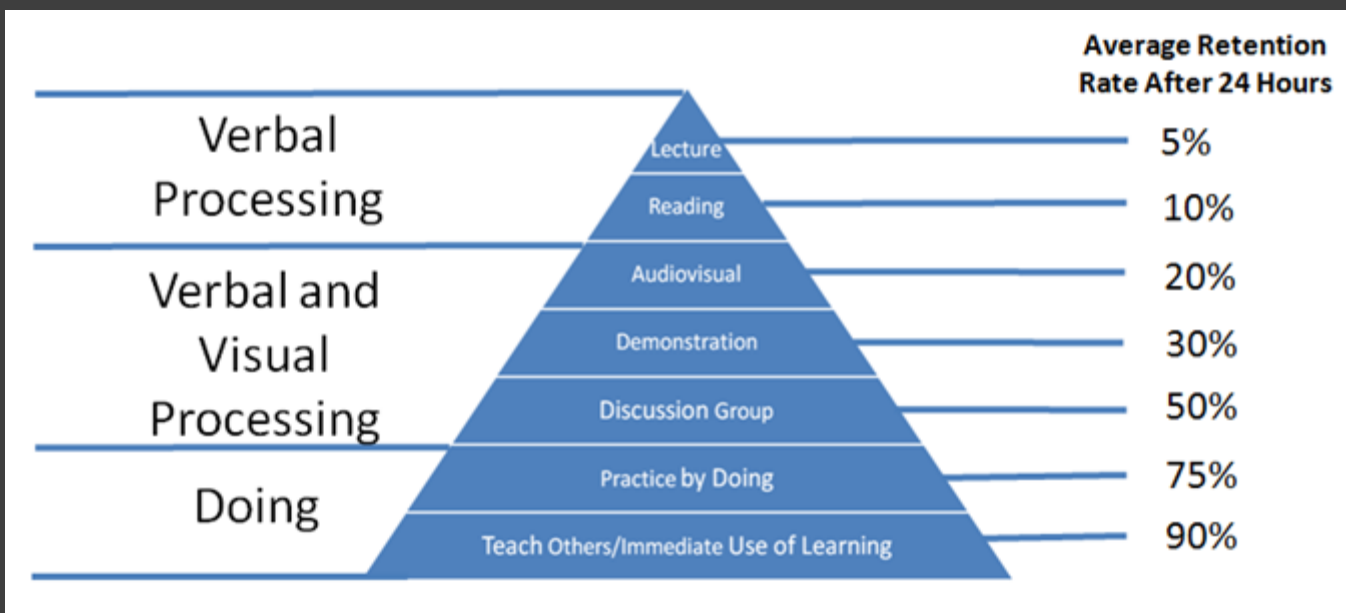
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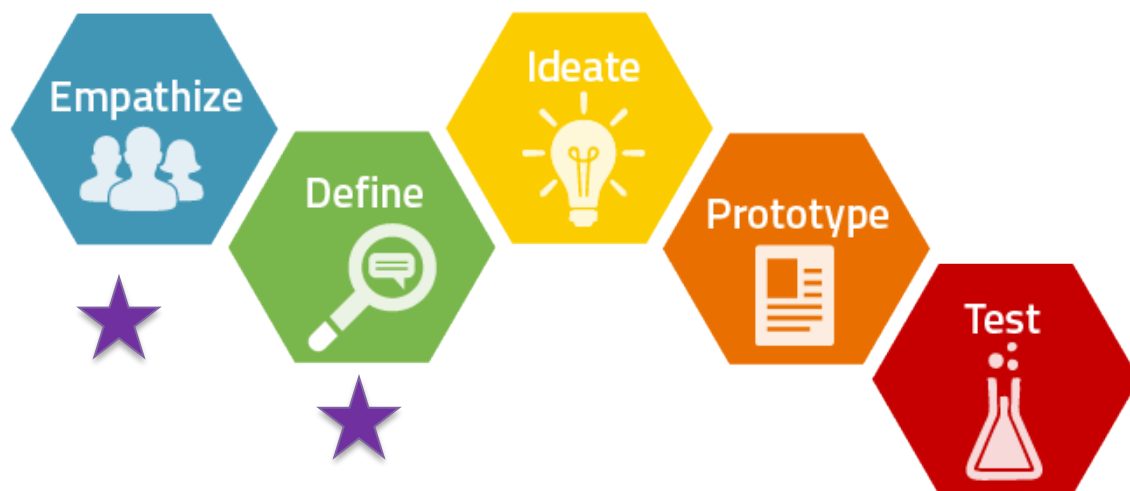
