

# Understanding the Effects of Faculty Work on Promoting Essential Learning Outcomes

## How Disciplinary Context Matters

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# Research Focus

To better understand the effect of faculty time spent on research and scholarly activities on promoting essential learning outcomes

And to what extent the context of academic discipline moderates this effect



# Cultural Forces

“The distinctive preferred norms, values, and practices of faculty in the respective academic environments transcend the institutional settings in which they are organizationally housed” (Smart & Umbach, 2007, p. 191).

The context of academic discipline has found to moderate the effect of how faculty

- Structure their courses
- Interact with students
- Promote learning goals and outcomes



# Economic Forces

- Across nearly all institutional types faculty are spending more time on research (e.g. Milem, Berger, Dey; 2000)
- Evidence is mixed as to whether teaching has suffered (e.g. Massey & Zemsky, 1994; Milem, Berger, Dey, 1997)
- Consensus is emerging within and outside of higher education as to the essential learning outcomes for the 21<sup>st</sup> century (e.g. AAC&U, 2007)
- *All faculty* considered are a vital link to preparing students



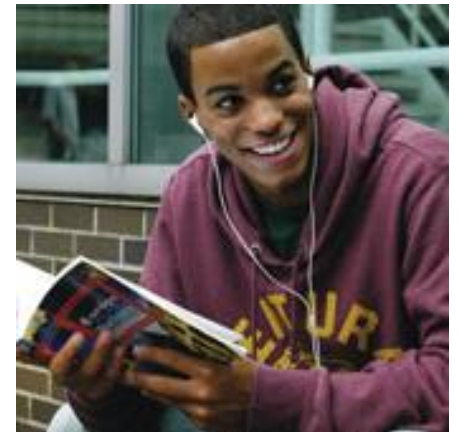
# Research Questions

Does faculty time spent on research and scholarly activities have a *positive or negative* effect on their promotion of essential learning outcomes?

Is the effect consistent across disciplinary areas?



# Faculty Survey of Student Engagement 2008



# FSSE Instrument

- Online survey
- Design to complement the National Survey of Student Engagement
- In 2008, over 23,000 faculty from 160 institutions
- Average institutional response rate was 49%
- Two survey options (course-based & typical student)





# Sample characteristics

## 8,708 faculty members

- 45% Women
- 77% White
- 6% non-U.S. citizens
- 84% Full-time
- 22% Lect/Inst
- 27% Assist, 25% Assoc
- 27% Full Professor

## Their courses

- 58% Upper Division
- 47% Gen Ed Course
- Avg course size = 36

- **From 112 U.S. Inst**
  - 36% from research/doc
  - 42% from master's
  - 33% from private inst

## Discipline

- 30% Arts & Hum
- 6% Biology
- 11% Business
- 2% Education
- 4% Engineering
- 12% Physical Sci
- 16% Social Science
- 8% Professional
- 9% Other



# Dependent Measures

**Faculty were asked to what extent they structured their course so that students learn and develop in various areas**

- Intellectual skills, 6-items ( $\alpha = 0.61$ )
- Practical skills, 5-items ( $\alpha = 0.63$ )
- Individual & Social Responsibility, 4-items ( $\alpha = 0.82$ )

\*See table 2 in handout

# Independent Measures

Faculty were asked how many hours in a 7-day week spend doing research and scholarly activities

Response set: 0, 1-4, 5-8, 9-12, 13-16, 17-20, 21-30, More than 30

- Two groups of faculty are identified
  - Non-research oriented (spend 4 or less hours/week) – 41%
  - Research oriented (spend 5 to 30+ hours/week) – 59%

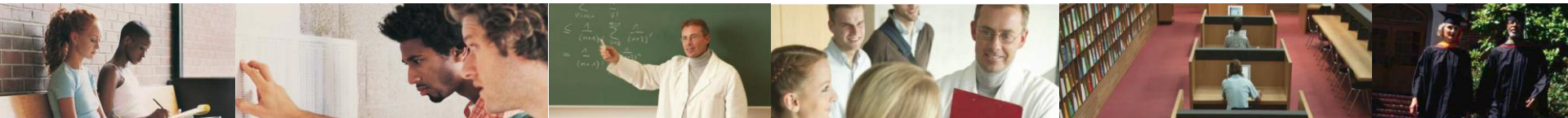


# Independent Measures

## Categorizing Discipline

- Biglan's (1973) categorizations is used to group disciplinary areas
  - Hard vs. Soft
  - Pure vs. Applied
  - Life vs. Non-Life
- 8 resulting categories (see table 1 in handout)

