**TCCU Learning Analytics Capstone Project (2019 Summer)**

**Project plan:**

* **Tentative project name:**

How and how well students use Imagine Learning products impact their performance on a state assessment

* **Project duration:**

June 2019 -- August 2019

* **Research question:**

Given students' demographic information, initial state assessment scores, and information on how and how well students use the Imagine Learning program (include, but not limited to internal assessment performance, activity or lesson performance and behavioral (log) data), can we predict the possibility if a student will succeed on the state assessment on the following year, and examine 2) how students' progress and their using behavioral impact their growth on the assessment

**Data sets and data elements (Joyce):**

* Demographic
* Internal assessment performance (to show growth)
* Internal performance on basic skills (to show progress)
* Internal log data (to reflect using behaviors)
* State assessment (outcome measures)

**Analysis:**

* Scope of the analysis:
  + Grade level: 4
  + District: ?
  + Program: Imagine Language & Literacy
  + State assessment (outcome measures): STAAR
* After matching and cleaning the data, please provide descriptive statistics and visualization that reflect the characteristics for the 5 data sets above.
  + number of students, percentages, averages, distribution, stdv., etc

* Clustering analysis for behavioral data to identify features that reflect motivates to learning or gaming behaviors
* Clustering for activity data to profiling students or identify students who are at risk (research suggests, when students hit a roadblock, repeated practice is not beneficial)
* Prediction model