

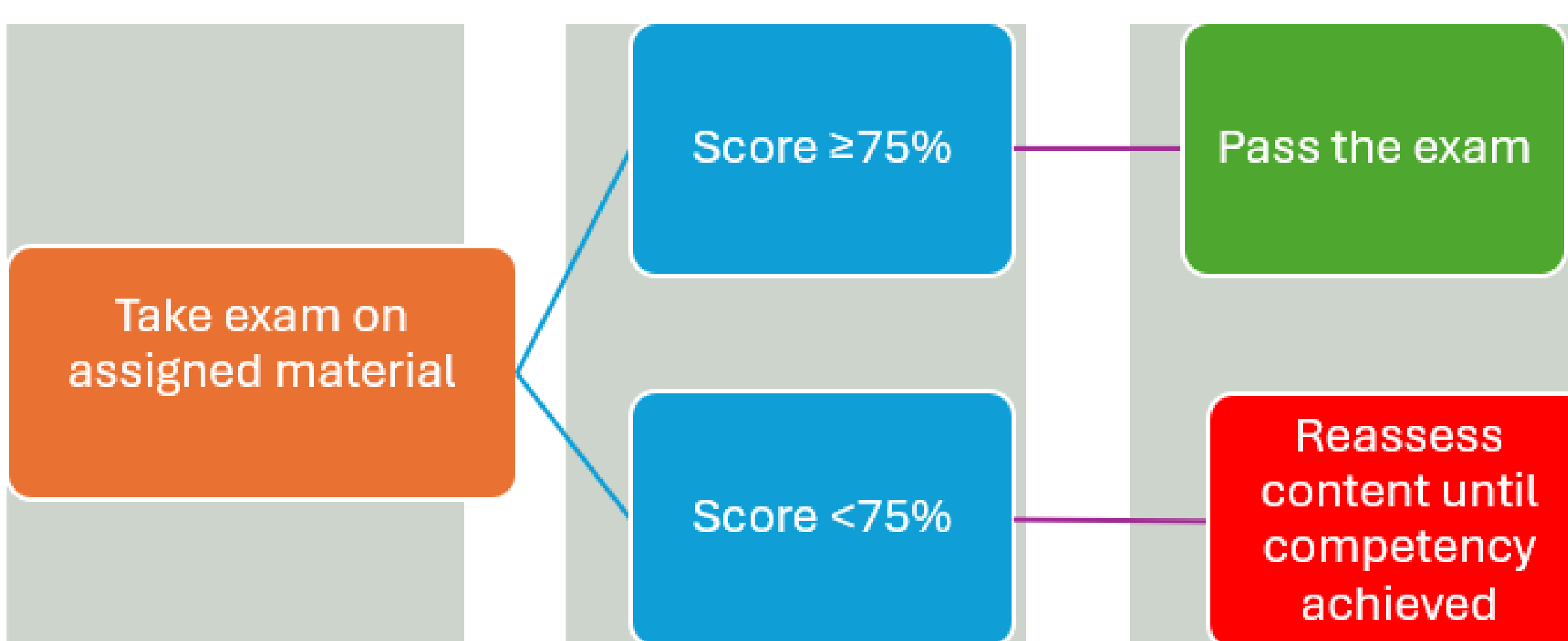
Objective

Student knowledge of top 200-300 drug facts and other basic prescription information is crucial for pharmacy education, but many students struggle with long term retention. There is a need for teaching and evaluation methods that encourage long-term learning of this material.

Background

- Traditional testing models that require students to learn material, pass a test, and then learn new material is not always conducive to long-term retention.
- Alternate testing models using repeated, spaced testing of critical material improves long-term knowledge. This is helpful to students who struggle with memorization and retention of drug information and other basic content.
- The School of Pharmacy previously required students to learn top 200 drugs 50 at a time Each group of drugs was tested one time over the course of each academic year. Anecdotal reports from students, faculty, and preceptors revealed that students would not retain the drug information from earlier tests. This issue provided an impetus for our faculty to redesign the way basic drug and other prescription information is taught in our curriculum.

Methods



- Pharmacy faculty members developed a core content of Baseline Pharmacy Knowledge (BPK) and implemented an assessment sequence as a component of the Pharmacy Skills courses which students are enrolled in each semester of their didactic years (Skills 1-6) beginning academic year 2022-2023.
- Content was added for the first 4 Skills courses and re-assessed to improve long-term retention; each exam was cumulative of all content assigned up to that point (see Figure 1).

