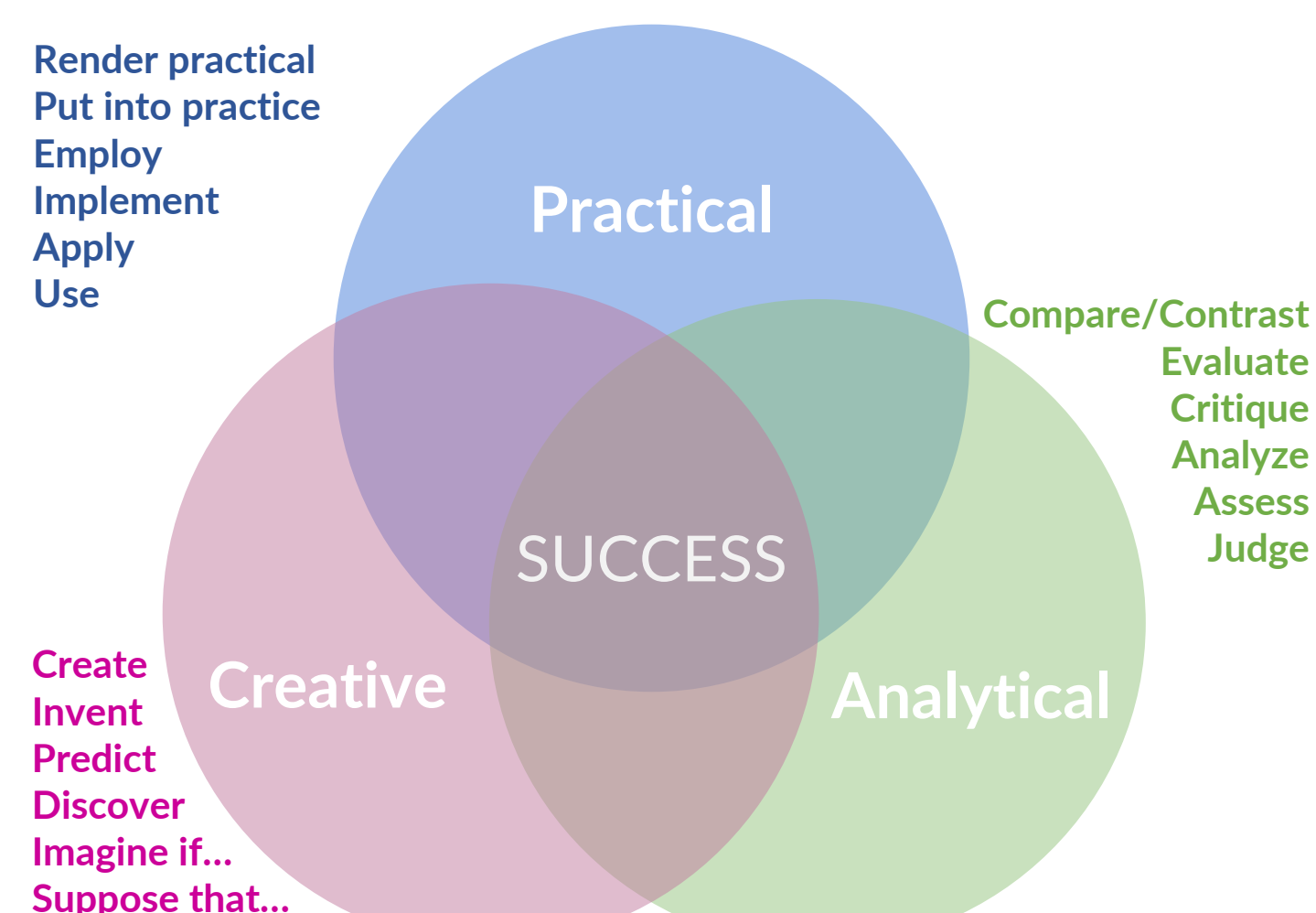


INTRODUCTION

This project is a small part of a larger longitudinal study where we are following a group of freshmen to predict student success in college based on many non-cognitive abilities. These abilities include but are not limited to growth mindset, grit, and Sternberg's Triarchic Model of Successful Intelligence (Sternberg & Hedlund, 2002). Sternberg's model consists of three types of intelligence, analytical, creative and practical (see Venn diagram). It states that, a person's success is a result of all three intelligence types. Practical intelligence is one of Sternberg's intelligence types that uses prior or current knowledge to adapt to the contexts of everyday life. We used tacit knowledge to measure practical intelligence. Tacit knowledge is knowledge gained from previous experiences that can be transferred to new experiences (Leonard & Insch, 2005).

Hypothesis: Freshmen's' practical intelligence around college topics can predict their overall performance and success in college.



