

# Business Intelligence Project – Use Case Proposal

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**Project Title:** Analytics for Open Learning Platforms

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**Course:** IT300 – Business Intelligence

**Institution:** Tunis Business School

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## 1. Introduction & Business Context

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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

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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

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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)**

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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.*