Gamification, Research and Writing

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Abstract: The Game of Writing (GWrit) project has developed a prototype of an online writing environment that allows us to experiment with different models with gamification in writing. Gamification is the making of a game of a task like writing an essay or washing the dishes. McGonigal describes a variety of situations where participants can be motivated by the gamification of an otherwise tedious task. (McGonigal 2011) GWrit provides an environment where writers can break up a writing task into documented milestones and then mark them complete when finished. The system keeps track of how many milestones you have completed and how presents the user analytical data about words written and so on. The environment then allows one to compete with another participant working on a similar task. Users can "brag" about what you have completed to competitors. We have conducted "think aloud" usability tests to improve the tool and make it reliably usable so that it can be integrated it into a writing course. GWrit is not simply a gamification of writing for the purpose of play. It was designed to encourage documenting and bragging about writing as part of the gamification so that we can gather data about how writers conceive of their writing tasks and progress. This raises ethical issues around the design of games for research that will conclude the paper. The project has recently turned into a production project as we are partnering with Writing Initiatives to redevelop GWrit to support large writing courses at the University of Alberta. This partnership has turned a slow research project into rapid production project with embedded research.

1.0 Introduction

Twentieth-century models for helping students learn to write were dominated by printed handbooks and textbooks. In the first decade of the twenty-first century, publishers have embraced the digital publishing revolution by creating electronic resources including PDF versions of printed books, and distributing these versions though online resources such as Pearson's MyCanadianCompLab[1], and making these online products available through e-readers and mobile devices. Pouring the old wine of textbooks into e-readers does not, however, take advantage of the opportunities for interactivity and analytics that computing offers. This paper describes a project to develop a writing environment called GWrit (Game of Writing) that hooks gamification, community commenting, and analytics into an online writing environment initially meant for community use, but now being

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[1] <http://www.mycanadiancomplab.ca> now renamed MyCompLab.

adapted for teaching level 1 writing courses in partnership with Writing Initiatives at the University of Alberta. Gaming is arguably the most disruptive new media technology of the past 20 years, and publishers and educators are only beginning to explore how that technology might be leveraged to create immersive, interactive, and engaging experiences for students who are learning academic writing skills. GWrit gives us a framwork for experimenting with gamification and the use of analytics in a university writing course.

2.0 The Problem: Introductory Writing Course

The English and Film Studies (EFS) department of the University of Alberta typically offers over 150 sections of level 1 English courses over the year (including summer sessions.) These courses are taken by students across the disciplines as, among other things, a introductory writing course. Due to budget constraints that led to voluntary retirements, EFS will be cutting back the number of sections they offer. To meet the campus-wide demand Writing Initiatives is collaborating with researchers associated with the GRAND Network of Centres of Excellence to develop a blended learning version of the Writing Studies (WRS) 101 course that makes use of GWrit to provide a multi-disciplinary blended learning writing experience.[2] The goal is to be able to teach up to 1200 students a year in large (300 student) sections that have access to online resources through our eClass CMS and GWrit.[3]

The environment offered by GWrit will provide students with composing tools (word processing), reviewing opportunities, research guidance, models for writing, and advice about writing through one interface. This environment will be consistent with the move to "flipped" classrooms or blended learning because GWrit makes the writing environment the classroom; formal teaching will come in the form of short video lectures, textbook readings, email and chat exchanges with instructors and peers, links to writing resources already on the web, and existing library resources. Instead of regular classes, the in person meetings will be organized around issues and disciplines. Students will have a menu of drop-in sessions available depending on the discipline they come from or the writing issues they need help with.

Students will play a key role in their own education through GWrit as they will required to review the work of others in the class. R. Light's study from Harvard University and Rogers' study from Stanford University point to the importance of content-specific, out-of-class peer-group writing experiences as key ways to improve student writing (Light, 2003; Rogers, 2010). Light (2003), for example, notes that students who improve the most as writers work with a professor, a writing teacher, or a study group. This research suggests that by creating a rich online environment that has multiple ways for students to connect and interact both with instructors, peers, and alumni we can improve their skills as writers. If

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[2] The current Writing Studies: Exploring Writing (WRS 101) course is offered in sections of 20 students. See <http://www.ois.ualberta.ca/~/media/ois/WritingStudies/docs/WRS_101_Brochure_-_2011-2012_final.pdf> (PDF).

