



Better Writing through AI: Online writing tools

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Roger Graves
Director, Writing Across the Curriculum at University of Alberta

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Apprenticeship strategies: Helping graduate students...
Roger Graves
Published on LinkedIn

How can we develop better graduate student writers? In this episode of the Teaching Writing podcast, I discuss several strategies for developing the writing skills of graduate students: mapping out a plan of development over the entire degree program; developing an...see more

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How can we develop better graduate student writers? In this episode I...

Roger shared this

At the start of a recent workshop, I

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Helping graduate students write better
by Teaching Writing: Ideas and Strategies

0:00 | 12:28

podomatic

Teaching Writing: Ideas and Strategies

Help students become better writers

Category: Higher Education
Location:

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<https://rogergraves.podomatic.com/>

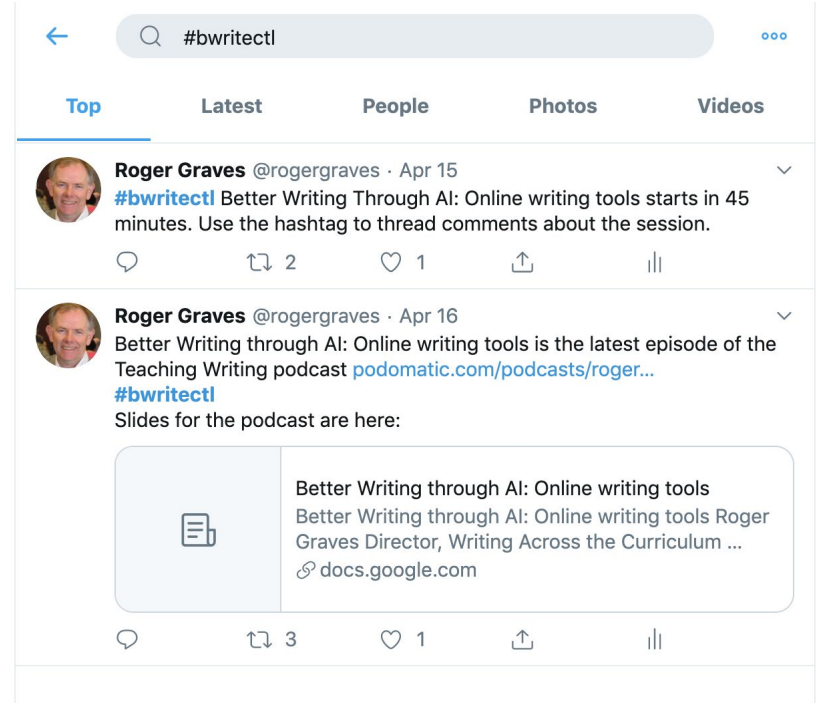
How we roll

Ask questions as they occur to you

Supply answers if you have one

If talk in this room gets too busy, post comments/answers/questions to Twitter at

#bwritectl



OK, maybe I shouldn't have said AI

Some definitions:

“**Writing**” = process; iterative; social; genre-driven

“**AI**” = all inclusive. No?

= software using data tools to facilitate revision/composition

“**Students**” = everyone here, including me

Focus questions

How can we, as writers, use software tools to write better documents?

What is the range of options?

Who has had success with what?

Others?



My first computer, 1987, IBM PS2
Glorified typewriter

<http://www.old-computers.com/museum/computer.asp?st=1&c=1183>

Ways to think about writing: the canons of rhetoric



Invention (of ideas to write about)



Arrangement (organization/genre)



Style (grammar and usage)



Memory (record of the text)



Delivery (performance of the text)