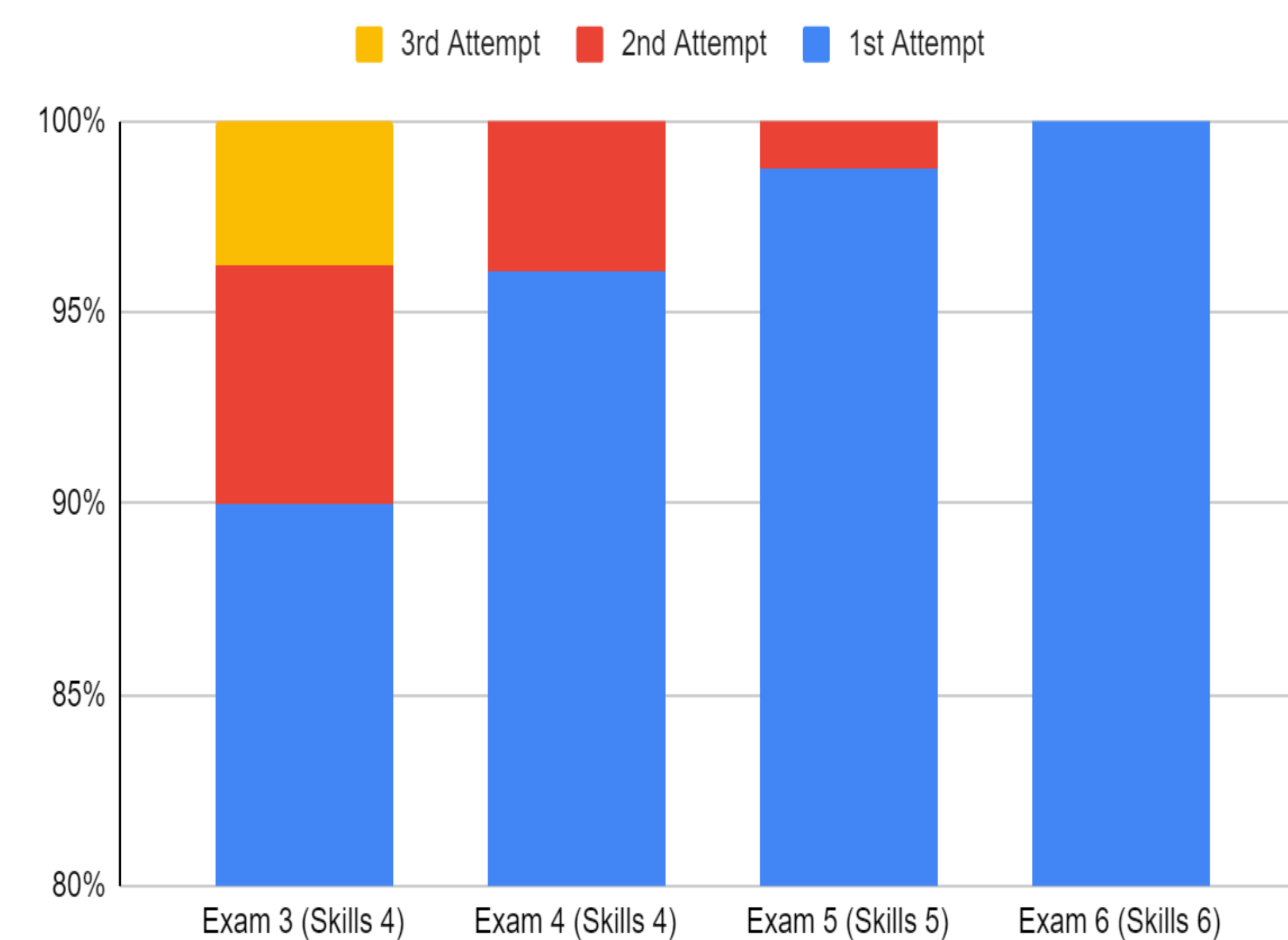
Results

Since all BPK content was included in student exams in the 4th Skills course, median scores on each exam as well as the numbers of students needing reassessment were followed for the subsequent 2 Skills courses to assess ability to retain this information, beginning with the class of 2024.

