Converting School Specific Resources into Study-Friendly Formats

Brady B. Buchanan, BS[1], Hannah M. Harris, BS[1]; Gary B. Allen, BA[1]; Conor M. Pumphrey, BS[1]; Abdulazeez R. Swaiti, BS[1]; Dmitry Tumin, PhD[1]; Phillip J. Boyer, MD, PhD[1]
[1]Brody School of Medicine, East Carolina University

Brady Buchanan
Medical Education Distinction Track
East Carolina University
Greenville, North Carolina 27858
bradybb33@gmail.com

INTRODUCTION

Medical students are turning to 3rd-party resources as pressure to do well on Step 1 & 2 exams have increased.

What is Anki?

Anki, a web-based platform utilizing spaced-repetition, is among the most popular third-party resources being used.

Figure 1. Anki interface shows decks of flashcards, along with number of new(blue), incorrect(red) and review(green) cards.

Effect of Anki

- Educators are questioning its effect on engagement with in-house curriculum[1].
- Integration of Anki into curricula has been rarely described in literature[2].

Our Goal

To demonstrate that small team of students can collaborate with faculty to turn their trusted resources into Anki flashcard formats.

METHODS

Planning phase - November 2019 and May 2020 and was centered around development of a procedure for creating and sharing flashcards.

Phase 1 - April 2020 and January 2021, implementation of procedure to create flashcards alongside curricula (Table 1).

- Proofreading of cards
- Tagging of cards
- Distribution to BSOM class of 2023 before assessments

Phase 2 – Maintenance phase. Only required one student.

FLASHCARD CREATION

Front of Flashcard	Should include one piece of testable material
Back of Flashcard	Extra Section – Include screenshot of most applicable visual content considered in this order: 1. A picture or screenshot of a PowerPoint slide/s directly from the same review PowerPoint file 2. Table/s from review PowerPoint file or corresponding lecture materials 3. Picture or screenshot of a PowerPoint slide/s directly from corresponding lecture PowerPoint
	Lecture Notes Section – Screenshot of the most applicable region of the lecture notes provided with the corresponding lecture
Card Tagging	Must match specific topic in the title of PowerPoint file used to create flashcard

Table 1. Common instructions for flashcard creation

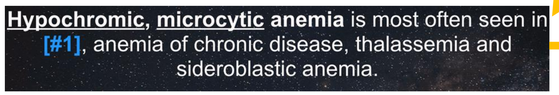

Figure 3. Front of card using cloze deletion format

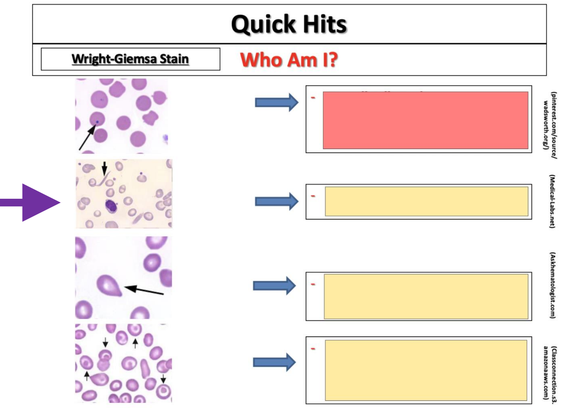

Figure 2. Front of card using image occlusion format

ORGANIZATION

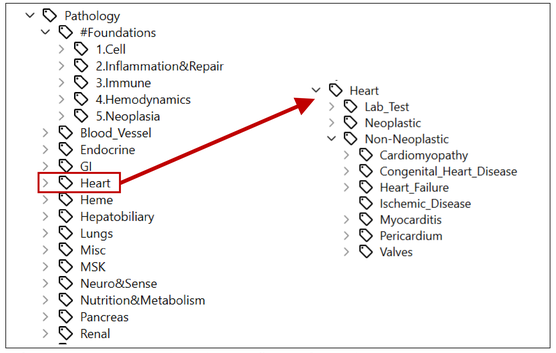

Figure 5. Organization of cards using tags

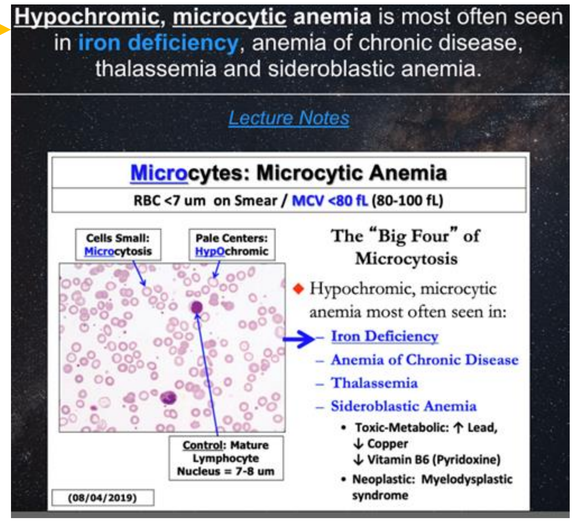

Figure 4. Front/back of card using cloze deletion format

RESULTS/DISCUSSION

Ultimately, over **25,000** PowerPoint slides were converted into **8,883** Anki flashcards corresponding to the medical pathology course at BSOM.

Benefits to Students:

1. Anki use associated with higher scores on licensing exams[3].
2. Resource creation is a way of studying and solidifying pre-clinical concepts.
3. Building connections with faculty mentors.
4. Introduction into medical education research and curricular development/innovation.

Benefits to Medical School Faculty:

1. Re-engage medical students with institutional curricula
2. Close collaboration with medical students enhances perspective of newer preferences for studying
3. Student help in updating old educational materials

We propose that the time commitment required is minimal compared to the benefits that may be achieved in pursuing such projects. Future research should seek to quantify reception of such resources and to expand their use in clinical and residency level training programs.

CONCLUSION

Our project demonstrated successful collaboration between medical educators and students to generate comprehensive, institution-specific Anki flashcards that can be used by medical students to study school curricula efficiently, reaping the benefits of spaced repetition resources. Our findings show that collaborations like ours can be undertaken successfully and may be an important step in re-engaging students in their school-specific curriculum without sacrificing preparation for national licensing exams.

ACKNOWLEDGEMENTS

Special thanks to the Medical Education Distinction track leaders and participants for valuable advice and feedback.

REFERENCES

1. Allen IE, Seaman J. Conflicted: Faculty and Online Education, 2012. (Lederman D, Jaschik S, eds.). Inside Higer Ed; 2012. https://files.eric.ed.gov/fulltext/ED535214.pdf
2. Hirumi A, Horger L, Harris DM, et al. Exploring students' [pre-pandemic] use and the impact of commercial-off-the-shelf learning platforms on students' national licensing exam performance: A focused review – BEME Guide No. 72. Medical Teacher. 2022;44(7):707-719. doi:10.1080/0142159X.2022.2039380
3. Lu M, Farhat JH, Beck Dallaghan GL. Enhanced Learning and Retention of Medical Knowledge Using the Mobile Flash card Application Anki. *MedSciEduc*. 2021;31(6):1975-1981. doi:10.1007/s40670-021-01386-9