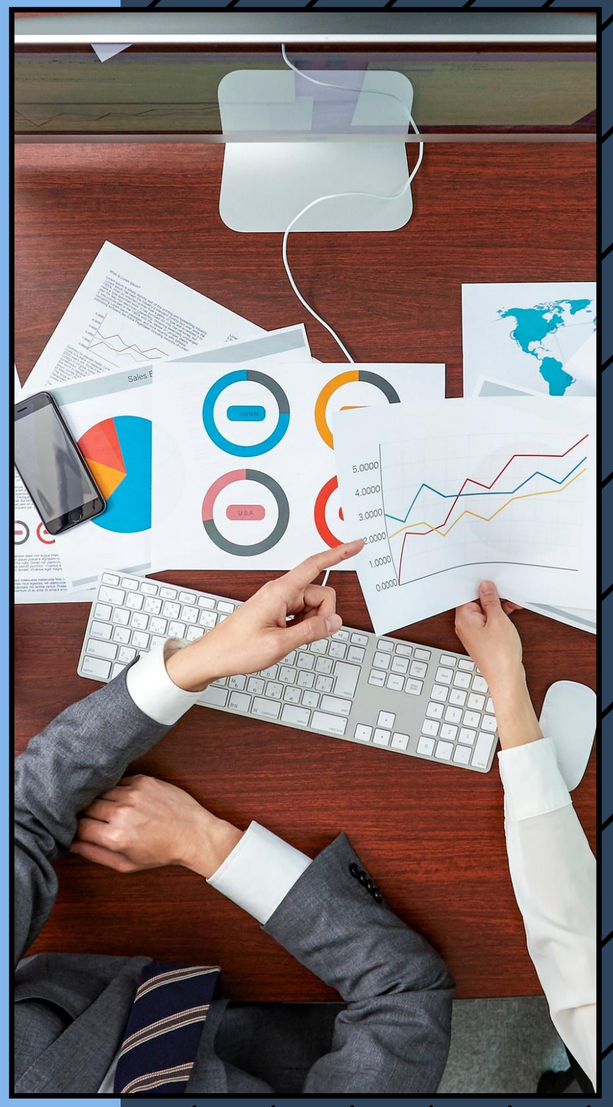
"Backlogs? What if we just... didn’t?"

Simulating the Impact of Backlog Reduction on Placement Outcomes: A Data Driven Study



This presentation covers the **latest trends** in research methodologies and data analysis, providing insights for enhancing academic performance and research outcomes.

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THE RESEARCH QUESTION:

How do academic backlogs affect campus placements, and what if colleges actively helped reduce them?

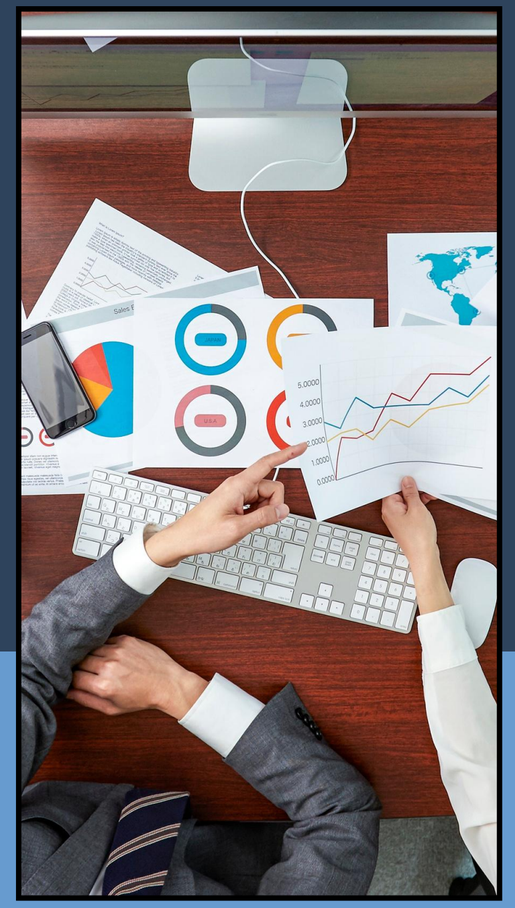
Why it matters:

- **In many Indian colleges, backlogs are like a one-way ticket out of the placement race.**
- **Understanding their impact can help students get fairer chances, and help colleges make smarter interventions.**

DATA & METHODOLOGY:

Dataset:

- 990 Final year Bachelor students from a University in India.
- Stream, Course, Academic scores (10th, 12th, UG), backlog counts, work experience, placement status.



