

## From Cyberspace to Print: Re-examining the Effects of Collaborative Discussion Board Invention on First-Year Academic Writing

**Florence Elizabeth Bacabac**

Assistant Professor, Professional and Technical Writing  
Dixie State College of Utah  
St. George, UT USA  
[bacabac@dixie.edu](mailto:bacabac@dixie.edu)

### Abstract

This descriptive study analyzes the use of the Discussion Board asynchronous invention forum for composing argumentative research-based essays. Microanalysis and analytical coding were used to investigate the transfer of invention ideas from online transcripts to student rough drafts, and interpret teacher-student interviews. Both quantitative and qualitative data suggest that the Discussion Board forum should be used as a collaborative invention tool for distinct essay categories – i.e. topic, purpose, and thesis statement; and main ideas and supporting details – as it enables socialization, meaningful conversations, and critical reflection. However, longer invention sessions are needed when discussing potential ideas on sources and counterarguments for more productive results. Though responses are delayed, the teacher and students affirm the capacity of the Discussion Board to sustain focused dialogues and equal opportunities for interaction. Implications for theory and practice in teaching writing with computers are also addressed.

**Keywords:** asynchronous computer-mediated communication; online collaboration; online discussion; freshman composition; descriptive study

### Statement of the Problem

College students enrolled in composition courses are expected to develop their academic writing skills in order to survive in the university. One of the first steps to meet this expectation is by applying innovative pedagogical practices in the process of discovery and invention. In this regard, the promise of computer-mediated communication (CMC) to facilitate student exchange becomes an enabling practice (Blythe, 2003; Yancey, 2003). Because the process of collaborative online invention or prewriting is a social act no longer reminiscent of the Platonic/solitary view, it is necessary to examine the usability of CMC as a social composing tool.

Toward this goal, this study closely re-examines the effects of one of the most commonly used CMC invention strategies in current composition classrooms, the Discussion feature of Blackboard, on an argumentative research-based essay requirement. One computer-mediated first-year writing class in an average-sized mid-western university used asynchronous Discussion Board for collaborative invention in the spring of 2007. The transfer of invention ideas to student essays, along with the attitudes and perceptions of the teacher and students toward this online activity, was analyzed and described to strengthen the pedagogical implications of this type of asynchronous technology among other CMC platforms in composition studies. Though short-term investigations on a limited setting such as this may not yield generalizable results, this inquiry can definitely contribute to understanding how technology impacts the writing classroom.

### Literature Survey

The field of computers and writing acknowledges the special features of online communication to link learners collaboratively and help them develop their academic communication skills. In this case, online invention creates a space where ideas are formed, meanings are negotiated, questions are asked, and language forms are produced uninhibitedly, far removed from any traditional, teacher-centered approach to instruction. In fact, a growing number of research studies have already identified its positive effects on student learning (e.g. Barton, 2005; Fife, 2008; Hewett, 2006; Paulus, 2007). The use of Blackboard content-management tools has become ubiquitous in the academic landscape and, with the current boom

of Web 2.0 and other interactive media learning tools that brought practitioners to greater lengths of classroom experimentation, many writing teachers seem to have forgotten their primary responsibility of validating the influence of such tools on the quality of student writing.

### **Revisiting the Process of Invention and Collaborative Learning**

In order to provide opportunities for student writers to develop academic language proficiency, one should re-consider the role of invention in the writing process. The process of invention ideally allows students to come up with clear essay topics and supporting details, wrestle and make connections between academic texts, think and communicate within the parameters of academic jargon, and so forth. Student writers find themselves moving freely between the personal and the academic praxis before the drafting process. Lauer (2004) argues that "All writers face the problem of finding subjects to write about and of developing these subjects" (p. 1). The idea that the writer undergoes preliminary stages could be traced back to cognitive psychology (Barab & Duffy, 2000).

