

Analysis of Faculty-Provided, Third-Party, and Near-Peer  
Developed Supplemental Resources in Medical Neuroscience:  
**Utilization, Perceived Impact, and Preference  
of Medical Students**

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BRODY SCHOOL OF MEDICINE  
10th Annual Medical Education Day



**SCRUBS**

STUDENT COLLABORATIVE RESOURCES FOR UNDERSTANDING AND BRODY SUCCESS

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## ■ Problem: Overwhelming abundance of study materials

- Burnout
- Decreased learning efficacy
- Negative impact on student wellness

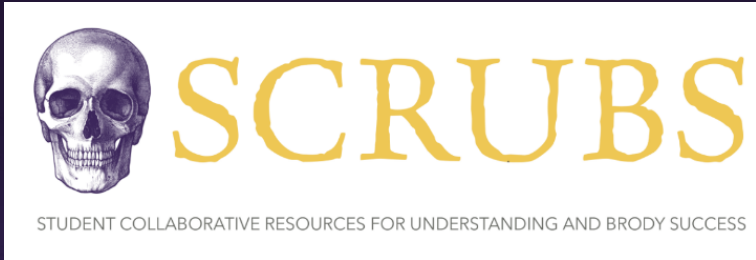


## ■ Goal: Guide students toward ***focused & effective*** resources, minimizing resource burden & maximizing quality.

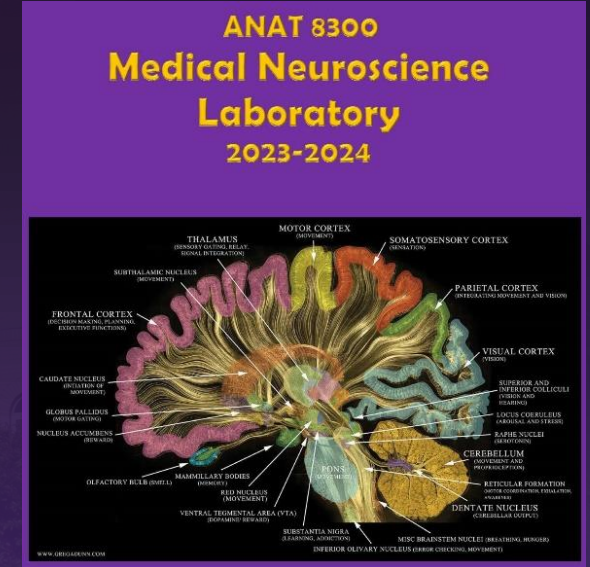


# OBJECTIVE

Compare *perceived* benefits of



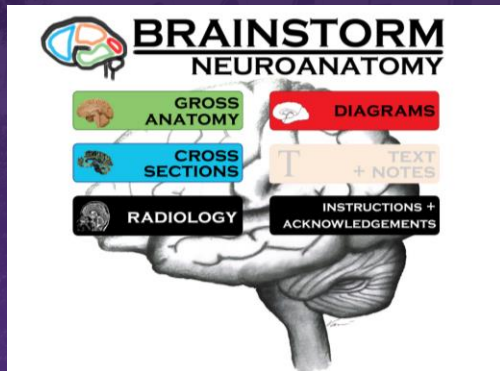
← **Near-Peer** created resources vs. **Course-Provided** →