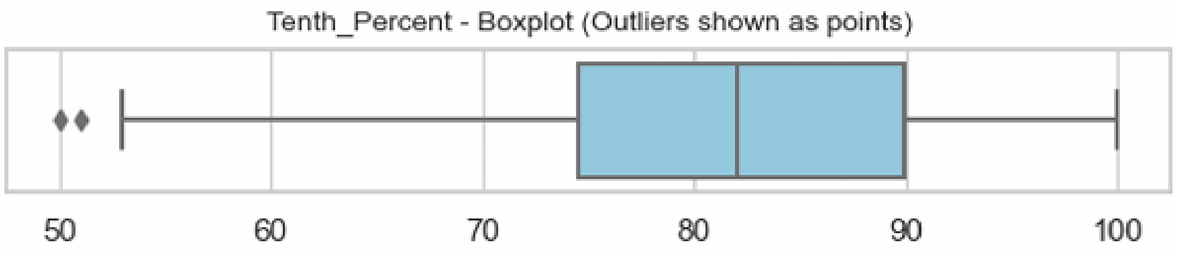
Method:

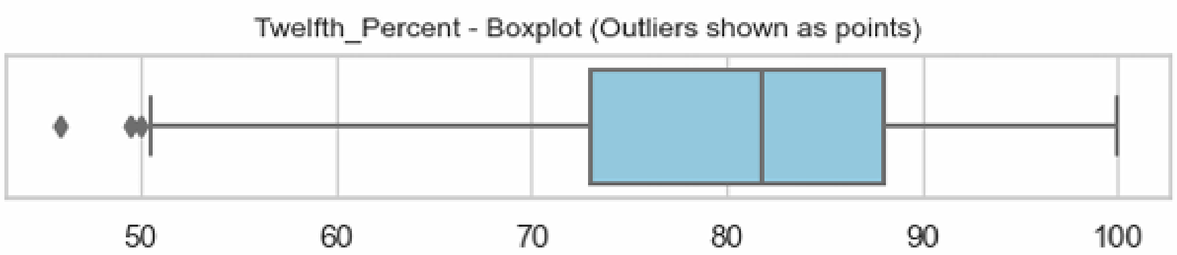
- EDA (Exploratory Data Analysis)
- Data cleaning
- Simulations to check: what happens if we reduce backlogs by x%?

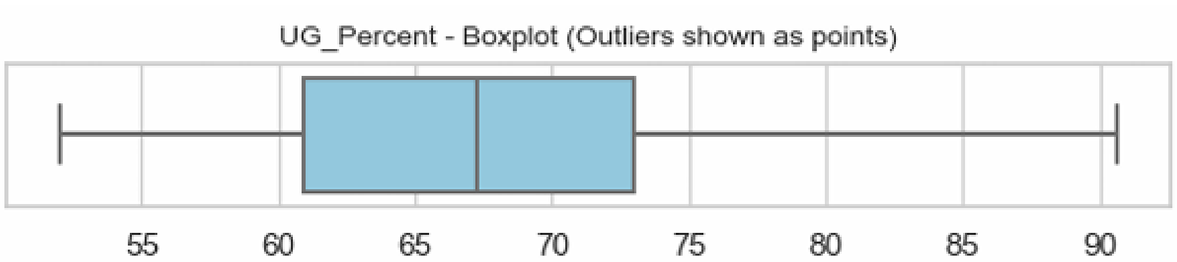
EDA HIGHLIGHTS – BEHIND THE SCENES

SANITIZING the Mess:

- **Fixed CGPA/percentage mix-ups using the good old ×9.5 rule.**







- Low grades (45–51%) in 10th% and 12th% were flagged as outliers because the dataset's higher mean reflects the College's high admission standards. Keeping these valid outliers helps identify at-risk students for targeted support to reduce backlogs.