Writing Competency

#bwritectl

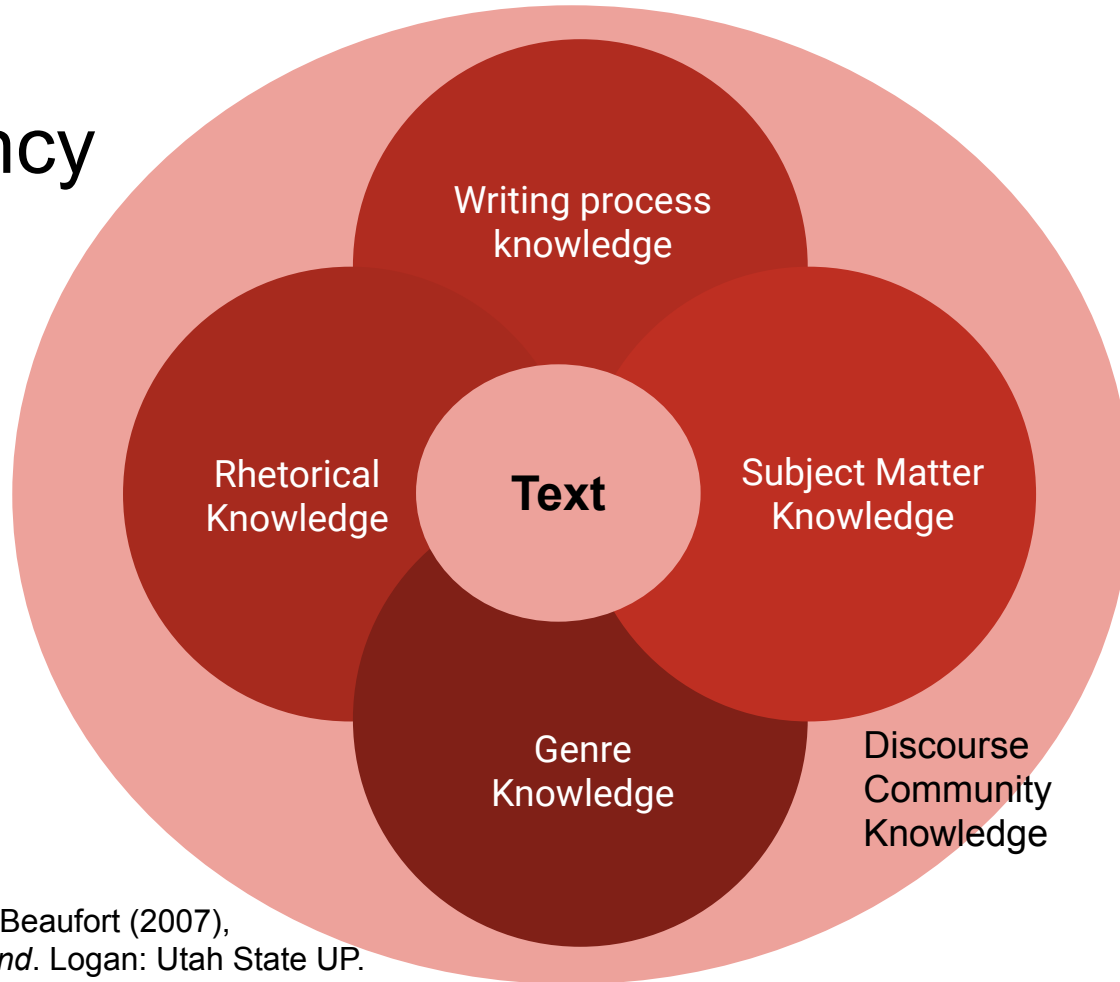


Diagram adapted from A. Beaufort (2007),
College Writing and Beyond. Logan: Utah State UP.

