

# Analysis of StrengthsFinder Results and Engineering Major Choice for Fall 2016 First Year Engineering New Beginners

## Project Description

Starting in Fall 2016, Purdue University received a grant for all new beginning and transfer students to take the StrengthsFinder assessment. My interest was to assess the Fall 2016 cohort of First-Year-Engineering (FYE) students' results. I was curious to see the signature themes of those who took the assessment and analyze whether or not there is any correlation between certain StrengthsFinder themes and their engineering major choice.

My initial data set includes six engineering majors represented by 624 students:

- Aeronautics and Astronautics Engineering (AAE): 203
- Biomedical Engineering (BME): 67
- Chemical Engineering (CHE): 136
- Environmental and Ecological Engineering (EEE): 28
- Industrial Engineering (IE): 161
- Nuclear Engineering (NUCL): 29

## ENGR Students' Top 5 Strengths

1. Learner
2. Achiever
3. Analytical
4. Restorative
5. Competition

## Initial Findings

- *Relationship Building* themes were only present in the Top 5 of EEE (Harmony and Relator) and BME (Relator)
- EEE only has Top 4: Restorative/Learner and Harmony/Relator
- All 6 majors have Learner in Top 5 Strengths
- 5 of 6 majors have Achiever, Restorative, and/or Analytical in Top 5
- BME, CHE, IE have same top 5 strengths as ENGR population analyzed, but order varies
- 4 of the Top 5 strengths for ENGR majors are represented in the most common Strengths for Purdue students

## Future Steps

- Analysis of ABE, CE, CEM, ECE, IDE/MDE, ME, MSE signature themes
- Are there common themes among students related to gender or domestic/international status?
- How do the top themes connect to the engineering curriculum (program and/or ABET outcomes)?

## Purdue Students' Most Common #1 Strengths

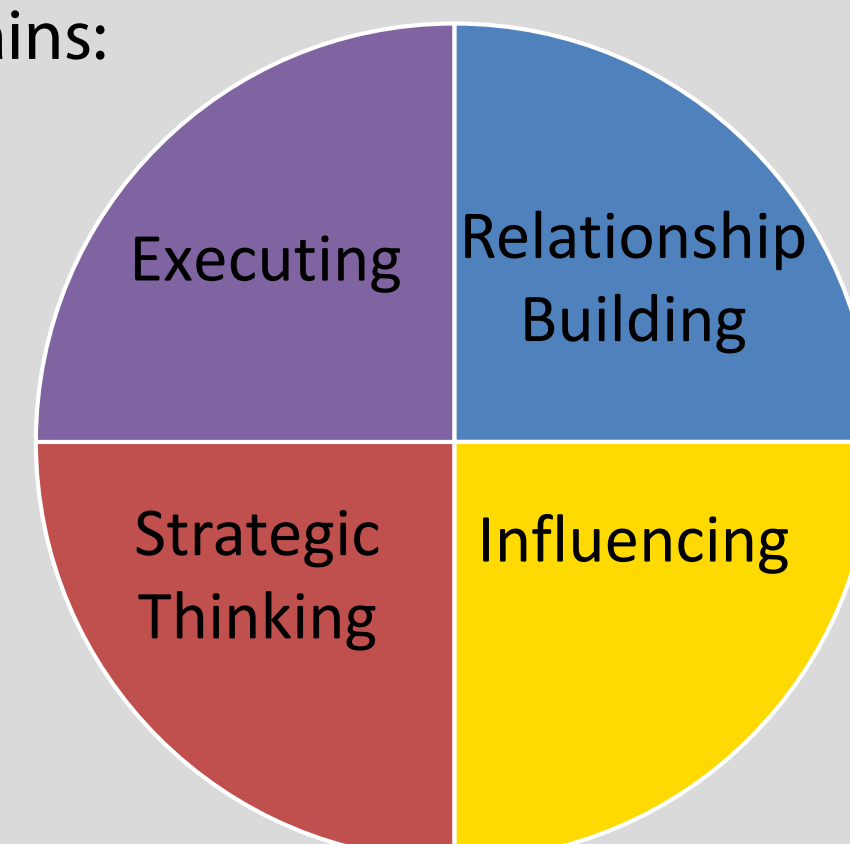
- Achiever
- Restorative
- Learner
- Analytical
- Input

\*Over 24,000 students have taken StrengthsFinder at Purdue (Purdue University, n.d.)

## What is StrengthsFinder?

"The CliftonStrengths for Students® talent assessment (formerly StrengthsFinder), based on the concept of intentionally developing your strengths rather than your weaknesses, identifies students' Top 5 Signature Themes from a list of 34 talents (Purdue University, n.d.)."

The 34 Strengths are split in to 4 domains:



	AAE (203)	AAE %	Rank	BME (67)	BME %	Rank	CHE (136)	CHE %	Rank	EEE (28)	EEE %	Rank	IE (161)	IE %	Rank	NUCL (29)	NUCL %	Rank	ENGR Totals	% of 624	Rank
<b>Executing</b>																					
Achiever	80	39.4%	3	34	50.8%	1	68	50.0%	1	7	25.0%	T-3	59	36.7%	1	11	37.9%	3	259	41.5%	2
Restorative	56	27.6%	4	18	26.9%	T-5	48	28.8%	4	10	35.7%	T-1	42	26.1%	5	8	27.6%	NA	182	29.2%	4
<b>Influencing</b>																					
Competition	40	19.7%	NA	20	29.9%	3	34	25.0%	5	2	7.1%	NA	56	34.8%	3	3	10.3%	NA	155	24.8%	5
<b>Strategic Thinking</b>																					
Analytical	88	43.4%	2	19	28.4%	4	53	39.0%	2	6	21.4%	NA	46	28.6%	4	10	34.5%	4	222	35.6%	3
Learner	97	47.8%	1	31	46.3%	2	51	37.5%	3	10	35.7%	T-1	58	36.0%	2	16	55.2%	1	263	42.2%	1

## What Some of the Literature Says: StrengthsFinder Study with Doctor of Pharmacy Students

*Objective:* "To describe student pharmacists' Signature Themes from the Clifton StrengthsFinder across 5 Midwestern pharmacy institutions and to compare themes by gender, institution, and undergraduate population (Janke et al, 2015, p. 1)."

*Results:* "The results of this study show that student pharmacists...have remarkably consistent Signature Theme profiles (Janke et al, 2015, p. 4)...Signature Themes provide insight about students who are attracted or admitted...however...there is no research demonstrating that specific Signature Themes are associated with career advancement, or other positive outcomes...(Janke et al, 2015, p. 6)."