# Request #: 654 - TEAL - Dissertation

Mobile learning's impact on interest in fluid mechanics

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March 16, 2023

**Background**

I worked with Tyson Barrett on the design of this project prior to him leaving USU. Data has been collected on student use of a mobile learning tool in a fluid mechanics course.

I am hoping to understand the tool's impact on student interest in fluids, the learning utility of the tool, and the overall usability of the tool.

**Sample**

Two groups, 41 and 46 participants respectively

demographic information (age, sex, gender, ethnicity, gpa, major, year in school)

survey responses (primarily likert scale, some open-ended answers)

**Hypothesis**

RQ 1: How does use of the mobile flow visualization learning tool based on Particle Image Velocimetry affect student interest in fluid mechanics?

RQ2. In what ways do students perceive use of the mobile flow visualization learning tool based on Particle Image Velocimetry to be useful for learning fluid mechanics?

RQ 3. What recommendations do students offer for improving the design and operation of the mobile learning tool based on Particle Image Velocimetry?

Variables age (continuous) sex (binary) ethnicity (binary) gpa (continuous) major (categorical, 4) year in school (categorical, 5) interest level (ordinal, 4 level) career interest (ordinal, 5 levels) skill level (ordinal, 4 level) navigation, upload, output (ordinal, 5 level Likert) feeling responses (ordinal, 4 level Likert)

Test-able hypotheses How does each variable impact (1) interest, (2) learning utility, and (3) tool usability

**Progress**

data cleaning, descriptive statistics, linear regression, logistic regression

**Request**

Help understanding how to plan and program ordinal logistic regression using an ordinal variable as the outcome and predictors

**Timeline**

This is my (hopefully) last analysis type. I'm hoping to wrap it up by April 1st.