Where tools help

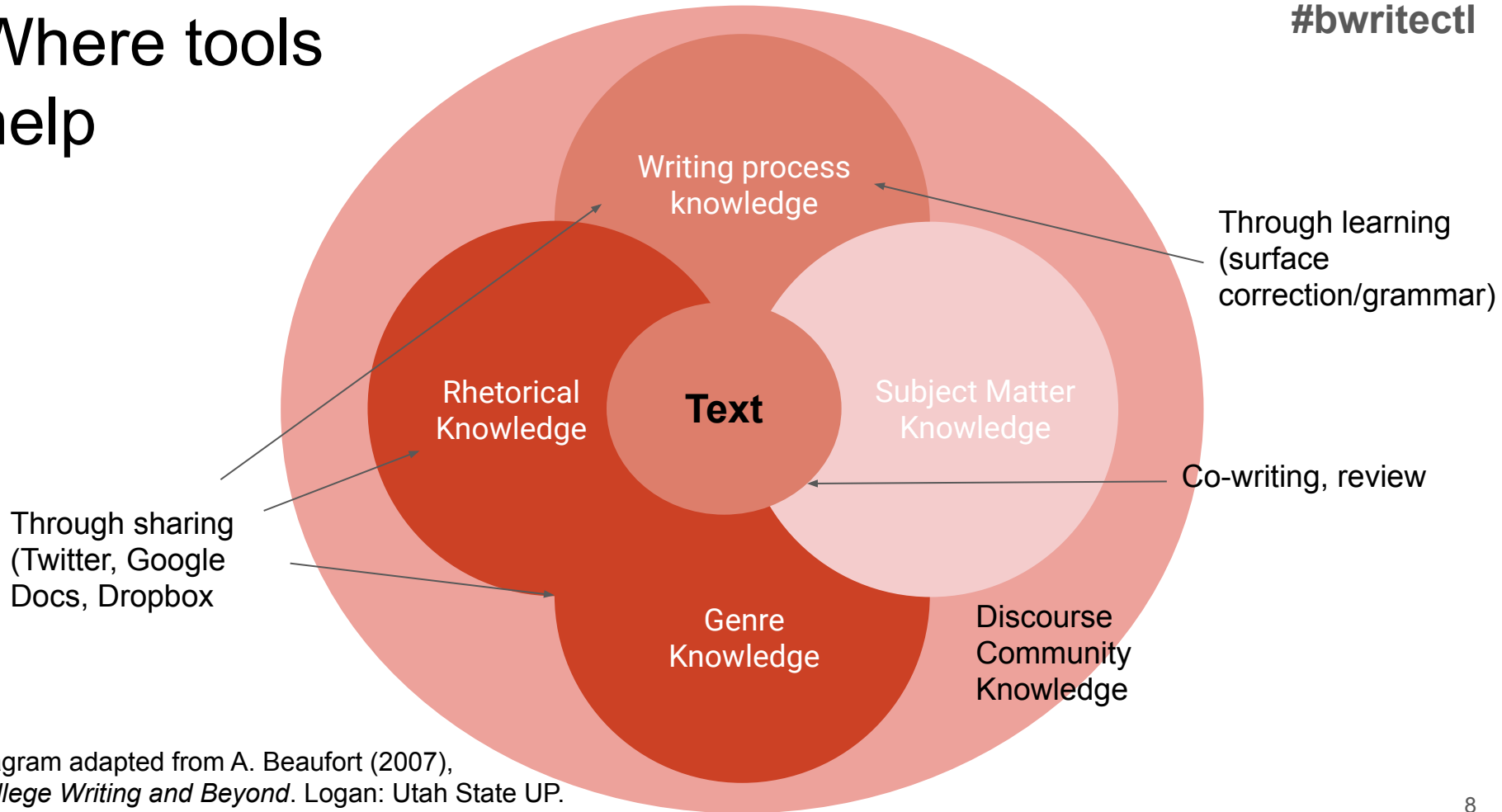


Diagram adapted from A. Beaufort (2007), *College Writing and Beyond*. Logan: Utah State UP.

Where they don't help: Limitations of software

The most important kinds of knowledge about writing (genre, rhetorical) **cannot**, at present, be developed through AI.

Writing process knowledge (invention, arrangement, style, memory, delivery) only helped somewhat by software applications: **style/grammar**.

Sharing of knowledge **can**, however, lead to better performances in invention and arrangement: Google docs, Dropbox

10 slides on tools

Surface-level, editing

- Grammarly
- ProWritingAid
- GradeProof

Sharing

- Google docs
- Dropbox

Research

- ResearchGate
- ScienceDirect

Social media

- Twitter: #phdlife, #phdchat
- <https://www.universityaffairs.ca/features/feature-article/wish-knew-early-career-professor/>

Formalized sharing

- Game of Writing
- Writing groups



ResearchGate: Links to citations

See all ›
[318 Citations](#)

See all ›
[40 References](#)



To give is better than to receive: The benefits of peer review to the reviewer's own writing

Article in [Journal of Second Language Writing](#) 18(1):30-43 · March 2009 *with* 805 Reads

