

User-wise features for School LMS

School Admin

1) School Setup & Governance

- School profile: academic year, boards (CBSE/ICSE/State), grade structure, sections/divisions
- Timetable periods + bell schedule, working days, holidays calendar
- Subjects catalog + mapping to grade/board syllabus
- Policies: password rules, session timeout, content moderation rules, communication rules
- Data retention policies + consent templates (parent/student)

2) User & Role Management

- Create/import users (Admins, Teachers, Students, Parents)
- Role-based access control (RBAC) + custom roles (e.g., “Exam Coordinator”, “Counselor”)
- Class/section allocation (bulk assign, promote to next grade, transfer students)
- Parent linking (one parent → multiple children, guardian types)
- Account lifecycle: activate/deactivate, alumni/archive, reset credentials

3) Class, Course & Content Administration

- Course creation templates per grade/subject (school-wide standardization)
- Assign teachers to courses/sections (primary + co-teacher)
- Content governance:
 - approve/publish/unpublish lessons
 - lock content after exams
 - version control for syllabi changes
- Resource library: centralized school repository (worksheets, videos, PPTs, PDFs)

4) Curriculum & Academic Planning

- Syllabus planner: chapter/topic plan by term

- Lesson plan tracking (planned vs completed)
- Homework plan: weekly schedule, distribution, submission windows
- Exam/assessment blueprint controls (weightage per chapter, learning outcomes)

5) Student Progress Monitoring (School-wide)

- Dashboard by grade/class/subject/teacher
- Learning analytics:
 - completion rate, mastery, time-on-task
 - weak concepts heatmap
 - at-risk student identification
- Cohort comparisons: section vs section, teacher vs teacher, month-over-month

6) Assessments & Exams (Governed at School Level)

- Exam creation workflows: unit tests, term exams, practice tests
- Question bank management (difficulty tagging, Bloom's taxonomy tags)
- Standardization tools:
 - moderation/approval flow
 - randomization rules
 - anti-cheating settings
- Result processing:
 - grading policy setup (rubrics, partial credit)
 - re-evaluation workflow
 - report card export formats

7) AI Controls & Safety (Critical for Schools)

- AI usage policy configuration:
 - allowed features (AI tutor, auto-summaries, auto-question generation, auto-grading)
 - grade-wise restrictions (e.g., tighter for < Grade 6)
- AI guardrails:
 - restricted topics list
 - safe-response modes for students
 - hallucination warnings + citations requirement for teacher-facing AI
- AI audit logs:
 - who asked what, when, which content was used
 - flagged outputs + feedback loop

- AI budget / credits (if applicable):
 - quotas per class/teacher
 - anomaly detection (spikes)

8) Communication & Announcements

- Broadcast announcements (school → all, grade-wise, class-wise)
- Teacher/parent messaging rules (time windows, moderation)
- Notifications: push/SMS/WhatsApp/email toggles per category
- Event calendar publishing (PTM, exams, holidays)

9) Attendance & Discipline (Optional but Common in School LMS)

- Attendance oversight dashboard (daily trends, defaulters list)
- Leave approvals + reason codes
- Behavior/incident logs (teacher entries, admin review, parent visibility controls)

10) Integrations & Infrastructure

- SIS/ERP integration connectors (import roster, sections)
- Zoom/Meet integration for live classes (if needed)
- API keys + webhooks for school IT admin (if required)

11) Compliance, Security & Data Privacy

- Consent management (parents, minors)
- Data access logs (who viewed student data/content)
- PII controls: masking, export restrictions
- Backup/restore (school-level exports)
- Incident reporting workflow (data breach, misuse)

12) Reports & Export Center

- Academic:
 - progress reports, concept mastery, benchmark reports
 - teacher effectiveness metrics (careful: position as “support”, not punishment)
- Operational:

- login adoption, weekly active users, content usage
- assessment participation rates
- Export formats: PDF/CSV + scheduled reports

13) Support, Training & Adoption Toolkit

- Admin onboarding checklist (school setup, import users, publish first course)
- Teacher onboarding module + certification
- Helpdesk console:
 - ticketing, issue categories
 - device/app troubleshooting scripts
- Feedback collection from students/teachers/parents

14) Content Quality & Moderation (Needed for Real Schools)

- Content review queue (teacher-created materials)
- Plagiarism detection (for assignments + teacher resources)
- Inappropriate content detection (text/images) + escalation flow
- Quality scoring rubric (readability, alignment to grade level)

“Must-have” vs “Nice-to-have” (fast prioritization)

Must-have (MVP for School Admin):

- User import + role management
- Class/section setup + teacher allocation
- Publish governance (approve/release content)
- School-wide progress dashboard + reports
- Assessment governance (basic exams + exports)
- AI controls + audit logs + safety restrictions

Nice-to-have (v2+):

- Discipline/incident logs
- Deep integrations (SIS/ERP, SSO beyond Google)
- Advanced question bank taxonomy + psychometrics
- Scheduled analytics reports + anomaly detection on AI usage

Teachers: Instructional designer + classroom executor + evaluator + mentor + data-driven decision maker.