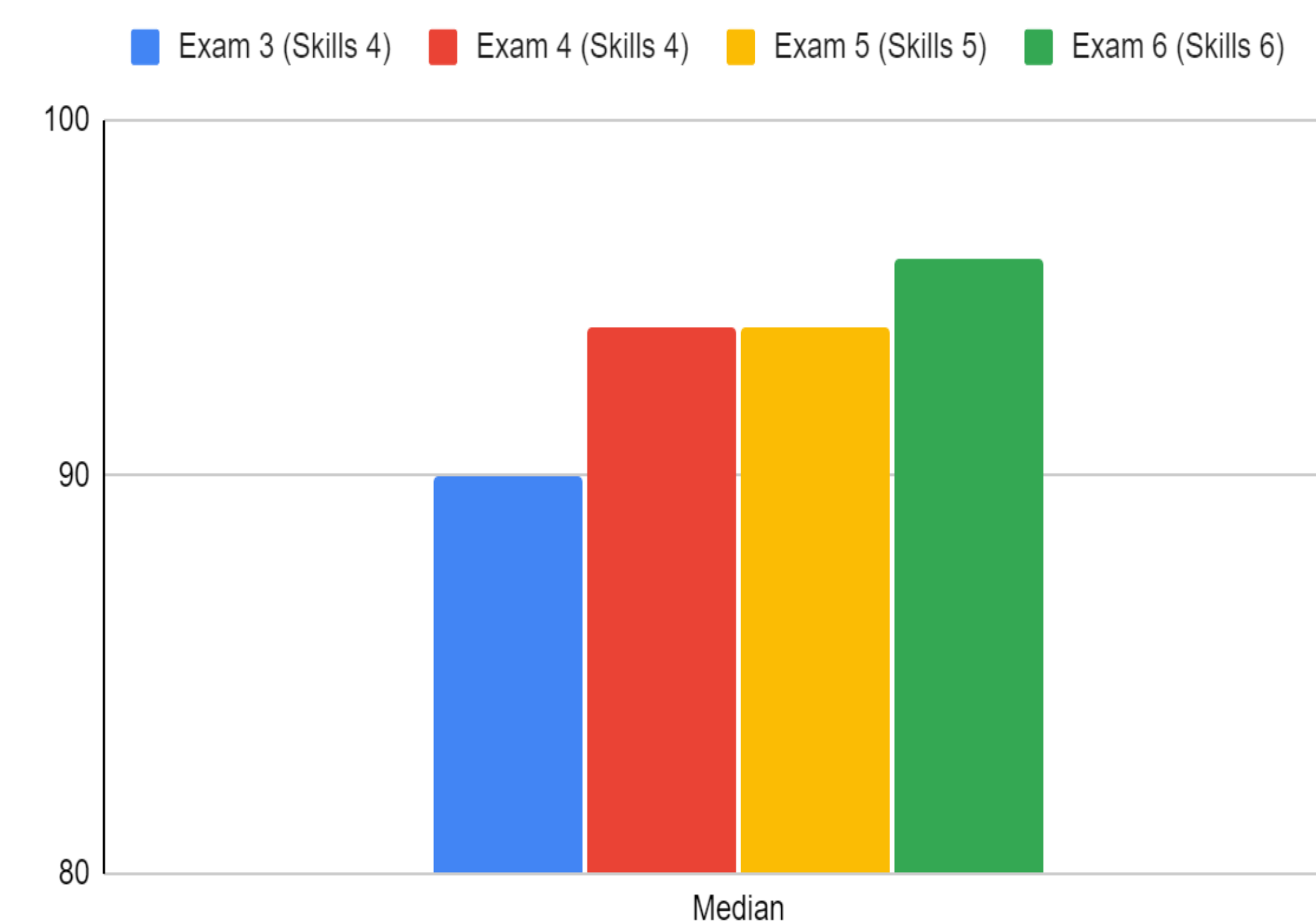
Fig 1: BPK Exam Content per Skills Course

BPK Content to learn:	Drug List A: Use/Class/Generic	Drug List B: Use/Class/Generic	Drug List A: Brand Name	Drug List B: Brand Name	Medical Information	Pharmacy Math
Skills 1, Exam 1 *MAX of 4 retakes	☑	☐	☐	☐	☐	☐
Skills 1, Exam 2 *MAX of 4 retakes	☑	☑	☐	☐	☐	☐
Skills 2, Exam 1 *MAX of 4 retakes	☑	☑	☑	☐	☐	☐
Skills 2, Exam 2 *MAX of 4 retakes	☑	☑	☑	☑	☐	☐
Skills 3 *MAX of 3 retakes	☑	☑	☑	☑	☑	☐
Skills 4 *MAX of 3 retakes	☑	☑	☑	☑	☑	☑
Skills 5 *MAX of 2 retakes	☑	☑	☑	☑	☑	☑
Skills 6 *MAX of 2 retakes	☑	☑	☑	☑	☑	☑