DOI: [10.1016/j.jslw.2008.06.002](https://doi.org/10.1016/j.jslw.2008.06.002)

 [Cite this publication](#)

... 11). These studies confirmed prior findings that peer feedback triggers higher percentages of content changes (Lundstrom & Baker, 2009; Yang et al., 2006), which are considered to be signs of better writing (Liu & Sadler, 2003). Finally, and perhaps most significantly given the scope of his work, Topping (1998) reported on a review of 109 articles about peer feedback in higher education that included both L1 and L2 learners, concluding that peer review "appears capable of yielding outcomes at least as good as teacher assessment and sometimes better" (p. ...

... This finding is consistent with those of prior studies highlighting the benefits of peer feedback on L2 writing, for both those who generate reviews and those who receive them (Diab, 2011; M.C. Ho, 2015; Lundstrom & Baker, 2009; Ruegg, 2015; Yang et al., 2006; Zhao, 2014). Moreover, the finding that peer review helps reviewers become better writers was also evident in the results for the research question 2, where the quality of participants' feedback was a stable predictor of their writing performance on the posttest measure. ...

... Moreover, the finding that peer review helps reviewers become better writers was also evident in the results for the research question 2, where the quality of participants' feedback was a stable predictor of their writing performance on the posttest measure. Even after controlling for students' initial writing ability in model 2, and the quality of author responses in model 3, the feedback measure remained a statistically significant predictor, which is consistent with the findings of other studies (Demiraslan Çevik, 2015; Li et al., 2010; Lundstrom & Baker, 2009) showing that feedback can engage students in an active learning mode that helps sharpen both reviewing and other learning abilities. ...

What Is the Influence of Peer Feedback and Author Response on Chinese University Students' English Writing Performance?

Article May 2019 · [READ RES QUART](#)

Xin Zhang ·  John E. McEneaney

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ELSEVIER

Journal of English for Academic Purposes

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System, Volume 80, 2019, pp. 288-303



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Academic emotions in written corrective feedback situations

Ye Han ^a , Fiona Hyland ^b

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<https://doi.org/10.1016/j.jeap.2018.12.003>

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Abstract

Although written corrective feedback (WCF) is often believed to evoke negative emotions, empirical studies on L2 students' affective reactions to this teaching and learning device are still lacking. Informed by research on academic emotions (Pekrun, 2006; Pekrun & Linnenbrink-Garcia, 2012), the paper reports on two case studies investigating Chinese university EFL

Citing articles (1)



Article Metrics



Citations

Feedback



Neil Haave

10:12 AM (26 minutes ago) ☆ ↶ ⋮

to me ▾

Thanks Roger! I have pencilled you into our program. I am assuming it will deal with something helping instructors develop their ability to develop our students' writing? Anyways, I have pencilled in for "Something on Writing." I'll let you know when we need something more concrete.



↶ ▾ Neil Haave (ualberta.ca)

Neil,
I guess I better get more specific that "some thing on

Correct your spelling

something

🗑️ IGNORE

📄 SEE MORE IN GRAMMARLY

⋮

↶ ↷ Sans Serif ▾ T

Send **A** 📎 🔗 😊 📎 📎

📄 1/3 ☰ ☷ ☹️ ☹️ ☹️ ☹️ ☹️ ☹️

⋮ 🗑️ 2



Neil,
I guess I better get more specific that "some thing on

Possibly confused word

Possibly misspelled word: *some ...*

some thing → **something**

The word *some thing* seems to be misspelled. Consider replacing it.

IGNORE

12 WORDS 2 CRITICAL ISSUES



MAY 21 - MAY 27

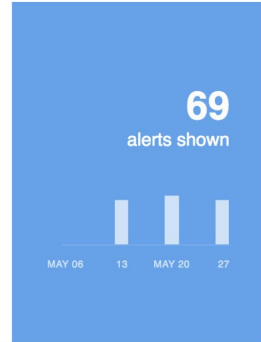
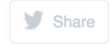
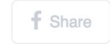
PREMIUM

Your Weekly Writing Update

Holy smokes. You were quite the busy bee with your writing this past week. You were more productive than 91% of Grammarly users.