[3] The University of Alberta's Course Management System (CMS) is called eClass and is built on Moodle. See <https://eclass.srv.ualberta.ca/portal/>.

students continue to return to the environment after taking the course, they can continue to develop as writers throughout their undergraduate careers.

In addition there will be analytics and "gamification" features that provide students with feedback and encouragement. When students sign in to enter the online environment, they will get to work actively rather than wait for a lecture to begin. More about this later.

In sum, the design of the blended version of WRS 101 will include:

- Each 3-unit course would be built around 4+ writing assignments. For each assignment students will:
    - Choose which version (template) of the assignment they want to work on depending on their discipline. Thus a science student might choose the version relevant to science writing.
    - Write drafts and track progress within GWrit.
    - Submit drafts for review by peers, peer tutors, TAs and eventually alumnae.
    - Rewrite based on peer-comments and tutor comments.
- Once a week in-person meetings that are not organized around sections, but around disciplines and issues.
- New writing resources including:
    - Short (60 second) videos about common topics,
    - Online content on writing,
    - Annotated example writings, and
    - Links to other online resources.

It should be mentioned that this new blended-learning version of WRS 101 builds on a number of both in-class and online versions of introductory writing initiatives managed by Roger Graves and Heather Graves over the years. Further, much of the content we will be adding online resources already exists in the form of two handbooks co-authored by Heather Graves, Roger Graves, and Lester Faigley: *The Brief Penguin Handbook* (604 pages) and the *Little Penguin Handbook* (320 pages).

3.0 GWrit: The Game of Writing

The first version of the Game of Writing (GWrit) was developed with support from the GRAND NCE in 2012-3 by a development team led by Matthew Bouchard under the supervision of Geoffrey Rockwell. The first version was intended as a prototype to test develop interface ideas and test. It was developed in Python using the Django framework. The first version was not developed specifically for large scale writing courses but instead for individuals online who want to try a gamified writing environment. Here is sample user screen:

GWRIT: The Game of WRITing

Hello Rockwell

Manage | Logout

Some of the features one can see here include:

- In GWrit one can have one or more writing Projects. These are accessed through a dynamic outline in a left-hand panel.
- Projects have Milestones and Milestones have tasks.
- All three levels (Projects, Milestones, and Tasks) have two associated fields. One field (the upper field) is where writers can write *about* what they are doing or have to do. We call this the "Editorial" field. The second field is where they actually write parts of the target work. This is the "Writing" field. The idea is to encourage planning and editorial thinking about writing.
- All three levels can be marked as Done which feeds into the gamification aspects of the environment. The system reflects back to you and any "competitors" what you have "done".
- You can invite another user to compete with you in writing. When you are competing then you have the option to "Brag" whenever you finish a task, milestone, or the project. Brags can Tweeted, emailed, or they can show up in the system. Here is Brag prompt:
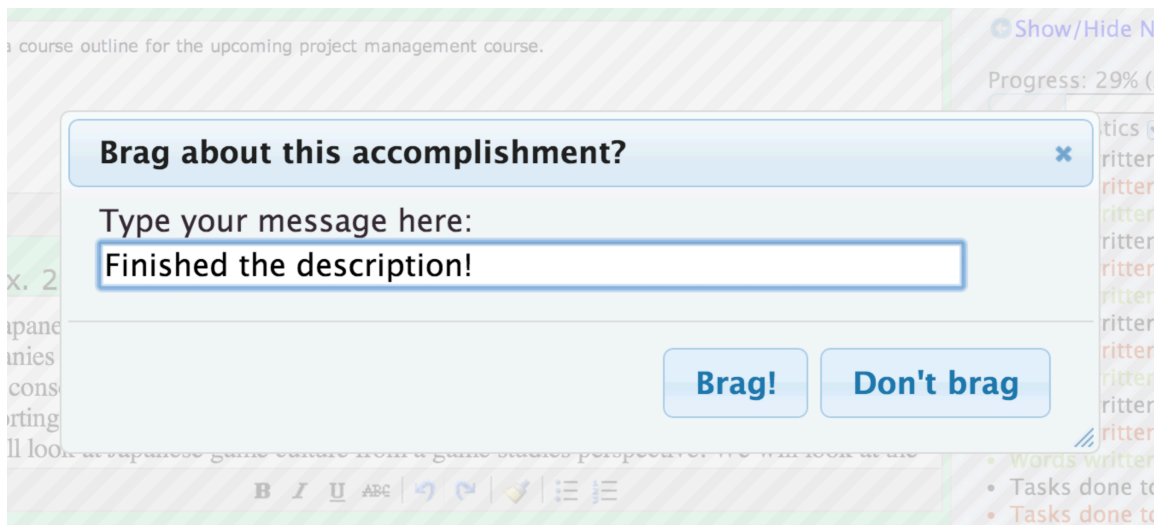
This first version was tested by a number of researchers using a "talk aloud" protocol where they worked on a writing assignment and recorded impressions about the system. Most of the feedback in this first user test had to do with functionality and the interface. Issues that emerged included:

