# Using JavaScript outside the browser (Articulate Storyline)

*NOTE: Not exactly outside of the browser. The browsers is needed to run but JavaScript was used within Articulate Storyline to apply special triggers.*

In today’s world, learning has been made easy for both its consumers and administrators. Technology and innovation has brought your traditional class training from the classroom to the World Wide Web, onto your computers and down to every mobile device.

These advances were made possible with the help of new tools in the industry, such tools as learning management systems (LMS) to host and track learning content. Course development tools like Articulate Storyline to develop that content and interaction with the user.

This type of learning can be very effective with proper instructional design, development and implementation. Throughout the years experts in these fields have improved the methods and tools used based on the data gathered, analyzed and improved upon.

But even with such tools available, their use can either be an advantage or disadvantage. Some organizations have years of experience and some are just adopting the standard.

In my organization, we have done learning and development for years supporting our aerospace industry customers but mostly relied on in-house and custom built learning technologies. This was mostly due to the proprietary and technical controlled content being taught and consumed by our audiences. At the time, these were all just standard web hosted content with no tracking or data analytics.

Finally with some easing of security policies and improved technical requirements, we have been adopting the industry standard technologies such as cloud based LMSs and course development tools. Our designers and developers are now able to create effective learning, gather and analyze data.

But this is just the start, as there are still security and technical limitations, especially when it comes to proprietary data. Certain training is still restricted from being hosted on the cloud. We had to take a step back, we had to go back to creating standalone web-based training hosted on internal servers.

Until security policies improved, there is really nothing we can do, proprietary content needs to be protected. So we continued developing courses using Articulate Storyline but as non-LMS standard web course. Imagine creating an online course without being able to see how users are taking courses and seeing their results. The quality of the courses are good but if we had that data, so much more can be improved.

After meeting with some colleagues, we decided we had to find a way to get the tracking and results data of our users taking these courses. User tracking and results are only supported in Articulate Storyline if published as SCORM, xAPI, etc. or other LMS supported technology. This is where the use of JavaScript comes in and a little bit of some server-side scripting.

After some extensive research and testing, including storyline documentation, we know that the same variables use to submit to an LMS are still present even if the course was published as a standard web. We just had to figure out how to access them. According to storyline documenataion we can use the player.GetVar method to retrieve the value of Storyline JavaScript variables, and use the player.SetVar method to set the value of a Storyline JavaScript variable. We then started creating custom variables, such as to get the users name, user start time, user duration, user end time, and user results (pass, points, score).

Now that these variables are accessible, we create a trigger at the end of the course slide that would then push the variables to an external server-side file, in this case we used a Classic ASP file. We used the *window.open* to point to the report.asp file with URL parameters that take the above mentioned string of variables.

Then from the roster.asp file, the same variables are set to be pushed to a database, in this case using SQL statements pushed to an Access database. We can now pull reports and user results when needed. It’s not much, but enough to get us started.

To conclude, we know the variables are there and we know that they can be accessed even with technical limitations for non-LMS based courses. Our next goal is to see if we can pull slide and quiz results using the same method. With the quiz questions trend, we are looking to probably be using a loop, to loop through questions and set them as an array and then push them to another database table.

This was a fun and challenging project and really looking forward to it.