



The Phoenix Student Success Game

An Impact Study on Student Retention

Ball State University

February 10, 2020

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Background

In June 2017, Ball State University and E.I. games, a recognized game-based learning company based in Miami Florida, embarked on a collaboration to create a simulation game to be integrated into a course in entrepreneurship in the graduate program at Ball State University CICS program. CICS director Dennis Trinkle and founder and CEO of E.I. Games Kevin Allen led the development of the simulation. The game was released in 2018, resulting in the receipt of a Gold Award of Excellence from the Serious Games Association and is now in use at universities such as Duke, Florida Atlantic University, Colorado State and of course Ball State.

The Student Success Initiative

Following the successful collaboration, it was decided that the unique format and content delivery method of E.I. games could be utilized to address the pressing issue of student attrition. The unique engagement method of individual play, empathy and high player engagement seemed an ideal means to assist students in their first year and be a significant contributor to an overall program of student retention with the potential to play a role in stemming the near epidemic student dropout phenomenon at universities nationwide.

The Phoenix Student Success Game

An EiGame team was formed and CICS students engaged in the project through course and graduate assistant projects. The project evolved through several key phases:

1. Need State Research
2. Strategy and Content Development
3. Postgame Focus Group
4. BSU Pilot Use

1. Need State Research

Hypotheses

The team embarked on the project with two key hypotheses, where the game can play a particular role:

First-year acculturation

The group believed that the greatest challenge facing first-year students was unfamiliarity with the college experience especially among first-generation students. In particular the various life changes students face in their first year have with it attendant emotional challenges, a number of which trigger the potential decision to leave college.

Hypothesis 1: The Phoenix game can meaningfully acculturate first year students to college life before embarking in their first year.

Advisory Services Adoption

Research has shown that advisory services and mentorship counseling can provide a needed support system for first-year students and has been shown to play a significant role in avoiding student attrition. However, preparatory research identified a dilemma in that first-year students are often reluctant to seek this assistance.

Hypothesis 2: The Phoenix game can increase student likelihood to seek advisory and counselling services

Need State Survey

To further understand the necessary need states of first-year students, a survey was designed and administered to 40 students at Ball State University in a distribution of classes to garner information on the first-year experience and to ascertain the emotional trigger points that propel students to leave. Secondary research augmented this research to aid and abet the development of these emotional triggers. This collective effort resulted in the identification of 28 discrete trigger points that either alone or in combination compelled students to leave university:

1. Not making Friends
2. Homesickness
3. Classes not Available
4. Living on one's own
5. Bombing a Quiz
6. Lack of Advisors
7. Not Living up to Expectations
8. Unprepared for Workload
9. Too much Stress
10. Balancing Work and School
11. Not Clicking with College
12. Depression and Mental Health
13. Overwhelmed with Classes
14. Money Worries and Budgeting
15. Having too much Fun
16. Disappointing Family
17. Coming Out
18. Not Fitting in
19. Break-ups
20. Sexual Harassment
21. Self-expression
22. Worry over Finals
23. Quality time with Professors
24. Not sure I know what I want
25. Not seeing the Value
26. Needing a Full-time Job
27. Disliking one's Major
28. Cramming Stress

Student Interviews

EiGames then conducted a series of one-on-one interviews with students after their first year to determine add some texture surrounding the emotionality of the triggers identified in the survey. These included such comments as

When ranking their answers to the following question, *What is or was your greatest fear in your first semester of college?* students ranked the *Not meeting class expectations/studying i.e. failure* and *Letting someone else down/disappointing someone* as their greatest fears.

When prompted with the question, *Do you know of any peers who had to withdraw from college? If yes, what were their reasons for leaving?* the responses highlighted recurring themes, including mental health, lack of friends or identification with the university, and financial concerns.

Departmental Interviews

With this information as background, the group conducted some additional interviews with individuals close to the student retention experience. Including Scott Reinke, Coordinator of BSU's Achievement App. These conversations corroborated and expanded on the emotional trigger findings and further articulated the unique problem with advisory and counseling services. Many first-year students, first generation especially, were reluctant to seek assistance for reasons of shame and fear of authority. These findings would be built into the game design along with the trigger points as a core component of content design.