&

**Third-Party**

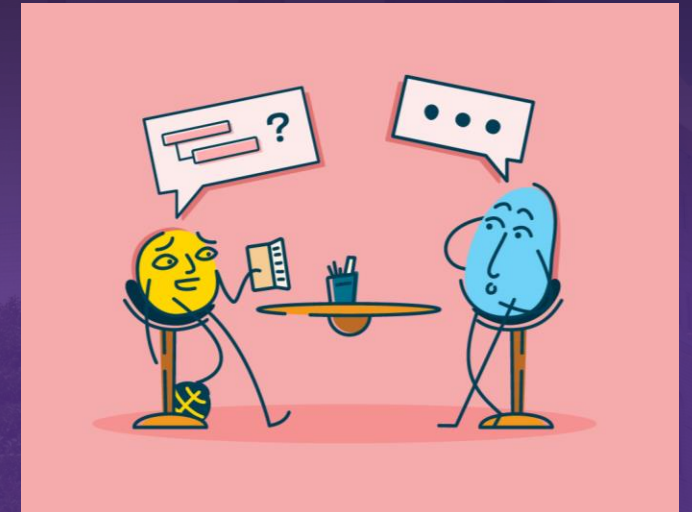
materials currently used in Medical Neuroscience



- Prospective, observational study
- **96** M1 BSOM students given access to Medical Neuroscience resources developed by:
  - **Course Faculty** (lecture files, study guides, laboratory manual)
  - **Third-party vendors** (USMLE<sup>R</sup> First Aid, Brainstorm)
  - **Near-peers** (lab ID videos, virtual ID Anki flashcards)
- Immediately after first course exam, students invited to complete a **10-question survey** detailing
  - Resource *utilization*
  - Perceived *usefulness*