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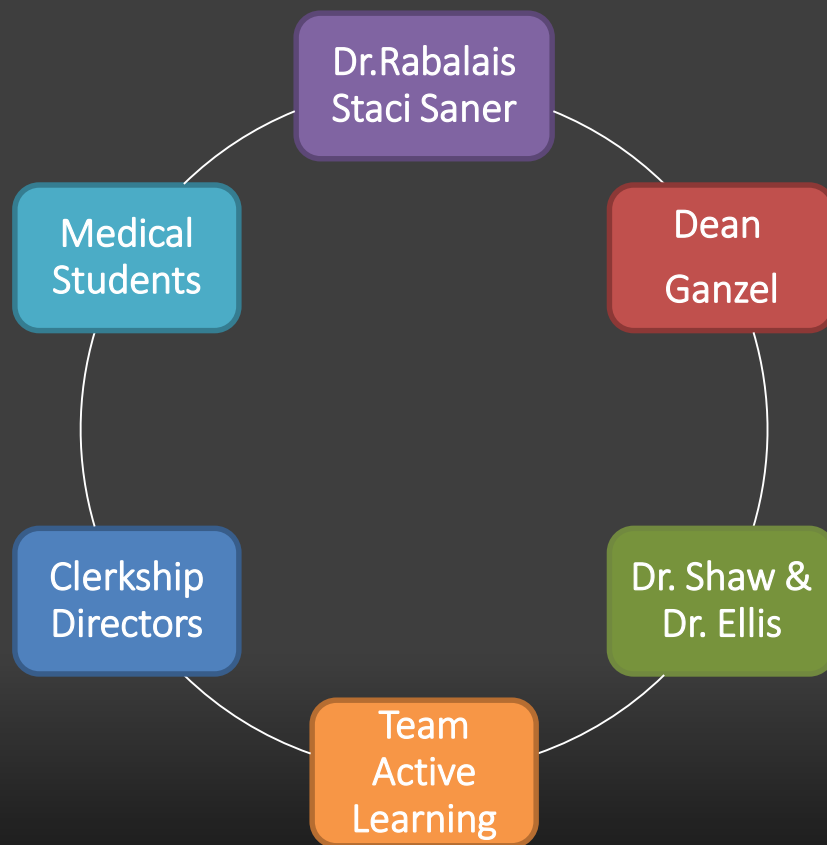
# ACTIVE LEARNING: NEED