Consequently, since entering a social paradigmatic approach (Paulus, 2007; Trupe, 2004), invention becomes more privileged in the writing classroom and the calls to study its practices gradually abound. With the ubiquity of an interactive classroom comes the success of the collaborative method, proving that learning can go on without the immediate presence of the teacher. Kelland (2006) supports this by examining the development of opportunities developed around constructivist principles, including constructing knowledge, practical participation, and collaborative work. In fact, academic literacy skills such as synthesizing sources, narrowing down topics, focusing main ideas and supporting details, and so forth become socially enhanced as students try to construct knowledge. The idea that it is only through interaction, dialogue, and negotiation of meanings that lead to higher learning is tacit in this respect.

But collaborative invention is just one among many other practices that broaden the experience of the writer; therefore, it is not at all impossible to draw something positive from solitary prewriting. However, once solitary invention becomes the *only* activity for generating ideas, then the prewriting experience also becomes *limited*. The idea is to expand prewriting techniques that would involve communication with others, if only to make sure that the problem of inadequate communicative skills within an academic discourse community is mediated.

### **Embracing Computer-Mediated Communication**

Current online practices, such as chat, blogs, wikis, and so on, including the use of asynchronous Discussion Board forums facilitate, augment, and redefine group interaction as well as promote the positive effects of collaborative learning in academic discourse communities. Translating solitary prewriting to a more social online discussion provides more unique opportunities for students to dabble in new academic material as they interact with each other before drafting their ideas on paper (Olaniran, 2005). The fact that more audience awareness may result from such a cognitively demanding task is extremely beneficial. Student writers are forced to verbalize their thoughts and interact with one another in online forums, allowing them to practice/use the language of the academic discourse community. Of course, the non-threatening space of online communication platforms enhances the advantages of collaborative invention (Pennington, 2008; Rickly, 2004).

Hand & Prain (2002) argue that "any effective writing-to-learn task requires a rich learning environment where students are provided with sufficient motivation, procedural guidance, and expert and on-going peer feedback" (p. 753). As noted earlier, engaging students in computer-mediated invention supports such an environment since the virtual activity itself exhibits three collaborative characteristics: motivation, guidance, and feedback. Anderson (2006) agrees that online interactions become beneficial for student learning, given the social nature of the activity. But is this really the case for *all* first-year writing students? Does online invention trigger the development of ideas transferable to student academic writing?

### **Research Questions**

Apparently, more investigations on dialogic artifact analysis are still needed in the field of composition studies. Such examination will strengthen the correlation between the use of CMC and the quality of the written product, so that composition teachers will be able to (1) understand the value of distinct platforms as a composing tool, and (2) choose an invention strategy that renders purposeful collaborative online activities within a situated context.

Because the use of the Discussion Board, an online threaded content-management tool, is still one of the most common collaborative online invention forums, investigating its impact on first-year student writing based on (1) the transfer of ideas from online to print, and (2) the attitudes and perceptions of the teacher

and students toward the process is beneficial for composition teachers. The term “collaborative online invention” is viewed in this study as a prewriting activity students engage in where they are linked with each other through the Discussion Board to generate and discuss topic ideas before drafting their essays. The research questions (RQ) are as follows:

**RQ1:** How effective is the use of the Discussion Board in generating ideas for writing academic essays?

RQ1a: How much of what was discussed online was reflected in the essay?

RQ1b: How much of the essay was not part of the online discussion?

RQ1c: In terms of language use, what lexical and/or syntactic similarities or differences were evident in the online forum and the written essay?

**RQ2:** What attitudes/perceptions do the teacher and students have toward the collaborative online invention process?

RQ2a: (for teacher and students) What did the teacher and students think of the process? Would they prefer using the same invention strategy in future essays? Why or why not?

RQ2b: (for teacher) How did the teacher assess the nature of this strategy in terms of student participation? Did she think the activity triggered fruitful class discussions (or otherwise)? Why or why not?

RQ2c: (for teacher) If the teacher were to modify this collaborative online invention activity, how would she do it? What reasons would she have for her choice of modification?

RQ2d: (for students) How many of the ideas discussed online did students think were tapped into their writing and/or how many of the ideas they have in writing were actually sparked by the online dialogue?

RQ2e: (for students) How did students come up with ideas that were not discussed online?