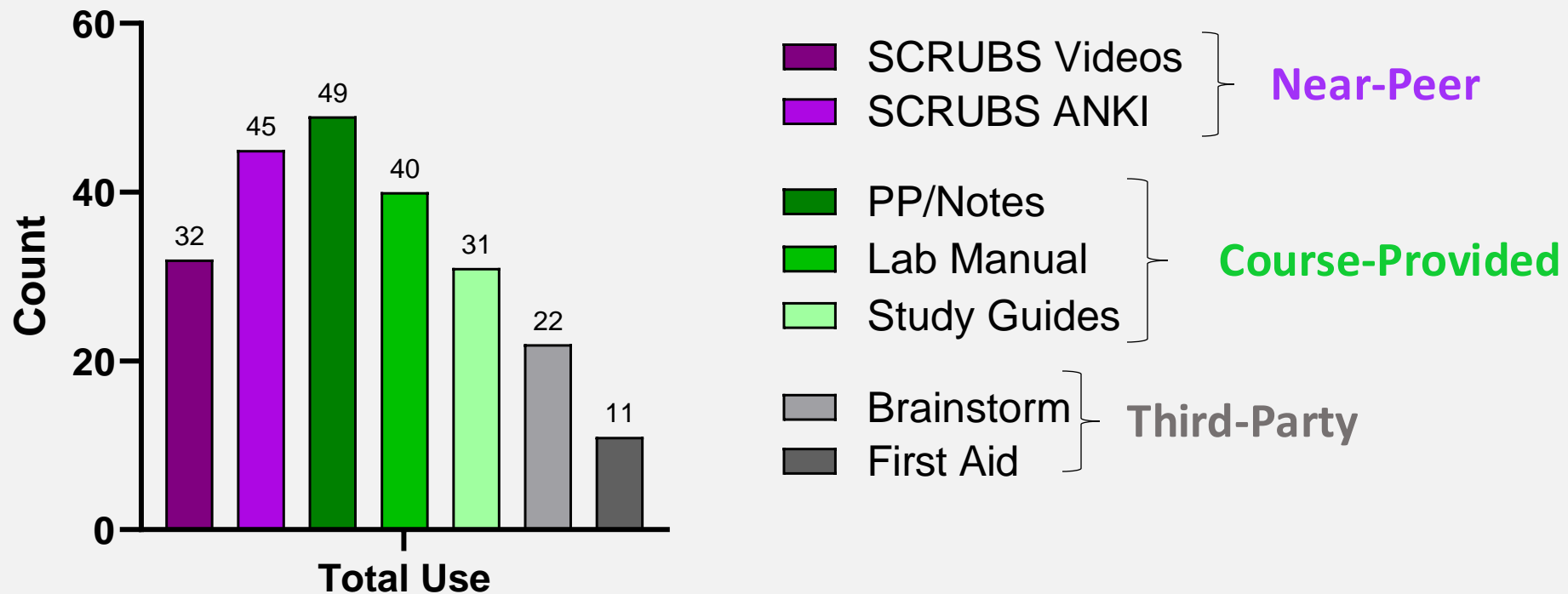


- Students ranked each resource *they personally used* in terms of:
  - Preparing for **computer exam** (lecture material)
  - Preparing for **digital lab practical**
  - Learning **general neuroanatomy**
  - Identifying personal **weaknesses**
  - **Alignment** with primary course material
  - **Decreasing stress**
  - **Usefulness** for future cohorts
- Rankings scale was 1 (most effective) to 7 (least effective)
- Comparisons were made using a **Chi-Squared** analysis

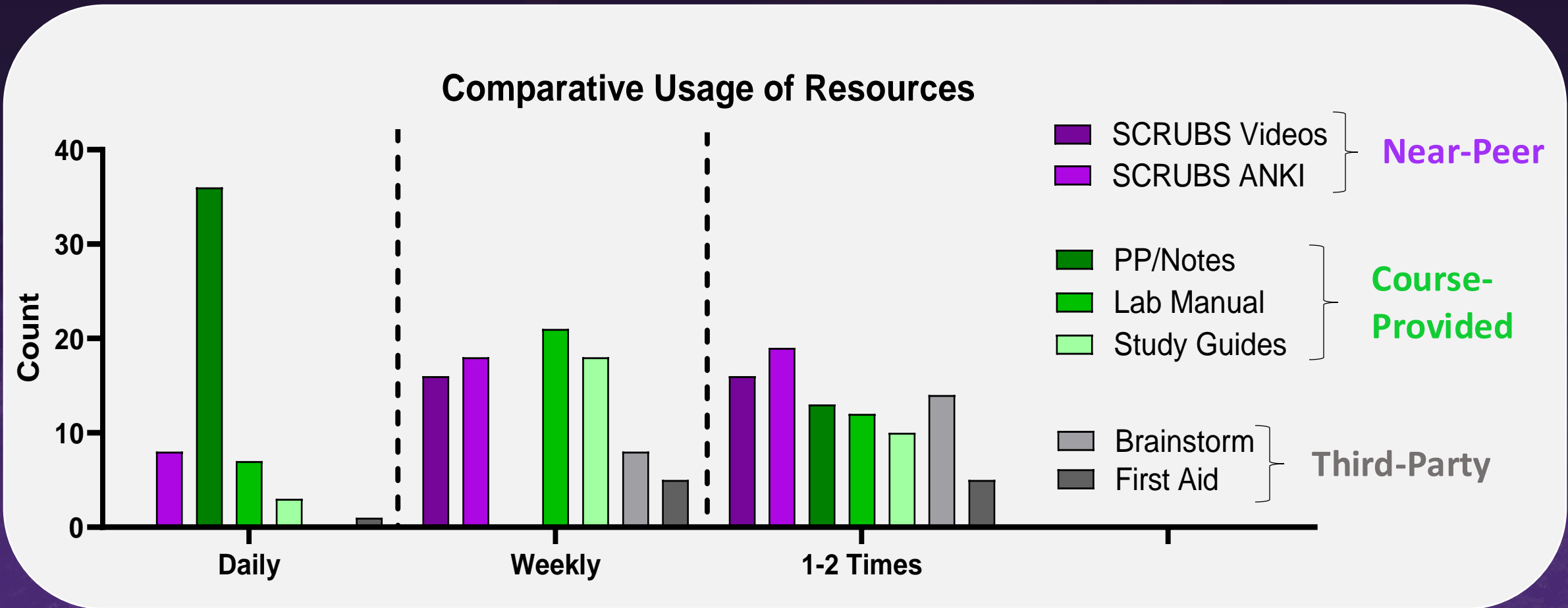


52 surveys completed (response rate = 54%)

