PHASE I: SPRING 2017

IS A FREE, FAST AND PRACTICAL TOOL FOR MEASURING ACADEMIC EXPECTATIONS OF COLLEGE FRESHMEN NEEDED?

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Why this Project: Foundation Data

Trends in Higher Education

- One-third of states in the country are experiencing fewer high school graduates
- A 5% reduction in high school graduates expected by 2022-2023
- Degree granting institutions grew from 6,479 in 2001 to 7,234 in 2011, a 10% increase

Trends at Winona State University (Report Index, 2016)

Term	Ten-Day Enrollment	Percentage Change	Enrollment of Students with 1 (or more) Retention Risk Factor	N = Increase or Decrease	Percentage Change
Fall 2013	8252	-------	741	------	
Fall 2014	8108	N < 144	714	N < 27	< 3.7%
Fall 2015	8016	N < 92	676	N < 38	< 5.4%
Fall 2016	7671	N < 345	1060	N > 384	> 36.2%

Why this Project: Supporting Students

In the Pixar movie Monster's University, Mike says "well everyone, I don't mean to get emotional but everything in my life has led to this moment".

This is true for many new college students, who experience both excitement and pressure when arriving on campus.

Expectations among freshmen when they arrive

Expectations from parents who want students to succeed

Expectations on the WSU community to retain students

Expectations to support retention with a limited budget!

Why this Project: Fast, Free, Targeted Approach

- No single tool can be all things to all students
- No single intervention has guarantees of retention or success

This project is a **two-phase targeted approach** to research, create and implement a fast, free and effective tool to measure academic expectations of incoming freshmen.

If students can identify concerns quickly, we can provided **targeted interventions**!

Retaining 1 additional student = $8105.90 per year in tuition/fees

Phase I: Designing the House, Building the Foundation

Phase I: SIA Proposal Timeline and Updates

January 2017: review the literature related to new college student academic expectations and write a quality literature review; *is a new tool needed?*

February-March 2017: provide methodology for creation of the tool and a plan for dissemination; but *how will validity and reliability be established?*

April-May 2017: create an outline for a website where the tool and related content/resources could be housed, *how will the site or dissemination be designed?*

June 2017: create a plan for training OR 100 faculty on the benefits and use of the new tool; *what is the plan and when will it be implemented?*

Applying the appreciate approach when designing the new tool. *Will the new tool be culturally responsive?*

Phase I SIA Project: Focus and Scope

Creating a NEW valid and reliable tool that will measure the academic expectations of incoming, traditional freshmen.

Results will provide feedback to students, advisors and others to intervene early, and help students align expectations with success.

- **Audience:** incoming, traditional freshmen
- **Scope:** academic expectations
- **Purpose:** help students understand their own academic expectations; recognize possible challenges and identify resources QUICKLY

Is a new tool measuring academic expectations needed?

Phase I: Establishing that a New Tool is Needed

Internet Review for Existing Instruments: Top Results with Chrome

Search Term or Phrase	Result(s)	Description
Reality check college freshmen	Amazon	Various texts related to college readiness
	Chronical of Higher Education	Various resources related to preparing for college, primarily financial readiness
	Get Schooled	Prospective students can compare up to 5 colleges or universities
	Odyssey	Student essay about college life
College freshmen and college student readiness	National Center for Public Policy in Higher Education	Beyond the rhetoric essay
	2013 National Freshmen Attitudes Report	Ruffalo Noel Levitz report about incoming freshmen attitudes
Expectations college freshmen	Centenary College	Helpful resources adjusting to college
	Atlantic Job Center	Blog with tips on being successful in college
	Huffington Post	High school to college transition tips
Are you ready for college	TestQ	Series of tests sponsored by Monster, including college readiness and career interests
	College Grazing	Survey related to college academic readiness
	BuzzFeed	Survey related to independence; life skills
	PsychCentral	Reflection essay about college readiness
	Family Connection	Series of guides sponsored by Hobsons, including academic, financial resources

- Use immediately when freshmen arrive on campus
- Puts the onus on students to reflect on their own expected behaviors and attitudes
- Will provide data in key academic success areas rather than making WSU “guess” at what interventions or resources are needed most
- Will allow WSU to target high-need resources quickly
- Could be used independently or as part of a facilitated class or orientation

Phase I: Designing the Tool

The tool in this project is based on the Intimacy vs. Isolation stage of development for traditional college freshmen, who are considered young adults.