RQ2f: (for students) Were there any technical terms/words, phrases, or clauses that were picked up online and used in the essay?

## Method

This study aims to provide a description of the asynchronous mode of invention based on the textual findings of the first research question and teacher-student interviews of the second. The first-year writing class of a mid-western state university was selected according to scheduling availability, computer lab access, and consent of the course instructor. Students were already exposed to in-class Discussion Board activities prior to the investigation, so assigning them to engage in two Discussion Board invention sessions before drafting a required research-based essay was not difficult. The data (online transcripts, rough drafts, and teacher-student interviews) were collected over a five-week period, taking place between the time when students started generating topics online for their argumentative research-based essay until the last student-interview was done. Students primarily explored general ideas for their essays (possible essay topics, theses, main points and supporting details, counterarguments, and so on) in groups with around three to four students per group on the first Discussion Board invention session. After a week, they continued discussing their essay plans as well as possible textual support within the same groups on the second session. Figure 1 shows the assigned group task for a typical collaborative online invention session.

Instruction: Explore with your peers and provide feedback/suggestions on the following points:

- 1) potential essay topics and thesis statements
- 2) possible main ideas/arguments and supporting details
- 3) possible opposing views and refutations
- 4) possible sources

Figure 1. Assigned group task for a typical collaborative online invention session

The instructor who agreed to participate was very comfortable with technology, having infused Discussion Board forums in her writing classes for several years before this study began. Without a vested interest in the approach, the possibility of a teacher effect was thus minimized. Twenty-two students from the class were expected, which is the maximum number of students typically enrolled in first-year writing, to agree to participate. After inviting student participants during my classroom visit at the beginning of the semester, only 10 student online transcripts and research-based essay rough drafts were randomly selected and analyzed; from these subjects, only three were interviewed (see Table 1). The random selection process did not consider the participants' gender, technological experience, or socio-economic status. In compliance with the Human Subjects Review Board regulation, identities of the participants were never revealed. Identification letters for students were used instead in order to eliminate sexual and racial biases. The instructor was referred to simply as "teacher."

Table 1. *Participants by group*

Group	Participants
1	Students K, L, M
2	Students N, O*, P, Q*
3	Students R*, S, T

\* *Students interviewed*

This study followed a descriptive research design to examine the relationship between the collaborative online invention strategy and student academic writing. Unlike experimental studies, no control groups were created and no treatments were given (Lauer & Asher, 1988). Patterns from online discussion transcripts, student rough drafts, and teacher-student interviews were identified and retained through classification and coding according to the principles of Strauss & Corbin (1998), with a "microanalysis" approach that resemble "very careful, often minute examination and interpretation of data" (p. 58).

To answer the first research question, four argumentative essay categories were grouped to trace and quantify the transfer (and non-transfer) of ideas as well as the transformation (and non-transformation) of linguistic structures from online transcripts to student rough drafts (see Table 2):

Table 2 *Four essay categories used for textual analysis*

Analysis of Online Transcript (Discussion Board)	Analysis of Written Essay (Rough Draft)
<ul style="list-style-type: none"> <li>Potential essay topic, purpose, and thesis statement</li> </ul>	<ul style="list-style-type: none"> <li>Clarity of thesis statement</li> </ul>
<ul style="list-style-type: none"> <li>Main ideas and supporting details</li> </ul>	<ul style="list-style-type: none"> <li>Formation of logical argument</li> </ul>
<ul style="list-style-type: none"> <li>Textual Support</li> </ul>	<ul style="list-style-type: none"> <li>Citation and synthesis* of academic sources</li> </ul>
<ul style="list-style-type: none"> <li>Opposing views and refutations</li> </ul>	<ul style="list-style-type: none"> <li>Integration of counterargument</li> </ul>

\* *Synthesis – source connections, usually with a verb between sources (e.g. agrees, disagrees, concurs, expounds upon, contradicts)*

To answer the second research question, the teacher and student interview data were subjected to "analytical coding" by Richards (2005), where meanings in context were considered, "creating categories that express new ideas about the data [and] coding to gather and reflect on all the data related to them" (p. 94). Interview data were then compared with the data from online transcripts and rough drafts until a significant pattern emerged.

