**Executive Summary for E-Learning Retention Strategy**

Dataset Highlights

Study conducted on 15,000 learning records  
Analysed course engagement, satisfaction, and progress  
Goal: Identify high-risk learners and design retention strategiesMetric Value

Total Records 15,000

Dropout Rate 60%

Retention Rate 40%

High-Risk Students Flagged 100

Total Features Analysed 20

Observation: Majority of students are dropping out within the first 20% of course completion, posing a significant revenue and reputation risk.

**Behavior & Segment Analysis**

Dropout Rates by Category

|  |  |  |
| --- | --- | --- |
| Category | Segment | Dropout Rate (%) |
| Subscription Type | Free | 57.2 |
| Paid | 62.1 |  |
| Course Difficulty | Easy | 58.1 |
| Medium | 57.8 |  |
| Hard | 63.0 |  |
| Device Used | Desktop | 58.1 |
| Mobile | 57.8 |  |
| Tablet | 63.1 |  |

Insight: Paid users show higher dropout than free users (62%)  
Tablet learners and hard course enrolees have above-average churn.

**Predictive Feature Importance**

|  |  |
| --- | --- |
| Top Features | Contribution (%) |
| Course\_Progress\_% | 58.7 |
| Video\_Watched\_Count | 8.7 |
| Time\_Spent\_Total\_Min | 7.3 |
| Quiz\_Attempted\_Count | 4.4 |
| Days\_Till\_Inactive | 4.2 |

Interpretation: Dropout is primarily behaviour-driven. Low activity and shallow progress signal early disengagement.

**High-Risk Behavior Flag**

|  |
| --- |
| Course Progress < 20% |
| Time Spent < 60 mins |
| Satisfaction Rating ≤ 2 |
| Inactivity > 10 days |

100 students matched this risk profile.

**Strategic Recommendations**

Insight Area Actionable Strategy

Low engagement cohorts Trigger nudges after 7 days inactivity

Hard courses with churn Add walkthroughs, simplified content, or optional support tracks

Device dropout patterns Redesign tablet experience with improved UI/UX

Satisfaction dip zones Embed mid-course feedback for agile content improvement

At-risk student profile Implement alert dashboards for proactive retention workflows

**Forecasted Impact**

Potential reduction in dropout rate: **15–25%**

Higher course completion improves upselling & cross-sell opportunities

Data-backed personalization increases learner lifetime value

Greater brand trust and platform reputation.