Cool Discoveries:

- **Scores drop from 10th → 12th → UG. From 81% to 67%. Growing up is tough.**
- **Commerce & BCom students rule the dataset**

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Average 10th% of Students: 81.24 %
Average 12th% of Students: 79.66 %
Average UG% of Students: 67.62 %
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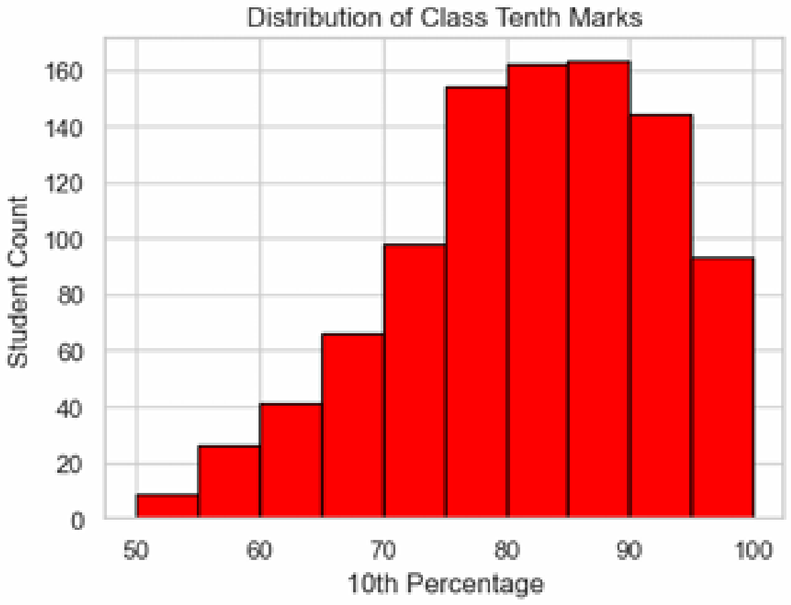
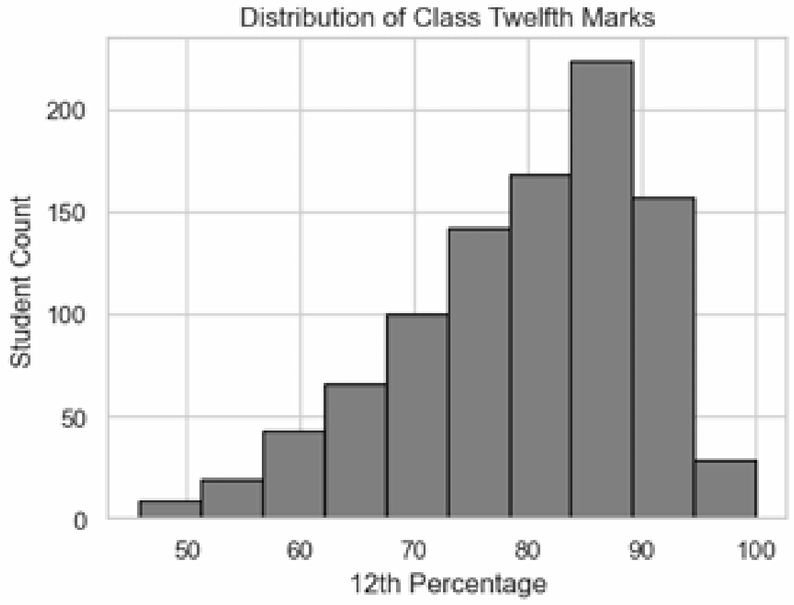
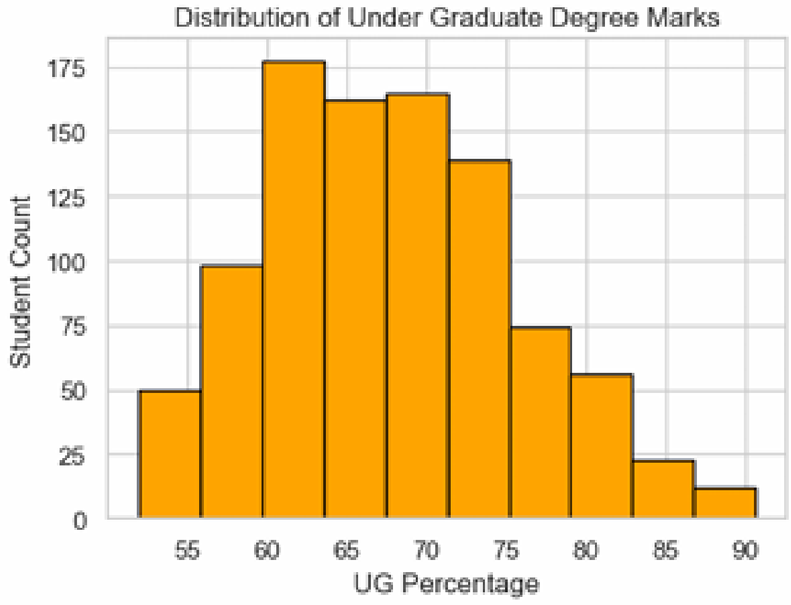
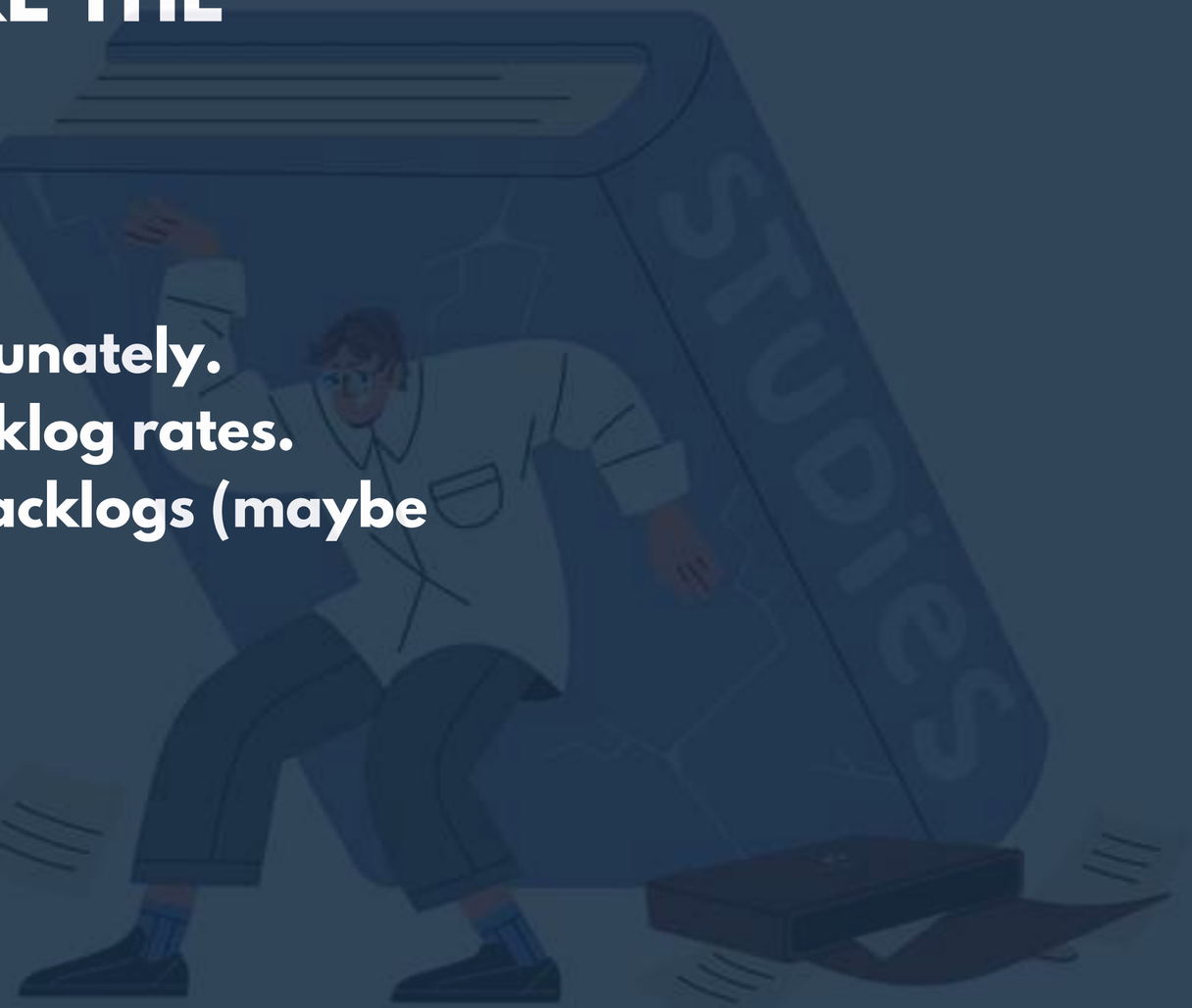






BACKLOG PATTERNS – WHERE THE TROUBLE IS



Who has more backlogs?

