

Beyond Canvas: University Enhances Learning with a Custom LMS for Advanced Assessment and Attendance

In today's data-driven educational landscape, traditional assessment and attendance methods can hinder progress. This case study explores how Invimatic collaborated with a large university in the USA to transform its learning environment. The University sought a more comprehensive solution than their existing Canvas LMS could offer for managing digital assessments and attendance tracking.



Company Overview

A prestigious university from the USA dedicated to fostering academic excellence and student success. They offer a diverse range of programs and serve a large student body. The University prioritizes innovative teaching methods and seeks to leverage technology to enhance the learning experience.

Challenges

- **Limited Assessment Capabilities:** Canvas offered basic functionalities for online quizzes, but The University required a wider range of digital assessment tools for various learning objectives.
- **Inflexible Attendance Tracking:** The university's existing system relied on student ID card swipes, limiting options for remote learning scenarios and lacking real-time data.
- **Restricted Data Insights:** Canvas provided basic analytics, but The University desired more granular data to identify struggling students and personalize learning experiences effectively.

Solution Offered

Invimatic partnered with The University to develop a custom Learning Management System (LMS) that built upon the foundation of Canvas. This enhanced LMS offered:



Advanced Digital Assessment Suite

Integration with a wider range of assessment tools, allowing instructors to create and grade essays, simulations, and other complex assessments electronically.



Customizable Attendance Tracking

The ability to tailor attendance tracking methods to The University's specific needs. This could include integrating with existing security systems or implementing features like geolocation verification for remote learning.



Enhanced Data Analytics Dashboard

A robust data analytics dashboard providing instructors with detailed insights into student performance. This allowed for early identification of at-risk students and informed personalized learning approaches.



Seamless Canvas Integration

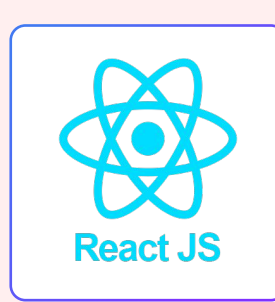
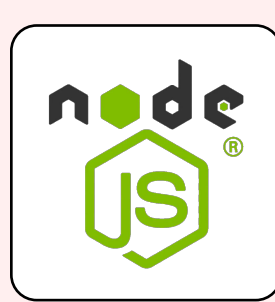
The custom LMS seamlessly integrated with the existing Canvas infrastructure, ensuring a smooth transition for faculty and students already familiar with the Canvas interface.

Technology Implementation

The custom LMS leveraged Canvas as the core platform and extended its functionalities through integrations and custom development:

- **API Integration:** The custom LMS utilized Canvas's API to access and manage user data, courses, and content within the familiar Canvas environment.
- **Custom Development:** Additional functionalities like advanced assessment tools, customizable attendance tracking methods, and a comprehensive data analytics dashboard were developed using Node.js.

Technical Stack



Results

- **Increased Efficiency:** The enhanced LMS streamlined assessment and attendance workflows, saving instructors valuable time and reducing administrative burden.
- **Data-Driven Instruction:** Real-time and detailed performance data empowers instructors to personalize learning for each student and identify at-risk students early on.
- **Improved Student Engagement:** A wider range of assessment tools and mobile access foster a more engaging learning experience.
- **Reduced Paper Waste:** Eliminating paper-based assessments and attendance logs contributes to a more sustainable learning environment.



Conclusion

This case study demonstrates the power of custom LMS solutions for institutions seeking to go beyond the limitations of existing platforms. By building upon the foundation of Canvas, Invimatic empowered The University to create a more efficient, data-driven, and engaging learning environment for its students and faculty.