Number of Attempts to Pass (%)



Median Exam Scores (%)



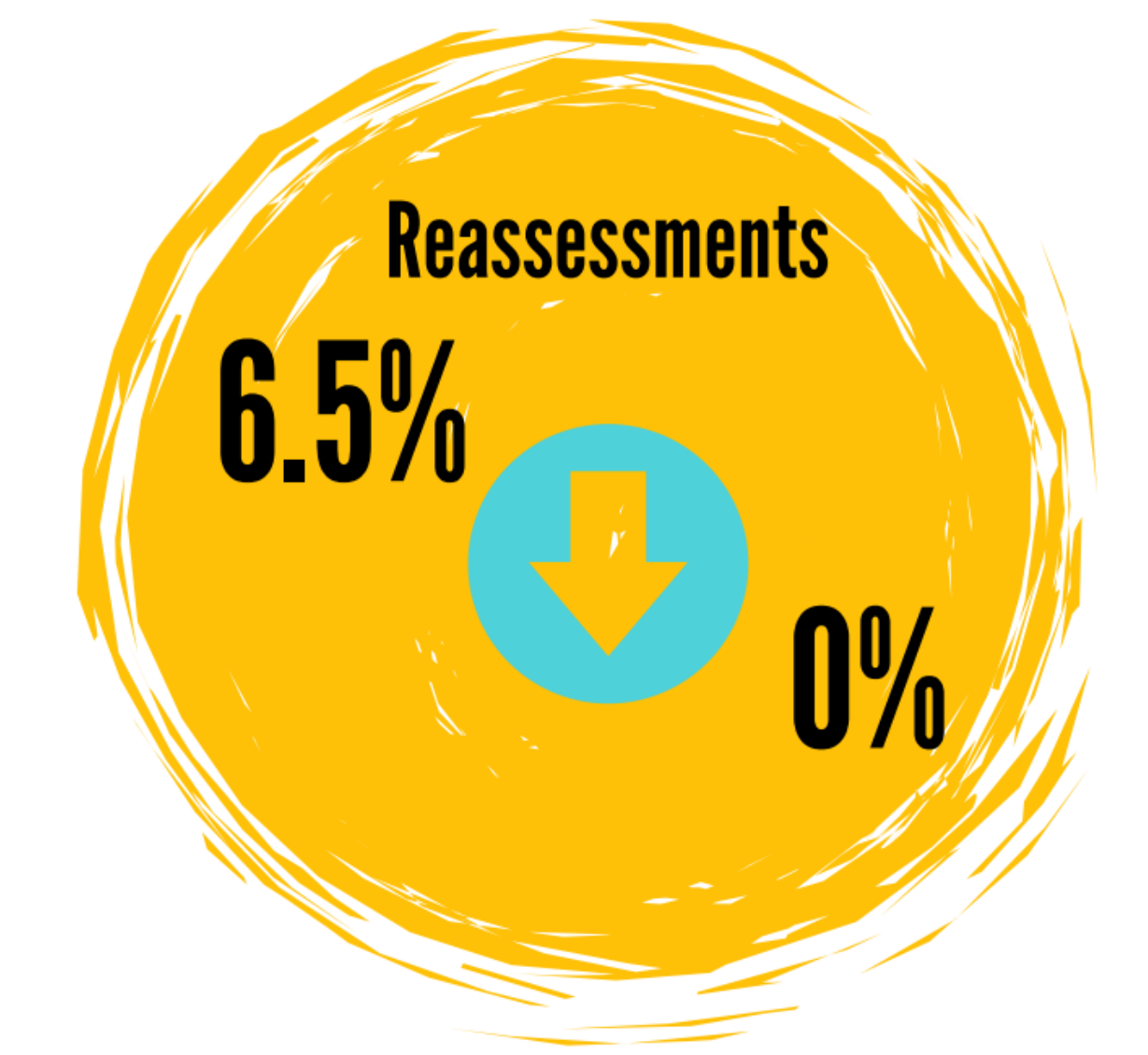
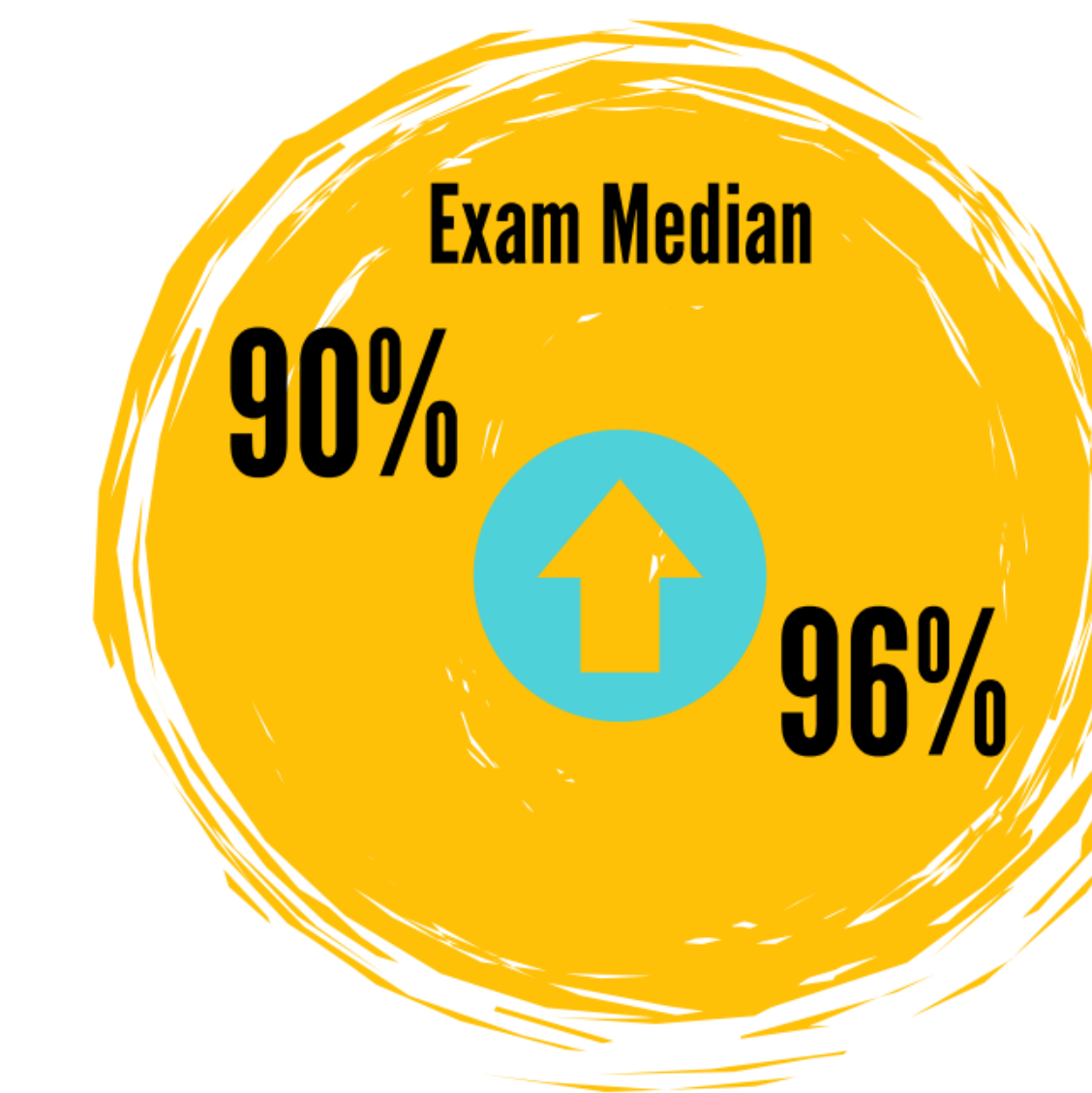
Discussion

- Competency in basic information on the top 200-300 drugs and other core content are essential for APPE readiness. Modification to the way this content is taught and tested encouraged pharmacy students at our school to prioritize long-term retention.
- Anecdotal reports from students during the transition year indicate that they felt more confident in their knowledge and more prepared for their experiential rotations. Students appreciated the repeated testing of the BPK Exam material.
- Limitations of this ongoing curricular assessment includes the challenges of students who change graduation class due to academic or personal struggles

Conclusions

A sequence of cumulative exams in didactic semesters was effective in improving the long-term retention of top 200-300 drug facts and other core pharmacy knowledge including medical terminology, lab values, sig codes, and math.

Requiring reassessment for exam scores <75% ensured that students who were struggling to learn and maintain basic drug facts and other essential pharmacy knowledge would gain this knowledge before progressing.



References

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The authors declare no potential conflicts of interest with respect to the research presented.