

CHANGE IN PHARMACY CALCULATIONS PERFORMANCE AFTER TRANSITIONING FROM STANDALONE, LIVE COURSE TO LONGITUDINAL, SELF-GUIDED FORMAT

Dawn Battise, PharmD; Jenn Wilson, PharmD; Rashi Waghel, PharmD; Heather Kehr, PharmD; John Brock Harris, PharmD; Wesley Haltom, PharmD

INTRODUCTION:

- Given that calculations account for 14% of NAPLEX content it is important to determine optimal delivery methods in pharmacy curricula.

OBJECTIVES:

- To evaluate student pharmacy calculations performance after transitioning from a live, standalone, single-semester course to a longitudinal, self-guided format embedded in the first four semesters of a skills laboratory series.

METHODS:

- Pharmacy calculations content delivery was modified from 1) original didactic cohort in a live, standalone, single semester during fall P1 year to 2) revised, self-guided cohort using on-demand videos, practice problems, and recitation over P1 and P2 years. Weekly quizzes were used to assess learning of content.
- Performance on key topic areas was compared between the original end-of-year comprehensive assessment and the revised end-of-year, high stakes-calculations assessment using student t-tests.

RESULTS:

- P1 students** in the self-guided cohort (n = 102) outperformed the didactic cohort (n = 170) on calculation items ($p < .001$).
 - Results driven by performance in prescription medication orders, systems of measurement, altering product strength, and patient-specific dosing.
- P2 students** in the self-guided cohort (n = 58) also outperformed the didactic cohort (n = 155) ($p < .001$).
 - Results driven by performance in dimensional analysis, isotonicity, constitution of solutions, patient-specific dosing, and reducing and enlarging formulas.

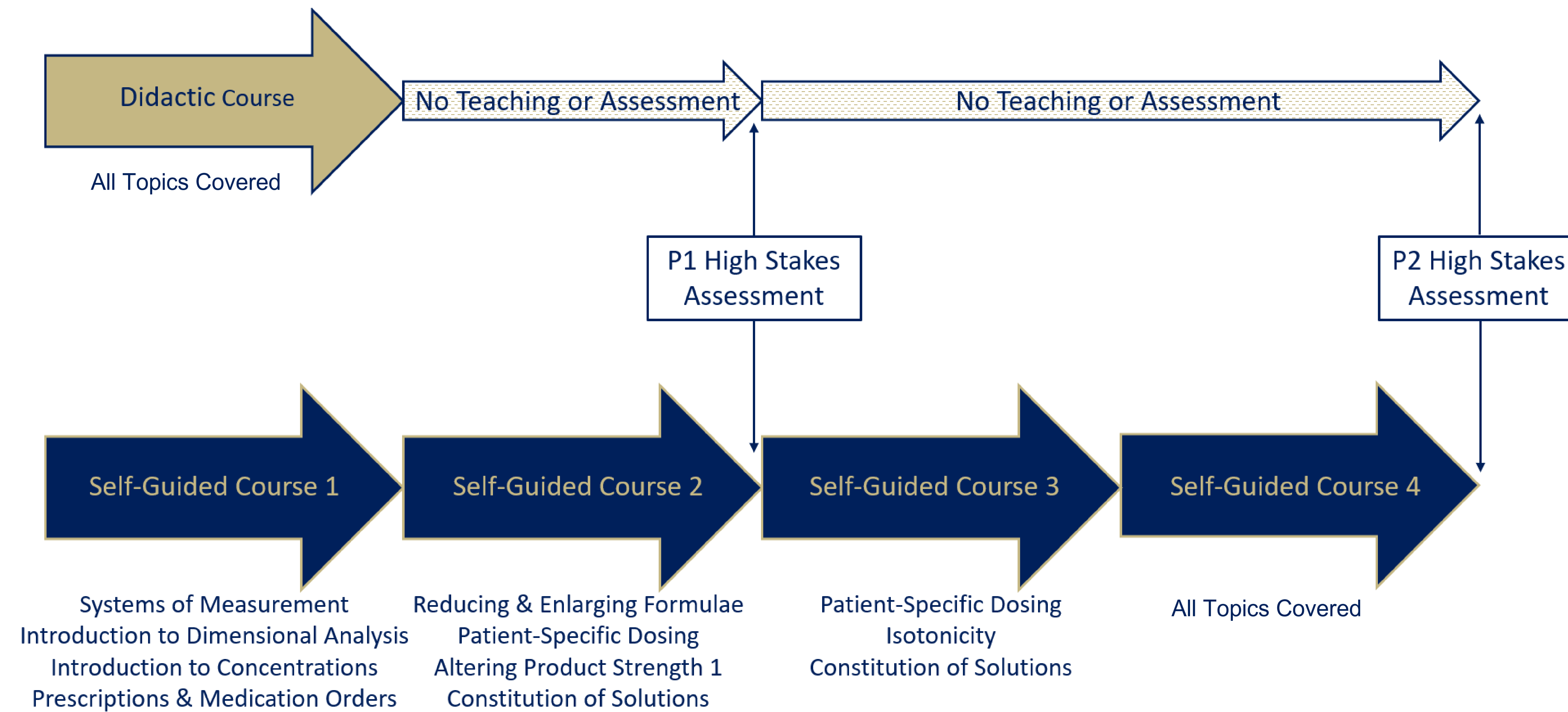
IMPLICATIONS:

- A longitudinal, self-guided format may be a reasonable option for pharmacy calculations content delivery.
- Student pharmacy calculations performance may improve in specific areas using this format

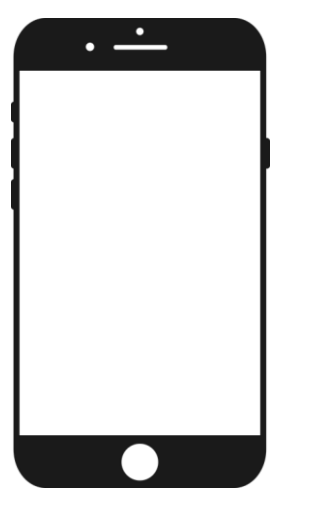
REFERENCES:

- NAPLEX competency statements. National Association of Boards of Pharmacy. Accessed 29 May 2024 <https://nabp.pharmacy/programs/examinations/naplex/competency-statements/>; 1 January 2021.

COMPARISON OF CURRICULAR DESIGNS



Take a picture to learn more about the distribution of self-guided calculations topics over the curriculum and to view the graphics



COMPARISON OF COHORT 1 VERSUS COHORT 2 PERFORMANCE ON CALCULATIONS TOPICS

