01

People Analytics Case Study

Daniel Pinedo| March 2020

Case Study Highlights

Given the provided dataset, how can we increase:

series 7 exam pass rates?
efficiencies in the recruiting and training process?

This case study includes:

recommendations for above questions
summary of findings

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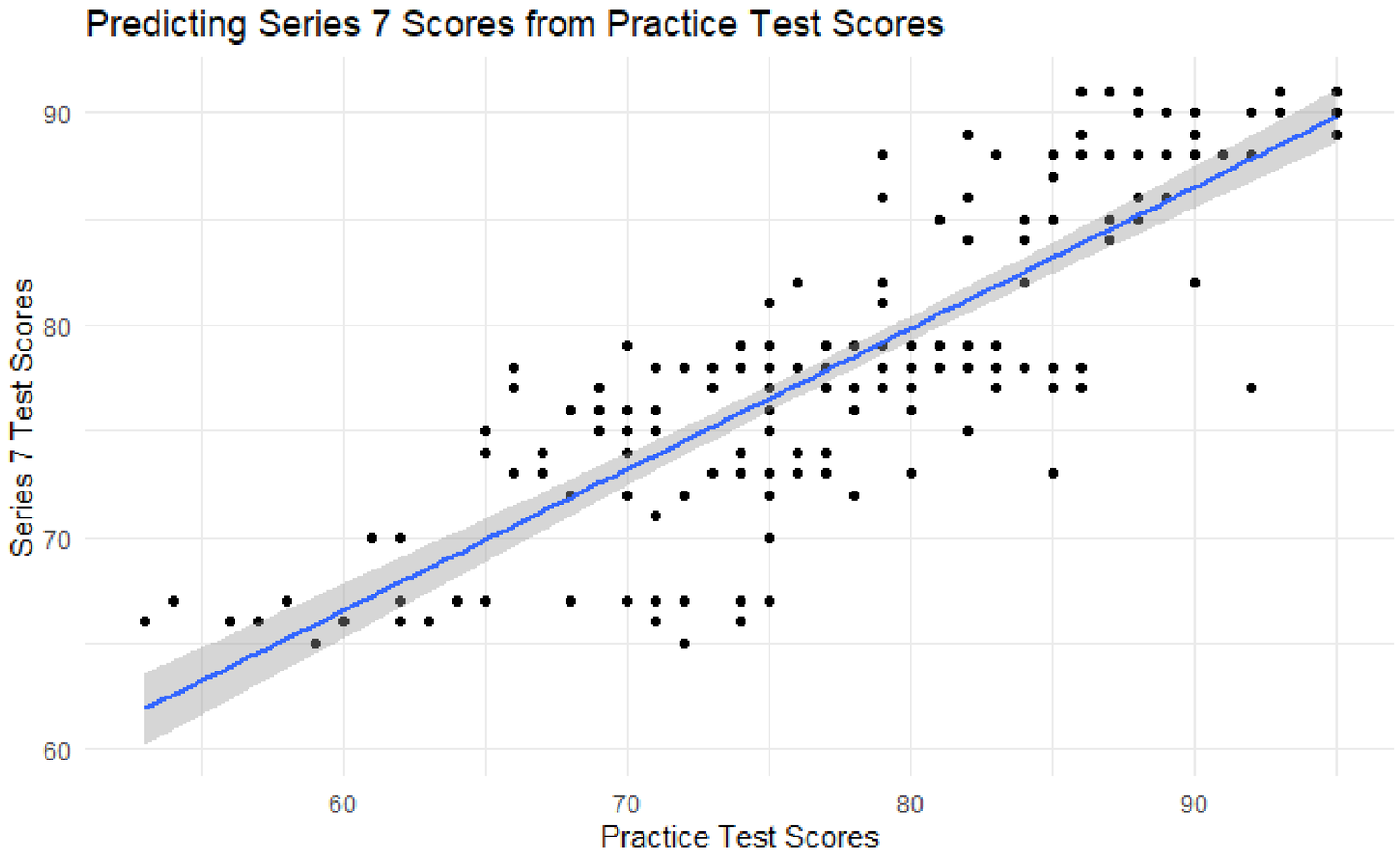
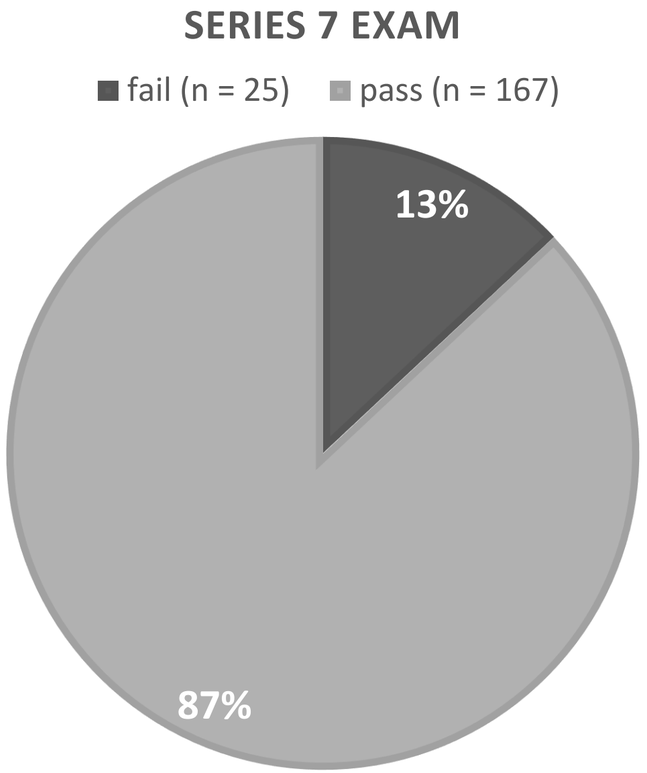
Question:

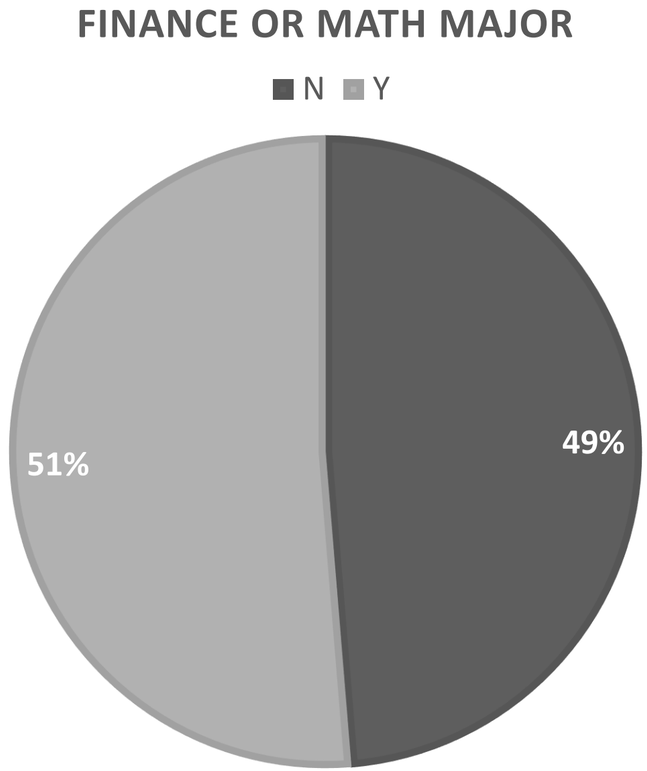
How can we increase Series 7 exam passing rates?

Potential answer:
Add more practice tests.
Practice test scores were the greatest predictor of Series 7 exam scores.



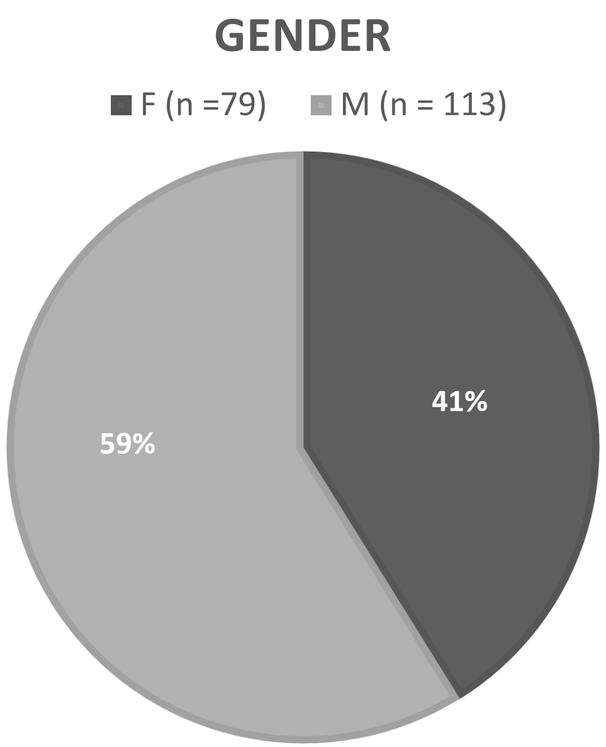
Acceptable pass rate for prior Series 6 and 63 Exams = 93%
(6% improvement needed)