Erikson Stages of Development

Stage	Virtue	Age
Trust vs mistrust	Hope	Infancy to 2 year
Autonomy vs shame	Will	Early childhood 1-3 years
Initiative vs guilt	Purpose	Play age 3-5 years
Industry vs inferiority	Competency	School age 5-12 years
Ego identity vs role confusion	Fidelity	Adolescence 12-18 years
Intimacy vs isolation	Love	Young adult 18-40 years
Generativity vs stagnation	Care	Adulthood 40-65 years
Ego integrity vs despair	Wisdom	Maturity 65 + years

(Erikson, 1968)

Phase I: Literature Review of Academic Expectations

There are many reasons why students drop out of college. For example, academics, financial, personal, mental health, family and others. However, this project focuses on academics for one key reason: students enrolled at WSU have the academic ability to succeed!

Students' Reasons for Dropping out of College

Reason	Definition
Academic	Low levels of academic preparedness, poor high school performance, poor grades in college, boredom with courses, change in career goals
Financial	Concerns related to paying for college tuition and other related costs, balancing work and school demands
Motivation	Uncertainty about educational or career goals, inability or unwillingness to study
Personal	Emotional problems, issues surrounding adjustment to college life, illness or family concerns
Dissatisfaction	Unhappy with the college size, social or academic environment or policies
Military	Choose to pursue military career or deployed
Employment	Demands related to work overshadow demands related to school

(Pantages & Creedon, 1978)

Phase I: Literature Review of Academic Expectations

- According to Horwedel (2008) many students do not arrive on campus with the study skills needed for college success.
- Mehta et al., (2011) found that traditional and first generation students are coping with multiple retention barriers, including arriving on campus less academically prepared with a lack of study skills.
- A study by Aquino (2011) confirmed that freshmen often arrive on campus unprepared for the academic work required. Aquino (2011) used the Survey of Study Habits and Attitudes (SSHA) to measure freshmen study habits and attitudes. Out of the 313 freshmen surveyed, only 18 were identified as high achievers. The mean score of the high achievers on study orientation was higher than low achievers, identifying better study orientation among high achievers. Study orientation included: study habits, study attitudes, delay avoidance, work method, attitude towards teacher and attitude towards education (Aquino, 2011).

How will validity and reliability be established?

Phase I: Content Validity, Literature and Experts

Reading Group: consists of five professionals, who have over one hundred years of combined professional experience related specifically to academic success behaviors. The group met a number of times throughout spring 2017 to consider and reflect on tool questions, noting *yes* if a tool item is/was relevant and *no* if it is/was not relevant. The percentage of yes responses from each item was calculated, and 85% agreement or higher on a particular response was established as valid (Popham, 2000).

Tool Item Classification:

- Class attendance, attention and note taking
- Time management and organization
- Study expectations and learning styles
- Resources
- Reading, writing and homework

How will the site or dissemination be designed?

Met with experts to discuss the creation of a new repository of support materials and videos. This repository will be on the same website as the new tool and tool directions.

Barb Oertel, Jill Quandt, Amy Meyer, Jenny Lamberson, Lynda Brzezinski, Charlie Opatz, Wayne Wicka, Nancy Dumke, Laura McCauley

- Accordion #1: Going to Class, Paying Attention and Taking Notes
  - *PDF/Video Staying Focused in Class*
  - *PDF/Video Cornell Notes*
  - *PDF/Video Note Sharing with a Classmate*
  - *PDF/Video Note Taking using the 4-M Method*
- Accordion #2: Time Management and Organization
  - *PDF/Video Use your Time Wisely*
  - *PDF/Video Hours in a Day Worksheet*
  - *Video link to Sand, Pebble, Rocks on You Tube, related PDF handout*
- Accordion #3: Study Expectations and Learning Styles
- Accordion #4: Resources on Campus
- Accordion #5: Reading, Writing and Homework