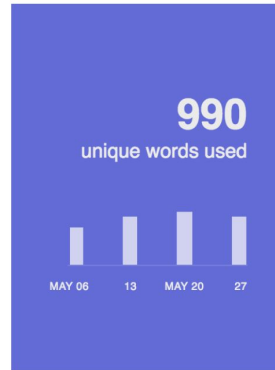
MASTERY

You were more accurate than **71%** of Grammarly users.



VOCABULARY

You used more unique words than **89%** of Grammarly users.



TOP 3 MISTAKES

- 1. Missing article [Learn More](#) 24 alerts
- 2. Missing comma in compound sentence [Learn More](#) 16 alerts
- 3. Incorrect punctuation with a title [Learn More](#) 14 alerts



grammarly

Overview

Members

Account

Roger Graves

University of Alberta

Overview

Month 3 Months **Year** | Custom Date


Export



GradeProof (Google docs)

Price: free

GradeProof ×



Potential Improvements

- 1 Spelling ?
- 2 Grammar ?
- 0 Adv. Grammar ?
- 1 Eloquence ?

[View Suggestions](#)

Statistics

| | |
|-----------------------------|---------------|
| Characters: | 498 |
| Words: | 108 |
| Sentences: | 7 |
| Syllables / Word: | 1.61 |
| Words / Sentence: | 13.5 |
| Readability: ? | 58.4% |
| Grade Level: ? | 8.1 years |
| Reading Time: | a few seconds |
| Speaking Time: | a minute |

ProWriting Aid

<https://prowritingaid.com/>

Key is ability to teach/learn
rather than simply mark
errors

A **subordinate clause** adds context to a sentence. It is not a proper sentence on its own.

A **subordinate clause** starts with a subordinate conjunction. Common subordinate conjunctions are: *after, although, as, because, before, even if, even though, if, in order that, once, provided that, rather than, since, so that, than, that, though, unless, until, when, whenever, where, whereas, wherever, whether, while, and why.*

In the following sentences, we have highlighted the **subordinate clauses** using bold italics.

Julia chose to visit the museum **since she's an art major**.

Since Julia is an art major, she chose to visit the museum.

If you go to the museum, you will learn something about history.

You will learn something about history **if you go to the museum**.

From these examples, you can see that **subordinate clauses** can either come at the beginning or end of a sentence. When **subordinate clauses** come at the end of the sentence, you don't use a comma. However, when a **subordinate clause** comes at the beginning of the sentence, you set it off with a comma.

Be careful, though, as some subordinate conjunctions can also act in other roles. For instance, the word "that" can also be a determiner, e.g. *That car is red.*

roots → roots,

THESAURUS

DISABLE RULE

IGNORE

Sharing: Twitter

Talk to others

Get ideas (invention)