2. Strategy and Content Development

The research findings were woven into a game with two key objectives:

1. Provide an experience that acculturates and orients students to the first year experience giving them the greatest possibility to know what to expect before they experience it.
2. Create awareness of and receptivity to advisory and counseling services as a valued part of the first-year experience

The game itself places the player in a position central to the college experience in a hero's journey storyline. In this case the student would become the Provost of a troubled University with a high rate of student attrition. Using projective and transference techniques the student, as Provost, would be challenged to reduce dropout rates by addressing 28 situations in a storyline sequence, in each case applying the empathetic, emotional intelligent approach to a situation. Each situation was based on the 28 emotional triggers identified in previous research.

3. Postgame Focus Group

Upon completion of the production of the Student Success Game a small sampling of first-year students were gathered to play the game and offer reactions. Additionally, they were asked to complete a pre-post survey of the game experience. Students were highly engaged and enjoyed the game experience. Students took away new perspectives on the first-year experience they didn't heretofore expect.

Behavioral Shifts Identified

- 100% - First-year students more likely to seek guidance from advisors after playing this game
- 100% - All student participants said they are more likely to see a counselor, advisor, or professor after completing this game.
- 100% - All student participants said they are more likely or likely to reach out to another student to help them stay engaged in college after completing this game.

Detailed Findings

- High Player Engagement
 - Overall, the student participants expressed having fun while playing the game. They said it was enjoyable, engaging, and helpful.
- Positive Experience and Influence on Student Behavior
 - The Post-Game Questionnaire revealed that students are more likely to seek guidance and help other students after playing The Student Success Game.
- Connection with Characters and Storyline
 - The student participants enjoyed the characters and storyline, sharing that they could relate to the experiences they encountered in the game. They really liked Karl, the Intern.
- Enhancement of Student Retention
 - With positive results of students being more likely to help others there is an improvement toward student retention with students playing the game.
- Enhancement of Student Education on Importance of Student Retention
 - The Post Game Questionnaire also showed that students are able to learn more about student retention and care more about the success of their peers after completing this game.

Interview Verbatims

“As I was reading the questions, I thought some answers were obvious, and then I realized that they were wrong. It made me think about things a bit more. Even as someone who is not struggling with school, or having second thoughts about dropping out, I think this is something all students should do. It has a lot of good information and can help a lot of students.” - Kate

“I think the message of the game is that there are a lot of options and things you can do to try and make your college experience better. This game teaches you about all those things.” - Leytan

“I really liked the characters. There was a nice balance of diversity and a lot of dynamics. Very funny, creative, and very visually appealing to play the game... It opened my mind to the idea that there are so many more options for people who are actually struggling with adapting to college and the college environment.” - Caleb

4. BSU Pilot Research

Following the post-game research, the game was offered to Ball State University first-year students on a non-required basis. In all 75 students responded with 35 playing one level of the game and a further 10 to full completion. It was decided that a survey would be administered to the completers rather than the entire cohort, as it was deemed important to garner feedback from a comprehensive game experience.

General Findings

1. Increased Acculturation

The hypothesis of acculturation was validated by the effect of the game. Students felt in greater readiness and more confident as they went into the first year.

2. Receptivity to Advisory Services

Students demonstrated a greater likelihood to seek advisory and counseling services as a regular part of the student experience.

3. Shift in Drop-out Perspective

Students took on a substantially altered view of dropping out, that is, rather than seeing it through the lens of an impending departure, the game experience coached students to discuss the idea of dropout heading off early in the game play

4. Full Retention

All students in the cohort, including the self-identified student at risk student returned to classes in the following semester.

Overall Findings

95% agreed the game can play a role in helping students stay at college in the future.

81% Found the game personally helpful.

61% believed students would be more likely to seek advisors, counselors, or professors after playing the game.

86% felt the game empathized with students and what they experienced in their first year at college.

Student Retention Findings

8. I considered leaving college at some point during my first semester. *

| | | | | | | |
|-----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------|
| | 1 | 2 | 3 | 4 | 5 | |
| Not much at all | <input type="radio"/> | Very much |

Of the 33% of students who considered leaving during their first semester:

100% will be returning for their second semester at college.

85% believed the game could help other students having difficulty as a first-year student.

83% stated that the game helped students to understand what to expect in their first-year at college.

Recommendation

Taking the need state research, the quantity and quality of developmental research, the post-game research and along with the pilot survey as one a holistic body of research, we conclude that The Phoenix Student Success Game:

- 1. Has the potential to play a significant role in an integrated student success program.*
- 2. Can contribute to the successful preparation of students on entering their first year of study.*
- 3. Can positively shift perceptions of advisory services resulting in an increased likelihood that students will seek help regularly in their first year.*
- 4. Can identify and assure at-risk students. Can shift the drop-out dialogue.*