- Science students lead the race... unfortunately.
- BVC students? Chillin' with just 8% backlog rates.
- Those with work experience = fewer backlogs (maybe they learned to manage time better?)

Key Insight:

- Backlogs KILL placements.
- Only ~1.3% with backlogs got placed

SIMULATION RESULTS – THE "WHAT IF ANALYSIS"

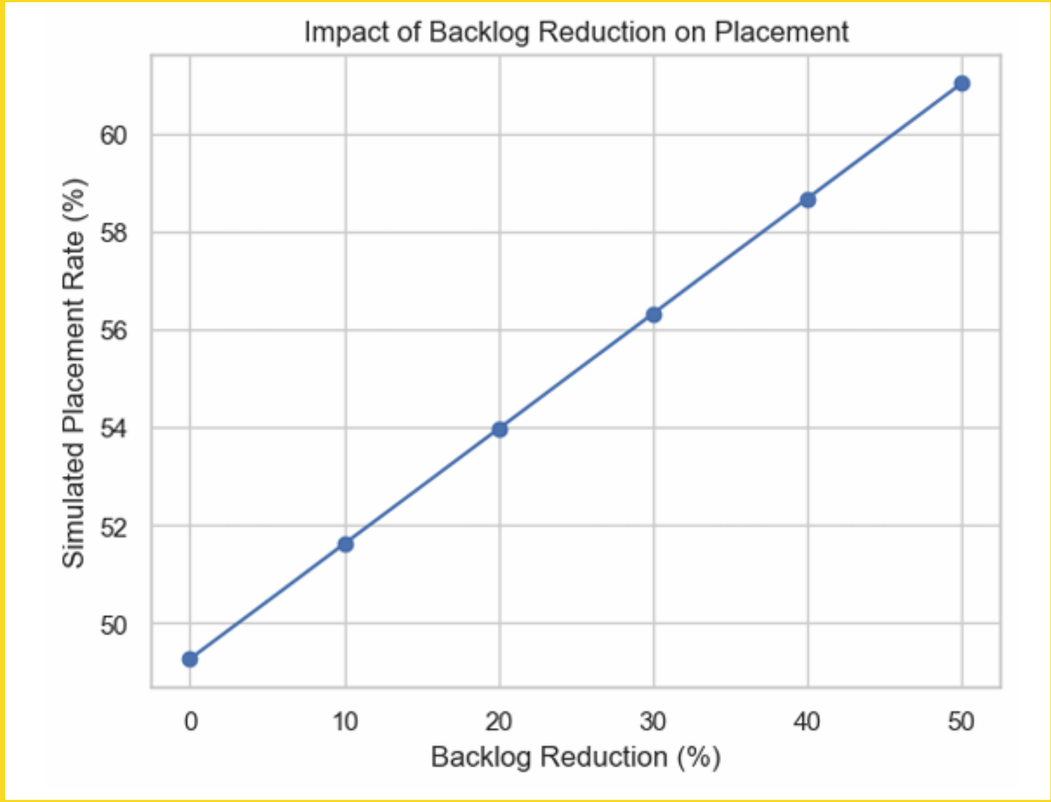
What if we reduced backlogs?
Simulated a scenario where 10–50% of backlogs got cleared

Result:

- **Every 10% backlog reduction gave a sweet ~2.35% increase in placements.**
- **A 30% cut could take placements to 56% – that's a solid win!**