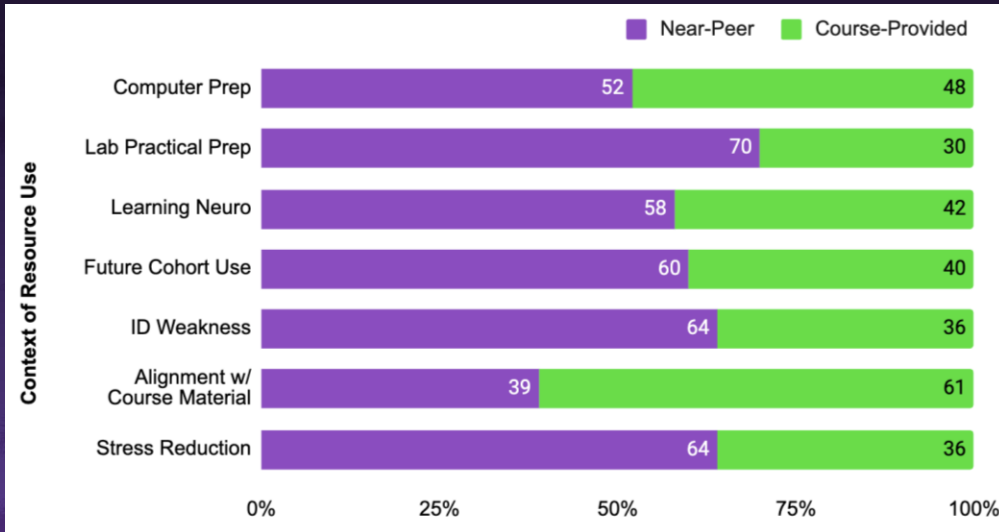
### Overall Use by Resource



## Frequency of Use of Resources



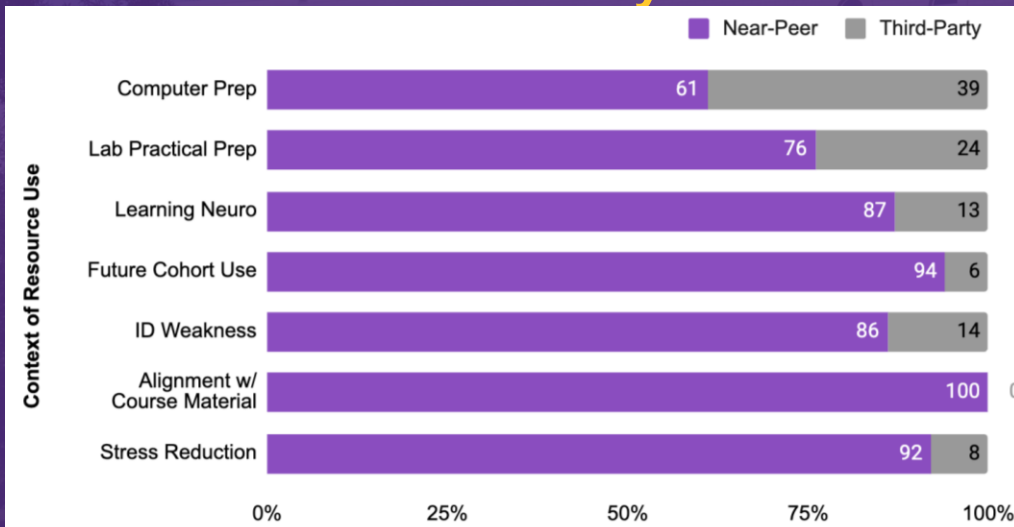
## Near-Peer vs. Course Provided



- Students who used **both** Near-Peer & Course-Provided Resources ranked Near-Peer resources higher in alignment with:

- Lab practical preparation (70%,  $p=.034$ )
- Decreasing stress (64%,  $p=0.2$ )
- Identifying personal weaknesses (64%,  $p=0.2$ )
- Anticipated benefits to future cohorts (60%,  $p=0.32$ )
- Learning general neuroanatomy (58%,  $p=0.41$ )
- Computer exam preparation (52%,  $p=0.847$ )
- Ranked lower for curriculum alignment (39%,  $p=0.297$ )

## Near-Peer vs. Third-Party

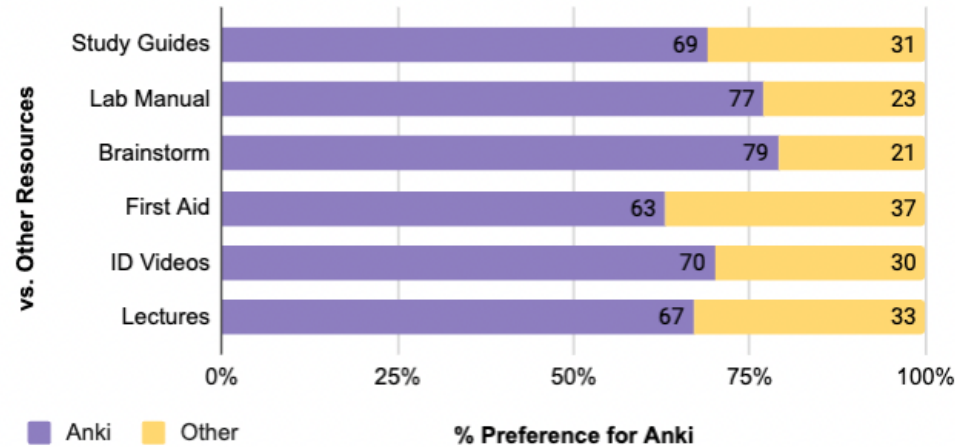


- Students who used **both** Near-Peer & Third-Party Resources ranked Near-Peer resources higher in alignment with:

- Course material / Curriculum (100%,  $p<0.001$ )
- Anticipated benefit to future cohorts (94%,  $p<.001$ )
- Decreasing stress (92%,  $p=.003$ )
- Learning general neuroanatomy (87%,  $p=0.004$ )
- Identifying personal weaknesses (86%,  $p=.0075$ )
- Lab practical preparation (76%,  $p=0.029$ )
- Computer exam preparation (61%,  $p=0.34$ )

