Purpose:

To define a comprehensive set of metrics that the backend dashboard must track across all modules (Home, Library, Projects, Discover). The aim is to ensure:

- Continuous product refinement
- User journey understanding
- Feature usage insight
- Psychological & behavioral analysis
- Business, marketing & monetization planning

USER & PROFILE METRICS

Metric	Description	Purpose
User ID	Unique identifier (hashed)	User-specific tracking
Signup method & source	Email, Phone, Referral	Attribution & growth tracking
Exam & Subject	UGC NET, CUET, etc.	Feed personalization
Language Preference	English / Hinglish	UX optimization
Region (State/City)	Based on IP or input	Localized behavior analysis
Device Type	Mobile/Web	Optimize experience & load balancing

HOME (CHATBOT) METRICS

Metric	Description	Purpose
Total queries asked	Per user + globally	Engagement depth
Average queries/session		Measures session richness
Session duration	Start & end time	Habit insight & burnout risk

Query type distributionDefinition, MCQ, TheoryContent demand insightFollow-up frequencyIndicates clarity of answersBot response quality metricNegative feedback rateThumbs down or confusionImprove training dataVoice input usage %Tier 2/3 friendlinessAccessibility trackingTime-of-day usageMorning vs NightPush timing & daily cycle design

LIBRARY METRICS (LEARNING HISTORY)

Metric	Description	Purpose
Topics covered %	Unit-wise progress	Adaptive content suggestions
Glossary terms tracked	User's learning vocabulary	Depth of subject understanding
Query revisit count	Confusing or repeated doubts	Suggest reminders or expert help
Study days streak	Days with activity	Habit health indicator
Study session count	Number of focused blocks	User consistency tracking
Avg. time per session	Time spent per block	Retention & attention tracking

PROJECTS METRICS

Metric	Description	Purpose
Projects created/user	Indicates study discipline	Power user segmentation
Items per project	Notes, saved doubts, tests	Depth of preparation
Project types	PYQs, summaries, test series	Behavioral clustering
Shared projects count	Collaborative usage	Future monetization layer
Quiz attempts from projects	Self-testing rate	Concept recall metric
Project revisit %	Return after creation	Study sustainability

DISCOVER METRICS

Metric	Description	Purpose
Top 10 questions/day	Global demand index	Content curation/marketing
User interaction with feed	Click-through rate	Curiosity signal & social trust
Re-query from Discover	Students following peers	Doubt overlap metric
Discover scroll depth	Time spent on feed	Stickiness of community layer
Most common confusion clusters	Repeated low clarity queries	Improve training priorities

CROSS-MODULE BEHAVIORAL METRICS

Metric	Description	Purpose
Power Users	High DAU, multi-module	Early monetization candidates
Passive Users	Low query count, high bounce	UX friction check
Query progression map	$A \to B \to C \text{ topic journey}$	Study pattern analysis
Conceptual vs Rote split	Based on query nature	Understand learner mindset
Improvement tracking	Quiz scores + repetition	Learning outcome indicators

BUSINESS & GROWTH METRICS

Metric	Description	Purpose
DAU / MAU	Active user engagement	Product-market fit tracking
CAC (Cost of Acquisition)	From ads or organic	Growth budgeting
Retention %	1-day, 7-day, 30-day	User stickiness measurement
Referral usage rate	% users from invite	Viral loop tracking

Conversion % (to paid) Once monetized Revenue forecasting

Active device per user Cross-platform behavior Technical optimization

PSYCHOLOGICAL INSIGHTS (IMPLICIT SIGNALS)

Metric Description Purpose Scroll bounce rate Exit without query UI/UX dropout causes Response time delay Before typing or clicking Cognitive load analysis Streak anxiety Drop-off after long streak Motivation dip predictor Repeat same-day questions Forgetting or unclear Revision opportunity flag Clicks on summaries vs Learning style Personalization layer examples preference design

MARKETING SIGNALS

Metric	Description	Purpose
Most saved questions	Great for reels/posts	Social proof content
Most searched topics/unit	Trend alignment	YouTube/SEO targeting
Discover usage rate	Peer interest	Community campaigns
User testimonials or reviews	% who give feedback	Trust-building assets
Popular doubts by region	Regional targeting	Vernacular influencer strategy

ANALYTICS & EXPANSION PATHWAYS

- Track subject-level engagement to decide which exam to scale into next
- Flag high churn periods to time feature drops
- Benchmark average learning curve per student segment (UGC NET vs CUET)
- Enable dynamic onboarding flow based on behavioral cohorts (e.g., confused learner vs goal-driven)

DAILY/WEEKLY DASHBOARD VIEWS (RECOMMENDED)

Daily Snapshot:

- New signups
- Top 5 queries
- Top revisited doubts
- Most engaged student
- Feedback ratio

Weekly Snapshot:

- Query volume trends
- Unit/topic coverage heatmap
- Top Discover clicks
- Power user behavior
- Drop-off zone detection

Final Note: These backend metrics must be tracked in a scalable and modular way, using tools like Firebase Analytics, Mixpanel, or Supabase SQL dashboards. They will guide product iterations, investor conversations, monetization experiments, and content decisions.