UW System FY16 Innovation Program Project Report

- **Due on 12/23/2015**
- **Email completed report to Sasi Pillay, CIO, UW System: spillay@uwsa.edu (cc: dtrendt@uwsa.edu)**
- **Please Note: All reports will be posted on the Innovation Program Project Reports web page.**

(*Not to exceed two pages)

Project Name: Learning Analytics Tool Chest – Optimization of Analytics & Recommendation Tool	
Report Preparer: Kimberly Arnold	
Date:12/23/2015	Report Interval: 60 **90** 120-Final

- Briefly recap project objectives. Have implementation tasks to date caused any meaningful adjustments to the project's original objectives?

All stated objectives for the first ninety days of the project period have been initiated (for objectives spanning the entire project) or completed. At this time, no necessary adjustments to originally proposed implementation tasks have been identified.

Tasks that have been *initiated* (ongoing) which span the entire 120 day period of the award:

- **LATC Technical Reliability Study—**monitor and collect bugs, glitches, and codes fix needs from campus liaisons coordinate with TRAD to repair and deliver solutions in a timely manner.
- **LATC Technical Reliability Improvements—**work with Kari Jordahl to repair bugs, glitches, and codes fix needs for LATC .

Tasks that have been targeted and *completed* since the 60 day report:

- **Algorithm Optimization—**original code included all roles in the algorithm calculations; all roles were removed EXCEPT for students so that estimates were purely based on student behavior (rather than having instructor/TA/administrator behavior contaminate the calculations).
- **User Interface Improvements—**a major focus of the 60-90 day interval was to prioritize and complete UI improvements. Many changes were made to displayed metrics to ensure reports were more meaningful and actionable to users (students and instructors). Students are also now able to compare their behavior to the grade clusters (A, AB, B, BC, C) rather than to a single high performing student; this allows a range of behavior to be captured.
- **Display Improvements—**reported visual display issues were addressed. Colors of the data visualizations were changed to allow for more distinguishable distinction. Display issues within Firefox were also addressed.
- **Performance Improvements—**code was added to allow for more efficient response times, as well as loading performance.

- What is the status of in-progress project tasks?

Two tasks have been initiated that run the entire span of the project.

- **LATC Technical Reliability Study—**the campus liaisons are working with instructors on their campus to gather evidence of performance issues, bugs, glitches, and requests for improvements for the LATC tools.
- **LATC Technical Reliability Improvements—**using the evidence collected during the LATC technical reliability study, the requests will be examined and prioritized. Phase II of the project will focus on developing solutions.

The remaining tasks will be undertaken in the final month of the award period:

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- **Software Development and testing—**the clustering technique selected for the algorithm is hard-code into the tool and is currently being tested.
- **Change Implementation** – finalize any changes based on software testing feedback.
- **Deployment –** Algorithm optimization live for future semesters.

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1. Compare the current status of the project with regard to scope, schedule and cost with the original submission. Please also describe the cause for any significant variance from the original plan.

To date the scope of the project has been maintained due to adherence to specified implementation tasks. Barring any unforeseen circumstances, the project team expects to be able to deliver all proposed objectives by the end of the 120 day project. No significant variance has occurred.

	Original Proposal	Actual Status
Scope	Optimize A&R algorithm and provide reliable tools for expansion	As proposed
Schedule	120 days	Currently 90 days in; expected completion on schedule
Cost	$19,960	$14, 136.75 has been billed

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2. Risk Assessment
    a. Describe any significant new or anticipated risks to the project's successful outcome with regard to scope, schedule or cost.

At this point, the project team fully anticipates a successful delivery of all proposed outcomes by the end of the award period. However, during the algorithm optimization stage, there were three unexpected issues discovered that needed additional research.

- An unexpected memory issue was related to the initial retrieval of data for A&R. A solution has been devised to this issue and there has been no additional sign of the issue; however, further testing will be undertaken.
- All development work has been done in non-production courses; once all optimizations have been hard coded, testing with larger and more varied courses will need to be scheduled. This testing is scheduled to occur in the final stage of this project.
- A&R was designed with the assumption that an individual instructor will access the tool only for a single course.   This may propose a risk as some data elements retrieved will be stored locally to streamline the use of the tool. No documentation exists for a scenario in which a single individual would hold the role of "instructor" for more than a single course. This issue is being researched and will be addressed in the final stage of the project.

    b. Describe the mitigation strategies to address these new or anticipated risks.

It is expected that these issues can be addressed in the final stage of the project within the current scope and budget.