

## Transforming Art Education: Seamless Integration of Design Tools within a Custom LMS

In today's evolving art world, traditional artistic skills must be combined with proficiency in complex design tools. This case study explores how Invimatic collaborated with a leading North American art college to bridge this gap.



### Company Overview

The College is a prestigious North American art institution dedicated to fostering the next generation of creative talent. Their curriculum emphasizes traditional art forms, but they sought to expand their offerings to include the specialized tools used by professional artists.

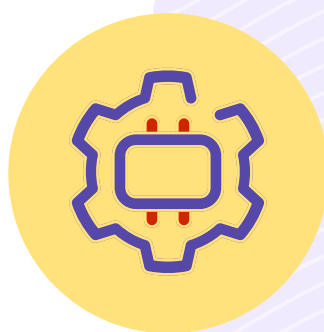
### Challenges

- **Limited Exposure to Complex Tools:** The existing curriculum focused on traditional art techniques, leaving a gap in exposure to professional design software and workflows.
- **Inadequate Learning Resources:** Basic learning materials were available within the LMS, but they lacked the depth and interactivity needed for mastering these tools.
- **Inflexible Learning Platform:** The existing LMS platform lacked the capabilities to integrate advanced design tools and support the specific needs of art education.



### Solution Offered

Invimatic developed a custom Learning Management System (LMS) with Learning Tool Interoperability (LTI) capabilities. This solution addressed the limitations of the existing platform and offered several key advantages.



#### LTI-Integrated Design Component

Invimatic developed an LTI component that seamlessly integrated with The College's existing LMS. This custom component offered a dedicated drawing and design workspace within the familiar LMS environment.

### Freehand Drawing Functionality

Students gained the ability to practice freehand drawing directly within the LMS, fostering a more natural and intuitive learning experience.



#### Enhanced Learning Resources

The custom LMS facilitated the integration of rich learning materials specifically focused on mastering complex design tools, including tutorials, demonstrations, and sample projects.

### Technology Implementation

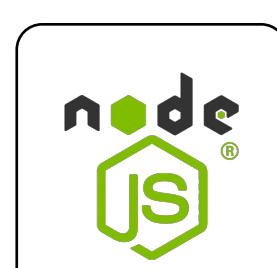
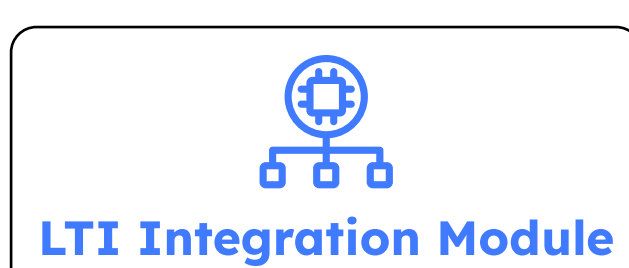
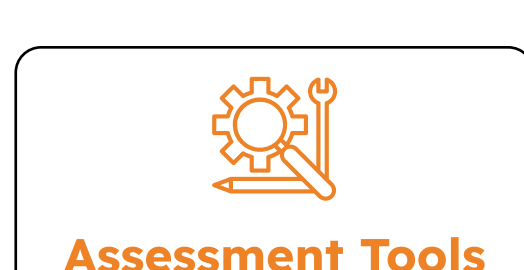
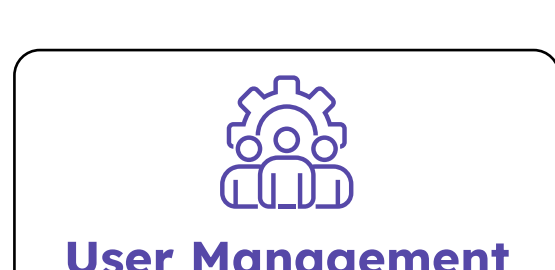
The custom LMS utilized Learning Tool Interoperability (LTI) to seamlessly connect with the newly developed design component. This ensured secure two-way communication between the two systems, allowing data exchange like user information, course context, and potentially even student work created within the design tool.

**LTI Integration Module:** A crucial module within the LMS facilitated this communication with the design component. This module handled functionalities like:

- **Launch Request Processing:** Parsing incoming requests from the design component to understand the user, course context, and desired action.
- **User and Course Validation:** Verifying user identity and course enrollment within the LMS to ensure authorized access to the design tool.
- **Deep Linking:** Generating secure links within the LMS that direct users to the appropriate functionality within the design component based on the request.

**This LTI integration ensured a smooth user experience for students, allowing them to access the design tools directly from within the familiar LMS environment.**

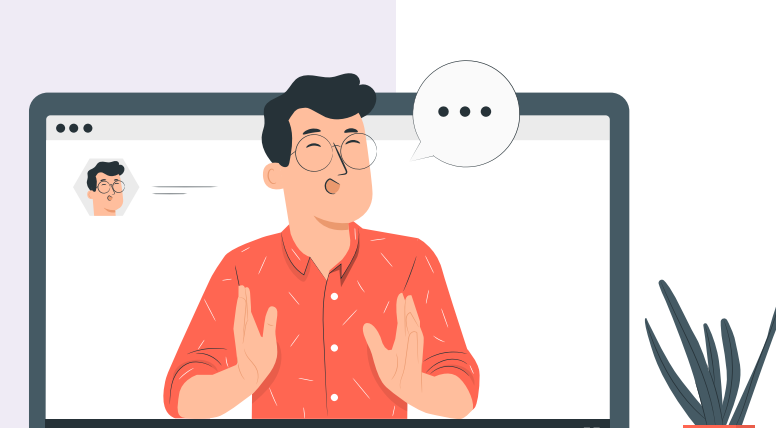
### Technical Stack



### Results

The College has observed significant improvements in its art education program:

- **Increased Student Satisfaction:** Students benefit from a broader and more industry-relevant learning experience, preparing them for success in the professional art world.
- **Enhanced Faculty Flexibility:** Educators can now integrate advanced design instruction into their curriculum, enriching the overall learning experience.
- **Improved Institutional Reputation:** The College has established itself as a leader in innovative educational technology, attracting students seeking industry-focused art education.



### Conclusion

This case study demonstrates the power of LTI in revolutionizing educational technology. By enabling seamless integration of external learning platforms within a centralized LMS, LTI empowers education institutions to bridge the gap between traditional education and industry demands, preparing students for success in the ever-evolving creative landscape.