Find resources

Informal; unfocused

ations Messages  Search Twitter  Tweet

You Retweeted

 **UWaterloo WCC** @UWaterlooWCC · Mar 14

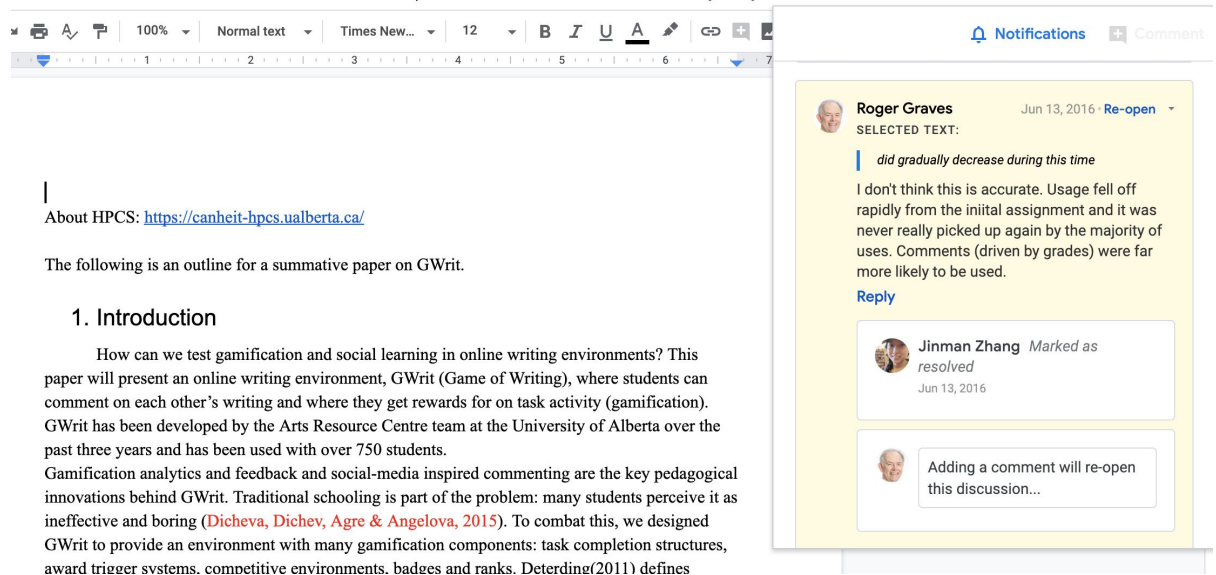
Every day is a nail-biting adventure inside A WRITER'S MIND™! For the full welcome package, check out the WCC Blog! ow.ly/zUp030o1jgY #writing #writerslife #art #illustration



3 10 17 Screenshot

Google docs

It is through sharing of comments that we can improve the thinking and ideas in our writing (high-order, invention aspects).



The screenshot shows a Google Docs interface. The document text includes a link to 'About HPCS: https://canheit-hpcs.ualberta.ca/' and a section titled '1. Introduction' with a paragraph of text. A comment thread is visible on the right side, showing a comment by Roger Graves on June 13, 2016, which was marked as resolved by Jinman Zhang. The comment text is: 'I don't think this is accurate. Usage fell off rapidly from the initial assignment and it was never really picked up again by the majority of uses. Comments (driven by grades) were far more likely to be used.' Below the comment is a reply box with the text: 'Adding a comment will re-open this discussion...'

100% | Normal text | Times New... | 12 | B I U A | GD +

1 2 3 4 5 6 7

About HPCS: <https://canheit-hpcs.ualberta.ca/>

The following is an outline for a summative paper on GWrit.

1. Introduction

How can we test gamification and social learning in online writing environments? This paper will present an online writing environment, GWrit (Game of Writing), where students can comment on each other's writing and where they get rewards for on task activity (gamification). GWrit has been developed by the Arts Resource Centre team at the University of Alberta over the past three years and has been used with over 750 students. Gamification analytics and feedback and social-media inspired commenting are the key pedagogical innovations behind GWrit. Traditional schooling is part of the problem: many students perceive it as ineffective and boring (Dicheva, Dichev, Agre & Angelova, 2015). To combat this, we designed GWrit to provide an environment with many gamification components: task completion structures, award trigger systems, competitive environments, badges and ranks. Deterding(2011) defines

Notifications Comment

Roger Graves Jun 13, 2016 · Re-open

SELECTED TEXT:

did gradually decrease during this time

I don't think this is accurate. Usage fell off rapidly from the initial assignment and it was never really picked up again by the majority of uses. Comments (driven by grades) were far more likely to be used.

Reply

Jinman Zhang Marked as resolved Jun 13, 2016

Adding a comment will re-open this discussion...

A note on sharing

Phillips, F. (2016). The Power of Giving Feedback: Outcomes from implementing an online peer assessment system. *Issues in Accounting Education* 31, 1-15. DOI: 10.2308/iace-50754

Phillips concluded that students were reliable assessors of their peers; that students value peer assessment; and that **peer assessment contributed to higher academic performance.**

Chen, T. (2016). Technology-supported peer feedback in ESL/EFL writing classes: a research synthesis, *Computer Assisted Language Learning*, 29:2, 365-397. DOI: 10.1080/09588221.2014.960942

in blended or hybrid courses, **technology-enabled peer feedback produced more lexically complex responses with more interactive competence.**

<https://cloudfront.ualberta.ca/-/media/centre-for-teaching-and-learning/wac/wac-research/peerreviewofwritingliteraturereview.pdf>

