

# **Product Requirements Document (PRD)**

**Project Name:** CAPS-Aligned Intelligent LMS Platform (South Africa)

**Prepared For:** Online Schools, Tutors, Educators & Curriculum Providers

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## **1. Project Overview**

An intelligent Learning Management System (LMS) designed to serve the South African education market (Grades 1–12), aligned with the **CAPS curriculum**. The platform will include AI-powered tools for automating tests, lesson plans, report cards, and content delivery. It will support video courses, live classes, digital library, teacher monetization, and marketplace features. E-commerce-ready and optimized for mobile and web.

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## **2. Target Users**

- **School Administrators** (private/public schools)
  - **Independent Tutors / Coaches**
  - **Parents & Learners** (Grade 1–12)
  - **Education Businesses / Publishers**
  - **Government & NGO Education Programs**
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## **3. Core Features (MVP)**

### **3.1 Curriculum & Content Delivery**

- CAPS-aligned curriculum library (Grade 1–12)
- Digital library with document uploads (PDF, EPUB)
- Video course player with secure streaming (YouTube, Vimeo, S3)
- Live class scheduling via Zoom, Jitsi, or in-app WebRTC

### **3.2 AI-Powered Content Generation**

- Auto-generated lesson plans, tests, quizzes
- Report card generation (customizable templates)
- Weekly planner generator for educators

### 3.3 Learning Experience

- Public/private classes
- Single or multiple instructors per course
- Quiz & certification engine
- Drip content control
- Assignment submissions & grading

### 3.4 E-Commerce Integration

- Course store (digital goods)
- PayFast, Ozow, PayPal, Stripe integration (30 gateways altogether)
- Installment & partial payment support
- Affiliate and referral system

### 3.5 User Accounts & Permissions

- Roles: Student, Teacher, Parent, Admin, Org Admin
  - Device restriction (avoid duplicate logins)
  - Secure onboarding and profile verification
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## 4. Advanced Features (Phase 2+)

- Full SaaS model with subscription packages
  - AI-powered tutor recommendation system
  - Instructor profile chat
  - Forum and course communities
  - Multi-language & RTL support
  - Student reward points system
  - Cashback, coupons, loyalty bonuses
  - Quiz question bank and reusability
  - Course waitlists, upcoming course alerts
  - GDPR compliance tools
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## 5. Technical Requirements

- **Frontend:** React or Vue.js
- **Backend:** Laravel (PHP) or Node.js

- **Database:** MySQL or PostgreSQL
  - **AI Services:** OpenAI API, LangChain, or fine-tuned LLM
  - **Storage:** AWS S3 or DigitalOcean Spaces
  - **Mobile App:** Flutter or React Native
  - **Authentication:** JWT, OAuth, Social Login
  - **Security:** SSL, Role-based access, File encryption
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## 6. Design & UX

- Fully responsive (mobile/tablet/desktop)
  - Dark mode & accessibility compliance
  - Drag & drop homepage builder for schools
  - Custom color & font settings per institution
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## 7. AI/Automation Strategy

- Connect OpenAI or fine-tuned model to:
    - Generate assessments from syllabus topics
    - Autocomplete lesson outlines & activities
    - Auto-grade objective quizzes
  - Future: Voice-to-text grading & tutoring support
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## 8. Curriculum Integration (CAPS)

- Full CAPS document mapping per grade
  - Curriculum content tagging (topic, subject, term)
  - Weekly plan alignment (Term 1–4)
  - Admin import tool for uploading CAPS-compliant textbooks, worksheets
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## 9. Revenue Model

- Freemium (basic access)
- Paid SaaS plans (monthly/yearly)
- Course sales commission
- Digital product store

- Referral & affiliate payouts
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## **10. Development Milestones**

### **Phase 1: MVP (3 months)**

- Core LMS, curriculum mapping, digital library, e-commerce

### **Phase 2: AI Integration (2 months)**

- Automation of assessments, report cards, lesson plans

### **Phase 3: Mobile App & SaaS (2 months)**

- Flutter app, SaaS packaging, loyalty features, affiliate system

### **Phase 4: Marketplace & Community (2 months)**

- Forum, tutor finder, student-teacher messaging, blog
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