# Lab ID Anki Flashcards Results

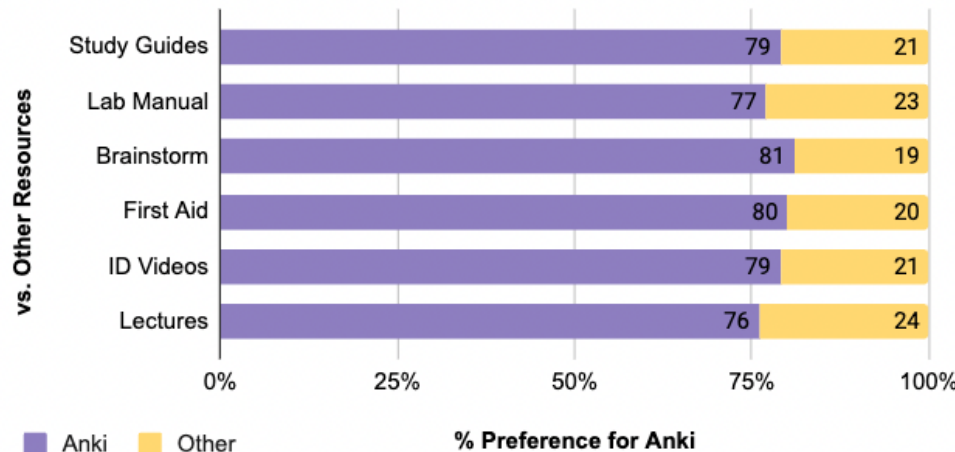
## Computer Exam Preparation



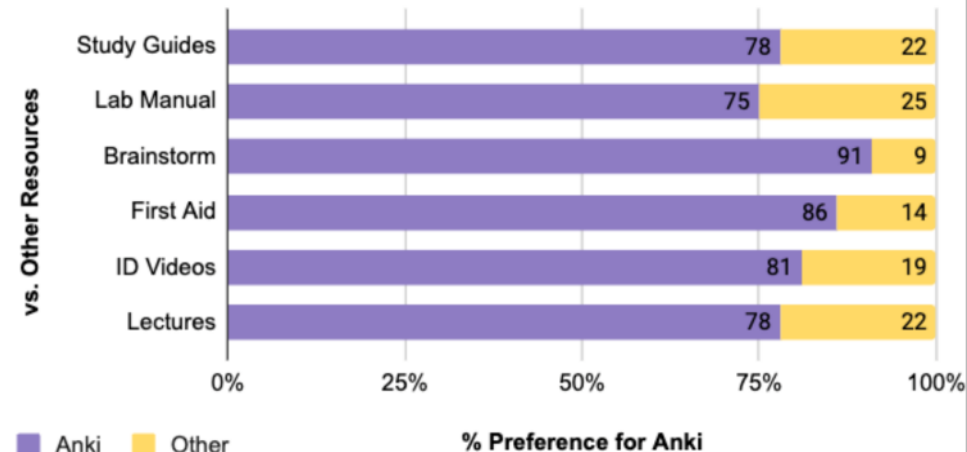
■ This singular **Near-Peer** resource ranked higher than both **third-party** & **faculty-provided** resources across ALL criteria! (including those not pictured:)

- Future Class Usefulness
- Identifying Personal Weakness
- Alignment with Curriculum
- Learning General Neuroanatomy

## Lab Practical Preparation



## Reducing Stress



- Near-peer resources *strongly preferred* over third-party
  - Perceived as equivalent or superior to some course-provided aids
- Future implementation & improvement of near-peer resources
  - Consider integration of these resources in place of currently recommended third-party resources to increase efficient learning & minimize distractions
  - A system of sustainable, continuous resource improvement must be implemented to maximize benefit

- Survey response rate (54%)
  - Potential unaccounted biases due to subpopulation response
- Not all respondents used all resources
  - Mitigated by cross-referencing survey question “how often did you use each resource” → if answered “never,” that resource’s ranking was removed from the following individual’s further survey responses.
- Single point of data collection (post Exam 1)
- Full Neuro course revamp after initial creation of near-peer resources



- Beyond perceived effectiveness: Does specific resource preference or utilization **correlate to exam/course performance?**
- Does resource preference **change as course progresses?**
- Is preference for a specific resource related to specific **content being covered?**
- Does this trend of preference for near-peer resource utilization **extend to other foundational courses at BSOM?**



# ACKNOWLEDGEMENTS

- We thank the **Department of Emergency Medicine** and the **Office of Medical Education** for their continued support of educational research
- A special acknowledgement is extended to the **Brody Class of 2027** for their trust in our creation & implementation of these near-peer created resources, as well as providing feedback thereof.

