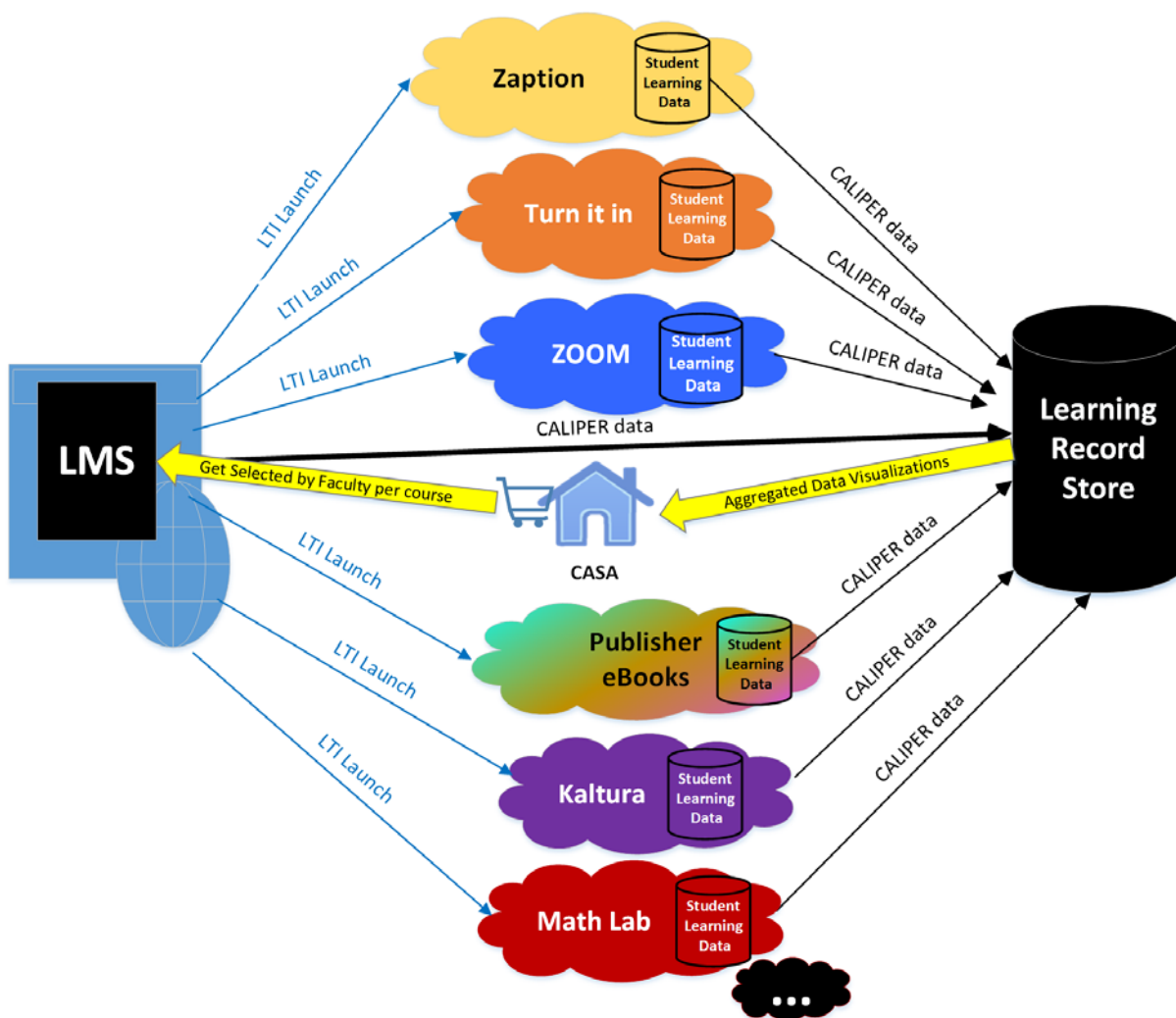


UC Proposal for a CALIPER® Technical POC to use data from LMS's & Cloud tools to deliver Learning Analytic visualizations

Increasingly the UCs are leveraging third party cloud tools in their learning ecosystems. This unfortunately results in student data residing in external cloud tools. If a faculty member wants to then look at data from across these tools in aggregate, they would have to merge and aggregate them manually and create charts of the data. The IMS Global CALIPER® Learning Analytics workgroup has released a set of metric profiles that in theory will solve this problem and allow the data in disparate clouds to deliver data streams to be aggregated in a learning record store for aggregated visualization. It is in the best interest of the UC to pilot the IMS Global Caliper® standard and require that vendors provide these data streams. The pilot goal will be to deliver aggregated data views to faculty who want to test the use of various educational and learning analytic visualizations in their courses. In the figure below, it is illustrated how using LTI® and CALIPER® can help get the UC to this solution.

