Data Analysis Report: Factors Driving Student Disengagement

1. Executive Summary

This report presents the findings from an educational research questionnaire designed to identify and quantify the primary factors contributing to the decline in student interest and motivation.

The analysis confirms that **Financial Stress, Teaching Style, and School Resources** are the three most significant external barriers to student engagement. Demographic variables (age and gender) show minimal correlation with motivation. Crucially, the data highlights a clear path for intervention, showing high student willingness to utilize support services: **82.93%** are willing to use mental health services, and **46.34%** believe personalized mentorship would be very helpful.

2. Project Overview and Methodology

2.1. Problem Statement

A declining interest in education is negatively impacting student performance and future prospects. This project sought to move beyond anecdotal evidence by providing **data-driven insights** into the environmental, social, and personal factors driving this trend.

2.2. Research Questions

The analysis was structured around five core questions:

1. **Main Factors:** What are the main factors contributing to the decline in students' interest?
2. **Demographics:** How do demographic variables (age, gender, education level) influence motivation and performance?
3. **Environment:** What is the relationship between learning environments (style, facilities, peer influence) and student engagement?
4. **Challenges:** To what extent do personal/external challenges (financial stress, mental health) affect habits and motivation?
5. **Interventions:** What strategies do students believe would improve their interest and performance?

2.3. Methodology

1. **Data Collection:**
   A structured Google Form survey was designed and shared among students across

various educational levels. The questionnaire covered demographic information, study habits, financial challenges, learning preferences, mentorship, and mental health.

2. **Data Preparation:**
   The collected data was exported into a **CSV file**, cleaned, and imported into **SQL** for analysis. SQL queries were used to identify patterns, relationships, and trends.

3. **Data Visualization:**
   The cleaned and analyzed data was then imported into **Power BI** to develop an interactive dashboard that highlights key findings related to student motivation and challenges.

4. **Tools Used:**
   - Google Forms (Data Collection)
   - Microsoft Excel (Data Cleaning)
   - SQL (Data Analysis)
   - Power BI (Visualization and Insights)

3. Key Findings

3.1. RQ1: Primary Drivers of Decline

The findings reveal that the most significant barriers to educational interest are systemic and resource-based:

- **Top 3 Contributors: Financial stress, Teaching style, and School resources** were cited as the main factors contributing to the decline, scoring highest among all challenge options. This confirms that basic needs (financial stability, adequate facilities) and pedagogical quality are the most urgent areas for improvement.
- **Mental Health:** This factor showed a high impact score, following closely behind the top three, indicating a consistent challenge with student well-being.
- **Low Influence: Peer influence** was found to have **very little contribution** to the overall decline in students' interest in education.

3.2. RQ2: Influence of Demographic Variables

Demographic attributes were found to have a limited predictive power over core engagement metrics:

- **Education Level: Undergraduates have a higher motivation level on an average** compared to students at other levels.
- **Gender and Age: Gender does not have much impact** on student motivation and academic performance, and **Age group does not have much impact** on student motivation and academic performance. This suggests that resources should be allocated to universally accessible programs rather than being segmented by age or gender.

3.3. RQ3 & RQ4: Relationship Analysis

This section explores the relationship between various external and internal factors and

student outcomes.

Factor	Relationship Strength	Finding	Strategic Implication
Facilities Adequacy	**Positive**	There is a **positive relationship between Facilities adequacy and student engagement**. Better facilities lead directly to better motivation and engagement.	Investment in infrastructure yields direct engagement returns.
Financial Stress	**Average (Motivation) / Low (Grades)**	Financial stress affects motivation level **averagely**, yet **does not really affect academic grades**.	Students are compensating for low motivation with extra effort, risking burnout.
Resource Access	**High Positive**	**Students with access to resources have a higher motivation level**.	Confirms that resource deprivation is a key driver of disinterest.
Teaching Style	**Weak Positive**	There is a **weak positive relationship between teaching style and student engagement**.	While cited as a problem (RQ1), the current teaching style isn't actively creating *high* engagement; radical change is needed.
Parental Support	**Average**	**Parental encouragement affects students' study habits**	Current levels of encouragement are moderate and could be

		averagely.	significantly improved.
Mental Health	**Average**	**Mental health has an average impact on motivation level**, confirming it as a consistent, ongoing challenge.	Interventions are necessary to stabilize motivation.

3.4. RQ5: Student Demand for Interventions

Student feedback on desired solutions was highly conclusive, pointing to immediate needs for support:

- **Mental Health Demand:** A high percentage of students **(82.93%) are willing to use mental health services** if provided. This indicates a high level of need and low stigma barrier.
- **Mentorship Demand:** A high percentage of students **(46.34%) believe mentorship programs will be very helpful**, underscoring the student desire for personalized guidance, career clarity, and soft-skills development.

4. Conclusions and Actionable Recommendations

The evidence overwhelmingly supports prioritizing the external and institutional changes that directly remove barriers to learning and provide critical support structures.

Recommendation Category	Priority Action	Data Justification
Welfare & Financial	**Establish Targeted Financial Aid and Resource Subsidies.**	**Financial Stress** is the **#1 factor** contributing to the decline. Removing this material barrier is a prerequisite for improving focus.
Support Systems	**Implement Accessible Mental Health and Mentorship Services.**	**82.93%** are willing to use mental health support, and **46.34%** highly value mentorship. This meets a

		proven, high-demand student need.
Learning Environment	**Modernize Teaching Pedagogy and Upgrade Facilities.**	**Teaching Style** and **School Resources** are key contributors to disinterest. Improving facilities has a demonstrated **positive relationship** with engagement.