Finally, the analytical procedure mentioned above was transformed into the following steps to approximate grounded theory method:

- 1) Read and mark the subject-participants' dialogues found in online transcripts.

- 2) Read and mark the essay parts in their drafts based on four categories – (a) topic, purpose, thesis statement; (b) main ideas and supporting details; (c) source citation and synthesis; (d) counterarguments. Note any rhetorically significant language use as well.
- 3) Reread and analyze online transcripts and mark relevant dialogues pertaining to four essay categories. Also note subject-participants' contribution to group discussions.
- 4) Code and analyze both texts (online and rough drafts). Reread and immediately repeat coding and/or analysis if a significant pattern emerged.
- 5) Reread essay drafts to note any (or lack of) transfer of four essay categories: What was found in both texts (online and essay drafts) and what was found only in one text? Also, compare both texts to identify rhetorically significant language use.
- 6) Code and analyze teacher and student interviews. Repeat coding and/or analysis if any significant pattern emerged. Finally, compare and contrast both teacher and student interview data.
- 7) Compare and contrast analyses of online transcript and essay draft data with interview data. Use interview data to supplement or enrich textual data.
- 8) Arrange textual data and interview data analyses coherently. Point out significant observations and patterns, including the quantity of transfer of each category and language use as well as supplementary patterns based on the interview.

## Findings

Examining the initial reproduction of ideas in the Discussion Board and their transferability to the first written draft (RQ1), as supplemented by teacher-student attitudes and perceptions toward the process (RQ2), helps determine the effectiveness of the invention forum in facilitating the acquisition of meaningful ideas and language proficiency. Due to spatial constraints, this section summarizes the quantity (vs. quality) of transfer of ideas from ten (10) student transcripts and rough drafts to answer the first research question. In addition, qualitative findings of both the teacher and student interviews for the second research question support the first. In both cases, the effects of the Discussion Board as a collaborative invention tool are described. Table 3 presents a descriptive summary with (+) and (-) markers referring to the “positive” and “negative” effects of the online tool, respectively.

**RQ1.** How effective is the use of the Discussion Board in generating ideas for writing academic essays?

The intent of this question was to look at the transfer of invention ideas from the Discussion Board to student rough drafts. To address the question, the following items were examined: (1) how much of what was discussed online was reflected and/or not reflected in the essay; and (2) distinct language transformations that were evident in the online forum and the written essay. These modes of inquiry comprise three research sub-questions which are expressed in three major themes: (1) transference of ideas from online to print; (2) non-transference of ideas from online to print; and (3) (non-) transformation of linguistic structures from online to print. The quantity of the findings is interpreted in distinct thematic constructs to identify the effects of the Discussion Board forum.

### *Transference of Ideas from Online to Print*

The Discussion Board illustrate meaningful social interactions that result in either complete transfers or heavy modifications of ideas based on all four argumentative essay categories – essay topic, purpose, and thesis statement; main ideas and supporting details; textual support or source synthesis; and opposing views and refutations or counterarguments. This section summarizes the data patterns regarding the first research sub-question, “How much of what was discussed online was reflected in the essay?” of the first major research question.

The importance of the *social aspect* of this invention forum is enhanced by the positive quantity of idea transfers from online to print. Indicating *successful* transfer, five essays with transfer and three essays with partial transfer are noted in the first essay category (topic, purpose, and thesis statement). An *average* transfer of the second category (main ideas and supporting details) reflects four essays with complete transfer and five essays with transfer (with ideas that were either modified, added, or reduced in the rough draft). Even the last two essay categories seem to suggest this need for longer social interactions because of their complexity: the third category (sources) indicates *minimal* transfer with two essays with complete transfer, and the fourth category (counterarguments) reveals *very minimal* transfer with two essays with partial transfer.

