

# Student Performance Insights Dashboard

Uncovering What Drives Student Success

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# Introduction

## Objective:

This dashboard provides insights into how various behavioral, academic, and lifestyle factors affect student performance. It helps educators and analysts make informed decisions to support students better.

## Why This Matters:

Student performance is influenced by more than just classroom instruction—factors such as sleep, stress, screen time, and learning style play a major role. By identifying these influences, institutions can create more effective, data-driven strategies to enhance student success and wellbeing.

# Data Preparation

- Data Extraction: Loaded raw CSV file into Power BI
- Cleaning: Removed nulls, duplicates, and corrected data types
- Transformation: Applied calculated columns, grouped values, and created categories
- Tool Used: Power Query Editor

# KPI Overview

Title: Key Academic & Lifestyle Metrics

Visual: 5 KPI Cards

- Avg Final Grade Score: 2.54
- Avg Study Hours Per Week: 27.13
- Avg Sleep Hours Per Night: 6.98
- Avg Time Spent on Social Media: 14.94 hours/week
- Avg Exam Score: 70.19%

These KPIs summarize the overall trends among students and act as quick indicators of academic health and balance in lifestyle.

# Charts :

## 1 . Study Time vs Final Grade

### **Chart: Scatter Chart with Trend Line**

This chart shows a positive correlation between weekly study hours and final grades. Students who study more tend to achieve higher final grades.

## 2 . Stress Level vs Exam Score

### **Chart: Donut Chart (High, Medium, Low Stress)**

Contrary to common expectations, students with high stress levels scored the highest on exams, while medium-stress students scored the lowest . Low-stress students scored slightly better than medium-stress peers. This suggests that a certain level of stress might enhance performance, while moderate stress may reflect inconsistent habits or poor stress management.

### **3 . Sleep & Academic Performance**

**Chart: Clustered Column Chart**

**X-Axis: Sleep Hours per Night**

**Y-Axis: Average Final Grade Score**

There is a relatively flat but slightly positive trend showing that 6–8 hours of sleep per night aligns with slightly better performance.

### **4 . Learning Styles & Final Grades**

**Chart: Line & Clustered Column Chart**

**X-Axis: Preferred Learning Style**

**Y-Axis: Count of Student ID**

Visual and Kinesthetic learners are more prevalent, and their grade distribution shows some performance variation across learning preferences.

## **5 . Social Media vs Exam Score**

**Chart: Line Chart**

**X-Axis: Time Spent on Social Media (hours/week)**

**Y-Axis: Average Exam Score**

The chart illustrates fluctuation in exam scores with increased social media usage. Heavy use appears to slightly reduce average exam performance.

## **6 . Assignment Completion vs Exam Score**

**Chart: Scatter Chart with Final Grade as Legend**

Students with higher assignment completion rates generally perform better in exams. There's a cluster of high performers with 75-80% completion rates.

## **7 . Discussion Participation & Final Grades**

**Chart: Clustered Column Chart**

**X-Axis: Final Grade**

**Y-Axis: Count of Student ID**

**Legend: Participation in Discussion (Yes/No)**

Students who participate in discussions are more likely to earn higher final grades. Engagement is positively correlated with outcomes.



# Interactive Slicers

- Gender
- Final Grade

# Recommendation<sup>2★</sup>

- Promote balanced sleep routines (6–8 hours)
- Encourage regular study habits
- Support students experiencing high stress
- Cater to dominant learning styles (visual/kinesthetic)
- Encourage participation in class discussions
- Monitor and reduce excess social media use

# Conclusion

This dashboard reveals that academic success is not determined by a single factor. It results from a combination of good study habits, sleep quality, stress management, participation, and the right use of technology. Data-driven decisions can empower educators to create supportive learning environments tailored to each student's needs.