1) Teacher Dashboard (Control Center)

Purpose: Real-time situational awareness.

- Today's schedule (classes, pending grading, announcements)
- Class snapshot:
 - attendance summary
 - homework submissions

- at-risk students flagged by AI
- Recent AI insights:
 - weak concepts
 - struggling students
- Pending approvals (if moderation workflow exists)
- Quick actions:
 - Create assignment
 - Generate quiz (AI)
 - Start live session
 - Post announcement

2) Class & Section Management

- View assigned classes/subjects
- Student roster with:
 - profile snapshot
 - performance history
 - attendance trends
- Create groups within class (for differentiated instruction)
- Promote class discussions (thread-based)

3) Lesson Planning & Instruction Design

A. Lesson Planner

- Create lesson plans aligned to:
 - syllabus chapter
 - learning objectives
 - Bloom's taxonomy level
- Weekly planner view (drag-and-drop scheduling)
- Lesson plan templates (school standard or custom)

B. AI Lesson Builder

- Generate lesson outline from:
 - chapter/topic

- uploaded PDFs
- board syllabus
- Auto-generate:
 - explanation notes
 - real-life examples
 - age-appropriate summaries
 - slide decks
- Difficulty adjustment toggle (basic/intermediate/advanced)

4) Content Creation & Resource Management

- Upload:
 - PDFs, PPTs, videos, worksheets
- Attach resources to:
 - course
 - section
 - specific lesson
- Version control (edit → republish)
- AI-assisted:
 - simplify text
 - generate visual explanation
 - create diagrams
 - auto-summarize

5) Assignments & Homework

- Create assignments:
 - objective
 - subjective
 - project-based
 - file submission
- AI generate:
 - worksheet sets
 - differentiated homework
 - practice sheets
- Submission control:
 - deadlines
 - late penalties
 - resubmission rules
- Bulk grading interface

- Rubric-based evaluation
- AI-assisted grading (with teacher override)

6) Assessments & Quiz Builder

A. Quiz Creation

- Manual question entry
- AI-generated questions:
 - MCQ
 - short answer
 - case study
 - HOTS questions
- Difficulty tagging
- Auto-randomization
- Time limit controls

B. Question Bank

- Save reusable questions
- Tag by:
 - chapter
 - difficulty
 - skill level
- Import/export questions

C. Exam Review

- View student performance analytics
- Identify:
 - most-missed questions
 - concept gap clusters
- Re-evaluation workflow

7) AI Teaching Assistant

This is a key differentiator.

A. AI Co-Teacher

- Generate alternative explanations
- Create analogies suited for age group
- Generate blackboard-style explanation scripts
- Convert textbook into interactive session format

B. AI Tutor Oversight

- View what students asked AI
- See AI responses given
- Flag inappropriate or inaccurate responses
- Provide feedback to improve AI answers

C. Adaptive Instruction

- AI suggests:
 - remedial worksheets
 - advanced practice for high performers
 - group-based interventions

8) Student Progress & Analytics

- Per-student dashboard:
 - concept mastery heatmap
 - assessment trends
 - time spent learning
- Class analytics:
 - average score
 - distribution curve
 - weak topic ranking
- At-risk alerts:
 - low participation
 - repeated concept failures
- AI recommendations:
 - suggested revision plan
 - intervention strategy

9) Classroom Interaction Tools

- Discussion boards
- Polls during class
- Live quiz mode
- Doubt-clearing thread
- Parent-visible comment logs (if enabled)

10) Attendance & Behavior Tracking

- Mark attendance (manual or auto)
- Add remarks:
 - academic
 - behavioral
- View attendance trends
- Export attendance summary

11) Communication

- Message:
 - individual student
 - group
 - parents
- Send:
 - homework reminders
 - performance alerts
- Schedule announcements
- Auto-translate communication (AI-powered)

12) Report Card & Feedback

- Add qualitative remarks
- AI-assisted comment suggestions (editable)
- Export report cards
- Parent meeting summary logs

13) Academic Intervention Tools

- Create remedial plan

- Assign targeted micro-lessons
- Monitor improvement progress
- Track intervention effectiveness

14) Professional Growth & Insights

- Teacher performance dashboard:
 - student engagement score
 - content effectiveness rating
- Feedback from students/parents
- AI suggestions to improve lesson clarity
- Training modules / certifications

15) Safety & Compliance Controls

- Restricted AI topic handling
- Plagiarism detection for student submissions
- Content moderation alerts
- Data access visibility (who viewed what)

MVP vs Advanced

Must-Have (MVP)

- Dashboard
- Lesson builder (manual + AI)
- Assignment & quiz creation
- Basic grading
- Student progress analytics
- Communication tools

Advanced (Differentiator)

- AI co-teacher scripts
- Adaptive worksheet generation
- At-risk AI prediction
- AI tutor oversight panel