- It wasn't clear what the reasoning was behind the dual panes for each Project, Milestone, and Task. In the new production version the Editorial field is used for template instructions and suggestions from the instructors. In addition we are adding a third pane of comments that can come from peers, tutors, and TAs.
- Statistics the show achievement (like number of words written) were appreciated, but the degree of completion (how many Tasks and Milestones that are Done) was not clear. We are experimenting with a "fuel guage" interface feature for each feature so it clear what has been done and what has to be done. We are also trying to weave graphical hints right into the left-hand outline.
- Competing with others should be an option as not everyone wants to write that way or has a friend who would be interested.

The opportunity to partner with Writing Studies to develop a version of GWrit for production use in a course changed the pace of the project and the development. The prototype version didn't need to be robust enough to support hundreds of students. As we are expected to have a stable version by September 1st for a section of approximately 100 students we have discarded the current code and are reimplementing GWrit with professional developers in the University's Arts Resource Centre.

The reimplementation has also meant that we have to redevelop GWrit to suit the researchers and instructors in Writing Initiatives so it fits with their pedagogical design. The key innovation they have introduced is a reviewing system that allows students to post their work for others to comment on and to then rate the usefulness of the comments.

This commenting or review feature is now being designed to allow reviews by fellow students, by peer tutors (which Writing Initiatives currently trains), by graduate student Teaching Assistants (who are also trained to be able to mark writing), and eventually by volunteer experts from the community. We have proposed involving alumni who have "real world" experience with writing in the review/commenting process as it will give students authentic feedback on their writing as it would be read in contexts outside the university. By inviting alumni to participate, we are taking up the challenge that S. Toope (2013) outlines in "Universities must give up control: UBC president" to pursue vital change by lowering the boundary for alumni and others to participate in learning activities at universities. The Game of Writing can provide just the kind of direct experience that Toope and others (including Harvard) calls for (Perez-Pena 2013). By encouraging alumni involvement we will add resources through the donation of time and build support throughout Alberta for the work of the University.

4.0 Gamification[4]

Let us now return to the gamification components to GWrit. Gamification has been made popular by Jane McGonigal through her game designs, public talks, and her book *Reality is Broken*. McGonigal starts the book with a chapter on "What is a game?" that defines games by four defining traits: goals, rules, feedback system and voluntary participation. This definition works well for the purposes she wants to put it to in that it helps her then discuss work and happiness. (Reality is broken because most of our work doesn't have the energizing "eustress," as in happy stress of challenge of a game. (p. 32.) As she puts it in her first "Fix":

> Fix #1: Unnecessary Obstacles
>
> Compared with games, reality is too easy. Games challenge us with voluntary obstacles and help us put our personal strengths to better use. (p. 22)

The problem with this definition and what she does with it is that just about anything, including the work of reality would fit in the definition. Most work has goals, rules (often called law), feedback and is voluntary (at least in so far as we can, theoretically, quit our job.) She, like most writers on games falls into Wittgenstein's trap of trying to define games and ends up with such a broad one that it can do just about anything but explain what is special about games.

To be fair, McGonigal is not trying to define games as a philosopher would so much as defining in order to introduce them in her larger theme of life and work. This is the focus of the book. It isn't really about gaming but about the place of gaming in leisure and work. Her argument, at least in the beginning, goes something like this:

- Millions of gamers are spending more and more time playing,
- So, there must be something wrong with reality,
- Therefore we should make reality more like gaming.

