

Case Study

Application Testing and Release Stability Support for a Leading K-12 eLearning Platform Suite

**Magic
EdTech**

The Client

The client is a leading provider of K-12 STEM educational software, offering a suite of science, math, fractions, STEM, and competition-based learning applications designed for students in grades 3 through 12.

The Challenge

Operating in the high-stakes K-12 market, the client needed recurring User Acceptance Testing (UAT) and production stability testing. This testing would be conducted before deployment to identify unknown issues across their multiple learning applications and support front-end UI changes where required.

Critical Success Parameters

- ✓ Conduct UAT and production stability testing before deployment.
- ✓ Identify blocker, critical, latency, and functionality issues across learning applications.
- ✓ Validate both front-end functionality and back-end behavior where required.
- ✓ Test application behavior across multiple browsers and devices.
- ✓ Follow client-provided testing instructions, steps, and guidance.
- ✓ Support planned daily and weekly testing tasks for upcoming assignments.
- ✓ Provide front-end UI support and QA testing.
- ✓ Coordinate regularly with the client team on planned work and deployment needs.
- ✓ Remain available during deployment windows and late-release support needs.

Our Approach

- ✓ Conducted UAT and production stability testing every 15 days before deployment.
- ✓ Supported testing across multiple learning applications covering science, math, fractions, STEM, and competition-based learning experiences.
- ✓ Assigned a delivery team of three QA engineers and one UI developer for testing and front-end UI support.
- ✓ Performed manual, automation, and accessibility testing across application workflows, logic, browser behavior, and device-specific scenarios.
- ✓ Checked back-end behavior in cases where the front-end functionality appeared correct but the underlying logic needed validation.
- ✓ Conducted cross-browser and multi-device testing across environments such as desktop browsers, Chromebooks, and iPads.
- ✓ Used existing automation coverage for hundreds of interactive activity checks where available, while continuing manual testing for the wider application suite.
- ✓ Maintained weekly coordination with the client team to align on planned tasks, upcoming assignments, and deployment needs.



Key Result Highlights

Identified a blocker login issue that could have prevented users from accessing one of the learning applications.

Detected latency issues during stability testing, enabling the client to roll back changes and redeploy after fixes.

Identified critical back-end functionality issues that were not visible from the front end.

Uncovered browser and device-specific issues, including cases where activities worked in one environment but failed in another.

Received client appreciation for identifying critical issues during stability testing.

Supported a long-standing engagement of four to five years through recurring QA and front-end support.

Helped the client manage deployment support through flexible availability during late or urgent release windows.