- Meeting with Ben Nagel and others to design the tool in Qualtrics
- Ongoing website development meetings with Elizabeth Meinders

NOTE for Phase II:

- Creation of the new tool in Qualtrics
- Final development of the website
- Validity and reliability testing of the new tool
- Student bias panel to review the tool, website and resources
- Adjust the tool, website and resources as needed

What is the OR 100 training plan? (Plan = Phase I)
When will it be implemented? (Implementation = Phase II)

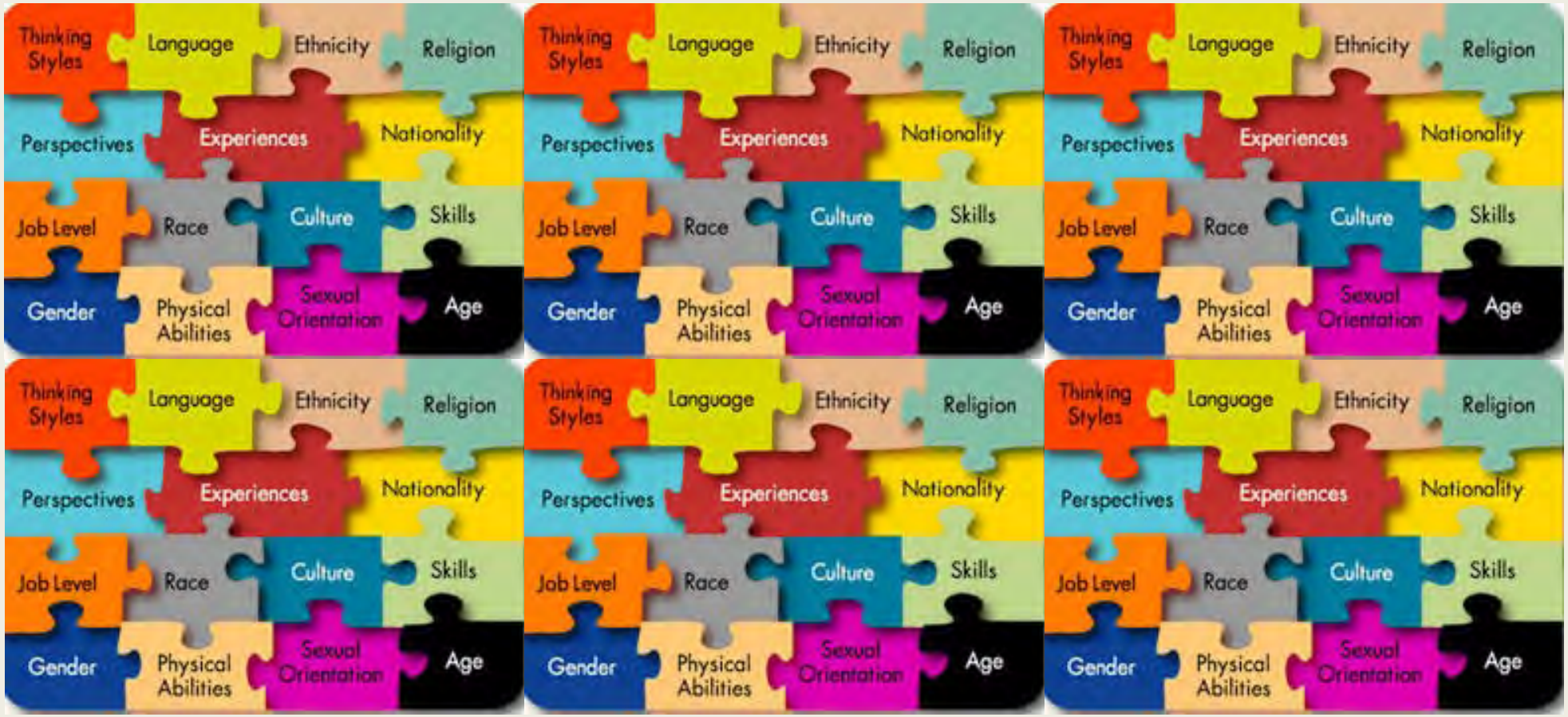
Fall 2017:
Discuss validity/reliability of the new tool with the Director of the Warrior Success Center (WSC)
Meet with the OR 100 faculty coordinator to demonstrate the tool and discuss use/training

Spring 2018:
Meet with the WSC Director and OR 100 faculty coordinator to demonstrate the new website and tool
Discuss a strategy for introducing the new tool to OR 100 faculty

Summer 2018
Provide information and/or training to OR 100 and other WSU community members on using the tool

Fall 2018
Website and tool are live and ready for use in OR 100 or with constituents

Will the new tool be culturally responsive?