Table 3. Descriptive Summary

Research Questions	Essay Categories (Need longer invention sessions for the LAST TWO essay categories; Positive language transformations in ALL essay categories)	Discussion Board
<p><b>Research Question 1:</b></p> <p>How effective is the use of the Discussion Board in generating ideas for writing academic essays?</p> <p><b>(Seems to encourage 'Socialization', 'Meaningful Conversations', 'Critical Reflection')</b></p>	#1: Essay Topic, Purpose, and Thesis Statement <b>(successful transfer)</b>	<b>(+)</b> 5 essays with transfer, 3 essays with partial transfer, 2 essays without transfer
	#2: Main Ideas and Supporting Details <b>(average transfer)</b>	<b>(+)</b> rough drafts indicate multiple modifications of main ideas and supporting details with 4 essays with complete transfer, 5 essays with either modified, added, or reduced ideas, 1 essay without transfer
	#3: Textual Support or Source Synthesis <b>(minimal transfer)</b>	<b>(-)</b> 2 essays with complete transfer, 8 essays without transfer
	#4: Opposing Views and Refutations or Counter-arguments <b>(very minimal transfer)</b>	<b>(-)</b> 2 essays with partial transfer, 8 essays without transfer (however, online transcripts indicate traces of meaningful interaction and critical reflection on counter-arguments with 8 students with online posts on counter-arguments)
<p><b>Research Question 2:</b></p> <p>What attitudes / perceptions do the teacher and students have toward the collaborative online invention process?</p> <p><b>(According to the teacher and students, this forum generally sustains 'Focused Dialogues/Critical Reflection' and 'Equal Opportunities for Interaction')</b></p>		<p><b>(+)</b> the teacher and students affirm the Discussion Board's capacity to sustain focused interactions and critical reflection within an egalitarian environment; invention forum most preferred by the teacher</p> <p><b>(-)</b> according to one student, responses are delayed in the Discussion Board; the teacher recognizes the time lag but counter-argues that students are more fully engaged in reading, responding, and reflecting on online posts</p>

*Non-Transference of Ideas from Online to Print*

Despite the non-transference of ideas from online to print, the Discussion Board seems to promote critical reflection and meaningful interaction because of its organized, threaded archives and time-independent nature. These features prove to be more beneficial for online discussions of the first two essay categories – essay topic, purpose, and thesis statement; and main ideas and supporting details. This section

summarizes the data patterns regarding the second research sub-question, “How much of the essay was not part of the online discussion?” of the first major research question.

The first essay category (topic, purpose, and thesis statement) reveals two essays without transfer, and the second (main ideas and supporting details) shows five essays with either modified, added, or reduced ideas. These patterns seem to prove the capability of the Discussion Board to encourage *meaningful conversations* that lead to *critical reflection*; that is, quality modifications are possible because of its highly-organized archives and time-independent feature. Meanwhile, the third (sources) and last (counterargument) essay categories identify eight essays without transfer, indicating the need for longer invention sessions to value the *social aspect* of knowledge construction.

#### *(Non-)Transformation of Linguistic Structures from Online to Print*

The Discussion Board invention activity facilitates meaningful and reflective interactions online that result to language modifications in print. This section summarizes the data patterns regarding the third research sub-question, “In terms of language use, what lexical and/or syntactic similarities or differences were evident in the online forum and the written essay?” of the first major research question.

In terms of the first essay category (topic, purpose, and thesis statement), the Discussion Board activities hint at *meaningful interaction* during the session as one case of a more argumentative essay purpose online and two cases of exact thesis statement or word order both online and in print are evident. In addition, the organized threads of the forum also lead to *critical reflections* with three cases of specific topic and formal word choice in the essays. Three cases of main ideas recast as supporting detail and four cases of online ideas reworded either as a main idea or thesis statement are found in the second category (main ideas and supporting details). The third category (sources) reveals the positive effect of source transfer on the use of synthesis verbs – two essays with complete transfer have strong synthesis; whereas, two essays without transfer have weak synthesis, three have no synthesis at all, and only three have strong synthesis. Finally, one case of general to specific transformation and one case of subject pluralization in the written draft depict the last category (counterarguments), accounting for its very minimal effect. These transformations reflect the capacity of the Discussion Board to keep a record of initial/reflective thoughts within a non-restrictive informal environment and encourage multiple revisions for an academic-oriented discourse community.