Hard-Pure-Life (biology)	Soft-Pure-Life (sociology)
Hard-Pure-Non Life (chemistry)	Soft-Pure-Non Life (history)
Hard-Applied-Life (agriculture)	Soft-Applied-Life (educ)
Hard-Applied-Non Life (enrg)	Soft-Applied-Non Life (bus)



# Analyses

- 3 regression models
- Standardized dependent variables
- Mean-centered independent variables
  - Conduct research and scholarly activities
  - Disciplinary area
  - Faculty, course, institutional controls (see table 3)
- Interaction terms = discipline x research
- Adjusted mean scores reported



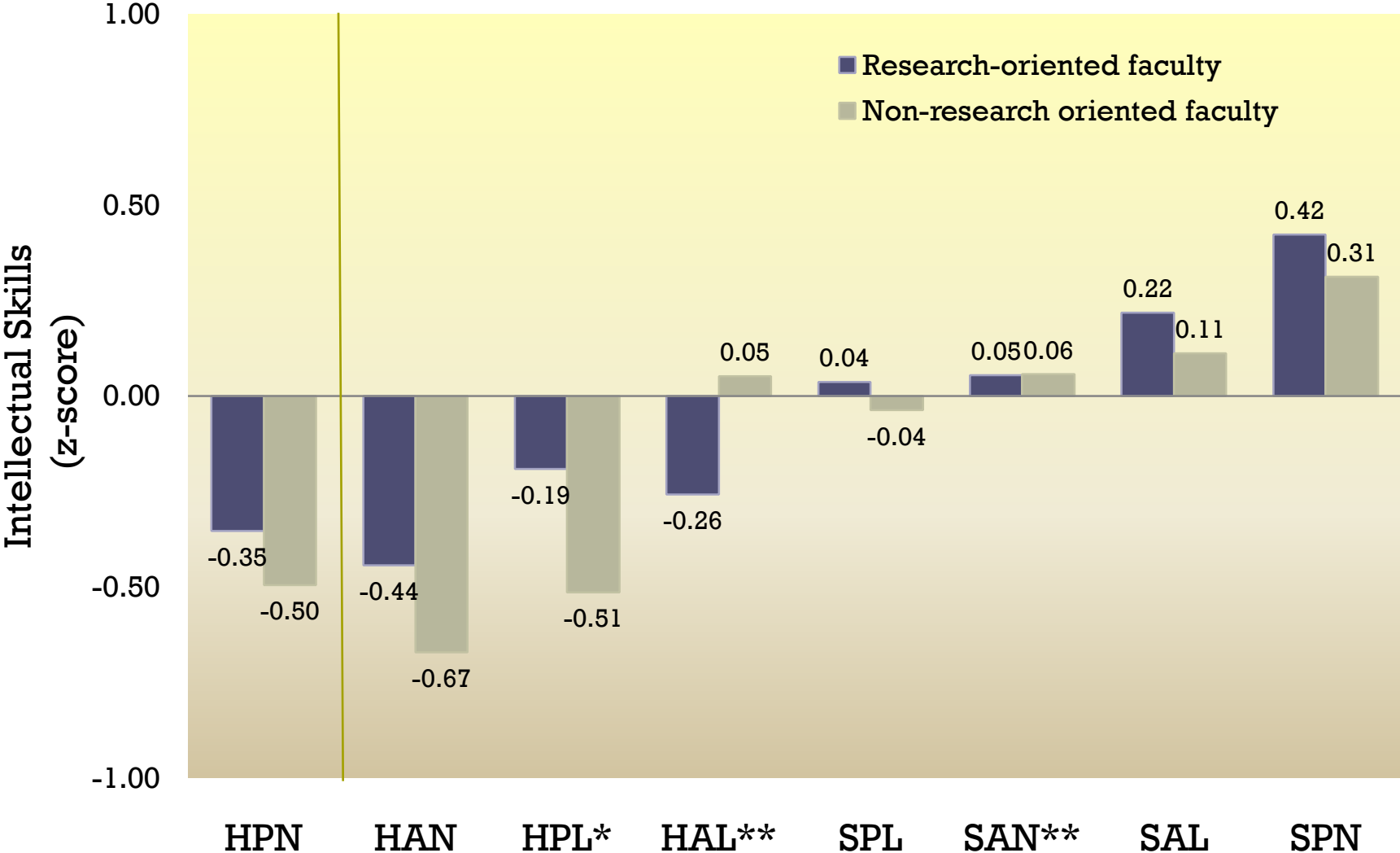
# Results

- On average, faculty who spend time on research and scholarly activities tend to promote essential learning outcomes more than their non-research counterparts
- However, the positive effect of “spending time on research” is not consistent across all disciplinary areas



