

Comparison of By-domain performance outcomes within course exams to NAPLEX domains



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Abstract:

Objective:

The purpose of this work is to compare performance of assessment items from TTUHSC SOP course exams with NAPLEX performance domains.

Methods:

Items in all course exams are tagged to ACPE subdomains and related ability statements using ExamSoft. A crosswalk was created between these ability statements and the six domains of the NAPLEX exam. For the cohort graduating in 2023, “by-domain” performance was evaluated for each competency area tested in pre-APPE SOP course exams, and this performance was compared to each corresponding NAPLEX test domain from the 2023 NABP school report. The practice of tagging of assessment items to competency statements commenced with the 2020-2021 academic cycle, limiting the capability to perform “by-domain” analysis for this cohort to assessments conducted during their P2 and P3 curriculum. Data was deidentified; IRB review was not required.

Results:

The total number of assessment items included in this analysis was 4754. A definition of each NAPLEX test domain is shown in Table 1. The proportion of assessment items from each performance area within TTUHSC SOP course exams and each corresponding NAPLEX test domain are shown in Figure 1. A comparison of performance outcomes in TTUHSC SOP competency areas and NAPLEX test domains is reflected in Table 2.

Conclusions:

Though limited to P2 and P3 curriculum, it was possible to identify competency areas within school exams for which performance did, or did not, appear to correlate with that of performance in related NAPLEX test domains. The results suggest areas of curriculum and assessment that may require attention.

Table 1. NAPLEX Test Domains

Domain	Description
1	Obtain, interpret, or assess data, medical, or patient information
2	Identify drug characteristics
3	Develop or manage treatment plans
4	Perform calculations
5	Compound, dispense, or administer drugs, or manage drug delivery systems
6	Develop or manage practice or medication used systems to ensure safety and quality

Figure 1. Proportion of assessment items corresponding to NAPLEX test domains

The proportion of items representing Domain 3 was the same in TTUHSC SOP assessments as in the NAPLEX exam. Proportions were similar across most domains, with the greatest differences seen in the representation of Domains 1 and 6. Though this data set was limited to items included in the P2 and P3 curriculum, this cross-walk exercise demonstrates that it is possible to estimate how well the focus of curriculum exams mirrors that of the NAPLEX exam.

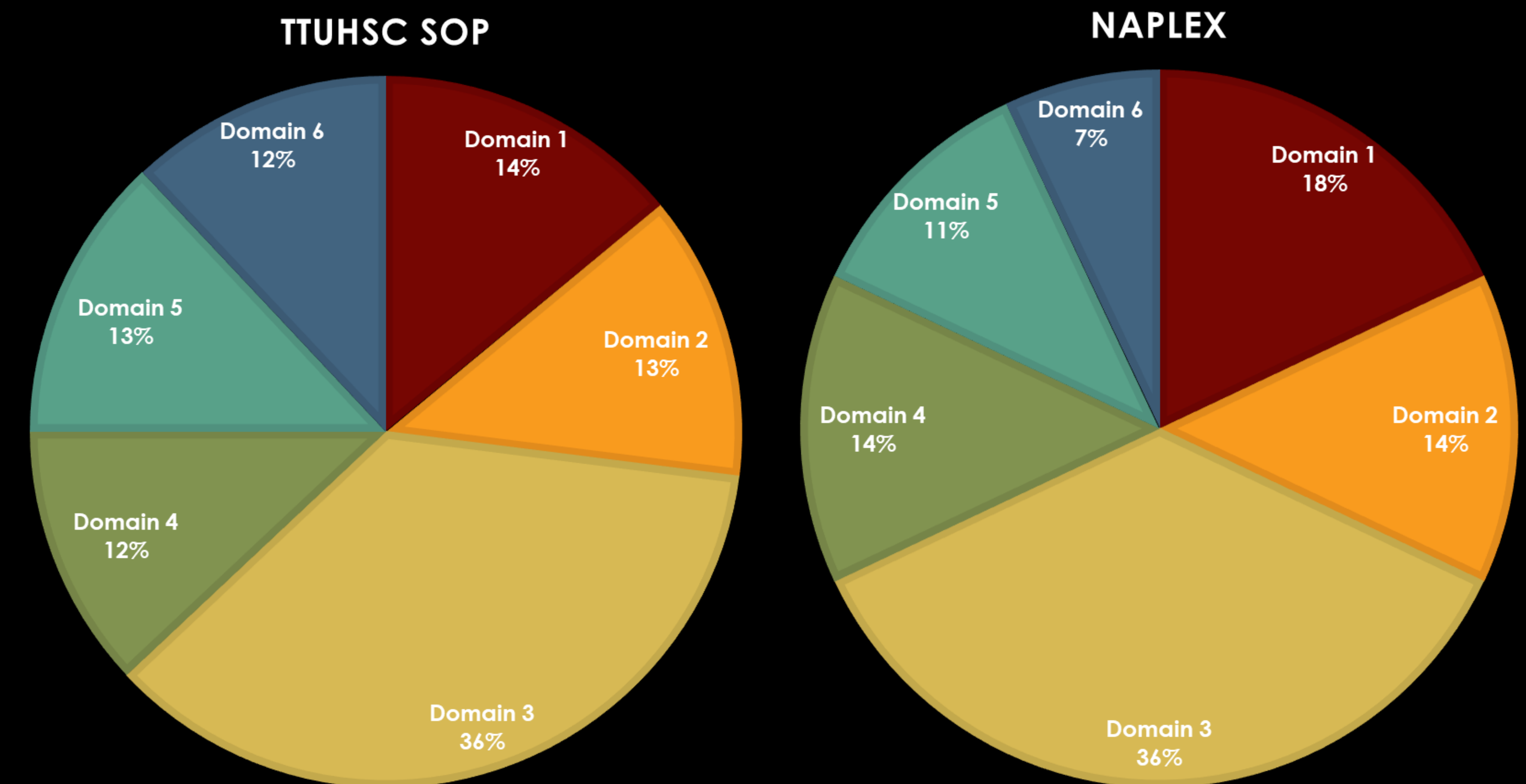


Table 2. Class of 2023 By-Domain Performance Difference

	TTUHSC	NAPLEX	Difference (N-T)
Domain 1	81.72444	84.1	2.37556
Domain 2	83.51722	68.2	-15.31722
Domain 3	81.95706	72	-9.95706
Domain 4	79.03964	72.8	-6.23964
Domain 5	76.79	78.1	1.31
Domain 6	81.62	76.5	-5.12

While the NABP report provides valuable information to denote which test domains are associated with either successful or poor performance, comparison to performance in corresponding curricular assessments provides interesting insights:

- Performance was most similar between TTUHSC and NAPLEX exams for Domains 1 and 5. This might suggest that, for the content tested in these areas, performance on curricular assessments predicts performance on corresponding NAPLEX test domains (whether successful or poor). This can differentiate curricular areas in need or reinforcement.
- By contrast, performance differed the most for Domains 2 and 3. In particular, Domain 2 was associated with highest performance on course exams but lowest for NAPLEX. This might suggest that attention needed in these areas should be on the assessments themselves to evaluate appropriate scope, level, or timing within the curriculum. This is especially important when successful performance on curricular exams does not translate to successful performance in the corresponding NAPLEX domain.