

# Introducing Anki, a Spaced-Repetition Program, as a Study Tool for First Year Medical Students

Kassidy Kanja, BS, BA<sup>1</sup>, Jon Abe, BS<sup>1</sup>, Caleb Ko<sup>1</sup>, Richard Kasuya, MD, MEd<sup>2</sup>

<sup>1</sup>John A. Burns School of Medicine; <sup>2</sup>Office of Medical Education, JABSOM



## Description of Innovation

- Anki is a free flashcard program that can be downloaded from the internet onto electronic devices. It uses a learning technique called “spaced repetition,” a good learning practice (Tabibian et al., 1965).
- To use Anki to study for exams, students may either (1) make their own flashcard “decks” (collections of flashcards divided by subject) and/or (2) download flashcard “decks” from the internet (made by peers from other medical schools).
- Anki recently gained popularity among medical students (Rana et al., 2020) after it was shown that students who used Anki performed better on the USMLE Step 1 than students who did not use Anki (Deng et al., 2016).

## Context

- JABSOM MS1s were previously introduced to Anki when JABSOM’s class of 2023 made and distributed Anki decks that covered material from JABSOM’s MD2 (Cardiology and Pulmonology) to JABSOM’s class of 2024.
- Most students in the class of 2024 reported success with using Anki to study for their MD2 exams (Koshi et al., 2021).

## Objectives

1. Familiarize the MS1s (class of 2025) with Anki and its basic features.
2. Assess the effectiveness of Anki decks covering most MD1 PBL material as a study tool and as an introduction to using Anki.
3. Assess the effectiveness of online workshops, led by the authors of this project, teaching the MS1s how to efficiently use Anki and how to make their own flashcards and decks.

## Acknowledgements

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## Methods

- This project introduced Anki to MS1s (class of 2025) during their MD1 (Health and Illness) with the goal of (1) easing their transition to medical school, and (2) building on the findings of Koshi et al. that instead focused on MD2.
- Distribution of the Anki decks came with certain stipulations. First, the decks only covered material related to MD1 PBL cases. Second, they were released one at a time after students finished their corresponding PBL cases so as to not interfere with the PBL process. Lastly, they did not include PBL cases 5 and 7 to encourage students to practice making their own flashcards.
- This project also included a workshop (hosted by the authors of this project) that taught MS1s how to use Anki as well as “AnKing,” the most popular premade Anki deck for the USMLE Step 1 and 2.
- Students’ comfort with and utilization of Anki were monitored throughout the unit via weekly surveys after each PBL case was completed, followed by rudimentary statistical analysis of the results.