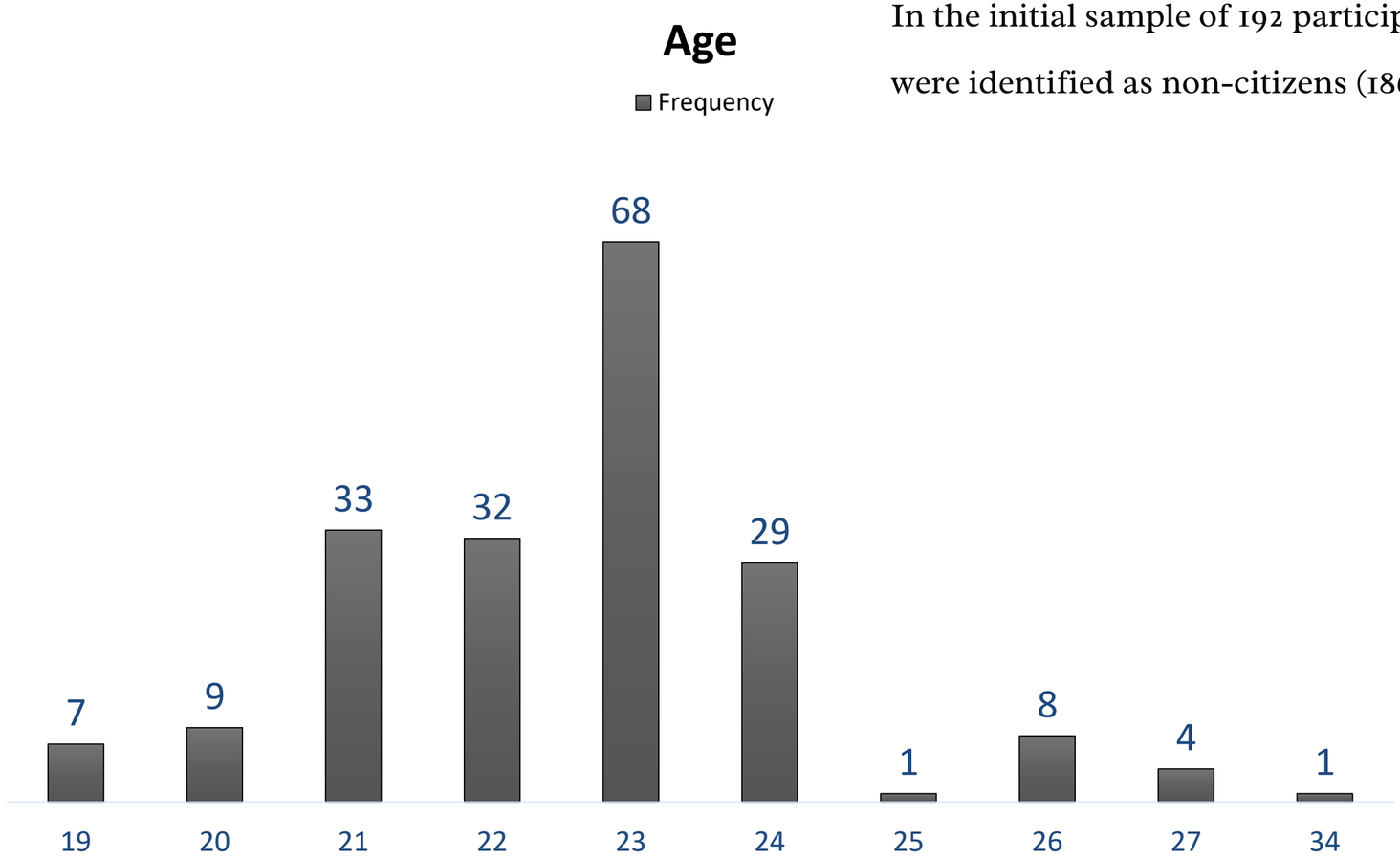




Whether a new hire was a Finance or Math major also predicted success on the Series 7 exam, but did not account for much more prediction above and beyond practice test scores

Additional Findings





In the initial sample of 192 participants, 6 were identified as non-citizens (186 citizens)