Implications for your teaching

- Much of what we talked about here can be applied to your teaching
- Students need to “tool up” in order to write well
- Students improve their writing by sharing their writing and by commenting on the writing of other students

Game of Writing site/application

The screenshot displays the GWRIT application interface. At the top, the logo "GWRIT" is prominent, along with a user profile icon and the text "GwritExample". Navigation options include "Logout" and a menu icon. The main content area is titled "Notes" and contains a rich text editor with a menu bar (File, Edit, Insert, View, Format, Table) and a toolbar with various formatting options. The text in the editor discusses the Game of Writing application and its use in a blended and flipped format. A word count of 214/1000 is visible at the bottom of the editor. On the left sidebar, there is a progress indicator for "WRS 102" showing 10 incomplete items and a 3% goal. Below this, a list of tasks is shown: "Task 1", "Task 2", and "Task 3". On the right sidebar, there is a comment from "GwritExample" dated "2016-06-23, 7:24:31 AM" with the text: "Good citation but the reference is missing. Don't forget to add it before you submit for grading."

WRS 102
Achievement 10
Incomplete 3%
Goal

2A. Science Stream: Observations and Summary of Scientific Phenomenon

- Task 1
- Task 2
- Task 3

Notes

Writing notes.

File Edit Insert View Format Table

Formats B I

Blending courses and flipping them requires learners to participate more and take charge of their learning-- it empowers them while at the same time changes the context of their learning

Owston, York, & Murtha 2013. We built a gamified online writing application, The Game of Writing (GWRIT), and used it in-class writing activities to deliver a first-year academic writing course in a blended and flipped format. To this point, first-year writing instruction in Canadian/North American universities and colleges has largely taken place in face-to-face meetings. However, the Game of Writing technology-enhanced learning system enhances student learning and creates innovative ways of making writing instruction more effective, more cost-effective, and sustainable in the long term.

We really did mean to "change the game" students play when taking courses by creating an online environment that demanded their active participation and forced them to make choices about what they would learn. While some maintain that gamification borrows the surface features of games inappropriately (Bogost 2011), others maintain that these features can be

Words: 214

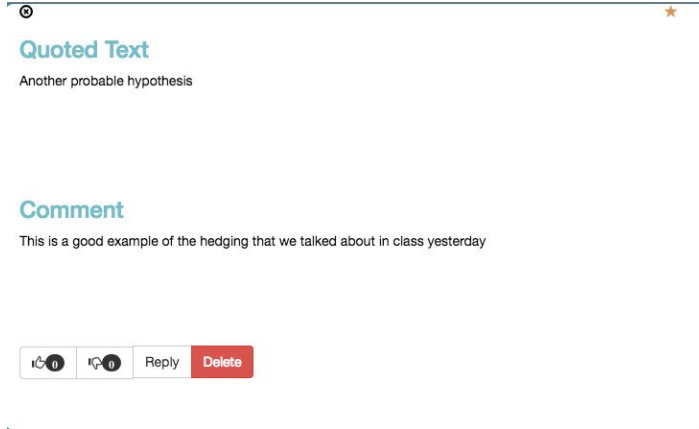
214 / 1000

Save Submit for Review Submit for Mark Requires 2 users to comment.

Comments Analytics

GwritExample
2016-06-23,
7:24:31 AM
Good citation but the reference is missing. Don't forget to add it before you submit for grading.

Social commenting



The screenshot shows a social commenting interface. At the top, there is a header with a circular icon on the left and a star icon on the right. Below the header, the text "Quoted Text" is displayed in blue, followed by "Another probable hypothesis". Further down, the text "Comment" is displayed in blue, followed by "This is a good example of the hedging that we talked about in class yesterday". At the bottom, there is a row of four buttons: a circular icon with a left-pointing arrow, a circular icon with a right-pointing arrow, the text "Reply", and a red button with the text "Delete".