## DESIGN THINKING



# Design Thinking: Focus Groups



## *Meeting with Dean Ganzel (12/3/18)*

- Self-directed learning is an LCME requirement (Standard 6.3)
- Current state
  - Lecture attendance generally poor
  - Better attendance for lectures perceived to be active and lecturers perceived to be engaging
  - Majority of students are watching lectures
  - PBL meets self-directed learning definition
- Barrier: Perception that active learning requires more work
  - Need to obtain buy-in from/convince students and teachers





# LESSONS LEARNED FROM STAKEHOLDERS

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## *Meeting with students (12/4/18)*

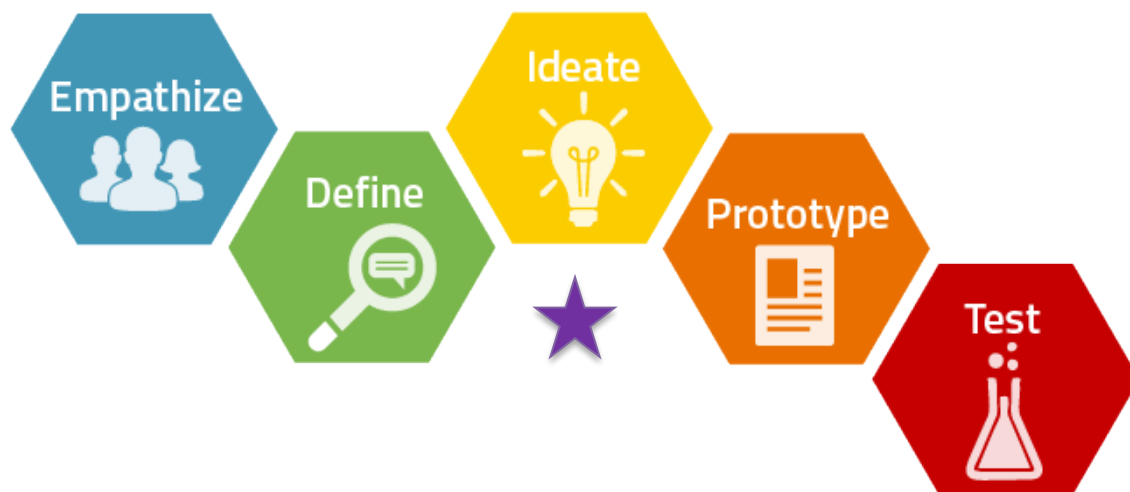
- Feedback regarding lectures
  - Want more iClicker usage to engage audience
  - Enjoy clinical cases and patient panels
  - Enjoy using a clinical case to start/end a lecture
- Students are not engaged with current strategies
  - Softchalk: extremely dry; feels like a Cliffnote/textbook version of a topic
    - Single question at the end can be useful
  - Articulate: rave reviews, want more of these online
  - PBL: low-stakes (not taken seriously, 'just show up' mentality)



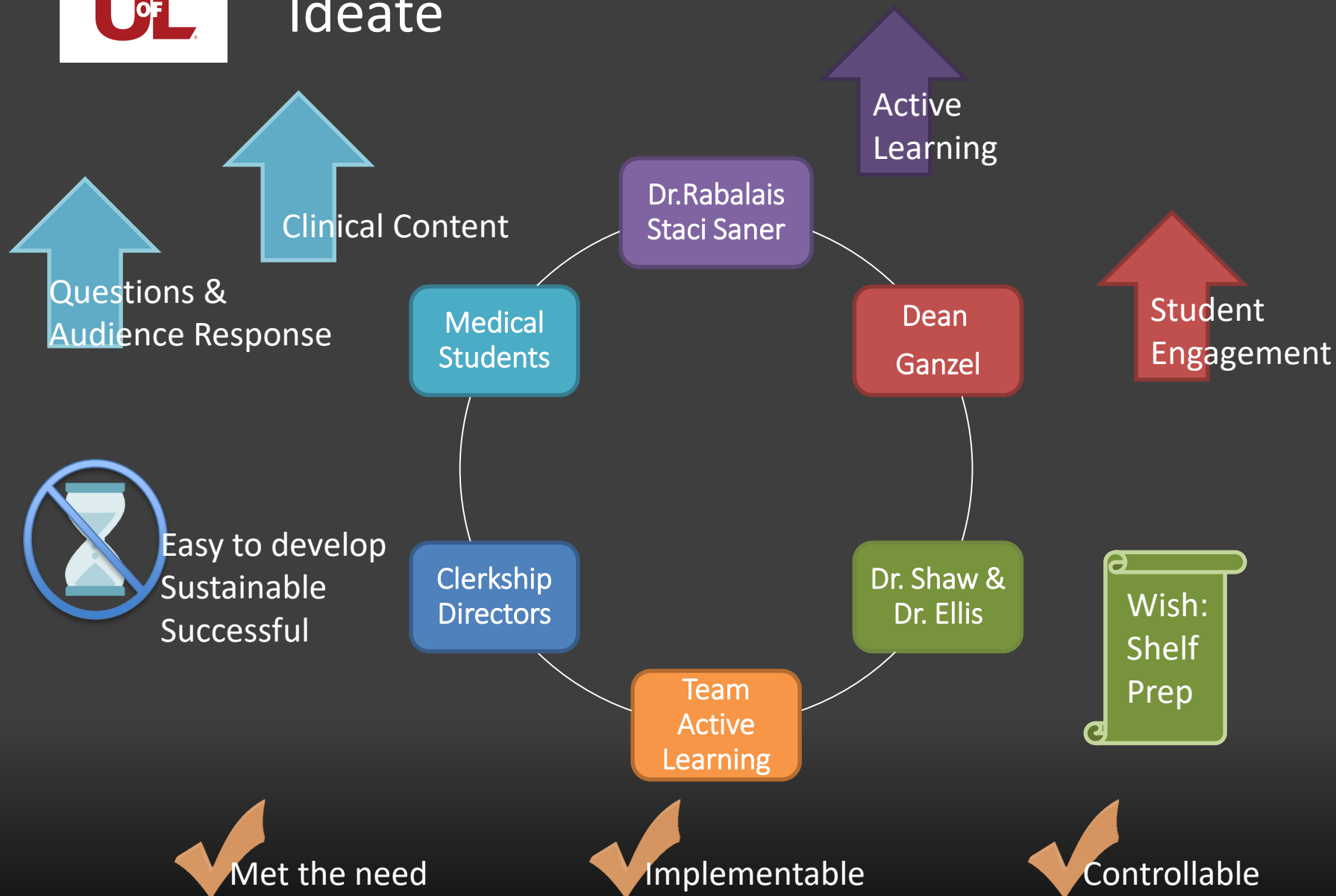
## *Meeting with Drs. Shaw and Ellis (12/13/18)*

