

Montana State University - Bozeman

# Studying the Student Experience







# **Completion to Cash**

# Making Sense of Student Success

### Holistic

#### **Academic Success**

Retention/Graduation G.P.A.

Content knowledge
Finding a good program fit
Academic engagement

#### **Personal Success**

Achieve what students came to achieve

Sense of belonging

Taking risks and challenges

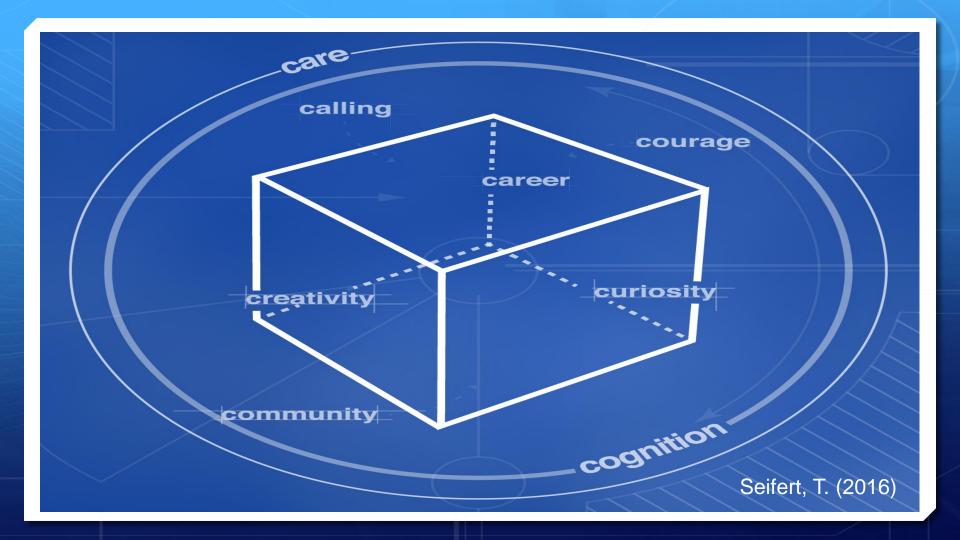
Career-readiness Lifelong skills Self-agency

Varies by Student

Seifert, T., Henry, J., & Peregrina-Kretz, D. (2014)

# WHY?















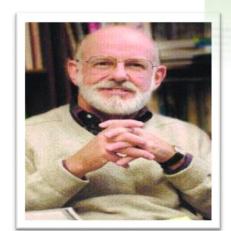
VOLUME 3 FINDINGS FROM THE 21st CENTURY

MATTHEW J. MAYHEW ALYSSA N. ROCKENBACH NICHOLAS A. BOWMAN TRICIA A. SEIFERT GREGORY C. WOLNIAK WITH ERNEST T. PASCARELLA AND PATRICK T. TERENZINI

JI JOSSEY-BASS









# 'A' game Act and Apply

- Based in learning theory
  - (Dewey, 1938; Kolb, 1984; Piaget, 1954; Prince, 2004; Vygotsky, 1978)
- Direct experience spurs learning.
- Development occurs through assimilation & accommodation.
- Learning takes place through facing a challenging task with support and feedback.
- Invites students not to study but to practice the discipline.





Any method that engages students meaningfully in the learning process, requiring them to think and reflect about what they are doing in relationship to course content (Prince, 2004).

## **Active Learning**



- Meta-analysis in STEM disciplines, students' average exam scores increased by 6% in active learning environments (Freeman et al., 2014)
- Deliberate Practice 2.5 ES largest ever observed in educational intervention.

(Deslauriers, Schelew & Wieman, 2011).

Clickers Collaborative
Service-learning groups
Concept maps

**No Silver Bullet** 

Case-study

**Applied Learning** 



Undergraduate research
Labs, fieldwork, simulations
Case study
Work-integrated learning
Service-learning



Applying knowledge
Higher-order thinking
Communication skills
Subject-matter knowledge





**Deliberate Practice** 

## Game-Based Learning

uses games to achieve learning outcomes by leveraging their engaging, practical, & dynamic qualities.



## **Gamification**

uses elements found in games in a non-game setting.



Leaderboards



**Points** 



Achievements



Badges

#### **Education and Health Behavior Literature on Game-Based Learning**

"The research is clear; people do learn from games."

Tobias et al., 2014, p. 500

Beale et al. (2007): Knowledge acquisition, self-care habits, self-efficacy

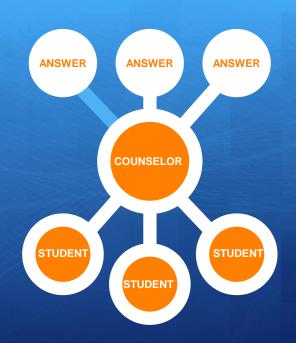
Cameron and Dwyer (2005): knowledge retention in games is due to feedback within the games.

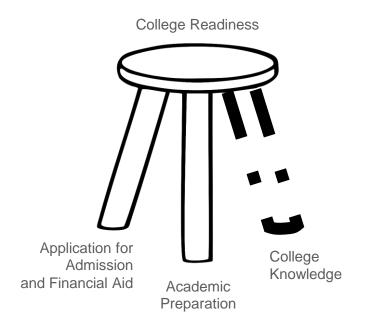
Papastergiou (2009) found significantly increased test scores in an experimental study of GBL with Greek High School Students

Yip and Kwan (2006); Miller and Hegelheimer (2006) found vocabulary acquisition to be increased through games.

DeSmet et al. (2014) meta analysis of 54 game-based learning studies found increase in healthy lifestyle adoption and antecedents that influence behavior.

# THE PROBLEM: COLLEGE READINESS





Students are drafting their blueprint for college success from a two legged stool.

## THE SOLUTION: **GAME-BASED LEARNING ANSWER COUNSELOR ANSWER ANSWER ANSWER** STUDENT **STUDENT STUDENT**

Games allows students to discover answers while allowing counselors to focus on providing help where it's needed.



Tierney and colleagues (2013) found playing two or more times associated with greater knowledge of the college admission & financial aid process.



### **TABLETOP UNIVERSITY**









Friend Card

Life Event

**Social Event** 

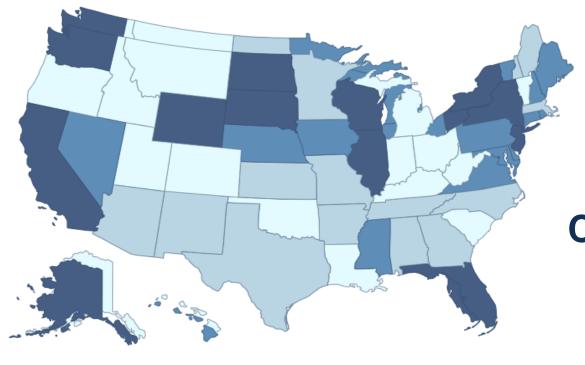
Assignment

### MANAGE CONNECT ACHIEVE



# WHY?





College attrition is a loss for students and society

42.16₹3456975.0

51.07<del>15</del>.15\$9.8<sup>77</sup>

**■** 53.97t7.3gt9g81.2

■ 565.781<sub>6</sub>37401.826.5

U.S.UASveAnvogasage54.759.8



#### CONTACT



TRICIA SEIFERT, Principal Investigator tricia.seifert@montana.edu

#### **FOLLOW**



Blueprints for Student Success - Montana



@\_blueprints; @TriciaSeifert