

Faculty Innovator Grant 2013
Center for Learning and Teaching

Final Report Form

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| Project Title: (10 words or less) | The Learning to Learn Game: Traditional Teaching Levels Up |

Other faculty:

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1. Describe the specific teaching and learning issues being addressed by the proposal.

As experienced undergraduate instructors, especially in 100- and 200-level courses, the Co-Primary Faculty (Co-PFs) repeatedly watch students struggle with basic learning skills such as critical reading, note taking, time management, and engagement. This system of incorporating learning-to-learn skills must be easy for faculty to introduce into courses where the curriculum is already designed. There must be an easy way to help minimally motivate students to commit to additional self-directed learning that supports the non-grade-related rewards built into the game (like badges and levels). Although most students are likely to benefit from additional instruction in various learning skills, most are not willing to spend the time or energy on the topic and/or are not willing to acknowledge they could use the help. Therefore, there are three learning issues:

- students need continued opportunities to improve their set of learning skills and their self-awareness of said skills,
- students need the time, energy, and motivation to learn the skills and conduct several meta-reflective activities, and
- faculty need to be able to easily incorporate these elements into a course without completely disrupting a completely developed curriculum.

2. Describe the revised specific teaching and learning issues being addressed by the proposal (if applicable):

n/a

3. Describe the development activities involved addressing the learning or teaching issue.

We completed three prototype development and testing sessions.

Spring 2013

During spring 2013, we did an extremely fast prototype development of seven multimedia instructional units and activities in Google Sites. Two faculty participants volunteered to test the materials with their courses. They were asked to implement at least one activity. Data was collected from both the faculty and the student participants. Although most of the students found the assigned activities either somewhat or very helpful, the research results demonstrated that the design of our first prototypes were too long and laborious to motivate students to complete any more than assigned by their students.

Summer & Fall 2013

During the summer and fall 2013 sessions, the team worked with Dr. Amy Adcock to theoretically situate revising the structure of the learning activities. During the fall semester, the team developed 15+ prototype activities in an instance of WordPress. The activities did not include much instruction so that the student could learn the objective while completing the activity. This cut down on reading and “content learning” time. The activities were also more closely aligned with content from ODU (like referencing

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specific Academic Services). Finally, the activities started to include audio narrative elements from the game. At the end of the Fall semester, we tested eight of the activities with one of the Co-PF's courses.

Results from the knowledge assessment portion of the formative evaluation indicated that the modules are achieving the goal of increasing awareness of the information. Data was supported by the amount of time spent in modules indicating participants were reading and completing the activities. Data also demonstrated that many participants found the information interesting and useful. Usability results were mixed but participants indicated instructions and navigation were clear. It was apparent from the survey results that the majority of revisions need to focus on the motivational or gamified elements of the environment.

Based on the data, we outlined the following revisions to improve the L2L environment. All of these revisions should improve the challenge and curiosity aspects of the game.

- Increase game-like motivational elements like rewards, competition and levels.
- Delivery of the audio clips was not apparent; include a visual cue to call attention to the clips.
- Include more opportunities for reflection.
- Review instructions to ensure steps are broken down into appropriate, clearly articulated chunks.

Taking the time to rapidly prototype and test instructional content and basic game elements helped designers make critical revisions earlier in the development processes before revisions were difficult, or costly, to make.

Spring & Summer 2014

Taking what we learned from the testing in the fall, during the spring semester, we continued revising and developing more activities. We published a total of 48 activities and tested them with two faculty and their summer students. We still are aggregating and analyzing data; however, initial responses include:

- positive faculty perceptions of impact on student work habits and learning;
- visual cue for audio elements still confusing for students; and
- students generally found the activities adequately challenging, engaging, and useful.

4. Describe the learning outcomes attained by the project.

By integrating the Learning to Learn Game within a given course/term, faculty were able to:

- incorporate at least two specific learning skills within specific content instruction and/or learning activities that already exist within the course curriculum (i.e., supplemental instructions/activities, not adding something entirely new), and
- provide students with minimum grade-related motivation, along with the more intrinsic and playful motivation built into the game, for engaging with some Learning to Learn Game units beyond the required course learn-to-learn activities.

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Upon interacting with the Learning to Learn Game within a given course/term (especially after the heavy emphasis on reflection activities in the third round of prototyping), students were able to:

- describe and reflect upon their learning habits and strategies in various learning contexts, and
- apply acquired learning skills to course content as well as suggest when and how the learning skills might be used in the future.

5. Describe unexpected outcomes, if any.

Our faculty participants during the summer 2014 testing were especially interested in the fact that activities made students more aware of :

- their own responsibility and agency in the learning process, and
- the design and structure of the course materials and learning activities.

6. Describe the impact of the completed project on your colleagues, department, college, or community.

We did not implement on as big a scale as we originally hoped; however, we are happy with the results of the slower, smaller prototyping and testing process. Currently the impact is smaller; however, since we have received one of the Interdisciplinary Writing (IDW) Action Project grants, we will be developing approximately twice as much content, focused on supporting research-based writing, and continue to implement and test the materials in courses across the university.

7. Describe how the project can be a model, template, or prototype for use by other instructors.

The project is still a bit too beta to be copied by others; however, after about another year of work, faculty across the university should be able to easily adopt it for their courses. Other institutions will need to adapt some of the activities to their own environments (like listing various student services, etc.).

8. Describe the technology used to help address the issues described in the proposal.

We originally used Google Sites for fast prototyping in Spring 2013. We used WordPress (<http://l2lgame.digitalodu.com/>) for the remainder. We will stay in WP for a bit longer; however, we will probably need to go to something more robust (Drupal), or home grown, to start developing rich game mechanics.

9. Describe products, if any, that are a result of the project.

Right now we have a website with 48 activities: <http://l2lgame.digitalodu.com/sitemap>
We will continue to develop this site with the IDW Action Project.

10. Describe the future plans for this project, if any.

We have receive a \$19,000+ grant to continue developing activities, the game, and test the materials with faculty in other disciplines.

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11. Attach a financial report with updated Budget Plan Matrix.

Final Budget Matrix

| | Source of Funds | | | |
|--|-----------------|------------|-----------------|------------------------------------|
| Budget Item (equipment, personnel, software, etc.) | Qty | Total Cost | Amount from FIG | Amount from Other Source |
| Personnel x3/\$1,000 each | 3 | \$3,000 | \$3,000 | |
| server space | 2 | n/a | | Google & College of Arts & Letters |