

*Learning beyond the classroom:
Blogging for reflection, retention and application of learned concepts*

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Our project description and research questions were as follows:

How well do college students retain what they have learned after a course is over? Are they able to apply concepts learned to their daily lives? Transfer and application of knowledge beyond the formal classroom environment is notoriously difficult to assess. This interdisciplinary research study between Dr. Trena Paulus and Dr. Lisa Jahns in Nutrition will examine application of knowledge The NTR (Nutrition) 100 course at the University of Tennessee teaches concepts of nutrition, health and wellness to approximately 200 undergraduate students each semester. NTR 100 attracts a wide range of undergraduate majors as it fulfills a UT General Education requirement. However once students finish the semester and move on, whether or how they retain and apply what has been learned is unclear. Computer-mediated communication (CMC) tools can extend learning experiences beyond traditional boundaries of time and location. We propose using web logs (blogs) as an informal online learning community where highly motivated students who have done well in the course can extend their learning through reflection, discussion and application of learned concepts to their daily lives as they write about it in their blogs.

The following research questions will be answered through a qualitative inquiry approach:

- 1. What learned concepts of health and wellness do students write about in their blogs?*
- 2. Which topics are commented on the most by other student bloggers?*
- 3. What issues related to health and wellness do students continue to struggle with in their daily lives?*
- 4. What does the reflective process look like in terms of the dialogic writing and commenting patterns in the blog environment?*

In the fall of 2006 we obtained approval to do research with human subjects through the university's IRB. We recruited 10 participants for the project from the fall 2006 Nutrition 100 course. We hired Rebecca Payne, doctoral candidate in the TPTE department, as the graduate assistant for the project.

We held orientation on January 9 for the participants and trained them on the use of the blogger tool (nutritionblog.vox.com) and set out expectations for the project. The orientation materials are included in Appendix A. Our participants posted to their blogs several times a week from January 15 until March 2. Unfortunately no one other than the research participants and team can access the blogs due to IRB concerns about privacy. However we have included some screen shots in Appendix B.

After the seven weeks of blogging we conducted interviews with 6 of the 9 participants. One participant withdrew from the study halfway through the time period. We transcribed the interviews and began analyzing the data.

We've had a proposal "Learning beyond the classroom: Blogging for reflection, retention and application of learned concepts" accepted at the XI Biennial International Conference of the *International Association for Cognitive Education and Psychology*. It will be held right here at the University of Tennessee the first week of July.

We have used the findings as preliminary data in support of our proposal to the National Science Foundation - Course, Curriculum and Laboratory Improvement program. Our proposal title is: "**SOAR: Small online argument and reflection groups to promote conceptual change in nutritional science.**" Below is an excerpt from our NSF grant proposal describing our findings thusfar:

In spring 2007 we conducted a seven-week pilot study with nine students who had completed NTR100 the previous semester. Students chose pseudonyms and were instructed to make three blog posts per week on any topic related to nutritional science, and to comment on five posts made by others. Students used the free VOX tool (<http://vox.com>), which allowed them to limit access to their posts to each other and the researchers. We interviewed six of these students and analyzed their blog conversation transcripts using discourse analysis techniques. Screen shots of their posts and comments are included as a supplementary document.

Student posts were on topics such as determining the nutritional value of specific foods, difficulties around designing and adhering to a healthy diet, weight control/physical activity, social influences on eating decisions, and motivation to strive toward nutrition goals. No technical difficulties were reported. Interviewees felt that the size of the group (n=9) and the participation requirements were appropriate, mentioning that requirements were easy to meet since they were often online anyway. Most did not feel that their pseudonymity impacted what or how they wrote. They liked that only members of their neighborhood (other participants) could read their posts. They most rewarding aspect of the activity was realizing that they were not alone in their experiences, yet at the same time others had different perspectives on situations they were experiencing. They enjoyed being able to answer questions that others asked. They felt that keeping a blog as a formal part of a lecture course would give them more contact with other students and allow them to be open and honest about questions they would otherwise be intimidated to ask. They also indicated that having freedom to talk about course topics of particular interest would provide an incentive to learn from others.

Some students expressed concern about the lack of structure and overt facilitation, feeling that at times discussions strayed too far off topic and there was no one to provide 'the right answer.' In analyzing the blog conversation transcripts, we noted many instances of questions raised that were not explicitly answered. The paradox is that students both liked that no instructor was present, as they felt freer and had ownership of the conversation, yet at times wished for an expert to help with unanswered questions. They also noted that at times there wasn't enough substance to the posts and that having assigned topics would help focus their discussions. In our discourse analysis we found

that posts structured as stories and ending with questions generated the most discussion in the comments. However, students rarely responded back to comments others made. There is a need then for explicit instruction to not only write, read and comment, but to return to earlier posts to revisit initial ideas.