Uses social media techniques to frame comments by students on each others' drafts

Commenting activity

| | F2014 | F2015 | WI 2016 |
|-----------------------------|---------------------|---------------------|---------------------|
| total assignments submitted | 3360 | 1428 | 1225 |
| total comments | 4781 | 6131 (+28%) | 9173 (+50%) |
| star comments | 268 (5.5% of total) | 593 (9.7% of total) | 1204 (13% of total) |
| likes by students | 55 (1% of total) | 395 (6.4% of total) | 502 (5.5% of total) |
| dislikes/thumbs down | 4 | 12 | 114 |

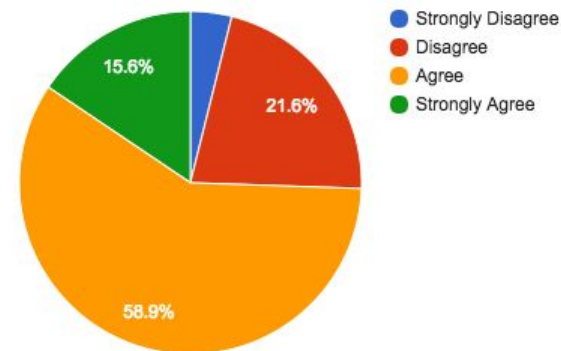
Comments useful?

Comments on my writing have helped me improve my documents:

68% Agree or Strongly agree (18%)

25% Disagree or Strongly disagree (4.5%)

Comments improved my documents



“Comments on my writing helped me improve my documents”

One-way ANOVA analyses showed that the difference in scores of the three items, “The GwRIT system helped me obtain comments on my writing before the assignment was due” ($p = 0.001$); together with “Comments on my writing helped me improve my documents” ($p = 0.001$); and “The breakdown of writing assignments into Tasks helped me stay on track and complete assignments” ($p = 0.001$), was statistically significant among all the different terms (see Table 7).

| Variable | Fall 2014 | | Fall 2015 | | Fall 2016 | | Fall 2017 | | <i>df</i> | <i>F</i> | <i>p</i> |
|--|-------------|-----------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|----------|----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | | |
| The GwRIT system helped me obtain comments on my writing before the assignment was due | 3.71 | 1.02 | 3.63 | 1.05 | 4.30 | 0.91 | 4.22 | 0.96 | 3 | 6.541 | 0.001 |
| Comments on my writing helped me improve my documents | 3.54 | 1.20 | 3.56 | 1.14 | 4.16 | 0.94 | 4.15 | 0.87 | 3 | 5.600 | 0.001 |
| The breakdown of writing assignments into Tasks helped me stay on track and complete assignments | 3.93 | 0.89 | 2.70 | 1.11 | 3.38 | 1.20 | 3.66 | 1.02 | 3 | 9.972 | 0.001 |

Table 7. One-Way ANOVA Between Uses of the GwRIT system by term

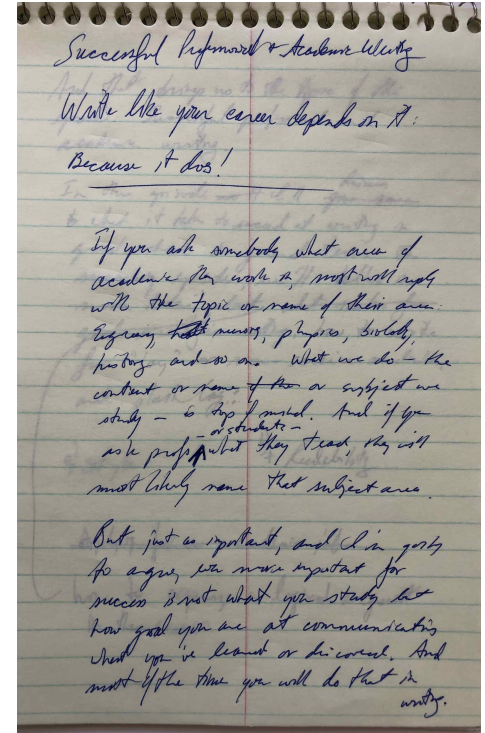
What kinds of writing do you do?

My assumption throughout this presentation has been that you're working on articles and considering how to use online tools to improve those documents

What else do you write? Me:

- Podcast scripts
- Technical reports
- Textbooks
- Presentation slides
- LinkedIn articles

When don't you use these tools?



Tooled up: What digital tools do you use?