# Promoting Intellectual Skills

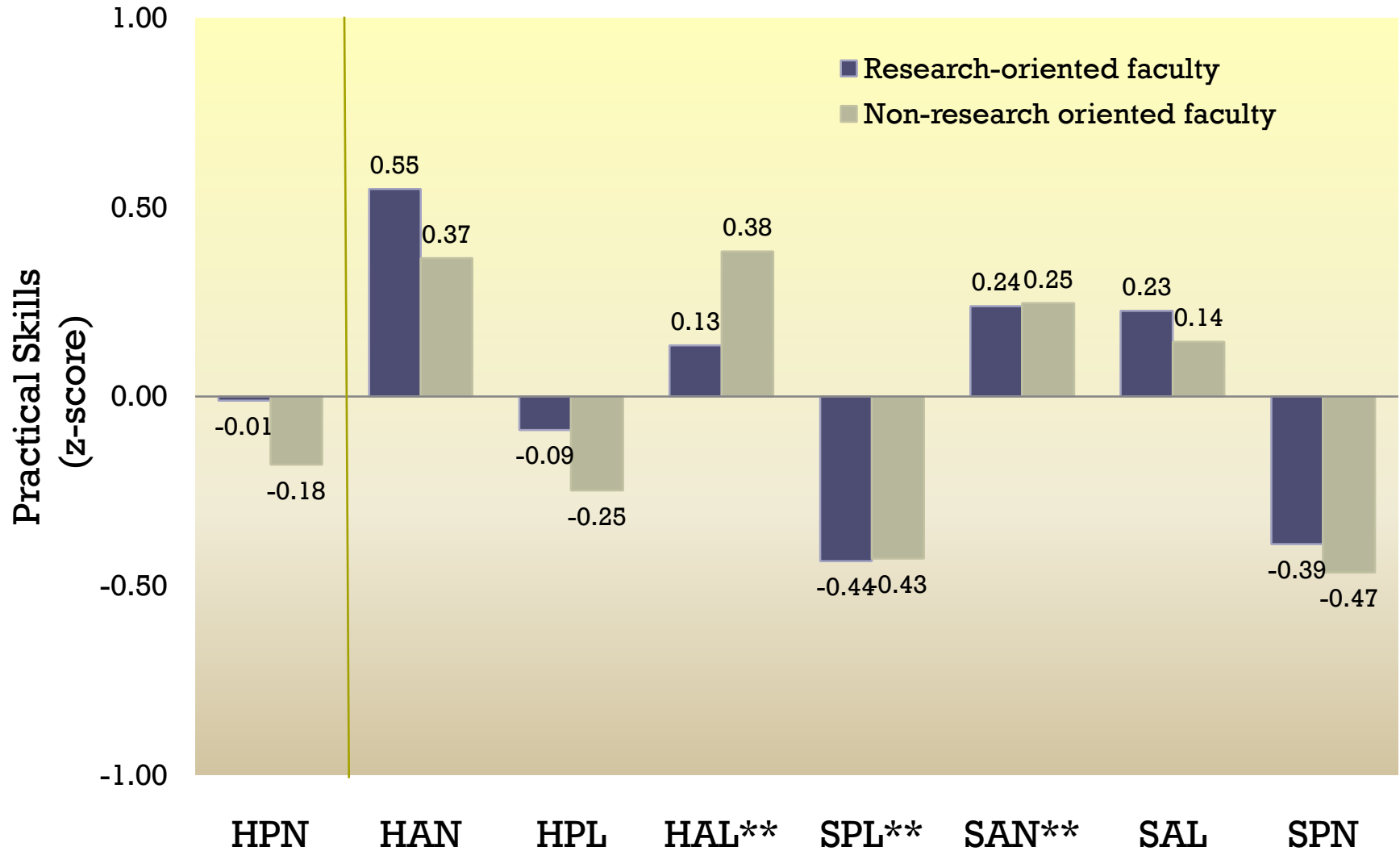
Faculty time spent on research/scholarly activities by disciplinary areas



NOTE: \*(p≤0.10), \*\*(p≤0.05), \*\*\*(p≤0.001)

