

Identifying Optimal Selection Criteria for the Direct Admit Program

UNIVERSITY OF THE INCARNATE WORD.

FEIK SCHOOL of PHARMACY

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Background

- The Feik School of Pharmacy (FSOP) Direct Admit (DA) Program, developed in 2012, offers first-time freshmen students interested in a Doctor of Pharmacy (Pharm.D.) degree opportunity for direct admittance.¹
- FSOP is one of 53 pharmacy schools with an early identifying admission program.²
- A review of the literature indicated that early identifying admission programs for health professions has not been widely studied.³

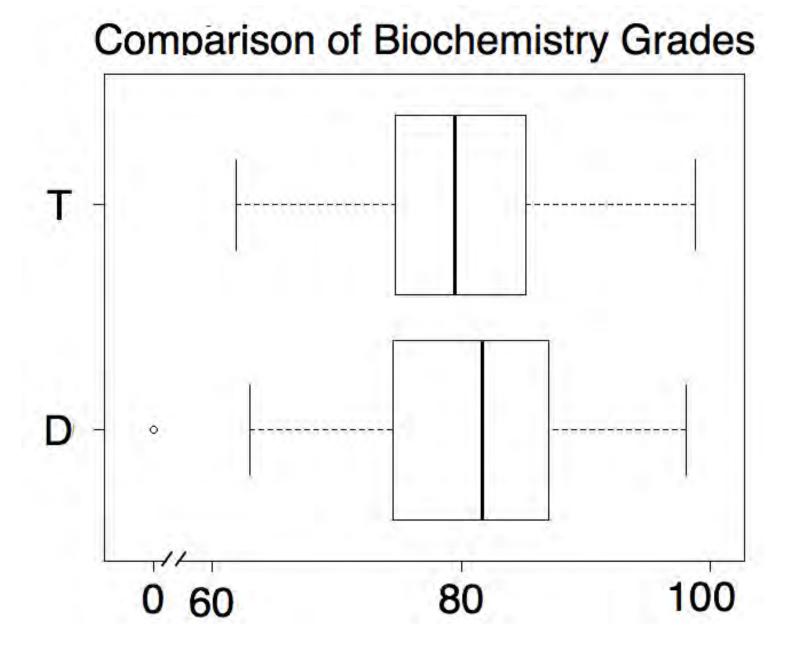
Objectives

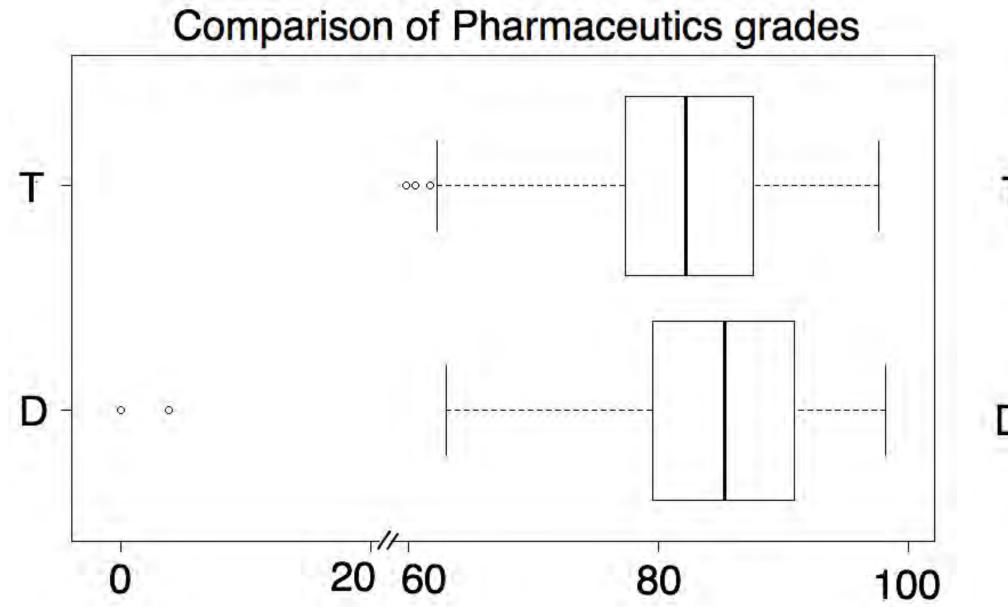
- To determine if the Feik School of Pharmacy DA program is using the best criteria in identifying students to successfully progress through the PharmD program.
- The hypothesis is DA students perform significantly better than Traditionally-admitted pharmacy students.