- Current state
  - 20 hours of contact/week (includes virtual, SP/sim center, and lecture)
    - Lectures are not mandatory; active sessions are
    - All lectures are taped on Panopto
- What are some reasons students aren't attending class
  - Each has their own learning style, some don't get anything out of attending class
  - Students self-select depending on how they learn best
- Perceptions
  - Softchalks are very helpful
  - Students always want more 'exam type' questions
  - Barriers to active learning are time, energy, unwillingness of faculty to change
- Wish list
  - Shelf exam preparation

## DESIGN THINKING



# Ideate



# APPROACH: Gamification of Concepts



RESEARCH ARTICLE

## Effects of competitive learning tools on medical students: A case study

Alfredo Corell<sup>1</sup>, Luisa M. Regueras<sup>2</sup>\*, Elena Verdú<sup>3</sup>, María J. Verdú<sup>2</sup>, Juan P. de Castro<sup>2</sup>

### Methods

- Medical students (n=285) in Human Immunology course
- QUESTOURnament
  - Moodle module that allows teachers to organize contests
  - Challenges or questions that students must solve in a time-constrained way

### Results

- Students using the competitive learning tool had better academic performance, and they were satisfied with this type of learning

### Conclusions

- Competitive learning motivates medical students, improves their academic outcomes and may foster the cooperation among students

- **Competitive learning**
  - Educational tool that increases students' motivation and satisfaction
  - Competitiveness is a characteristic of medical environment and schools



# APPROACH: KAHOOT!

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## *What is KAHOOT?*

Easy-to-use free online game platform used in classrooms to increase student engagement



## *How will we use KAHOOT?*

- OB/GYN clerkship
- Students test themselves on key concepts
- Students engage in competition



# BENEFIT

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- UME
  - Opportunity to increase active learning within the curriculum (clerkship years)
  - Includes a self-directed component
- Medical Students
  - Guide to high yield topics
  - Potential increased retention of material
    - Recall, spaced learning, self-directed question development
  - Easy to use (can complete on computer or phone, free)
- Clerkship Directors
  - Reusable, inexpensive
  - Quick method for guiding clerkship curriculum
- All
  - Improved clerkship exam scores (hopefully) and improved educational experience

## Increasing active learning

Multiple interactive and game-based learning platforms are available

LIMITATIONS WITH MANY OF THESE:

- Not free
- Learning curve in development
- Availability/portability
- Lack of synchronous and asynchronous learning options



Poll Everywhere



iclicker.





## DESIGN THINKING





# PROTOTYPE: OB-GYN clerkship pilot

## Hypothesis

Introduction of Kahoot tournaments into the OB-GYN clerkship will...

- Be well received by students
- Result in improved knowledge acquisition of clerkship material, as evidenced by increased shelf exam scores

# PROTOTYPE: OB-GYN clerkship pilot

## Design & Implementation

- 2 randomly assigned teams
- Instructions, resources, timeline distributed at orientation
- Weekly Kahoot tournaments

Week	Topics	Tournament Date
1	Preconception Counseling & Immediate Care of the Newborn	Friday, April 5, 12:30 pm Auditorium
2	Lactation & Breast Disorders	Friday, April 12, 12:30 pm Auditorium
3	STI & Puberty/PAG	Friday, April 19, 12:30 pm Auditorium
4	Gestational Trophoblastic Disease & PMS/PMDD	Friday, April 26, 12:30 pm Auditorium
5	Late Pregnancy Complications*	Tournament Due: Monday, April 29 <sup>th</sup> Friday, May 3, 12:30 pm Auditorium
6	Topic Review	Wednesday, May 8 <sup>th</sup> during afternoon didactics (time TBD)