**RQ2.** What attitudes/perceptions do the teacher and students have toward the collaborative online invention process?

In order to supplement the textual findings of the first principal research question, the intent of the second research question was to find out what the teacher and students think and feel about using the Discussion Board forum as collaborative invention platform. To address the question, three research sub-questions expressed in three major themes comprise the teacher interview: (1) general feedback about the process and teacher preference; (2) assessment of the process in terms of student participation; and (3) suggestions for modification. In addition, four thematic patterns comprise the research sub-questions for student interviews: (1) general feedback about the process and student participation; (2) assessment of transfer of ideas from online to essay draft; (3) description of other invention strategies; and (4) other comments on language use. The findings are presented in separate teacher- and student-interview sections.

#### *Teacher Interview*

For the teacher, the use of the Discussion Board forum positively characterizes the social act of invention and knowledge construction. With its organized threads and time-independent feature, this asynchronous platform seems to have facilitated more meaningful interactions among student participants regardless of their computing skills. Under the second major research question, this section summarizes the teacher interview in response to three research sub-questions (RQ2a-c), respectively: (a) “What did the teacher think of the process? Would she prefer using the same invention strategy in future essays? Why or why not?” (b) “How did the teacher assess the nature of this strategy in terms of student participation? Did she think the activity triggered fruitful class discussions (or otherwise)? Why or why not?” and (c) “If the teacher were to modify this collaborative online invention activity, how would she do it? What reasons would she have for her choice of modification?”

The teacher related that the more structured and formal set-up of the Discussion Board helps facilitate focused online dialogues without the presence of weird little tangents characteristic of most synchronous or real-time communication. The use of this asynchronous forum for collaborative invention seems to

provide more opportunities for critical reflection and meaningful interaction, even without a common set of information for students to work on. That is, good ideas might still be generated by blocking possible subject groups together beforehand despite the variety of topic choices.

In terms of student participation, students might have taken much longer to respond to Discussion Board posts, but the teacher argued they were simply taking more time looking at threads, reading everything that had been said about the subject, thinking about what to post, and so on. After critically reflecting on posts enhanced by the formality and structure of the forum, the teacher insisted that students responded more frequently, and quite meaningfully, to one another. Only one recorded transcript shows a misplaced online post (Student P posts two different suggestions on a single thread), but this is immediately repaired so the focus of the dialogue was not directly affected.

At any rate, giving and receiving information asynchronously in order to modify or compose drafts connotes the social aspect of invention and knowledge construction. In addition, the teacher confirmed the prevalence of corporate power when she claimed students “took on a little bit of ownership of keeping things going to a certain extent.” Because asynchronous communication is independent of time and computing skills, and devoid of any sense of competition for the right to post messages, everyone seems to have equal opportunities for interaction in this online forum.

Finally, except for the teacher to sustain an active presence online, no further suggestion was given for the success of the Discussion Board. The teacher shared that students were able to generate valuable ideas as they gave and received posts from one another at their own pace. This observation reaffirms the sense of socialization and reflective interaction prevalent in collaborative Discussion Board activities.

#### *Student Interviews*

A majority of those who used the Discussion Board invention forums shared positive online experiences, although a few contradictions are evident with regard to a respondent's negative comments. Nevertheless, these interview data clearly affirm the social capacity of this forum to promote collaboration and knowledge construction (Bonk & King, 1998). Under the second major research question, this section summarizes the student interviews in response to four research sub-questions (RQ2a, d-f), respectively: (a) “What did students think of the process? Would they prefer using the same invention strategy in future essays? Why or why not?” (d) “How many of the ideas discussed online did students think were tapped into their writing and/or how many of the ideas they have in writing were actually sparked by the online dialogue?” (e) “How did students come up with ideas that were not discussed online?” and (f) “Were there any technical terms/words, phrases, or clauses that were picked up online and used in the essay?”