Demographics

Training Cost Efficiency

Question:

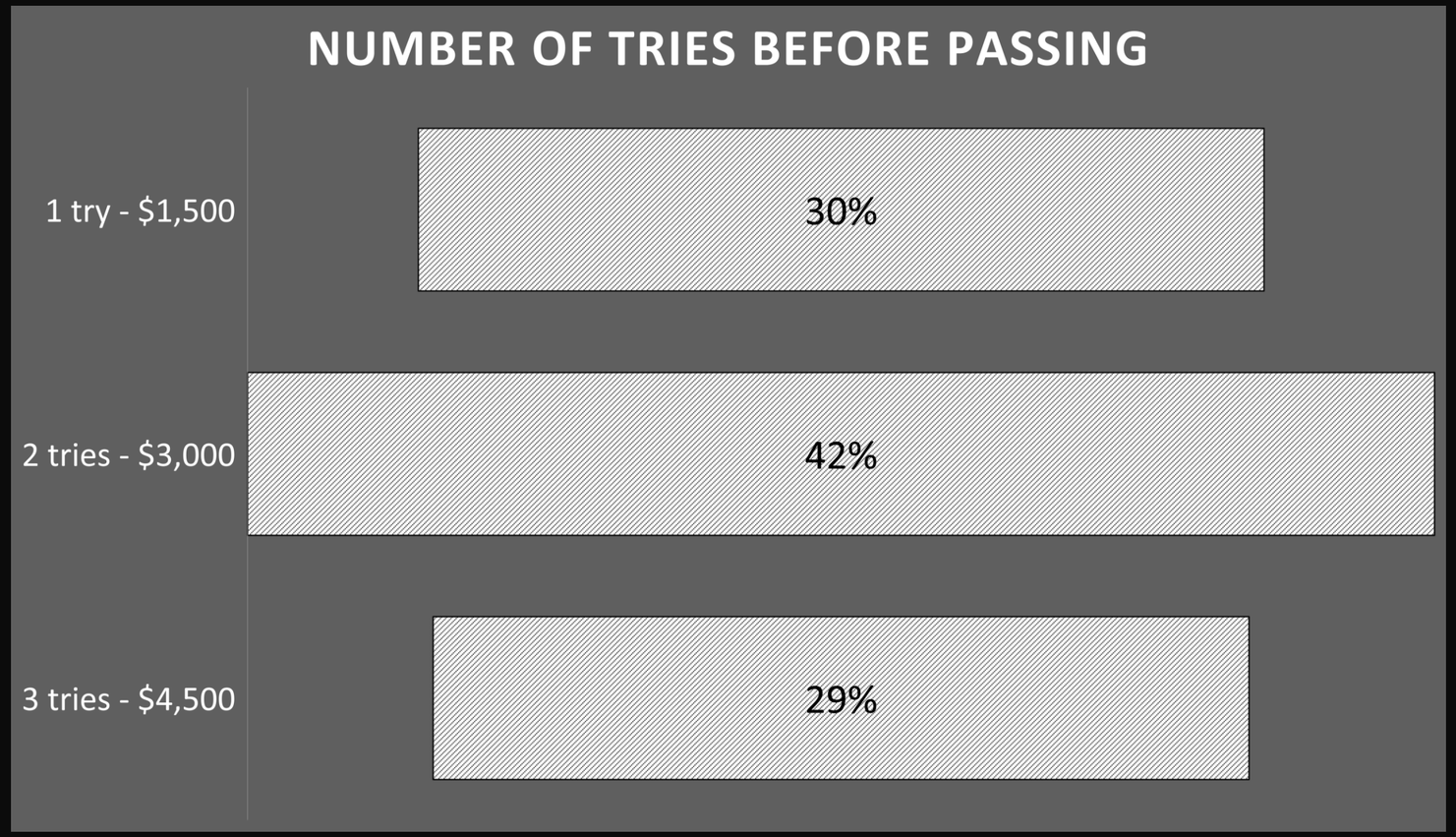
How can we increase efficiency in the recruiting and training process?

