UW System FY16 Innovation Program Project Report

- **Due on 11/23/2015**
- **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:11/23/2015	Report Interval: **60** 90 120-Final

1. 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 sixty 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* 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* within the first sixty days of the award:
- **Algorithm Optimization—**export historic behavior data for analysis
- **Algorithm Optimization—**Clean, transform, and analyze behavior data to determine which path to take to hard-code back-end algorithm optimization for A&R
- **Software Development—**hard-code the selected algorithm optimization solution

2. 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 second half of the award period
- **Software Development—**develop selected solution for optimization requests
- **Software Testing –** alpha test the algorithm optimization in test environment
- **Change Implementation** – finalize any changes based on software testing feedback
- **Deployment –** Algorithm optimization live for future semesters

3. 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. The project is currently slightly ahead of schedule and, barring any

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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 60 days in; expected completion on schedule
Cost	$19,960	$4,886 has been billed; 64.5 hours

4. 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 may interject some risk.

- An unexpected memory issue was discovered related to the initial retrieval of data for A&R
- All development work has been done in non-production courses; once all optimizations have been hard coded, load testing will need to be scheduled
- 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.

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

Research is being undertaken to produce solutions for the issues. It is likely that these issues can be addressed in the second stage of the project within the current scope and budget.   The three issues are common in customizing software and known solutions exist. An update will be provided in the 90 day report.