## Results

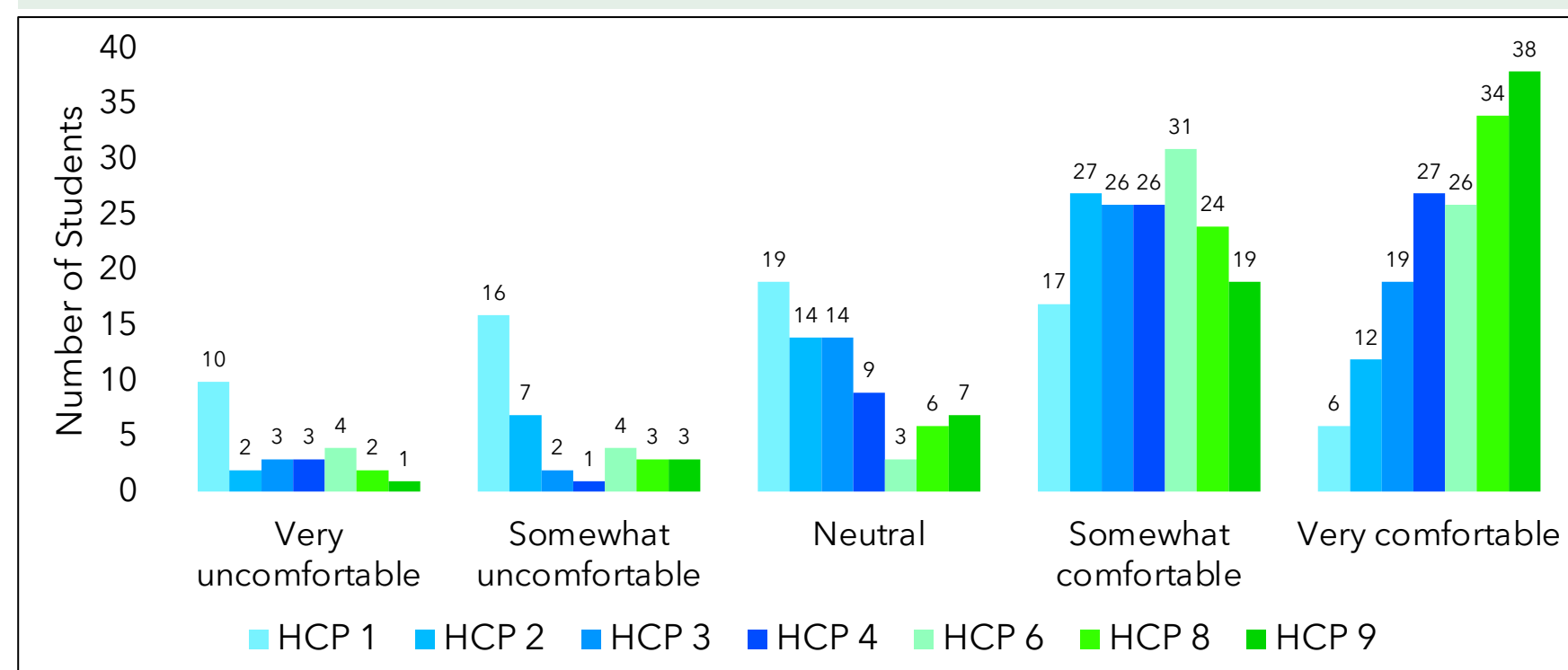


Fig. 1. Number of students by “how comfortable [they] felt with using pre-made Anki decks as a study tool?” from PBL cases 1 to 9 (omitting 5 and 7).

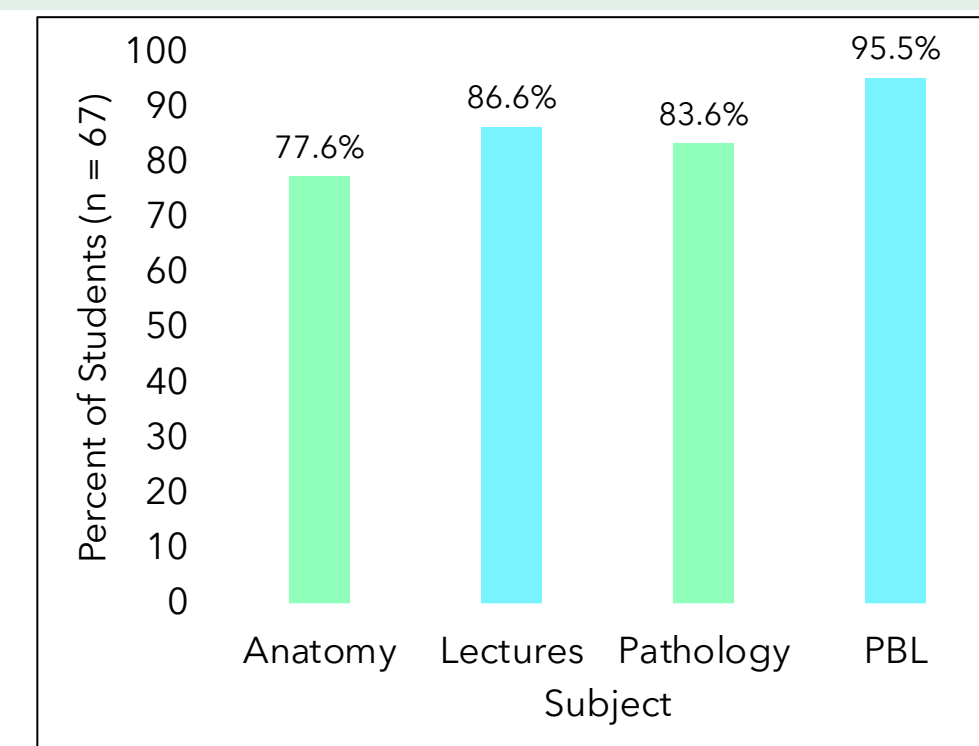


Fig 2. Percentages of students who plan to continue using Anki as a study tool, by subject matter.