Reduction of failure rates

Since practice test scores predict Series 7 exam scores with a high level of confidence, we can reduce failure rates by implementing more practice tests

Cost projections

Current Training Costs	Efficient State (1 try)
$2,984,375	$1,500,000
Difference	**Percent Difference**
$1,484,375	-49.7%



Cost projections are based on total new hire number of 1,000

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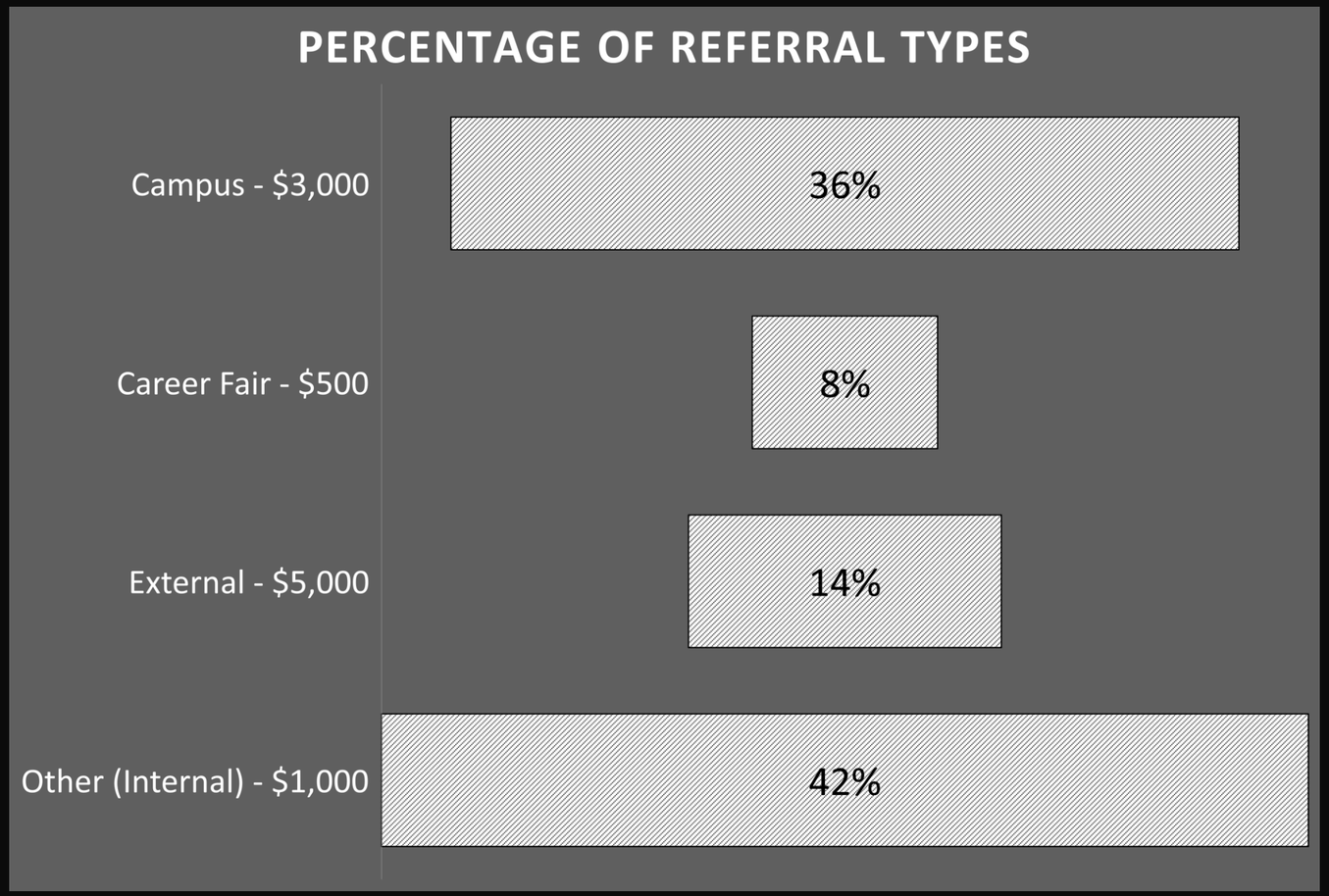

Referral Cost Efficiency

Referral type did not predict success on the Series 7 exam.

Therefore, we may seek efficiencies here by simply reducing cost.

We may achieve this by eliminating external referrals (highest cost) and substituting career fair referrals (lowest cost).

Current Referral Costs	Efficient State
$2,235,602	$1,599,476
Difference	**Percent Difference**
$636,126	-28.45%

Total new hires: 1000
Average Salary: $50,000
Total Cost = Training + Referral Costs

	Current	With training efficiency only	With referral efficiency only	With both efficiencies
Total cost per new hire (Averaged)	$5,220	$3,736	$4,584	$3,099
As percentage of salary	10.44%	7.47%	9.17%	6.20%

Cost Summary

Thank you

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