Disciplinary Differences in Faculty Emphasis on Deep Approaches to Learning
Comparing Conceptualizations of Academic Discipline

Stephen C. Hiller
Thomas F. Nelson Laird


Purpose and Research Questions

1. How does faculty emphasis on DAL differ by academic discipline, as categorized by Biglan?
2. How does faculty emphasis on DAL differ by academic discipline, as categorized using Holland’s theory?
3. How do Biglan and Holland conceptualizations of discipline differ in their relationship to faculty emphasis on DAL?

Frameworks

Approaches to Learning
• Focus on the process of learning rather than the outcome
• Primary approaches: deep approaches and surface approaches
• Deep approaches include the intention to understand meaning and make connections

Biglan’s Dimensions
• Biglan sought to identify characteristics that distinguish disciplines
• Empirically identified 3 dimensions:
  a) Hard vs. Soft
  b) Pure vs. Applied
  c) Life vs. Non-life
• Substantial work has validated their use

Holland’s Theory
• Theory of career choice that was applied to faculty and students in higher ed
• Six categories based on individuals’ personalities:
  a) Realistic
  b) Investigative
  c) Artistic
  d) Social
  e) Enterprising
  f) Conventional
• Disciplines can be categorized by the dominant personality type of members

Data and Respondents

• 2019 administration
• 6,548 faculty whose disciplines could be categorized using both Biglan and Holland
• 56 disciplines (118 four-year institutions)

MEASURES

Disciplines categorized by:
a) Each of 3 Biglan’s dimensions
b) 8 categories derived from Biglan’s dimensions
c) 5 categories by Holland’s theory

Control variables include individual and course characteristics: gender identity, sexual orientation, race/ethnicity, years of teaching experience, rank/title, number of courses taught, course division, course size, course format, and whether course meets a general education requirement
How does faculty emphasis on DAL differ by academic discipline, as categorized by Biglan?

Controlling for individual and course characteristics:
- Hard/soft dimension explains approximately twice the variance than other two dimensions and more than the control variables alone
- Faculty in soft, applied, and life disciplines exhibit positive relationships with DAL

All else constant, considering the 8 categories:
- Slightly more variance explained than just hard/soft dimension
- Despite differences in explanatory power, the three dimensions dynamically interact

How do Biglan and Holland conceptualizations of discipline differ in their relationship to faculty emphasis on DAL?

- Differences between the explanatory power of Biglan and Holland are ultimately small but notable
- Biglan’s hard/soft dimension explains a small amount more variance (R² = 0.212) than Holland categories (R² = 0.175), with all three Biglan dimensions (8 categories) explaining marginally more variance (R² = 0.220).
- Descriptive consideration of the ranges of category effect sizes, suggests that the 8 Biglan categories help explain disciplinary differences especially among faculty emphasizing DAL less than the average faculty member

Comparing Conceptualizations of Academic Discipline

- This study provides further evidence of the importance of accounting for discipline and how we conceive of it in research and practice
- For faculty emphasis on DAL, Biglan’s conceptualization, particularly the Hard-Soft dimension, seems most appropriate to use
- Choosing to use Holland’s conceptualization should be done for theoretically or empirically supported reasons
- For researchers and educational developers, findings suggest it need to carefully consider and reflect on disciplinary contexts when studying or supporting college teaching (e.g., effect of soft or social fields)

Thanks so much for joining us!
Find the paper and our slides as well as other information about FSSE at fsse.indiana.edu
Questions about the paper can be directed to Stephen Hiller: schiller@indiana.edu
Blog: NSSEsightings.indiana.edu
@NSSEsurvey