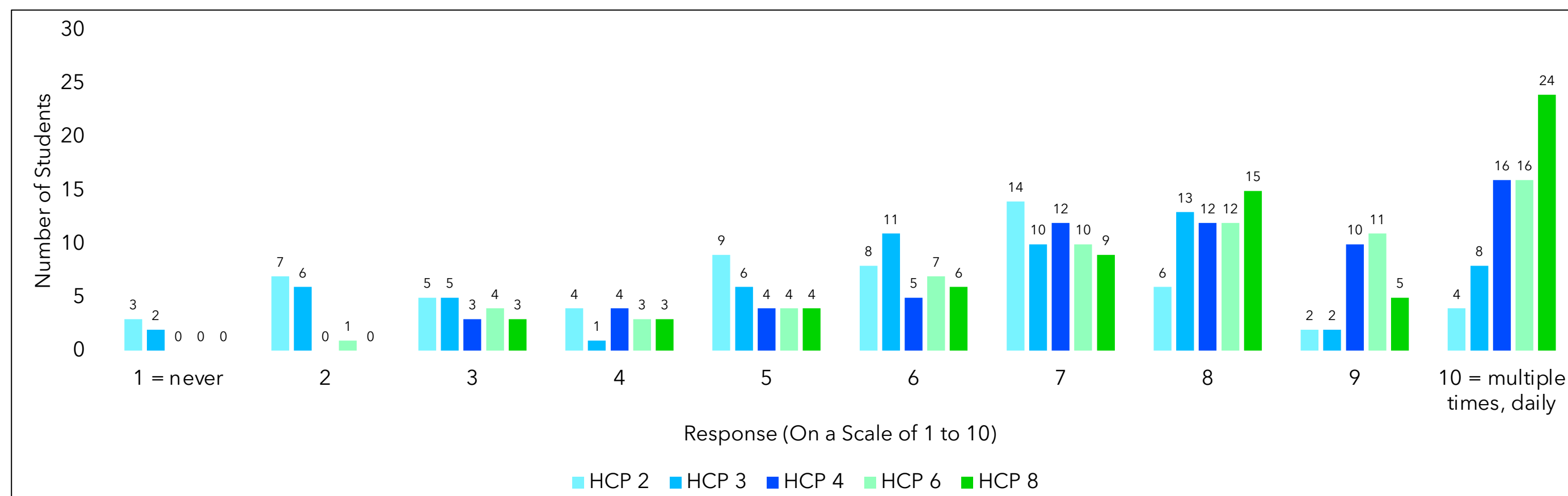


Fig 3. Number of students by “how frequently [they] use Anki as a study tool?” with 1 being “never” and 10 being “multiple times a day.”

## Results

- **Utilization Rate:** The MS1s (n=77) were emailed 9 Anki decks out of a total possible 11 PBL cases. An average of 66.14 students (85.9% of the class) used the PBL decks.
- **Change in Comfort Levels**
  - At the beginning of this project, 30.8% of respondents felt somewhat or very comfortable with creating new Anki cards.
  - At the conclusion of this project, this percentage increased to 65.7%.
- **Future Plans:** All 67 respondents would recommend Anki as a study resource to future students. All but one respondent planned to continue using Anki as a study resource.

## Discussion

- **Limitations:** This study would have benefitted from surveying the effect of Anki on more objective measures, e.g. self-reported study time and exam performance.
- **Next Steps:** This study may benefit from follow-up surveys of the MS1s’ utilization of Anki in studying for additional units (especially MD4, the end of their first year) and for the USMLE Steps 1 and 2.

## Conclusion

- **Summary:** Most MS1s gave positive feedback about the Anki decks, reporting they were helpful study tools. Furthermore, most students reported this project eased their transition into medical school, helped them develop a better study schedule, and would continue to use Anki in future units.

## Target Audience

The intended audience of this presentation includes health professionals, as well as medical school faculty, educators, and students.

## References

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## Disclosures

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