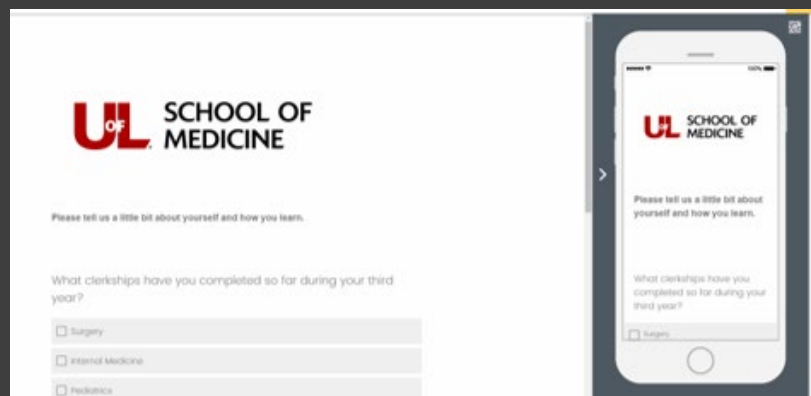
**SELF DIRECTED LEARNING  
TEAM BASED LEARNING**

**SPACED ACTIVE RECALL**



# TEST: Evaluation Plan

## Qualtrics Survey



OVERALL

**>96%**

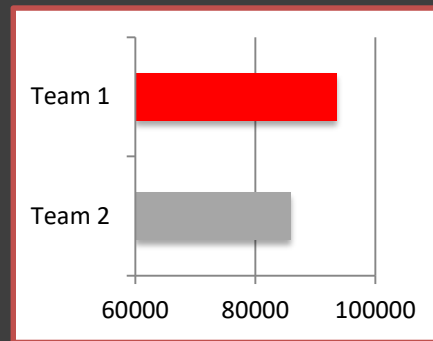
completion rate

- Demographics
  - Completed clerkships
  - Specialty plans
  - Learning style
  - Barriers to self-directed learning in clerkship setting
- Previous experience with Kahoot
- Current experience with Kahoot
- Future directions

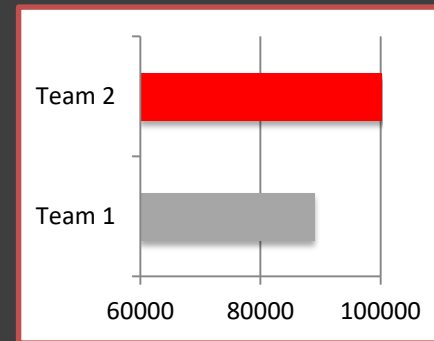
# RESULTS: Knowledge acquisition

Average Kahoot Score

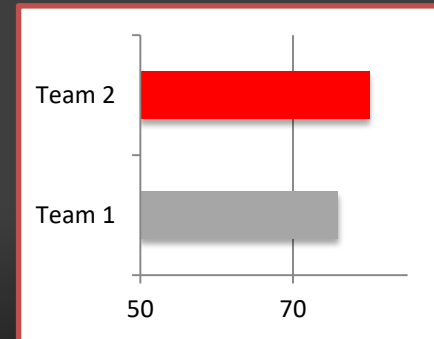
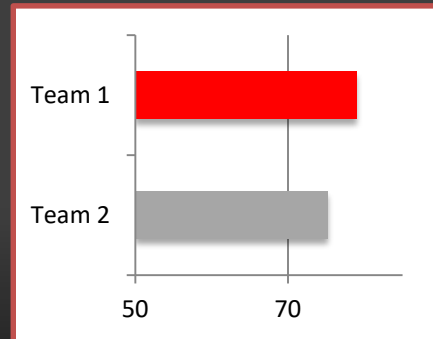
1<sup>st</sup> Clerkship



