Business Requirements Document (BRD)

# Project: Learnytics-School Student Performance Tracker

Domain: Education

Date: June 20, 2025

## 1. Project Details

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| --- | --- |
| Attribute | Details |
| Project Name | School Student Performance Tracker |
| Domain | Education |
|  |  |
| Project Manager | Karina D’Souza  Alen Thomas  Royce Jose  Vincent Thomas |
| Expected Start Date | May 2025 |
| Expected End Date | November 2025 |
| Tools/Technologies | Web-based app, Mobile support, Database SQL server, BI tools, Python. |

## 2. Project Overview

The School Student Performance Tracker is a centralized system designed to manage and monitor students’ academic performance and attendance data over time. It will enable better academic intervention, improved engagement, and institutional reporting through automation and data analytics.

## 3. Stakeholders

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| Stakeholder | Role | Interest |
| School Administration | Sponsor | Oversight, funding, KPIs |
| Academic Faculty | User | Grade/attendance input, student monitoring |
| IT Department | Developer/Maintainer | System implementation and support |
| Students | Beneficiary | Performance tracking, transparency |
| Parents/Guardians (optional) | Viewer | Receive alerts and summaries |
| Counselors | Advisor | Monitor and guide at-risk students |

**4. Business Objectives**

* Centralize and streamline academic and attendance data tracking.
* Reduce manual processes and human error.
* Provide early warning for students at academic risk.
* Generate actionable insights through dashboards and reports.
* Ensure compliance with academic regulations.

## 5. Functional Requirements

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| --- | --- | --- |
| ID | Functionality | Description |
| FR1 | Student Data Management | Add/edit/view student profiles and academic history |
| FR2 | Attendance Tracking | Manual entry & integration with biometric/RFID |
| FR3 | Grade Management | Entry and automated calculations (total/percentage) |
| FR4 | Trend Analysis | Performance analytics over semesters/years |
| FR5 | Alerts/Notifications | Email/SMS notifications for low attendance or grades |
| FR6 | Reports | Generate semester-wise, department-wise performance summaries |
| FR7 | Role-Based Access | Define views/actions for admin, faculty, students, parents |
| FR8 | Integration Support | Connect with LMS and ID systems |

## 6. Non-Functional Requirements

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| --- | --- | --- |
| ID | Requirement | Description |
| NFR1 | Scalability | Must support >10,000 students without degradation |
| NFR2 | Security | Role-based access, encrypted data, FERPA/GDPR compliance |
| NFR3 | Performance | Dashboards and reports should load within 3 seconds |
| NFR4 | Availability | 99.5% uptime required during academic months |
| NFR5 | Mobile Access | Responsive design or mobile app support |
| NFR6 | Data Backup | Daily automated backups for disaster recovery |

## 7. Scope (In and Out Scope)

### In-Scope:

* Tracking and analysis of grades and attendance
* Role-based access for faculty, students, admin
* Alerts and predictive performance flagging
* Integration with attendance hardware
* Visual dashboards for trends and statistics

### Out-of-Scope:

* Student behavior or disciplinary tracking
* Financial or fee management
* Full-fledged LMS development
* Manual intervention in alert criteria without approval

## 8. Current State

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| Aspect | Current Situation |
| Attendance | Logged manually on paper or Excel |
| Grades | Maintained by individual faculty using separate files |
| Reporting | Generated manually, often delayed |
| Early Intervention | No systematic approach to identifying at-risk students |
| Data Access | Limited digital access to students/parents |

## 9. Constraints

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| --- | --- |
| Constraint | Impact |
| Budget Limitations | May limit advanced features or 3rd-party integrations |
| Staff Tech Readiness | Training required for adoption |
| Legacy Systems | Possible integration challenges |
| Data Privacy Compliance | Must strictly adhere to regulations |
| Timeline | Must be deployed before new academic session begins |

## 10. Glossary

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| --- | --- |
| Term | Definition |
| LMS | Learning Management System – platform for course content and delivery |
| GPA | Grade Point Average – numeric measure of academic performance |
| RFID | Radio-Frequency Identification – used for attendance tracking |
| FERPA | Family Educational Rights and Privacy Act – US data privacy law |
| At-Risk Student | A student showing signs of poor academic or attendance performance |
| Predictive Analytics | The use of historical data to forecast student outcomes |