Figure 1: visualization of data in the evolving Learning Ecosystem



[Intellify](#), a Learning Analytics company, that has played a leadership role in the IMS community in developing the [CALIPER Learning Analytics specification](#), has offered to do a “free of charge” Technical “Proof-of-Concept” pilot with two UC campuses’ LMS instances. The offer includes instrumenting one test¹ Moodle instance and one test¹ Canvas instance with CALIPER Sensors to pull in test data from these two LMS’s to allow the UC ETLG Learning and Educational Analytics subgroup to better understand how CALIPER can be used to extract LMS data and how a Learning Record Store (LRS) can be used to accommodate data from multiple sources.

In addition, the test data can be used to construct sample data visualizations such as an “engagement meter” across a variety of activities including media viewing, likes and comments posted to a discussion board or image gallery. Another sample visualization that might be configured could be a “progress bar” indicating the assignments viewed and completed mid-course. Faculty with the support of instructional designers would have the ability test and iterate on developing data visualizations that could be made possible with this data. It is envisioned that these visualizations could be made into LTI tools themselves and added into courses via an embedded test [CASA](#) LTI tool catalog instance.

This Intellify Moodle/Canvas pilot implementation goals would include the following:

- 1) Gain an understanding of the effort and maintenance involved in installing and maintaining Moodle/Canvas Caliper Sensor code.
- 2) Work to explore the potential modification of the Moodle/Canvas CALIPER sensor to see if it would be possible to allow data streams to be configured as “on” or “off” on a course by course basis. It is assumed that data streams should be turned “off” by default, and only turned on based upon a faculty member’s desire to look at specific data analytics visualizations.
- 3) Implement an “OPT Out” feature for individual students who desire to not have their data included in any data analytics views.

This would then provide the UC with a non-abstract experience in what it may take to collaborate on both the collection and pooling of Educational and Learning Analytics data, the infrastructure needed to support this effort as well as share in the development of potential sample visualizations and data algorithms in support of student success.

1 – There would be no actual student data utilized in the TEST Caliper proof of concept

UC Proposal for a CALIPER Technical POC (Proof of Concept) pilot blending data from Moodle & Canvas and creating sample data visualizations

Tasks for CALIPER Technical Proof of Concept by Role	Estimated Hours	Rates	Cost Estimate
MOODLE integration - Time frame estimated is at approximately 4 - 5 months or roughly 22 weeks			
UCLA Analytics Proof of Concept Stakeholders			
Develop a set of sample visualizations that would be interesting for this POC and possibly future instructor focused pilots			?
UC Vendor Liason on Pilot	16	107.5	1,719.68

OIT UI/UX Designer			
Design Instructor UI to Turn off and on Data collected in Moodle	20		
Design Student UI to "Opt out" of data collected	20		
Total Hrs	40	58.21	2,328.40

Campus Moodle Developer			
Implement Caliper Moodle Sensor in UCLA TEST Moodle	8 hrs / wk		
Implement Instructor Caliper Data collection UI in TEST Moodle			
Implement Student OPT out UI in TEST Moodle			
Total hrs	176	93.17	16,397.92

OIT Software Architect			
Project Lead and Liason with Intellify, CCLE home and internal POC stakeholders	8hrs/week		
Advise and support Campus Moodle Developer			
Evaluate the Intellify Caliper Moodle Sensor implementation			
Determine if it will meet UCLA's desire to collect only specific faculty requested data streams			
Determine best pathway to allowing students to "opt out" of data collection			
Evaluate the long term viability and scalability of the effort			
Total hrs	176	93.17	16,397.92
			36,843.92

OIT Resources in yellow