Education Loan Repayment Dashboard   
– Professional Report

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# Objective

To build an interactive, user-friendly Excel dashboard that helps track, visualize, and simulate education loan repayment using real-time scenarios, enabling better financial planning and awareness.

# Motivation

As a student pursuing higher education, managing loan repayments is a critical aspect of financial responsibility. This project was initiated to:

* Understand the financial impact of monthly EMI payments
* Simulate 'what-if' scenarios like paying extra each month
* Track outstanding balance, interest paid, and total cost of borrowing
* Make data-driven decisions around early repayment benefits

# Tools Used

* Microsoft Excel (Pivot Tables, Formulas, Slicers)
* Financial logic and formulas (EMI, NPER, Interest Split)
* Excel Developer Tab for slider integration

# Key Features

1. **Interactive EMI Slider:** Adjusts EMI and recalculates tenure.
2. **Loan Summary Section:** Visual breakdown of principal and interest.
3. **Amortization Logic:** Uses financial formulas to calculate loan parameters.
4. **Early Payment Modeling:** Simulates interest and time saved.
5. **Data Visualization:** Graphs and slicers to enhance clarity.

# Real-Time Scenario

I took a total education loan of ₹35,45,132, disbursed in two separate parts:

* ₹15,45,312 disbursed in December 2023
* ₹20,00,000 disbursed in January 2025

The loans are both subject to an annual interest rate of 12%, which was later revised to 12.2% from November 2024.

## Timeline & Interest Accrual:

**Loan 1 (₹15,45,312):**

* Disbursed: December 2023
* Interest Rate: 12%, increased to 12.2% from Nov 2024
* From the date of disbursement, I have been auto-paying partial monthly interest of ₹1,545
* These payments help reduce the compounding burden during the pre-EMI phase

**Loan 2 (₹20,00,000):**

* Disbursed: January 2025
* Same rate change applies: 12% ➝ 12.2% from Nov 2024
* A partial interest payment of ₹2,000 is auto-debited monthly from my account from the time of disbursement

## Academic Timeline:

* Expected Graduation: December 2025
* Grace Period: January 2026 to December 2026 (No full EMI payments required during this time)
* EMI Starts: January 2027

## What I Wanted to Explore:

While I have a **grace period** from **Jan 2026 to Dec 2026**, I wanted to evaluate:

* What if I start paying full or partial EMIs before 2027?
* How much interest could I save if I start EMI now (May 2025)?
* What if I had started in past months like Jan 2025 or even Jan 2024?

## Dashboard Capabilities:

To answer these questions, I created an **interactive Excel dashboard** that allows:

* Setting custom **start months for EMI** (past, current, or future)
* Comparing **total interest paid** and **loan tenure** under each scenario
* Using **sliders to test monthly EMI amounts** (₹20,000, ₹25,000, ₹30,000, etc.)
* Estimating **impact of early repayments** on financial savings

# Key Excel Formulas Used

* **NPER():** Calculates number of periods based on EMI
* **PMT():** Calculates EMI based on loan parameters
* **IFERROR():** Improves user experience with error handling
* **Conditional Formatting:** Highlights key trends
* **Scroll Bar:** Enables dynamic EMI adjustment

# Benefits of the Dashboard

* Brings clarity to complex loan repayment processes
* Encourages financial literacy and planning
* Adaptable for other loans (home, car, personal)
* User-friendly design for non-finance users

# Future Enhancements

* Add amortization timeline view
* Include loan type dropdowns
* Enable multi-loan comparison
* Integrate with Power BI or web-based tools for interactive online visualization
* Provide monthly summaries and downloadable reports for tracking

# Conclusion

This project blends personal financial responsibility with the power of data analytics. The dashboard empowers users to not only understand their loan structure but also to take actionable steps towards faster repayment and smarter financial planning. Built entirely in Excel, it showcases how even basic tools, when used creatively, can yield powerful insights.