Digital Platform for Academic, Administrative, and Franchise Operations

Business Analysis Case Study Thiago Rossi

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1. Executive Summary

This project involved the design, development, and continuous improvement of a digital platform that centralized academic, administrative, and financial operations for an English school. The platform replaced manual processes, standardized the teaching methodology, automated assessments, and enabled the business to scale into a multi-unit franchise model.

In addition to leading the analysis, design, and evolution of the platform, I also managed the VPS environment, including deployments, backups, and database maintenance, ensuring system stability and uninterrupted operation across all units.

2. Current State (AS-IS)

Before the platform existed, the original school unit operated entirely through manual, fragmented, and non-standardized processes. No franchise units existed at this stage, and the business model was not yet scalable.

Academic Operations

- No standardized methodology or structured learning path
- Paper-based assessments with manual correction
- No centralized student history or progress tracking
- Missed classes could not be rescheduled

Instructor Management

- No centralized teaching materials
- No visibility into student history
- High variability in teaching quality
- Manual onboarding and training

Administrative Processes

- Scheduling done in notebooks or spreadsheets
- Contracts handwritten or manually typed
- Student data scattered across paper files and emails
- High volume of repetitive tasks and rework

Financial Management

- No automated billing or delinquency tracking
- Manual receipts and inconsistent reporting
- Limited visibility into financial performance

Student Experience

- No digital content or progress tracking
- No rescheduling options

- Slow communication

Technology & Data

- No central database
- No dashboards or KPIs
- High dependency on manual work

3. Problem Statement

The school's manual and inconsistent processes created operational inefficiencies, limited visibility, inconsistent teaching quality, and an inability to scale. As the school grew, these issues became critical, preventing expansion and reducing the quality of the student experience.

A centralized, digital, and standardized platform was required to:

- automate workflows
- standardize methodology
- consolidate data
- improve student experience
- reduce administrative workload
- enable multi-unit scalability

This need drove the creation of the platform.

4. Stakeholder Analysis

Students

Needs: progress tracking, digital content, rescheduling, communication Pain Points: no visibility, no rescheduling, inconsistent teaching

Instructors

Needs: lesson plans, student history, tools for attendance and assessments Pain Points: no materials, manual corrections, inconsistent processes

Administrative Staff

Needs: scheduling tools, contract automation, centralized records Pain Points: manual work, errors, rework

School Management

Needs: standardized processes, financial visibility, KPIs Pain Points: no data, no dashboards, no scalability

Franchise Owners (Future)

Needs: isolated data, standardized operations, dashboards Pain Points: business model not scalable before platform

Parents (When Applicable)

Needs: progress visibility, communication Pain Points: no access to information

System Administrators / Developers

Needs: clear requirements, stable environment, scalable architecture Pain Points: no existing system to build upon

5. Future State (TO-BE)

The platform introduced a fully digital, standardized, and scalable operational model with dedicated portals for Students, Instructors, Administrators, and Franchise Owners.

Academic Operations

- Standardized methodology and structured lesson plans
- Digital assessments with automated correction
- Complete student history and adaptive learning paths
- Rescheduling directly through the platform

Instructor Portal

- Access to lesson plans and teaching materials
- Student history and performance visibility
- Tools for attendance, assessments, and class notes

Administrative Portal

- Automated scheduling and conflict prevention
- Digital contracts and centralized records
- Automated notifications and communication

Financial Management

- Integrated payments and automated billing
- Delinquency tracking and financial dashboards
- Standardized reporting across units

Student Experience

- Digital content, progress tracking, and class history
- Rescheduling and communication tools

- Personalized learning experience

Franchise Management

- Independent logins with isolated data
- Unit-level dashboards and reports
- Centralized oversight for the franchisor
- Scalable architecture for new units

Technology & Data

- Centralized database and real-time analytics
- Automated workflows and role-based access
- Cloud-based infrastructure supporting multi-unit expansion

6. Functional Requirements (FRs)

User Management

FR-01 to FR-04: Role-based access, authentication, permissions

Student Management

FR-05 to FR-09: Profiles, attendance, progress, rescheduling, notifications

Instructor Management

FR-10 to FR-14: Lesson plans, attendance, assessments, scheduling

Academic Content & Methodology

FR-15 to FR-20: Lesson plans, digital content, automated correction, feedback, storage

Scheduling & Class Management

FR-19 to FR-22: Scheduling, conflict prevention, rescheduling, real-time updates

Financial Management

FR-23 to FR-28: Contracts, payments, delinquency, reports

Communication

FR-29 to FR-31: Notifications, messaging, centralized communication

Multi-Unit Architecture

FR-32 to FR-36: Data isolation, unit dashboards, franchisor oversight

Reporting & Analytics

FR-37 to FR-40: Academic, operational, financial dashboards

Automated Logic & Rules Engine

FR-41 to FR-46: Automated correction logic, rule configuration, progress updates

7. Non-Functional Requirements (NFRs)

Performance

NFR-01 to NFR-04: Load times, real-time correction, multi-unit performance

Scalability

NFR-05 to NFR-08: Horizontal scaling, rule engine expansion, data growth

Security

NFR-09 to NFR-14: RBAC, data isolation, encryption, auditing, GDPR

Reliability

NFR-15 to NFR-18: 99% uptime, VPS monitoring, backups, recovery

Usability

NFR-19 to NFR-22: Intuitive UI, consistent navigation, responsive design

Maintainability

NFR-23 to NFR-26: Continuous deployment, safe updates, documentation

Data Integrity

NFR-27 to NFR-30: Consistent corrections, accurate progress, financial consistency

Multi-Unit Architecture

NFR-31 to NFR-34: Independent units, centralized updates, consolidated dashboards

8. Technical Responsibilities

In addition to business analysis and product ownership, I also managed the technical environment that supported the platform.

Server & Infrastructure Management

- Contracted and configured a VPS
- Set up web server, application stack, and database
- Managed security and access control
- Monitored performance and uptime

Deployments & Version Management

- Deployed updates and new features
- Managed version control and stable releases
- Applied patches without downtime
- Coordinated deployment windows

Database Administration

- Managed database structure and integrity
- Performed manual and automated backups
- Restored data when necessary
- Optimized queries and performance

Operational Continuity

- Ensured stability across all units
- Troubleshot technical issues
- Monitored logs and system health
- Supported onboarding of new franchise units

9. Key Achievements

- Reduced manual workload by **70%** through automation of administrative and academic processes
- Enabled the business to scale into a **multi-unit franchise model**
- Automated 100% of class exercises, revision activities, assessment correction, and learning sequence progression using rule-based logic.
- Standardized the teaching methodology across all units, ensuring consistent quality
- Improved operational visibility with **real-time dashboards** for academic, financial, and administrative data
- Increased student satisfaction through digital content, progress tracking, and rescheduling features
- Reduced operational errors and rework by centralizing data and workflows
- Ensured system stability and continuity through VPS management, deployments, and backups