Progression of Ideas to Research Questions

Idea:

I want to find out whether the use of a learning system that incorporates social media capabilities and gamification will increase student learning and retention in CS

What do we know?

We know that following has been found:
- Greater student engagement = > greater learning and retention
- Social media has strong engagement in XXX
- The use of achievements in games => resilience & increased effort when failure occurs
- Having students work together on problems increases learning

Goals/Objectives

We want to determine whether the use of team-based achievement goals increases student learning of software testing techniques

Don't Forget: Substantive Significance!

Research Questions

Is there a significant difference between student learning of software testing techniques for students that used SEP-CyLE's team-based achievement goals capabilities and those who did not?

Make It Measurable

How do we define *student learning*?
- Ability to recall what types of software testing techniques should be used in different situations
- Ability to correctly conduct appropriate software testing

techniques when given a sample scenario