Trinity College Admissions: 
The Implementation of Predictors of Success

Briana Daley ‘18
Ed Studies Senior Research Presentation
Trinity College, Hartford, CT
December 11, 2017
### Inside Trinity Admissions Process

<table>
<thead>
<tr>
<th>Student</th>
<th>Numerical Personal Rating</th>
<th>Predictors of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>Grit</td>
</tr>
<tr>
<td>2</td>
<td>6+</td>
<td>Curiosity, innovation</td>
</tr>
<tr>
<td>3</td>
<td>7-</td>
<td>Overcoming adversity</td>
</tr>
</tbody>
</table>
## Predictors of Success

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Success Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfort in minority of 1</td>
<td>Innovation</td>
</tr>
<tr>
<td>Creativity</td>
<td>Openness to change</td>
</tr>
<tr>
<td>Critical thinking</td>
<td>Optimism</td>
</tr>
<tr>
<td>Curiosity</td>
<td>Overcoming adversity</td>
</tr>
<tr>
<td>Delayed gratification</td>
<td>Persistence</td>
</tr>
<tr>
<td>Empathy</td>
<td>Risk taking</td>
</tr>
<tr>
<td>Grit</td>
<td></td>
</tr>
</tbody>
</table>
Research Question

- What is the relationship, if any, between the predictors of success and the numerical personal ratings assigned to students?
  - Is the total number of predictors (of any type) assigned to each applicant associated with a higher numerical personal rating?
  - Is the presence of certain predictors associated with higher numerical personal ratings?
Key Findings

- Percentage of enrolled students assigned with predictor(s)
  - 74%: Year 0
  - 36%: Year 1
- Moderate (+) relationship between the number of predictors and numerical personal rating
- Only 3 of 13 statistically associated with higher rating
  - Empathy
  - Overcoming adversity
  - Optimism
<table>
<thead>
<tr>
<th>They Ask</th>
<th>I Ask</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rebecca Zwick (2017): How do we determine how to consistently and systematically measure “noncognitive” behaviors?</td>
<td>Are some noncognitive predictors associated with higher numerical personal evaluations?</td>
</tr>
</tbody>
</table>
Methodology

- No IRB
- Data cleaning
- Excel → Correlation and Scatterplots
- Stata → Multivariate Regression Analysis
1. Did the Percentage of Enrolled Students with Predictors Rise or Fall?
1. Did the Percentage of Enrolled Students with Predictors Rise or Fall?

Answer: Fell by 38%
2. Do Number of Total Predictors Influence Personal Ratings?

![Graph showing the relationship between Total Predictors of Success and Numerical Personal Rating.](image)
2. Do Number of Total Predictors Influence Personal Ratings?

Answer: Moderate Positive Correlation: 0.333
3. Which Predictors are Associated with Higher/ Lower Numerical Ratings?

Multivariate Regression

| finalperso~g | Coef. | Std. Err. | t | P>|t| | [95% Conf. Interval] |
|-----------------|--------|------------|-----|-------|------------------|
| comfpredic~r | .0167014 | .0556477 | 0.30 | 0.764 | -.0924814 to .1258842 |
| creapredic~r | -.0484366 | .0424567 | -1.14 | 0.254 | -.1317382 to .034865 |
| critpredic~r | .1132943 | .0452572 | 2.50 | 0.012 | .0244979 to .2020907 |
| curipredic~r | .0411984 | .0408352 | 1.01 | 0.313 | -.0389219 to .1213186 |
| delapredic~r | -.0293327 | .0736726 | -0.40 | 0.691 | -.1738811 to .1152156 |
| empapredic~r | .1264819 | .0330496 | 3.83 | 0.000 | .0616373 to .1913266 |
| gritpredic~r | -.022091 | .0460209 | -0.48 | 0.631 | -.1123857 to .0682038 |
| innopredic~r | .1697908 | .0821815 | 2.07 | 0.039 | .0085476 to .3310341 |
| openpredic~r | .0110786 | .0457749 | 0.24 | 0.809 | -.0787336 to .1008908 |
| optipredic~r | .169511 | .0462464 | 3.67 | 0.000 | .0787738 to .2602481 |
| overpredic~r | .2778982 | .0451289 | 6.16 | 0.000 | .1893537 to .3664428 |
| perspredic~r | -.0310695 | .0421441 | -0.74 | 0.461 | -.1137579 to .0516189 |
| riskpredic~r | .0239532 | .0552762 | 0.43 | 0.665 | -.0845008 to .1324073 |
| _cons | 6.220441 | .0134396 | 462.84 | 0.000 | 6.194072 to 6.24681 |

Number of obs = 1,159
F(13, 1145) = 12.35
Prob > F = 0.0000
R-squared = 0.1627
Root MSE = .39629
3a. Which Predictors are Statistically Associated with Higher Numerical Ratings?

Multivariate Regression

<table>
<thead>
<tr>
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<tr>
<td></td>
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<tr>
<td>empapredic~r</td>
<td>.1264819</td>
</tr>
<tr>
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<td>.169511</td>
</tr>
<tr>
<td>overpredic~r</td>
<td>.2778982</td>
</tr>
</tbody>
</table>

Answer: Empathy, Optimism, Overcoming adversity
3b. Which Predictors are Statistically Associated with Lower Numerical Ratings?

**Multivariate Regression**

|       | Coef.      | Std. Err. | t    | P>|t| | [95% Conf. Interval] |
|-------|------------|-----------|------|-----|----------------------|
| creapredic~r | -.0484366 | .0424567  | -1.14| 0.254| -.1317382 to -.034865 |
| delapredic~r | -.0293327 | .0736726  | -0.40| 0.691| -.1738811 to .1152156 |
| gritpredic~r | -.022091  | .0460209  | -0.48| 0.631| -.1123857 to .0682038 |
| perspredic~r | -.0310695 | .0421441  | -0.74| 0.461| -.1137579 to .0516189 |

**Answer: None**
Future Research Possibilities

- Calculate interrater reliability
- Interviews
- Population: All applicants
Special Thanks to...

● Angel Perez
  ○ *Trinity College Vice President of Student Enrollment and Success*

● Robert Greene
  ○ *Trinity College Admissions Computing Data Specialist*

● Jack Dougherty
  ○ *Trinity College Professor of Educational Studies*