# Promoting Practical Skills

Faculty time spent on research/scholarly activities by disciplinary areas

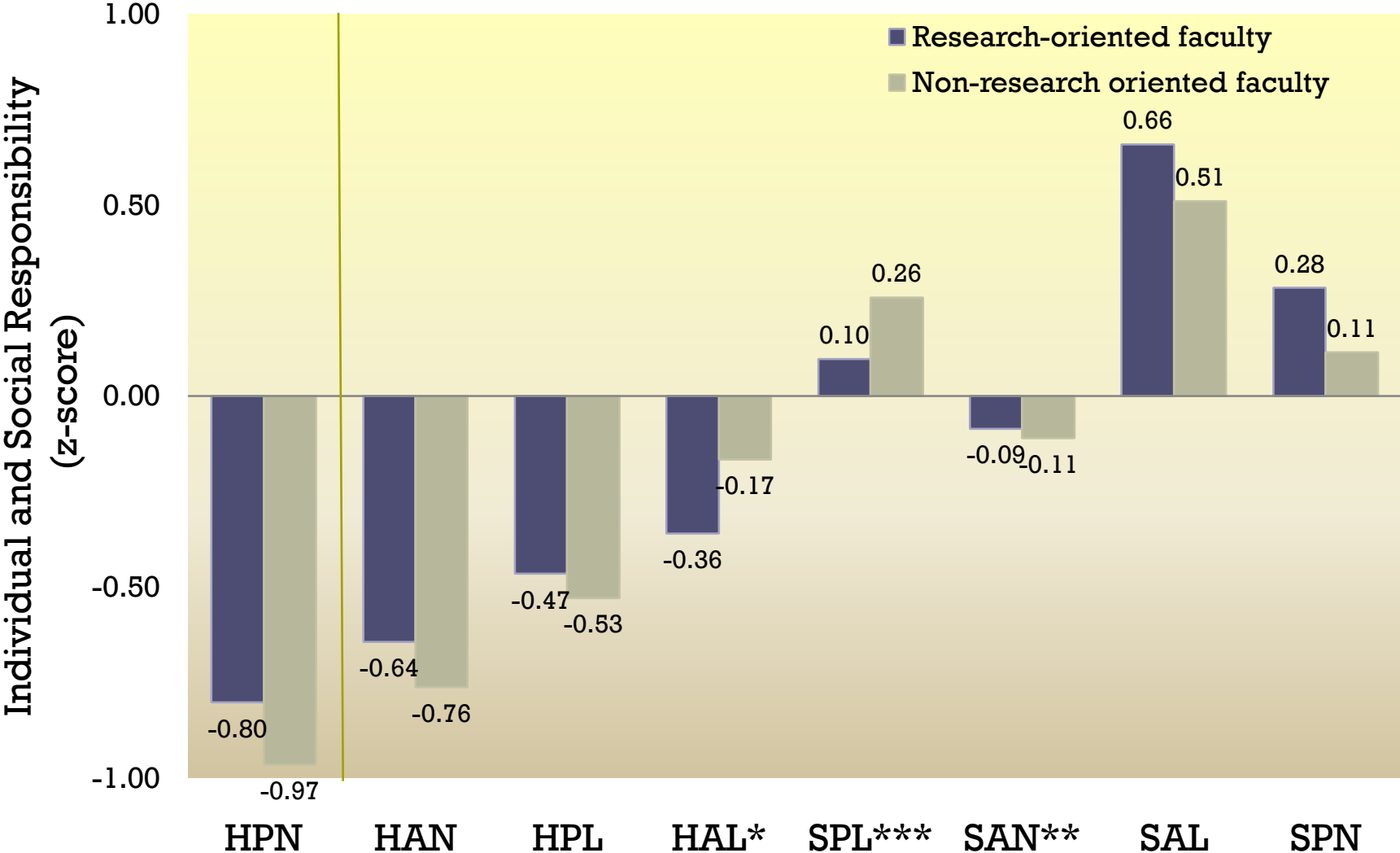


NOTE: \*( $p \leq 0.10$ ), \*\*( $p \leq 0.05$ ), \*\*\*( $p \leq 0.001$ )



# Promoting Individual & Social Responsibility

Faculty time spent on research/scholarly activities by disciplinary areas



NOTE: \*(p≤0.10), \*\*(p≤0.05), \*\*\*(p≤0.001)

# Implications/Conclusions

- Time spent on research and scholarly activities does not necessarily come at the price of teaching in respects to promoting learning outcomes
- In some fields faculty time spent on research has little or no effect
- Disciplinary context continues to be a strong predictor for faculty values for and emphasis on learning outcomes



# For More Information

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