2<sup>nd</sup> Clerkship



Shelf Score





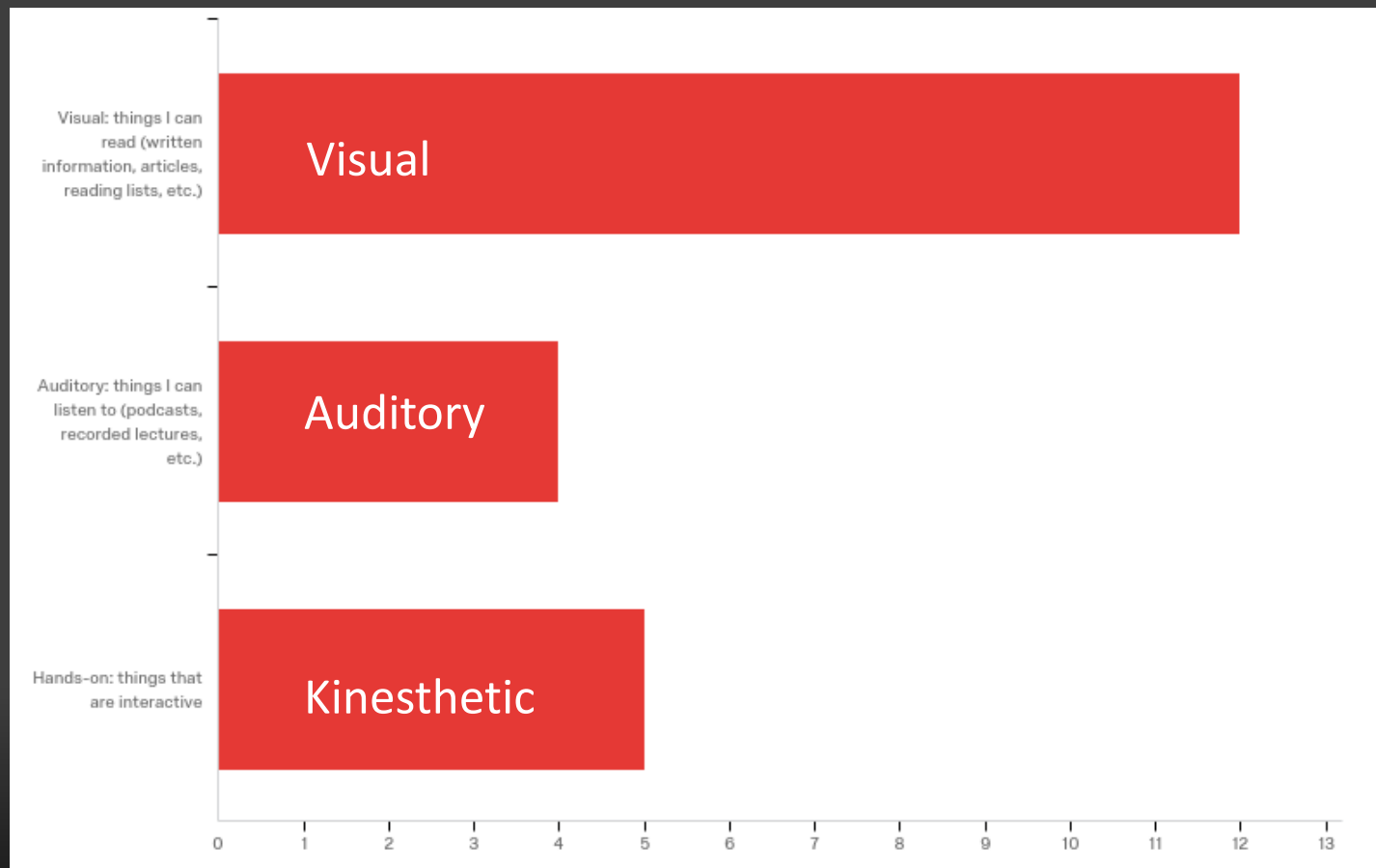
# RESULTS: Knowledge acquisition

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Clerkship Shelf Exam Average Compared to Last Year:

	1 <sup>st</sup> Clerkship (April)	2 <sup>nd</sup> Clerkship (May)
2018 Average	75.6	77.7
2019 Average	77.2	77.9