Put this way, the argument seems sort of silly, and of course there is more to it (including a section on happiness research). Nonetheless, I put it this way to show the flaws:

- The fact of all these people are playing games doesn't mean anything in particular without research. It is a standard move to take some shift (like a growth in game playing) and try interpret it to suit whatever snake oil you want to sell.
- We might just as well point out that millions of people spend even more time watching television. Does that make reality broken or prove anything about reality? For that matter all sorts of people spend hours and hours a week in all sorts of leisure pastimes from gardening to reading. No one tries to argue that reality is therefore broken and we should make work more like reading. The tensions between work and leisure have been with us since we had philosophers to think about them. McGonigal thinks she just discovered such a tension and can save the world by erasing it.

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[4] This section is drawn from my blog review of *Reality is Broken* at <http://theoreti.ca/?p=3594>.

- Gaming is reality. There is nothing but reality, at least as reality is normally defined. McGonigal, however, is defining reality as the non-gaming work reality we face Monday morning. Again there is a long tradition of seeing gaming (and other forms of leisure) as the other of work reality – see Huizinga's *Homo Ludens*. Why can't work be as peaceful as reading a novel, or as entertaining as watching a live spectacle or as challenging as playing a game? Wouldn't it be nice if we could make work into play? Huizinga and Suits (who she quotes with approval) tell us that games are by their very nature not efficient work. What makes them playful is that we don't have to do them and they don't have consequences outside the game. They are inefficient if compared to work as a way of getting things done, as Suits points out. And herein lies the problem with gamification and serious games. You can't have it both ways. You can't have games that are work and not work. It isn't play if it is work that has to be done and for which you get paid, no matter how voluntary the job sort of is. Work reality isn't broken, it is just different from play (by definition.) We can change the ratio of leisure time to work time; we can blur the borders between the two, but we shouldn't fool ourselves into thinking we can solve the reality of work with its other.

To be honest, what annoys me is the political innocence of this work. One has the feeling that McGonigal is oblivious of centuries of political science, thought about work, and the political struggles to make the reality of workers better. If reality (in the sense of our work world) is broken the problem is just as likely to be political. Perhaps people don't have meaningful jobs because the jobs are going off-shore or being automated or workers are having their rights to collective bargaining legislated away? McGonigal seems to be of the psychic self-help tradition where you can solve everything just by changing your attitude and being happy. She quotes with approval the literature about happiness as flow as if that were all it takes to live a meaningful life. If all it takes is flow then just turn your life into a game and go with the flow. Gamify your oppressive dead-end job, don't worry about the politics or the fate of others, just be happy through gaming because the games industry is there to lend a hand. (And we all know how the games industry is generous and altruistic. They are looking after our best interests and making sure that their games aren't too addictive and don't fleece us of too much of what little we have.)

No doubt I exaggerate, but there is a real danger for any of us to study gaming and gamification that we can become complicit in the industry. Reading the opening chapters I feel that she wants to justify gaming rather than examine it. As her subtitle suggests, her book is not whether games make us better or how they make us better or don't; instead the book is about "Why games make us better and how they can change the world." She starts by trying too hard to prove that games are good in order to predict that they will change things for the best (if enough of us cranks can just get with the program.) No doubt this makes her book a satisfying read for any gamer who has felt guilty that they aren't doing other things, but it doesn't make it convincing. I am not the only person to be critical of McGonigal or gamification. Reviewers like Chaplin have argued that gamified tasks aren't really that fun. They are about as fun as doing homework for a scratch and sniff sticker.

Ian Bogost, in his blog essay "Gamification is Bullshit" was even less complimentary:

> Rather, bullshit is used to conceal, to impress or to coerce. Unlike liars, bullshitters have no use for the truth. All that matters to them is hiding their ignorance or bringing about their own benefit.
>
> Gamification is bullshit.
>
> I'm not being flip or glib or provocative. I'm speaking philosophically.

In particular he objects to confusing *features* of games like points, leader boards, and levels with game themselves. Adding game features to things that aren't games is as likely to gamify them as adding wheels to fish is to "bicyclify" the fish. The fish might roll a little better, but you can't ride it.