Sternberg's Triarchic Model of Successful Intelligence

METHOD

Our sample includes 147 students from an *Introduction to Psychology* course at CSUMB. The majority of students were freshmen (83%), female (78%), and from an ethnic minority background (68%).

First, we generated a list of academic habits of successful students and formed them into tacit knowledge items. Second, we had students rate how *typical* each item was of a successful students. Lastly, we compared the habits participants *thought* high performing students do versus those that high performing students *actually* do in college.

FIGURES

Tacit Knowledge of Academics:

Are you practically intelligent? Distinguish the habits of successful college students versus those people *think* successful students practice! *Hint: The color coding means something.

Read syllabi for classes at the beginning of the semester.

When having trouble with a professor's teaching method, asking him or her to change.

Before turning in an essay, reread and rewrite it after a little break.

Ask a professor, "did I miss anything important in the last class" after being absent.

Aim for perfection on assignments even if you know you'll already get nearly every point.

Yell at professor when getting a bad grade.

Stay up all night studying for a test.

Make flashcards or use app to memorize key terms for class.

Use websites/apps showing professor ratings to choose your classes.

Review class notes after each class.

Get somebody's old paper for a class and reworking it to turn in as your own.

When it's very hard to follow what a professor is saying, skip going to class and just read the book.

Complete assigned reading before class.

Rather than going to a larger class, having a friend sign the attendance sheet for you.

Put major tests and assignment due dates on a calendar at the beginning of each semester.

Find a regular place to study where they will be able to concentrate (e.g., isolated area of the library).

RESULTS

- Students who knew habits of successful college students earned a marginally higher class grade.
- Students who knew habits of successful college students earned a higher GPA.
- Freshmen who knew habits of successful college students earned a higher class grade.
- This relationship was not significant between freshmen's practical intelligence and their GPA.

	Dependent Variables		
	Intro test grade	Intro grade	GPA
All participants			
<i>r</i>	.126	.144*	.317**
<i>p</i>	.127	.082	.034
	<i>n</i> = 147	<i>n</i> = 147	<i>n</i> = 45
Freshmen			
<i>r</i>	.175*	.195**	.126
<i>p</i>	.053	.032	.641
	<i>n</i> = 122	<i>n</i> = 122	<i>n</i> = 16

p*<0.1; *p*<0.05; ****p*<0.01

Results: Correlations between students' academic practical intelligence and dependent variables (*Intro to Psy* average test grade, *Intro to Psy* overall grade, and college GPA).

DISCUSSION

The results support the hypotheses. Practical intelligence predicted success at CSUMB, especially for freshmen.

Limitations include the small sample size of students with available GPA scores. Very few students have a college GPA their first semester. If they do have one, it is most likely based on one or two summer college courses. We cannot accurately tell yet if there is a relationship because it is insufficient data.

Future directions: We want to create a new version of the tacit knowledge task where we provide all items that either predict or do not predict college success and have students categorize them. As a result, this may better distinguish the high performing students from others.

In the future, we hope to have a model that is stronger than Sternberg's at predicting student success in college.

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Citation & Abstract

Velasquez, S & Grobman, K. H. (2019, April). Practically a genius: Is practical intelligence a good predictor of student success in college? Poster presented at the annual convention of the Western Psychological Association, Sacramento, CA.

Sternberg's triarchic theory of intelligence includes analytical, creative, and practical intelligence. College admissions and predicting a student's success in college is typically based on analytical intelligence, including cognitive abilities assessed by GPA and test scores. While analytical intelligence may be a good indicator of college success, we hypothesize that creative and practical intelligence, including non-cognitive abilities and tacit knowledge, can also serve as good indicators of success. The purpose of this longitudinal study is to predict student success in college based on creative and practical intelligence. Through a series of online questions and in-person activities, we measured 49 first-year Educational Opportunity Program (EOP) students and 17 first-year psychology students on the Big Five Personality traits, creativity, tacit knowledge, and grit. By December, we will have one semester's grades, so we will run correlations between students' grades and the results from our tasks. As well, when students leave the university, we will then conduct follow up interviews with them about the reason they are leaving (e.g., graduation or transferring) and their experiences at CSU Monterey Bay. Based on the current literature, we predict that creativity, grit, and tacit knowledge will all have positive correlations with a student's performance in college and thus serve as additional indicators of college success. Other researchers will benefit from the gaps of information we can fill regarding Sternberg's triarchic theory of intelligence. Our study will also provide more insight into college support programs and the impact they have on students. Higher education can be daunting and difficult for students, particularly first-generation college students. This research aims to give them and other students the benefit of learning that cognitive abilities and scores are only a part of what makes students successful in college. Learning that there is a wide variety of abilities and characteristics that make each of us have the potential of success will give new optimism to those who may doubt their capabilities.