

# Exam Performance and Its Key Drivers: Evidence from Student Data

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# Introduction

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Exam performance is a key indicator of student learning and overall academic progress.

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Understanding the factors that most strongly influence exam scores enables more effective strategies for improving student outcomes.

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By identifying these key drivers, institutions can focus improvement efforts on the areas that matter most to raising exam performance.

# What Data Was Used

WE USED 20,000 STUDENT RECORDS FOR THIS STUDY.

## STUDENT STUDY & LEARNING BEHAVIORS

- STUDY HOURS
- STUDY METHODS
- CLASS ATTENDANCE
- SLEEP HOURS
- SLEEP QUALITY

## LEARNING ENVIRONMENT & SUPPORT

- FACILITY RATING
- INTERNET ACCESS
- EXAM DIFFICULTY

## STUDENT DEMOGRAPHICS

- AGE
- GENDER
- COURSE ENROLLED

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# Key Insights from Student Study & Learning Behaviors

- **Study hours are the strongest driver of exam performance.**
- Class attendance is the second most influential factor affecting exam scores.
- Relying on a single study method (self-study, online, or group) is associated with lower exam performance compared to mixed approaches.
- Both sleep quality and sleep duration contribute to higher exam scores, with sleep quality having a stronger influence than quantity.

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# Key Insights from Learning Environment & Support

- Learning environment quality supports exam performance, with poorer facilities linked to lower outcomes.
- Internet access alone shows minimal direct impact on exam scores in this dataset.
- Exam difficulty has a smaller influence on outcomes compared to student behaviors and habits.

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# Key Insights from Learning Environment & Support

- Age has minimal influence on exam performance
- Gender does not meaningfully affect predicted exam outcomes
- Course enrolled shows limited impact compared to study behaviors

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# What We Learned & What We Can Do

## Student habits matter most.

Prioritize programs that help students plan, track, and sustain effective study time.

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# What We Learned & What We Can Do

## Attendance reinforces learning.

Strengthen attendance monitoring and engagement strategies to encourage consistent class participation.

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# **What We Learned & What We Can Do**

## **How students study influences outcomes.**

Encourage a balanced mix of study approaches—combining independent study with collaborative learning, guidance, and feedback—to support more effective learning.

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# What We Learned & What We Can Do

## Well-being supports academic success.

Promote sleep awareness and wellness initiatives that emphasize both sleep quality and sufficient rest.

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# What We Learned & What We Can Do

## Context matters less than behavior.

Differences in outcomes are driven primarily by student behaviors rather than age, gender, course, or exam difficulty.

# The End

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