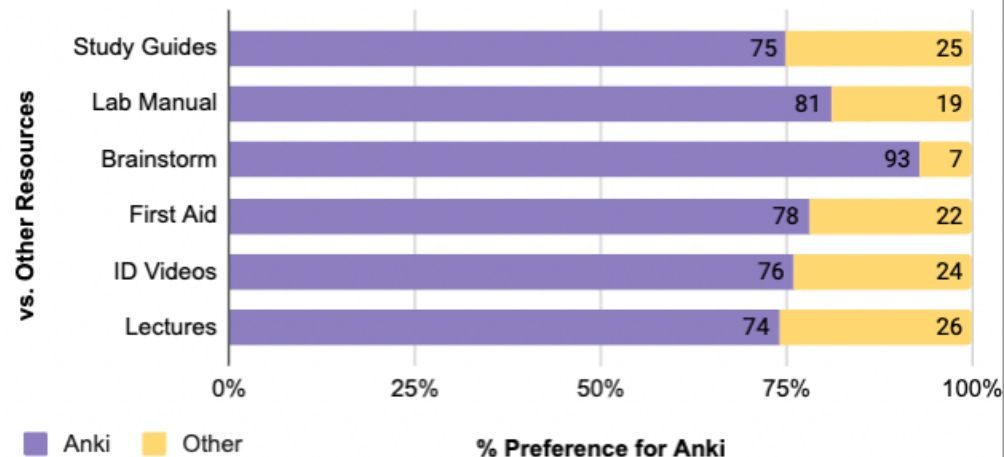
Thank  
You



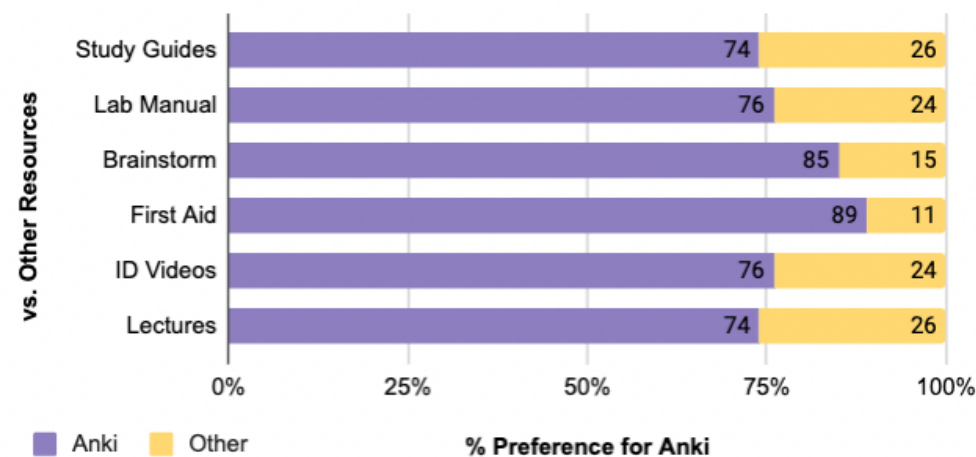
# SCRUBS

## Extra graphs: Anki vs. Both Faculty & Third-Party

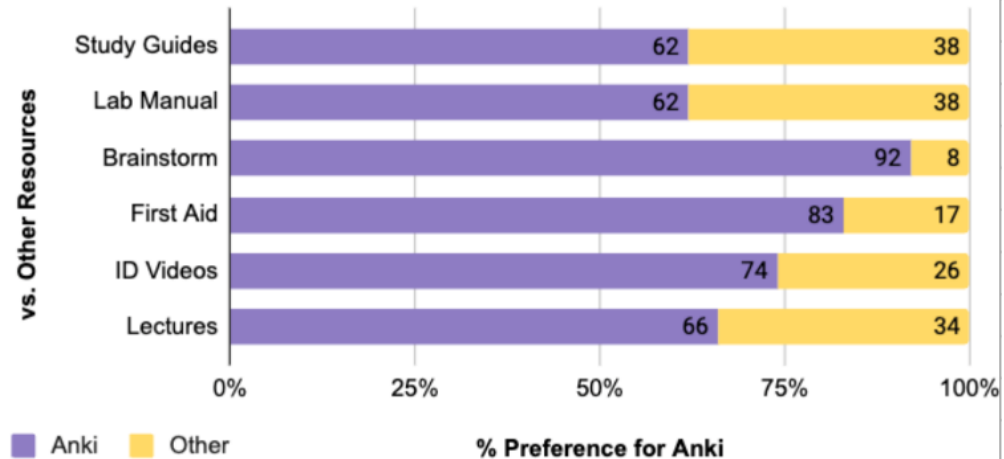
### Future Class Usefulness



### Identifying Personal Weakness



### Alignment with Curriculum



### Learning General Neuroanatomy