Culturally Responsive using the Appreciative Approach

Competence

Meaning

Inclusion

Attitude

Culturally Responsive Tool

- Ladson Billings (1994) defines cultural responsiveness as **communicating** high expectations, being an **active teacher or advisor** and being **culturally sensitive** to all students.
- The four key motivational conditions for being culturally responsive are: **inclusion, attitude, meaning and competence**.
- The tool and website will be created based on respect, regardless of gender, sex, age, race, ethnicity or any other specified class.
- Connecting tool scores in an advising appointment, for example, could be done effectively by applying **disarming principles** from the appreciative approach.
- The appreciative approach encourages all students to **discover** who they are, and **dream** about future goals. Students in this stage of cultural responsiveness can use their tool score to identify challenges and formulate an academic vision. The vision can then integrate academic hopes, goals and dreams with unique cultural qualities.

Culturally Responsive Tool

- Cultural responsiveness enhances meaning, and should encourage students to connect their tool score with how and why they make certain choices, using the tool score to design relevant goals.
- Students should also consider historical context, inquiry about college life, majors and other academic considerations in this stage.
- Finally, the tool will engender competence, or encourage students to embrace experiences that improve or enhance things they value, such as getting a college education. This stage is **deliver**, or applying culturally responsive decision making that supports academic goals.
- This tool can help students understand and act on strengths, within the paradigm of their own cultural responsiveness, to be academically successful. Students will also be encouraged to consistently move forward in a positive way, or **don't settle** when it comes to education and personal development.

Phase II: Build the House, Renovate as Needed

Moving Forward: Sneak Peak at Phase II

If both Phase I and Phase II are funded and supported by WSU (future SIA application will be submitted) then the full project should be complete and implemented by summer 2018.

Next Steps: Factor Analysis

Purpose: reduce the number of questions from the content reading group to make the tool concise and brief; use JMP software.

A key goal of the tool is to be brief, therefore a factor analysis will be done to correlate variables in each content area, and help lower the number unobserved variables, reducing the number of questions in the tool. For example, if it is determined that the eight questions being asked in the time management and organization section reflect the same variable or are basically asking the same question, then those eight questions could be reduced to four questions, aiding in brevity and validity. The factor analysis will help establish that a low score on the instrument really indicates unrealistic academic expectations regarding a specific area, and a high score really indicates realistic academic expectations in a specific area, leading to content related validity.

Principal component analysis on each data set, provides eigenvalue, which is used to normalize the data set; the new data sets are merged into a unique matrix and a global PCA is performed.

Factor loadings are run through statistical software and vary from -1 to 1; the closer factors are to -1 or 1 the more they affect the variable, a zero has no effect.

Audience: admitted freshmen

Next Steps: Inter-Item Reliability

A reliability inter-item correlation will be run when testing the tool; which will establish reliability of the tool questions. For example, does this new tool produce stable and consistent results?

When running inter-item correlation using JMP a .15 suggests no relationship to the construct of academic success strategies, which means the item should probably be removed. An item with an inter-item correlation above .50 means the questions are similar to the point of redundancy, and may also be removed.

Inter-item correlation will look at each tool scale area and make sure the questions in a particular area, such as resources or time management and organization, aren't asking the same question or addressing the same content. Since this tool is brief, it is critical that each question is unique. Running an inter-item correlation during the early testing phases of the new tool will help streamline the number of questions in each scale area.

Next Steps: Content Validity and Experts

Panel of Experts: once the tool is established it will be sent to this panel, including over one hundred higher education professionals from local universities, members of the national academic advising organization (NACADA) and college retention listserv advisors. Panelists will be provided with the tool and a related Qualtrics survey to provide feedback on items.

