

## UTAH STATE BOARD OF EDUCATION

**Subject:**

ACTION: USBE Annual Research Agenda Submission to the Utah Data Research Center (UDRC)

**Agenda item type:**

Action Item

**Recommended Action:**

The Committee recommends that the Board approve the Integrated Mathematics research proposal and incorporate the additional research priorities identified by the Committee into the final UDRC Annual Research Agenda request.

**Purpose of Memo:**

Staff recommendation

**Background:**

USBE Annual Research Agenda Submission to the Utah Data Research Center (UDRC).

Each year, the Utah State Board of Education (USBE) and its data partners collaborate to submit a formal research agenda to the UDRC. This submission outlines the specific research priorities and data inquiries the Board seeks to address during the upcoming fiscal year, leveraging Utah's Pk-20W longitudinal data system to inform state education policy.

**Purpose Research Project:** To determine if the statewide shift to an integrated math model improved student readiness for post-secondary education and decreased the need for remedial math in college.

**Problem Statement & Significance**

Utah transitioned to the integrated math model (Secondary Math I, II, and III) starting in the 2013-2014 school year to better align with the "spiral" nature of mathematical reasoning. There is a need to validate this change with longitudinal data. This proposed research agenda item will help the Utah State Board of Education understand if the integrated curriculum is achieving its intended goal of creating "college and career ready" students compared to the historical traditional sequence.

**Primary Research Questions**

- 1. Academic Trajectory:** How do ACT math sub-scores compare between student cohorts who completed the integrated sequence vs. the traditional sequence?
- 2. Post-Secondary Success:** Has the transition to integrated math led to a statistically significant decrease in remedial math placement at USHE institutions?
- 3. Workforce Alignment:** Is there a correlation between high performance in the Secondary Math II/III sequence and entry into Utah's high-demand STEM occupations (as defined by DWS)?

## 1. Executive Summary

Each year, the Utah State Board of Education (USBE) and its data partners collaborate to submit a formal research agenda to the Utah Data Research Center (UDRC). This submission outlines the specific research priorities and data inquiries the Board seeks to address during the upcoming fiscal year. By leveraging Utah's **Pk-20W** longitudinal data system, this research provides the Board with evidence-based insights to inform state education policy and evaluate the effectiveness of statewide curriculum standards.

## 2. Background & Strategic Importance

The UDRC (codified under **UCA 53B-33**) houses Utah's longitudinal data pipeline, linking records from K-12 (USBE), Higher Education (USHE), and the Workforce (DWS). This cross-agency connection allows us to track the long-term impact of curriculum shifts—such as the transition from traditional to integrated math—on real-world outcomes like college remediation rates and career earnings.

## 3. Formal Research Project Proposal: Math Pathways

**Project Title:** Evaluation of Student Outcomes: Traditional vs. Integrated Mathematics (Secondary Math I-III)

### Primary Research Questions:

- **Remediation:** Does completion of the Integrated Math sequence correlate with a reduction in remedial college course placement at USHE institutions?
- **College Readiness:** How do ACT math sub-scores and "Gateway" college math completion rates (Math 1050) compare between integrated and traditional cohorts?
- **Workforce Alignment:** Is there a measurable difference in the entry rates of these students into Utah's high-demand STEM sectors?

Staff is seeking to ensure that the final submission to the UDRC reflects the current priorities of the Board. In addition to the math curriculum study, **the Finance Committee is invited to propose additional research items or specific metrics for consideration in the annual agenda.**

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### Attachments:

None

