

Business Intelligence Project – Use Case Proposal

Project Title: Analytics for Open Learning Platforms

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1. Introduction & Business Context

Open Learning Platforms generate large volumes of learner data but often struggle with engagement and completion rates. Applying analytics enables stakeholders to monitor performance, understand learner behavior, and support data-driven decisions that improve educational impact and platform sustainability.

This project aims to design and implement an end-to-end Business Intelligence solution that analyzes learner behavior, engagement patterns, and performance data within Open Learning Platforms to support informed decision-making and improve learning outcomes.

2. Business Problem

Open Learning Platforms face several critical challenges that hinder their effectiveness and growth:

- **Low learner engagement and high dropout rates** – Many learners enroll but fail to complete courses
- **Limited visibility into learner behavior and progress** – Lack of real-time insights into how learners interact with content
- **Difficulty measuring course effectiveness and impact** – Unclear understanding of which courses deliver the best outcomes
- **Delayed or inconsistent performance reporting** – Decision-makers lack timely access to actionable data
- **Misalignment between content design and learner needs** – Course offerings may not match learner preferences or market demand
- **Challenges in predicting learner success and retention** – Inability to identify at-risk learners early for intervention

Impact: As a result, decisions related to course design, learner support strategies, content improvement, and platform optimization are often made without reliable, data-driven insights, leading to suboptimal learning outcomes and platform performance.

3. Analytical Questions

The Business Intelligence solution will address the following ten analytical questions, organized by business focus area:

Course Performance & Effectiveness

- 1. Which courses have the highest and lowest completion rates, and what factors (duration, level, subject) contribute to these patterns?**

This question directly addresses the business problem of low completion rates by identifying successful courses and the characteristics that drive their performance.

- 2. How does course difficulty level and duration impact dropout rates across different subjects?**

Understanding the relationship between course structure and dropout patterns enables better course design decisions.

- 3. What is the average time spent per course, and how does it correlate with completion success?**

This metric helps identify optimal course length and engagement levels needed for successful outcomes.

Learner Behavior & Engagement

- 4. How does learner engagement (time spent, sessions, forum participation) correlate with course completion and certificate attainment?**

Addresses the visibility gap by establishing clear engagement metrics that predict learner success.

- 5. Which learner demographics (age, gender, education level) show the highest engagement and completion rates?**

Enables targeted marketing and personalized learning experiences for different learner segments.

- 6. What percentage of learners enroll in multiple courses, and how does repeat participation affect completion rates?**

Identifies loyal learners and helps measure platform stickiness and long-term learner value.

Strategic & Predictive Insights

- 7. Which course categories and subjects generate the highest enrollments and revenue across different regions?**

Informs content development priorities and helps align course offerings with market demand.

- 8. What are the seasonal enrollment and completion trends, and when do learners show peak activity?**

Enables optimized marketing campaigns and resource allocation during high-demand periods.

- 9. Which geographical regions have the highest learner activity, and where are there opportunities for growth?**

Identifies expansion opportunities and helps customize offerings for different markets.

10. Can we identify at-risk learners early (based on engagement patterns) to enable timely interventions and improve retention?

Directly tackles the retention challenge by enabling proactive learner support and reducing dropout rates.

4. Key Performance Indicators (KPIs)

The following eight KPIs will be measured and tracked throughout the BI solution to monitor platform performance and learner success:

- 1. Total Enrollments** – Measures overall platform reach and growth
 - 2. Enrollment Growth Rate (MoM / YoY)** – Tracks platform expansion over time
 - 3. Completion Rate (%)** – Primary metric for measuring learner success and course effectiveness
 - 4. Certificate Conversion Rate** – Percentage of enrolled learners who complete courses and earn certificates
 - 5. Average Time Spent per Learner** – Indicates engagement levels and course appeal
 - 6. Learner Lifetime Engagement (LLE)** – Measures cumulative learner activity and platform loyalty
 - 7. Learner Repeat Participation Rate** – Tracks percentage of learners enrolling in multiple courses
 - 8. Revenue/Popularity by Course Category** – Identifies most valuable and in-demand content areas
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This proposal outlines the foundation for a comprehensive Business Intelligence solution that will transform learner data into actionable insights, enabling data-driven decisions to improve engagement, completion rates, and overall platform effectiveness.