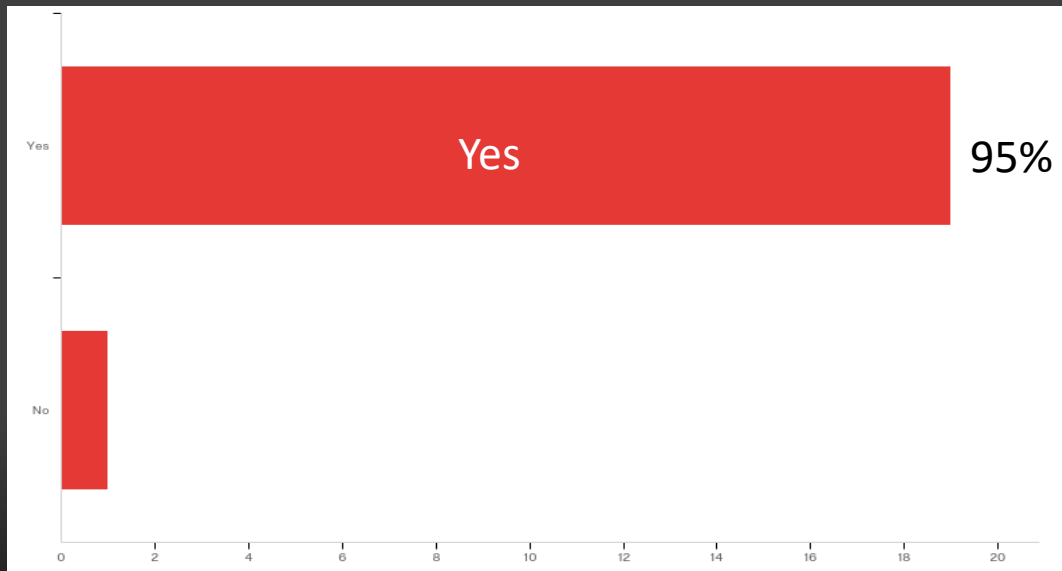
# RESULTS: Learning style



# RESULTS:

## Was Kahoot well-received by students?

- I enjoyed using Kahoot: 95%
- I found Kahoot to be a helpful tool for learning clerkship content: 80%
- Would you like to see Kahoot used in other 3<sup>rd</sup> year clerkships?





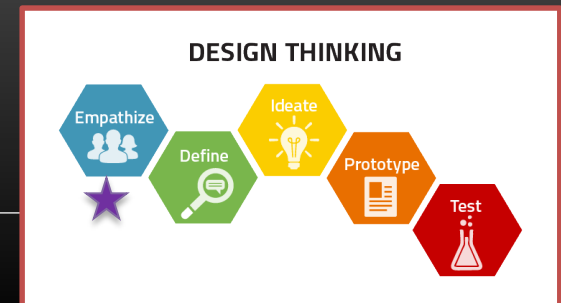
# RESULTS: Self-directed learning

- I felt that using Kahoot encouraged self-directed learning: 55%
- I felt that generating my own Kahoot questions encouraged self-directed learning: 55%
- What percentage of the provided resources did you use prior to the weekly tournament? *85% used half or less than half of provided resources*

Answer	Frequency
90-100%	5%
75%	10%
50%	30%
25%	25%
Less than 25%	30%

# RESULTS: Barriers to self-directed learning

Barrier	
<b>TIME</b>	<ul style="list-style-type: none"> <li>• Time management</li> <li>• Lack of free time</li> </ul>
Clerkship environment	<ul style="list-style-type: none"> <li>• Exhaustion</li> <li>• Pressure of studying for the shelf</li> <li>• Distractions; hard to concentrate</li> <li>• Too little reinforcement/repetition</li> </ul>



# NEXT STEPS

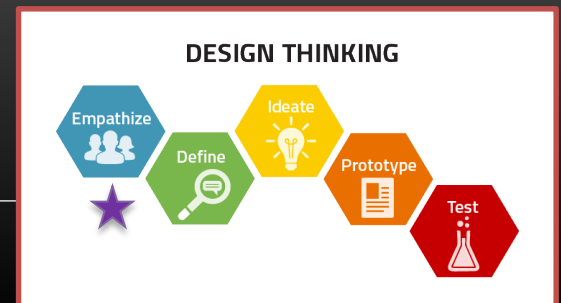
## *What's next?*

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- IMPLEMENTED INTO THE 2019-2020 OB-GYN CLERKSHIP CURRICULUM
- EXPANSION TO OTHER CLERKSHIPS
  - Presentation at the clerkship directors meeting
  - Toolbox to guide implementation
- REFINE QUESTION/HYPOTHESIS
  - Pilot looked at aggregate data
    - Individual-level question: Is there a correlation between individual Kahoot score and individual shelf score?

*Student Suggestion: Use of Kahoot in Students as teachers?*

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# THANK YOU!

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