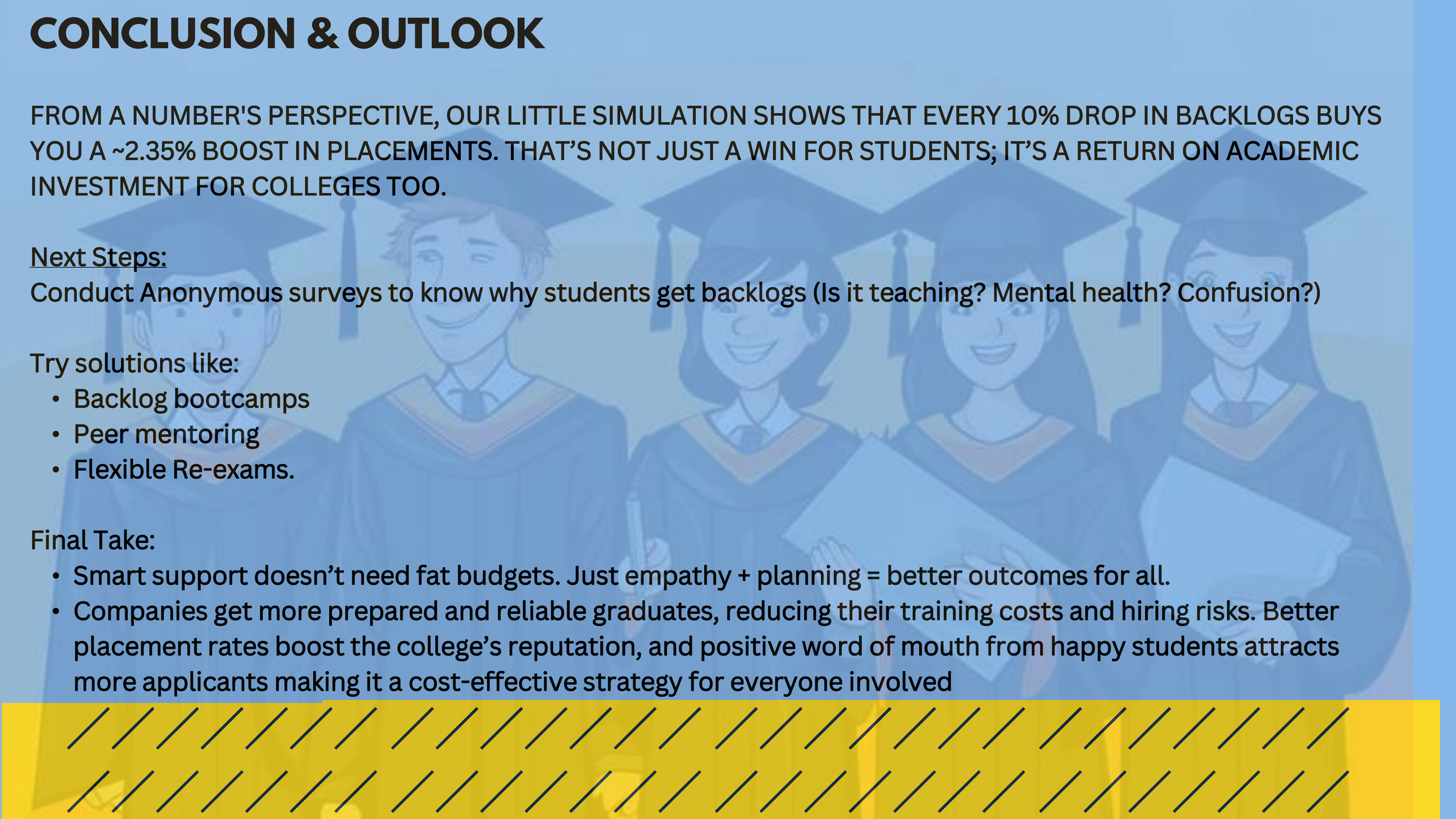
Main takeaway:

- **Even moderate support = big payoff**
- **It's not magic, just math (and care).**



CONCLUSION & OUTLOOK

FROM A NUMBER'S PERSPECTIVE, OUR LITTLE SIMULATION SHOWS THAT EVERY 10% DROP IN BACKLOGS BUYS YOU A ~2.35% BOOST IN PLACEMENTS. THAT'S NOT JUST A WIN FOR STUDENTS; IT'S A RETURN ON ACADEMIC INVESTMENT FOR COLLEGES TOO.



Next Steps:

Conduct Anonymous surveys to know why students get backlogs (Is it teaching? Mental health? Confusion?)

Try solutions like:

- Backlog bootcamps
- Peer mentoring
- Flexible Re-exams.

Final Take:

- Smart support doesn't need fat budgets. Just empathy + planning = better outcomes for all.
- Companies get more prepared and reliable graduates, reducing their training costs and hiring risks. Better placement rates boost the college's reputation, and positive word of mouth from happy students attracts more applicants making it a cost-effective strategy for everyone involved