These pilot study findings have impacted our project plan in our decision to: (1) use the same freely available VOX blog tool, (2) create SOAR group “neighborhoods” of 8-9 students, (3) limit post access only to their neighborhood and the graduate research assistants (GRAs), (4) provide more structure and guidance on how to participate while leaving specific topics up to the students, and (5) have facilitators monitor their discussions to troubleshoot.

Identifying and changing initial misconceptions of nutritional science concepts through explicit reflection and peer interaction through SOAR groups as part of a large lecture course is the overarching goal of this project. By articulating pre-existing knowledge through reflection and providing feedback through conversation with their peers, we hypothesize that student learning will improve. Project goals are (1) to improve student learning of nutritional science concepts and (2) to create a model for effectively integrating SOAR groups into large lecture classes.

We appreciate the support that we received for this research through the Project RITE grant.

Appendix A. Orientation Materials

Nutrition Blog Study
Orientation
4 pm Tuesday January 9, 2007
Claxton Complex 501

Welcome, introductions & snacks

- Double-check - is everyone 18?
- Does anyone know each other outside of NTR100?
- Rationale for the study - informal learning as talking with others outside the classroom, transferring what you know from the classroom to 'real life'

Participation guidelines

- Post 3 times per week; comment on 5 other participant posts per week
 - Try not to post all on one day
 - Try to comment on different blogs each week
 - Rebecca or Dr. Paulus may comment from time to time and will email you to remind you to post (if needed)
- Reason for pseudonyms - a way to maintain your anonymity if you so choose
- What happens in the blogosphere stays in the blogosphere
- Begin blogging on January 15, end on March 9 (before spring break)
- \$50 on February 9; \$50 on March 9
 - Quality and quantity of posts
- Interviews after spring break
- Sign informed consent statements

Set up your blog on Vox

- Join Vox and create your blog using your pseudonym
- Click on email link to activate
- Edit your profile
 1. Public profile – make real name and email ‘visible to no one’
 2. Privacy & notifications – uncheck ‘searchable by email’ and ‘searchable by real name’
 3. Change posting defaults
- Design your blog template
- Compose a post
 1. Option to post privately
 2. Viewable only to ‘friends’
 3. Topic of first post: what two topics struck you/do you remember most from NTR100 last fall? what topics on health/wellness/nutrition in general would you like to learn more about?
- Add friends, see your neighborhood

Final report: Paulus, Payne & Jahns Project RITE Grant

1. kat05
 2. maxima10
 3. dennycrane
 4. chattanooga09
 5. candy86
 6. nutritionVol
 7. PennyLn86
 8. bertha7688
 9. blazie1223
 10. mtn408
 11. newliteracies
 12. nutritionblog
- Adding photos - don't use a photo of yourself if you want to remain anonymous
 - Explore by keyword to see related blogs of interest

Ideas for what to talk about and how to talk about it

- It's really up to you!
 - Tell a story about an experience that happened that day related to health, nutrition, wellness, etc.
 - Reflect on conversations you had related to health, nutrition, wellness, etc.
 - Consider how others' experiences are different from or similar to yours
 - When making a post, end with a question about what others think or if anyone's had a similar or different experience
 - When you don't agree with or understand what someone is writing, ask the writer in a comment to 'say more'
-
- When commenting, ask questions rather than make statements or simply agree

Appendix B. Screen shots included in NSF Proposal

Figure 1.

Main page of VOX blog with current post



Figure 2.

Blog neighborhood (only members of the neighborhood can view the posts)

