



Analytics in Education

Making Sense of Student Data and Royalty Payments

About the Client

The client is a leading higher education publisher committed to offering online educational students tailored to university students. Their commitment to educational excellence positions them as a trusted resource for educators and learners. They host many courses for their university-level students. Apart from publishing their own course content, they also have content partners who contribute to content on their platform. The client manages large volumes of course material and resources from multiple sources. They also offer royalty payments for their content partners and aim to improve learning outcomes.

Business Requirements

The client holds a pivotal role in the educational landscape, curating content from diverse partners. However, they faced multiple hurdles in harnessing their data effectively. Even though there is plenty of data available, the client had several issues in creating insightful reports. This affected their business decisions as they could not understand the impact of the numbers. When the client wanted to analyze their product offerings, they could not generate student analytics for student engagement and royalty payments. This impeded their business growth.

The MRCC team took up the project to reorganize databases, incorporate business intelligence, generate student analytics, enable custom report creation, and empower the client to upgrade their EdTech service offerings.

Challenges in the Data Conundrum

The client was managing a distributed data system as the crucial data and information were scattered across multiple sources. The lack of standardization made it difficult for their existing reporting tools to generate accurate reports. As a result, the client could not get detailed and granular student analytics that measure student performance, engagement with course content, interest in pursuing similar courses, and personalizing learner journeys. Some challenges the MRCC team worked on are:

- Disparate data sources and formats due to siloed data
- Incomplete data that resulted in inaccuracies and inconsistencies
- Lack of robust data integration protocols that prevented real-time access to critical information
- Shortage of student engagement metrics
- Complex and error-prone process in calculating royalty payment
- Inadequate reporting capabilities
- Ensuring security and compliance of educational and financial data
- Adhering to industry standards and privacy regulations
- Establishing a feedback loop to improve learning outcomes through data analysis and course adjustments

MRCC Solutions

The MRCC team harnessed cutting-edge technologies to resolve the client's student analytics challenges. An expert team managed the analysis tech stack. These tools, with MRCC expertise, helped the client to meet their diverse business intelligence needs.

1. ETL Expertise

Leveraged capabilities of Airflow, DBT, and AWS Lambda to orchestrate and streamline data extraction, transformation, and loading processes, ensuring data accuracy and timeliness

2. Cloud Storage Mastery

Established secure and scalable cloud-based data storage using Amazon S3 for efficient data access and retrieval

3. Robust Datawarehouse

Employed Snowflake, Aurora DB, and Google BigQuery implementations for data warehousing to meet scalable data requirements

4. BI Insights

Deployed Looker BI platform to derive insights to create dynamic reports based on current business intelligence needs

5. Diagnostics

Created a proactive monitoring and diagnostics system using Splunk to ensure the integrity and performance of the analytics infrastructure

6. Project Management Excellence

Implemented Jira project management system to effectively collaborate, track progress, and meet project milestones with precision

7. Document Management

Enabled access to all authorized members through Confluence for knowledge sharing and efficient documentation

MRCC Analytics in Education Workflow

- 01. Requirement Assessment**

MRCC initiated the project with a detailed requirement assessment. The team worked with the client to understand BI objectives and specific BI requirements.
- 02. Team Formation**

MRCC assembled a team of technology experts specializing in each of the components of the analytics tech stack.
- 03. Technology Integration**

MRCC implemented technologies and integrated multiple systems to create a cohesive analytics ecosystem. The experts ensured that all the integrated systems maintained the workflow.
- 04. Data Collection and ETL**

MRCC technology experts extracted data from multiple sources, transformed and standardized information, and loaded the data into the selected warehouses.
- 05. Data Warehousing**

The MRCC data management team stored and organized data effectively, making it accessible for analytics.
- 06. BI Insights with Looker**

The MRCC BI implementation team customized the Looker platform to set up an analytics dashboard and reporting systems to create dynamic reports as and when needed.
- 07. Diagnostics and Monitoring**

MRCC leveraged Splunk to create a monitoring system to monitor infrastructure analytics, diagnose issues, and ensure system health and performance.
- 08. Project Management**

MRCC enabled an efficient project management system with Jira for future BI needs for tracking task milestones and collaborating with multiple teams.

Documentation and Knowledge Sharing

09.

MRCC created a detailed documentation and knowledge-sharing system using Confluence to ensure that BI tasks, procedures, processes, insights, and other project-related information are well-documented and accessible to all the team members.

MRCC Analytics in Education Workflow

After implementing the MRCC solution, the client could transform their EdTech operations using advanced analytics and data-driven insights. They revamped their educational platform with strategic approaches enabled by MRCC implementation. They achieved their goal of tracking student engagement and calculating royalty payments. MRCC went above and beyond to provide these benefits:

Robust analytics system to instantly develop student engagement insights

Leverage student learning curve to recommend complementary and supplementary courses tailored for each student

Optimized subscription packages through detailed data analysis to identify profitable subscription packages

Accurate tracking and reporting enabled streamlined calculation of royalty payments

Gain a competitive edge in the Edtech landscape through data-driven tools for personalizing learning journeys and content curation.

MRCC empowered the client to move forward in providing dynamic, effective, and impactful education for their students. The data-driven insights helped them to streamline innovative educational products that were met with success. The increased student engagement resulted in better learning outcomes and higher profitability for the client subscription packages

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