Ian Bogost is honest enough to realize that this critique of gamification could also apply to attempts to create serious games, whether educational or persuasive. Bogost, author of book on *Persuasive Games*, tries to distinguish gamification or exploitationware from persuasive games,

> I mentioned that frames like "serious games" and even my own "persuasive games" had done a terrible job making games seem viable to make and use in organizations. The problem is, they should be difficult to make and use in such contexts. In fact, games undermine many of the practices of industrialization that gamification silently endorses. (Bogost, "Persuasive Games: Exploitationware")

The difference is that gamification just borrows surface features and conceals the bitter pill of learning or work under the cloak of gaming while a persuasive game tries to model a phenomenon so that playing the game is a way of learning about the phenomenon.

Why then are we integrating gamification into GWrit? First, we should be clear that we have built GWrit so that it can be a platform for representing information about a user's writing back to them in the form of analytics or gamification components. Our working hypothesis is that gamification can be a playful way of representing real information back to users so that they can make decisions and possibly be motivated differently. Gamification is therefore an process of re-presenting information in a different rhetorical mode. Instead of simply stating information about a project (as in "you have finished 3 out of 5 tasks in 9 days") gamification is an experiment in presenting this information so that it is more persuasive. This is not a statement about what we think is true, so much as a hypothesis to test, which is why we need an environment into which we can plug:

- A variety of analytics that gather information about writing,
- A variety of "serious" and "gamified" representations of that information, and
- Tools for capturing information and comments about the writing we are trying to encourage through gamified analytics.

5.0 Partnerships

We see this then as an opportunity to experiment with different representations of information, including playful ones, on a larger scale and in a partnership that brings together game studies researchers with researchers who specialize in the

scholarship of writing instruction. More specifically this project is a collaboration between the following partners:

- The Faculty of Arts which has traditionally provided writing courses to students across the Faculties and is now having to find try different ways of offering such service teaching.
- Writing Initiatives that has been called on offer large-scale writing sections and which has a research function to study rhetoric and writing.
- Researchers in the digital humanities and game studies who are interested in studying different interfaces to information, different uses of analytics, and serious uses of games/gamification.

References:

Bogost, I. (May 3, 2011). "Persuasive Games: Exploitationware." *Gamasutra*. Online. <http://www.gamasutra.com/view/feature/134735/persuasive_games_exploitationware.php>

Bogost, I. (August 8, 2011). "Gamification is Bullshit." *Ian Bogost - Videogame Theory, Criticism, Design.* Blog. Online. <http://www.bogost.com/blog/gamification_is_bullshit.shtml>

Chaplin, H. (March 20, 2011). "I Don't Want To Be a Superhero: Ditching reality for a game isn't as fun as it sounds." *Slate*. Online. <http://www.slate.com/articles/technology/gaming/2011/03/i_dont_want_to_be_a_superhero.html>

Freedman, J. (2013, November 25). "MOOCs: Usefully Middlebrow." *Chronicle of Higher Education.* <http://m.chronicle.com/ >

Huizinga, J. (1950). *Homo Ludens: A Study of the Play-Element in Culture*. Boston: Beacon Press.

Light, R. J. (2003). "Writing and students' engagement." *Peer Review*, 6(1), 28-31.

McGonigal, J. (2011). *Reality is Broken: Why Games Make Us Better and How They Can Change the World*. New York, Penguin.

Perez-Pena, R. (2013, March 25). "Harvard Asks Graduates to Donate Time to Free Online Humanities Class." *New York Times*. <http://www.nytimes.com/>

Rogers, P. (2010). "The contributions of North American longitudinal studies of writing in higher education to our understanding of writing development." In C. Bazerman, R. Krut, K. Lunsford, S. McLeod, S. Null, P. Rogers & A. Stansell (Eds.), *Traditions of writing research* (pp. 365-377). New York: Routledge.

Suits, B. (1978). *The Grasshopper: Games, Life and Utopia*. Toronto: University of Toronto Press.

Toope, S. (2013, October 24). "Universities must give up control: UBC president." *Globe and Mail*. Retrieved from <http://www.theglobeandmail.com/>

Watters, A. (2013, November 29). "Top Ed-Tech Trends of 2013: MOOCs and Anti-MOOCs." *Hack Education* [blog]. <http://www.hackeducation.com/>