The screenshot shows a web interface for a Vox blog neighborhood. At the top is a navigation bar with links for Messages, Compose, Invite a Friend, and Help. It also displays the user's name 'Hello dr. paulus' and options for Account and Sign out. Below the navigation bar is the Vox logo and a menu with 'Home', 'My Vox', 'My Neighborhood', and 'Groups'. A search bar is present with the text 'Search all of Vox' and a 'Search' button. The main content area features the 'dr. paulus' blog' logo and the tagline 'research on nutrition & learning'. Below this is a section titled 'dr. paulus' Neighbors' with a link to 'View people who have dr. paulus in their neighborhood'. This section contains a grid of neighbor profiles, each with a profile picture, name, and update date. The neighbors listed are: nutritionVol (Updated March 2, 2007), mtn408 (Updated March 2, 2007), Candy86 (Updated March 3, 2007), PennyLn86 (Updated March 2, 2007), bLaZIE1223 (Updated March 2, 2007), Denny Crane (Updated March 1, 2007), chattanooga (Updated February 9, 2007), bertha7688 (Updated March 5, 2007), New Literacies (Updated January 26, 2007), Kat05 (Updated February 23, 2007), utkitc (Updated January 5, 2007), and maxima10 (Updated March 7, 2007). On the right side, there is an 'About Me' section for 'dr. paulus United States' with a profile picture, a 'View my profile' link, and the text 'researching technology & learning'. Below this is a 'Send message or email' link. At the bottom right is a 'My Groups' section with an 'Edit' link and the text 'You don't have any public groups yet. Search for groups that interest you to join them.'

Figure 3.

Recent posts, listed in reverse chronological order



safer eating tip

Candy66 | Feb 17, 2007 | Viewable by friends | 1 comment

so i found this safer eating tip on ediets.com. i thought it was interesting n kinda scary cuz i never do this..."Lettuce: Because it is grown so close to the ground, it can come into contact with manure or irrigation runoff, putting you at risk of contracting E. coli. When you buy lettuce, you should first discard the outer leaves. Then separate the inner leaves and thoroughly wash them. All raw fruits and vegetables can harbor disease-causing bacteria. Thoroughly wash any raw produce under cold running water before eating it. If appropriate, use a small scrub brush to remove any visible dirt. This is true even for organic fruits and vegetables."

[Leave a comment](#) or [mark as \[this is good\]](#)



cooking low fat...

mtn408 | Feb 16, 2007 | Viewable by friends | 2 comments

tonight i'm making this chicken casserole. the recipe calls for sour cream, chicken (obviously), cream of celery and cream of chicken soup. i bought light sour cream and low fat or "healthy recipe" for the soup. i'm really hoping it doesn't turn out tasteless or watery..i may need to up the spices in it or something. has anyone tried to substitute low fat for regular stuff in a recipe?? any feedback/tips would be appreciated!

[Leave a comment](#) or [mark as \[this is good\]](#)



Hibernate

PennyLn86 | Feb 16, 2007 | Viewable by friends | 1 comment

Sometimes I think hibernation is a great idea...like on these last couple days when it's miserably cold outside. I just want to stay in my bed all day. Is anyone else in anticipation for spring? I wish it was winter for maybe 2 weeks...and it could snow and have Christmas and such and then be sunny and warm after that.


Figure 4


Comments on post


mtn408
United States
[View my profile](#)


mtn408 is a friend
[\(edit\)](#)
Send [message](#)


Neighborhood

 [dr. paulus](#)
Updated Apr 6, 2007

 [maxima10](#)
Updated Mar 7, 2007

 [bertha7688](#)
Updated Mar 5, 2007

 [Candy86](#)
Updated Mar 3, 2007

 [bLaZIE1223](#)
Updated Mar 2, 2007

Explore [friends](#)
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[View my neighbors](#)

mtn408's blog Archives

- [March 2007](#) (1)
- [February 2007](#) (12)
- [January 2007](#) (6)


Powered by [Vox](#)

cooking low fat...


Feb 18, 2007 at 1:51 PM | [Viewable by friends](#) | [2 comments](#) | [Favorite](#)

tonight i'm making this chicken casserole. the recipe calls for sour cream, chicken (obviously), cream of celery and cream of chicken soup. i bought light sour cream and low fat or "healthy recipe" for the soup. i'm really hoping it doesn't turn out tasteless or watery..i may need to up the spices in it or something. has anyone tried to substitute low fat for regular stuff in a recipe?? any feedback/tips would be appreciated!

Comments

 **Candy86 wrote:**
Feb 17, 2007 at 8:56 AM | [Reply](#)

I've always thought low-fat things didn't taste as good, especially when it comes to cheese, milk, etc. i really don't think the light sour cream is going to be as good. but there are some things i've eaten where i couldn't tell the difference in the low-fat compared to regular.

 **Kat05 wrote:**
Feb 23, 2007 at 12:26 PM | [Reply](#)

i always use low fat things. i can ususally not tell, maybe because i'm so used to it. the only thing i think that is not good low fat is sliced cheese. but with all of those ingredients it should be pretty good still.

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