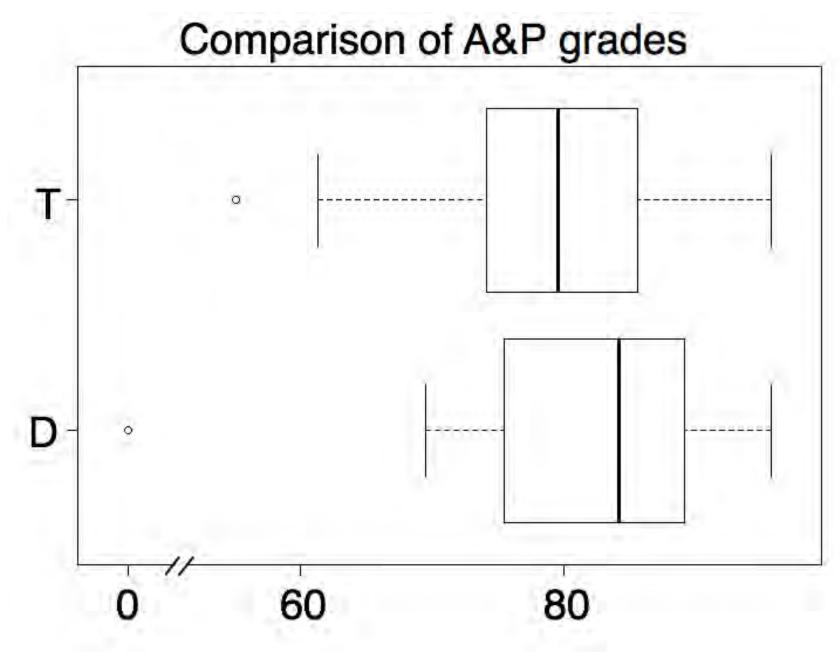
Class of 2018/2019/2020 Direct Pre-Pharmacy P1 Admit GPA (3.5) Biochemistry A&P I Pharmaceutics Model $log(P(success)/P(failure))=\alpha+\beta1[MS GPA]+\beta2[SAT MATH]+\epsilon$.

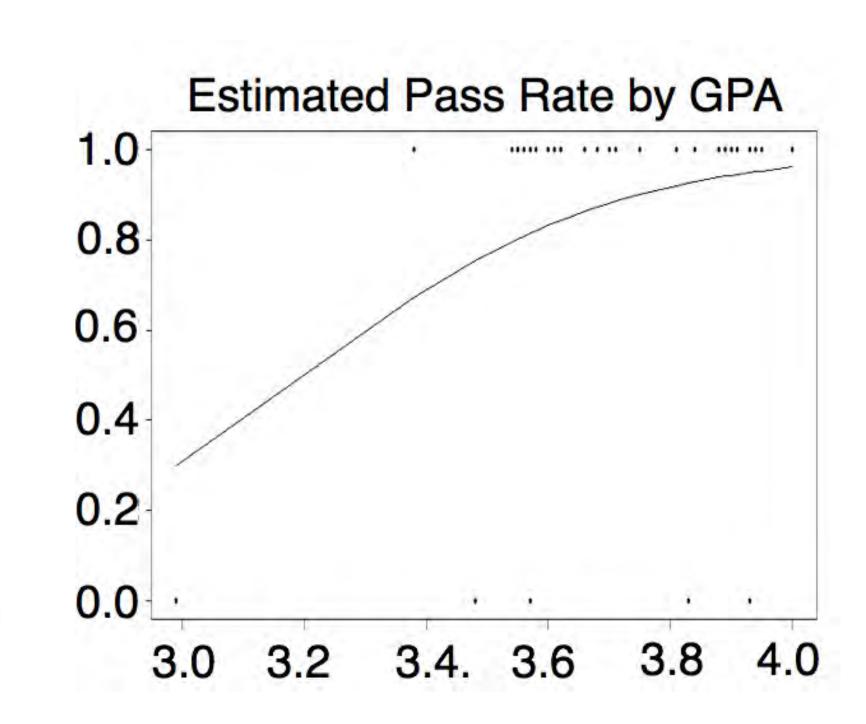
Results

- This study analyzed 38 DA and 215 Traditional students.
- After removing year-to-year variation in average grades, there were no significant differences in the average grades for Anatomy & Physiology (p = .434), Biochemistry (p = .269), or Pharmaceutics (p = .052).
- The Math and Science GPA was found to have a significant effect on the probability of a successful semester (p = .019) while SAT Math was not found to have a significant effect (p = .253). SAT Math score was removed from the model, resulting in log(P(success)/P(failure))=-14.645+3.767[MS GPA]+ε, with the Math and Science GPA coefficient having a p-value of .0253.









Implications

- In all three courses, the sample means suggested that the Direct Admit students score slightly higher in the courses on average. However, a statistically significant difference was not detected. A modestly larger sample is likely to have detected a difference between traditional and DA students for Pharmaceutics.
- The current criteria for DA bring in students who perform at least as well as traditional admission, and therefore relaxing the criteria can provide the program with more students who perform well.
- The results of the logistic probability model indicated that SAT Math score is not a significant predictor of first-year success, but Math and Science GPA is, and therefore such a model can be used to estimate the success rate of students admitted with specified GPA.
- However, more data from future graduating classes will be needed to make accurate predictions of the probability of firstyear success, as prediction bounds for success probability are still very wide. The original data will be supplemented with data from future graduates to update the model.
- As SAT Math is not a significant predictor of first-year success, relaxing or eliminating SAT math criteria could result in an increase in DA students without affecting the students' progression through the P1 year.

References

- 1. University of the Incarnate Word. Health Professions Direct Admit Programs. http://www.uiw.edu/healthprofessions/. Accessed on May 22, 2018.
- 2. American Association of Colleges of Pharmacy. Pharmacy school admission requirements. https://www.aacp.org/sites/default/files/2018-03/psar-18-19%20Table%201.pdf. Accessed on May 22, 2018.
- 3. Edelin KC, Ugbolue A. Evaluation of an early medical school selection program for underrepresented minority students. Acad Med. 2001; 76: 1056-1059.

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