- Concept heatmaps

STUDENT MODE (Primary Learning Interface)

Learning workspace + practice lab + AI tutor + performance mirror

1) Student Dashboard (Learning Control Panel)

- Today's classes & homework
- Upcoming tests
- Pending submissions
- Learning streak tracker
- AI suggested "Revise this today"
- Recent feedback from teacher
- Quick access:
 - Resume last lesson
 - Start practice test
 - Ask AI tutor

2) Course & Lesson Access

- View enrolled courses (by subject)
- Structured syllabus view:

- chapters → topics → lessons
- Lesson format:
 - text explanation
 - video
 - downloadable resources
 - teacher notes
- Bookmark lessons
- Highlight & save notes
- Offline reading mode (if allowed)

3) Unlimited Self-Assessments (Core Differentiator)

A. Practice Mode

- Unlimited topic-wise practice
- Instant evaluation
- Difficulty selector:
 - Easy
 - Medium
 - Hard
- Timed / untimed mode

B. Adaptive AI Practice

- AI generates questions based on:
 - weak areas
 - past mistakes
- Smart revision mode
- Mistake repetition engine (spaced repetition)

C. Performance Insight

- Concept mastery meter
- Improvement graph
- Accuracy %
- Speed analysis

4) AI Tutor (Supervised & Safe)

- Ask doubts from lesson content

- AI answers based only on course knowledge base
- “Explain like I am 10” mode
- Generate additional examples
- Solve step-by-step (math/science)
- Doubt history tracking
- Flag answer if confusing

5) Assignments & Submissions

- View homework list
- Upload:
 - file
 - typed answer
 - image (homework photo)
- Draft saves
- Resubmission if allowed
- See teacher feedback & rubric

6) Exams & Graded Tests

- Take timed exams
- Auto-save answers
- Question navigation
- Mark for review
- Instant results (if objective)
- Detailed solution view (if enabled)
- Review incorrect answers

7) Notes & Personal Study Tools

- Personal notebook (private)
- AI summary generator
- Flashcard generator
- Revision planner (AI-assisted)
- Daily goal tracker

8) Progress & Performance Tracking

- Subject-wise performance dashboard
- Chapter mastery heatmap
- Test history
- Assignment score trends
- Rank (if school allows visibility)
- Improvement vs previous term

9) Attendance & Participation

- Attendance record
- Participation score (if tracked)
- Behavior remarks (optional visibility)

10) Communication

- Message teacher (if allowed)
- Doubt thread participation
- View school announcements
- Assignment reminders

11) Gamification (Optional but Powerful for K–12)

- XP points
- Badges
- Weekly consistency rewards
- Leaderboard (optional, controlled visibility)



PARENT MODE (Password Protected)

Observation + Communication + Oversight + Early Warning System

1) Parent Dashboard (High-Level View)

- Ward's overall performance summary

- Attendance percentage
- Upcoming exams
- Pending assignments
- Teacher remarks summary
- Behavior flags (if applicable)
- AI-generated “Progress Summary” (simple language)

2) Academic Performance View

A. *Subject-wise Analysis*

- Average score per subject
- Strengths & weaknesses
- Chapter mastery
- Term comparison

B. *Test & Assignment Details*

- View each exam result
- View evaluated answer sheets (if allowed)
- Rubric & teacher comments

3) Report Cards & Documents

- Download report cards (PDF)
- Term-wise progress
- Promotion status
- Certificates (if applicable)

4) Attendance Monitoring

- Daily attendance
- Monthly trends
- Absence alerts
- Late arrival logs (if tracked)

5) Teacher Interaction

- Secure messaging with teacher
- Schedule PTM (Parent-Teacher Meeting)

- View teacher announcements
- Respond to remarks

6) Child Activity Monitoring

- Time spent per subject
- Practice frequency
- AI tutor usage logs
- Login frequency
- Last active time

(Not micromanagement — just transparency)

7) Behavioral & Alert System

- Low performance alerts
- Low attendance alerts
- Missing homework alerts
- AI-based early warning (if risk detected)

8) AI Parent Assistant (Optional Advanced Feature)

- Explain child's performance in simple terms
- Suggest how to support child at home
- Study schedule recommendations
- Compare with previous term

9) Controls & Restrictions

- Limit daily AI usage (if school policy)
- View but not modify student answers
- Parent mode cannot:
 - Submit assignments
 - Take tests
 - Change student content

Security Architecture Recommendation

- Student login → “Switch to Parent Mode”
- Prompt parent password

- Session separation (parent session token)
- Parent audit logs
- Optional OTP verification for sensitive actions

MVP vs Advanced

MVP Must-Have

Student:

- Dashboard
- Course access
- Unlimited practice
- Assignment submission
- Basic progress tracking

Parent:

- Performance summary
- Report card view
- Attendance
- Teacher messaging

Advanced Differentiators

- Adaptive AI practice engine
- Parent AI summary
- Risk prediction alerts
- Mastery heatmaps
- Spaced repetition system

