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**Gamification Project – TLI Report**

*Introduction*

For most students at Penn State Berks, ENGL 15, Rhetoric & Composition, is the entry course to university-level writing at our campus. It is typically, but not exclusively, taken during the first semester of the first year at Penn State Berks and there is a diverse skill set within the course. Some students who placed into Basic Writing opt to take this course instead to earn three credit hours, but need extensive support they may or may not seek in terms of paragraph structure, grammar, mechanics, and study skills as they relate to writing multiple drafts of an essay. Alternately, there are students who have succeeded at Advanced Placement English courses in high school attending the class, students with excellent critical thinking/analysis skills who are taking a composition course in English for the first time and require ESL support they may or may not seek, and students for whom writing is a chore to be completed, doubting the relevance of the role of written communication in the discipline they are focused on. Some students find writing a personal and sometimes emotional experience and sharing this work in peer review and with their instructor means taking a risk. To provide a space where learning can occur and a growth mindset can be engaged is vital. It is the role of the English Composition instructor to meet the needs of this diverse group and as seamlessly as possible foster a writing community where students feel comfortable joining in class discussion and producing quality work for review.

In Fall 2018, I reached out to Daonian Liu to discuss the possibility of incorporating gaming activities within my two fall 2019 ENGL 15 courses, Sections 001 and 002, creating a pilot project for 48 students with the goal of improving student engagement and a mastery of skills needed for success within the course (grammar, punctuation, avoiding writing fallacies and plagiarism, and writing within genres to name a few) to provide a better overall experience for students at Penn State Berks.

*Project Design*

Following the initial meeting with Daonian, I was assigned to work with Mary Ann Mengel to explore where and how gaming could be integrated within the course, which is largely centered around four major essays and five article analyses, to support areas where the students still need improvement based on my experience teaching the course for the past 10 years at Penn State Berks.

Mary Ann and I met multiple times over a period of several months beginning in January 2019 and particularly throughout the summer, to discuss formats that would best meet student learning needs in terms of web-based instruction as well as the scope of the project and a list of next steps I would take to integrate games into the course that met in person three times each week. Some questions we explored included the following: What would challenge students? How can this experience be competitive? Which game format worked best to meet my course objectives and goals for student success on the essay portion of the course? What aspects of critical thinking related to writing should be encouraged?

Considerable research was performed to determine how gaming could be employed in a writing course, particularly at OER.psu.edu using the Merlot platform and reviewing *Digital Storytelling* by Joe Lambert and Brook Hessler and The Gamification of Learning and Instruction *Fieldbook: Ideas into Practice* by Karl M. Knapp, Lucas Blair, and Rich Mesch.

Ultimately, Mary Ann and I determined it would be best to try a variety of formats with one game per week for a period of 15 weeks.

Separately, I met with Brett Spenser who was also working with Elizabeth Nelson, a librarian from Penn State’s Abington campus to develop an in-person game called Argument Architect, which would go on to be piloted in my ENGL 15 sections. One primary goal of the game was to get students to realize a strong thesis statement is supported by good, related research. Students should recognize at the end of the game that the research in specific types of scholarly and commercial sources should come before a completed thesis statement is added to an essay (and how thesis statements can change based on research findings). This is moving students away from “I believe” statements tied to opinion to essays and reports based on research and fact that students will encounter in college classrooms. The librarians spend many hours on developing this physical game and students worked in groups to complete it for prizes. The Argument Architect session was followed by student participation in a game called Evidence Excavator, a worksheet game directly linked to research scholarly sources for a definition essay that students were working towards within each respective course. Librarians were available for support when needed when students were researching sources for their essay based on the topics they selected.

Additionally, I met with librarian Alexandria Chisholm to discuss her game, the MLA Relay, teaching students the MLA format for source citation while completing citations for multiple types of sources in a positive, competitive format. Students typically do not enjoy lectures about formatting bibliographic citations in papers. While this was not the only time MLA format was introduced to students in the two course sections, it was the most detailed session, and students needed to pay attention, again, to compete against each other for prizes, tapping into each student’s basic competitive nature.

*Learning Outcomes*

During Week 14 of the course, students were asked to respond to a graded, anonymous survey (students received a grade upon completion, not for individual responses) designed by Mary Ann and the scaled responses are detailed below. (NOTE: there were 0% Strongly Disagree responses to any question so they have been removed from the results). *N* = 21 responses.

## The games in English 15 helped me feel more engaged in this course.

## The games in this course helped me learn the topics.

## I like the concept of using games to help me learn in this course.

## The games helped make learning fun.

## I learned course topics more easily as a result of playing a game related to the topic than I would have learned that topic without the game.

## I would recommend utilizing a similar approach (add game-like elements to reinforce important concepts) in other introductory-level courses.

## Some of the games in this course were played individually (online instructional games like Rhetorical Analysis, Plagiarism, Kahoot!) and some were team-based (MLA Relay). When comparing individual vs team-based games. **I had more fun playing:**

## The games helped me to recall and remember what I was learning.

## Potential benefits of an instructional game in order from 1 (most important) to 6 (least important) as rated by students based on impact to ease of learning and general enjoyment of the course

\*Each of the above responses used data collected by Canvas entered in charts created by Mary Ann Mengel

The survey also collected individual short answer responses from students, that expanded upon the data detailed above. For example, when students were presented with the statement that asked them to elaborate on what the “best part of the games used in the course was,” here are some examples of the responses:

* “They encouraged self-improvement.”
* “The games showed me what I did and did not understand and they allowed me to improve the mistakes I made without adding stress [sic].”
* “I found the Kahoots were the best because I was able to make quick decisions and was tested on my grammatical skills.”
* “Not only did the games help me learn the topics that were being taught but they helped get me involved in the classroom.”
* “I believe the best part of using the games during class was the interactive, competitive, and overall engaging atmosphere that the games produced.”