Student Bias Panel: includes over twenty currently enrolled, traditional aged undergraduate students who are in good academic standing and are seeking a bachelor's degree; panelists will be asked to review the tool, along with the website where the tool is being housed, to avoid or eliminate bias for any particular student or student group.

Next Steps: Construct Validity using Differential Population

Comprehensive literature review clarifying and defining academic expectations; connecting expectations to retention.

Conducting a differential population study. Two unique groups of high school seniors or current graduates who are 18-19 years of age will be differentiated by school type. Group number one will be from an alternative high school facility, consisting of students who have struggled with academic performance and/or who may need an alternative structure to complete high school graduations requirements. Group number two will be from a high achieving high school facility, consisting of students who have high academic performance and/or a high percentage of college attendance. The construct for this tool is academic success behaviors, so it is important to find populations with established academic success behaviors that are different.

Construct validity will be established if students at the low/er achieving, alternative high school have low/er AASB scores, while students at the high/er achieving or private high school have high/er AASB scores.

Next Steps: Concurrent Validity and Grades of High School Graduates

NOTE: criterion validity measures were eliminated and replaced with concurrent validity measures.

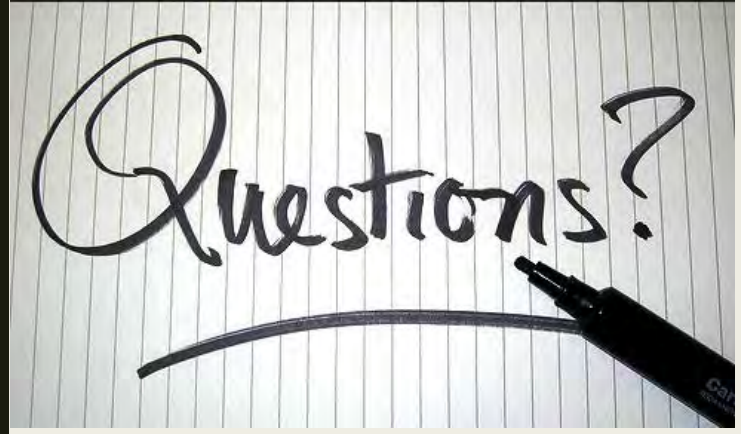
Concurrent-related validity will be established by testing the tool with recent high school graduates. The validity measure will be high school grade point average (GPA). The high school grades being used will be based on, or converted to, a 4-point grading scale: F=0, D=1, C=2, B=3, A=4 and common targeted courses (ex: English, math or science) will be used. The confidence interval, or probability that the tool will provide a valid score for the target population, will be established based on 95% item relevance. This item relevance represents the fraction of times the tool actually captures, or measures, the freshmen attitudes accurately.

An awareness of 95% item relevance and 85% content coverage on a particular response will be deemed acceptable. With 95% confidence it is estimated that students with low high school grade point averages will score lower on the new tool compared to students with higher grade point averages.

The primary inference from the data will be identifying, with greater confidence, that lower scores mean poorer self-reported academic behaviors, and less likeliness of academic success. In turn, higher scores mean better self-reported academic behaviors, and greater likeliness of academic success.

Next Steps: Reliability using the Split Half Technique

Once reliable tool items are established, a split-half technique will be conducted for reliability. A split-half technique divides the tool in half, treating the odd numbered items and even numbered items as two separate tools. The two sub-scores will be correlated, using coefficients known as "r" the Pearson-product method will correlated each half of the tool; the Spearman Brown method will be used to determine full test reliability. An acceptable reliability coefficient will be .80 in the development of this tool. This process will be conducted with college freshmen who have been accepted to a university but who have not started classes their freshman year. This reliability testing will help ensure that the tool provides accurate and consistent scores regarding freshmen awareness of academic success behaviors. Splitting the test into two halves will determine if the tool questions or items are functioning in a similar fashion. For example, confirming that two questions both measuring *awareness* of hours needed studying outside of class will both provide the same, consistent results. This leads to the final discussion of ethical considerations that surrounding creating a new, valid and reliable tool.



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