When students were asked to share what they considered the “worst part of using games in this course,” the responses collected included the following statements:

* “That we can only play Kahoot once a day.”
* “Sometimes they seemed really long and time-consuming.”
* “It was a little annoying how if you got one question wrong then you had to retake the entire quiz or game.”
* “Some of the games at points seemed off-topic, but by the end of the course, I realized each game was important in helping build upon my writing ability.”

When students were asked to share “suggestions for use of games in future sections of ENGL 15”, some examples of responses included:

* “I think we can have more games in ENGL 15…writing is kind of boring for most of people [sic]. These games can arouse people’s interest in the class.”
* “I think there should be more challenging games. A student will also skip class more if all they are going to do in class is play games.”
* “I hope ENGL 15 could add more topics about essays, or we could choose the topics that we are interested in, not only focus on the environment or something like that.”
* “Incorporate more group-based games.”

*Discussion*

The responses in the survey, overall, appeared to agree with/support the decision to employ the use of games to build skills in the composition classroom. In addition to the responses above, Section 002 was also asked if they learned more from individual games (52%), team-based games (29%), or if there was no difference (19%). This could be interpreted as reflective of the skill set individuals brought to that classroom.

There are other factors that can be noted behind these numbers. I believe the majority of the students in Section 001 came to the course with a stronger skill set when compared with students overall in Section 002, who seemed to need considerably more support during in-class discussion. Section 001 began at 11:15 a.m., just before the Common Hour, and Section 002 began just after the Common Hour at 1:25 p.m. and it is not clear if the time of day the class is taught affected attention span. At least one Section 002 student said her other classes were lecture-based and the games in our class was a welcome change (in presentation format).

The individual responses on my SRTEs for both ENGL 15 courses seemed to mirror the results on the survey, further supporting adding games fostered connections with other students and the course material. Several students described the games as “fun” or engaging and here is one example of positive student feedback in the Section 001 SRTE comments with regard to the gaming pilot: “Using gamification of the lectures was an interesting approach that helped bolster my knowledge in the course.” Other students also said the games helped them better learn the material in the course. Negative student feedback in the SRTEs with regard to the games sought fewer games, more challenging games, and “games were fun, but didn’t provide an incentive to take the class seriously.” It should be noted this general education course (or an honors composition class) is required for Penn State students and some students also noted in the SRTEs their dislike of writing in general.

Separately, the grades for the graded games and scenario quizzes amounted to 5% of the students’ total grade for the course overall. Evidence suggests that this would not be significant enough to determine whether or not a student would pass the course. It is impossible for me to know if it was the sole factor for one student who earned a 71% for the course (she had earned a B- in the graded games portion) and it may have bolstered the performance of two B students within the B range. In addition, students didn’t receive a grade for the in-person games or the Kahoot or Jeopardy in-class verbal group games.

As the courses progressed, it became clear it would be unlikely it would be possible to effectively measure the effect of the weekly games on student grades as the skill sets were so varied at the onset of the course and the effort put forth by students who lacked strong study skills during the course. It was also clear that the strong students, particularly in section 001, would have succeeded in the course with or without the games.

From my perspective as instructor, I believe the pilot accomplished what it set out to do. The games fostered a sense of engagement in each of the classrooms, however, there is room for development and improvement. Students in both sections still made MLA format errors on their essays, comparable to previous years without the games, and student work was still submitted with grammar and mechanics errors throughout the semester. This lack of attention to detail is not necessarily reflective of understanding as much as it is to attention to detail or time the individual student spent revising before submission. Perhaps no amount of games can truly change this, and the best one can do is to bolster the toolbox students have available at their disposal to succeed at this and other courses at Penn State Berks.

Going forward, I plan to incorporate more Kahoot games as well as the H5P games in my ENGL 202C this semester to encourage engagement across disciplines (usually, but not exclusively, science and engineering majors take that course); to keep most of the games developed for the fall ENGL 15 courses in my Spring ENGL 15 course; eliminating one grammar game that could be more challenging or more reflective of my goals for the course; to ask the librarians to come back to lead physical research games in the classroom; and to continue to use games in the classroom to encourage engagement, while reviewing how different formats and content can challenge a variety of skill sets.

*Acknowledgements*

Daonian’s support and encouragement for the project as a whole, particularly when forming objectives and goals, helped guide the progression of the project and I appreciate her guidance. I am grateful for the advice, direction, time, and considerable effort provided by Mary Ann. Without her advice, technical contributions and troubleshooting, the initiative would not have been possible. Several games required me to provide content to Mary Ann for her to incorporate into software and add images within H5P assignments, and the effort and time she put into doing so directly benefitted my students. I appreciate the work provided by the student summer interns in Media Commons who helped develop the visuals for the scenario-based quizzes. I am grateful to Brett for his compilation of websites to reference prior to undertaking the project that helped me gain a better understanding of student expectations and how gaming can be used in higher-education courses. Elizabeth, Brett and Alexandria provided in-person effective research support, game design strategy, and encouragement to the three classroom research session games noted above, and I’m grateful for their efforts.

It should be noted that the work put into this project was done without monetary compensation, due to Penn State Berks budget constraints. Typically, TLI project developers receive grant funding for time invested in their projects. This was known at the outset, and I consider the value in this initiative to be the training provided to me contributing to my growth as an educator. Because of this project, the learner-centered writing community I provide for our students has improved in terms of engagement. I would recommend Penn State Berks reinstate this funding when it is possible due to the extensive hours involved and the direct benefit to our students in terms of engagement at a time when retention is vital.