The use of the Discussion Board was extremely helpful for most students because it ignited possible topics and other essay ideas, allowed freedom of expression without reservations, and gave users a chance to share and read posts from others to refer back to at anytime. Everyone seemed to have equal opportunities to participate in existing conversations. These online features account for meaningful interaction and critical reflection mostly attributed to asynchronous forums (Paulus, 2007). In fact, the use of the Discussion Board supports greater accountability because comments and responses are directed towards specific individuals who also tend to defend positions more rigorously than face-to-face. Only one student thought otherwise and felt that face-to-face communication guarantees a much more immediate response ideal for invention. But the same student admitted to the social benefits of the Discussion Board, especially in times of physical absence. Overall, a majority preferred using this asynchronous platform for invention because of its social and collaborative aspects that positively lead to knowledge construction and critical reflection.

In terms of their assessment of the transfer of ideas, students thought that critical reflection was in fact the foremost strength of the Discussion Board as topics were modified, revised, clarified, or even introduced through online collaboration.

Admittedly, students also used other invention strategies – outlining, freewriting, and research – three different types of individual prewriting to supplement the online activity. These invention practices emphasize the importance of socialization pertinent to the online forum since no experimentation with other social strategies was mentioned.

Finally, students revealed that a few language features from online were reflected in their written drafts, though no specifications were made. At any rate, this transfer of linguistic patterns from online to print directly supports the collaborative potentials of the Discussion Board.

### Implications for Theory and Practice

To address the instructional shortcomings identified in this study, four theoretical constructs – (a) socialization, (b) meaningful conversation, (c) critical reflection, and (d) equality of interaction – are identified to emphasize the advantages of this asynchronous invention tool when composing argumentative research-based essays. The author suspects that more will be revealed as data analyses expand in future studies of this type:

1. The Discussion Board seems to attain more detailed online interactions when generating ideas for *all* argumentative essay categories. The value of *meaningful conversations* is prevalent in this forum as students generate possible essay topic, purpose, and thesis statement. Student-participants seem to have more time to read and respond to one another's posts without having to worry about the constraints of time, making their initial dialogues more productive.
2. The multiple modifications of main ideas and supporting details and linguistic patterns in this study prove that the use of this forum indicates more possibilities for *critical reflection*. The time-independent feature and organized information structure of this platform allow students to become more fully engaged in reading, reflecting, and responding to threaded posts, making it one of the best online tools for reflective group interactions.
3. Finally, the use of the Discussion Board when generating possible sources and counterarguments must be prolonged or executed in separate class sessions to offer more opportunities for students to interact exclusively on each essay category. The students in this study worked on creating and disseminating possible topics, purpose, and thesis statement; main ideas and supporting details; source synthesis; and counterarguments simultaneously online and as a result, the last two categories suffered. This forum shows minimal effects on sources and very minimal effects on counterarguments, owing to the mental demands of these categories as opposed to simple topic explorations. Though the Discussion Board hints at much promise, separate or longer invention sessions (Olaniran, 2005) are still necessary so students can learn to express themselves and write purposefully (Comeaux, 2002). Nevertheless, the need for time in this communal space to bring out the desired effect in print values the capabilities of socialization and equality of interaction associated with the use of CMC forums in hybrid classrooms.

### Conclusion

Short-term investigations of the correlation between CMC and first-year writing on a small population within naturalistic settings may not yield generalizable results but can definitely contribute to understanding how technology is used in particular situations as it impacts teaching and learning. The fact that theoretical consistencies appear in the data patterns – from online transcripts, student rough drafts, to teacher-student interviews – suggests there are grounds to propose that the Discussion Board forum should be used as a collaborative invention tool for distinct argumentative essay categories as it enables socialization, meaningful conversations, critical reflection, and equal opportunities for interaction. Admittedly, incorporating technologies in the composition classroom may be fraught with complexities, but the idea is to learn how and when to use these tools effectively for the benefit of the students. Teachers must move learners from passive learning to active learning and help them take ownership of their intellectual development or, in this case, writing process. Assessing the best online practice most suitable in diverse classroom settings to generate class participation and increase writing competencies is a movement towards achieving this goal.

### References

- Anderson, B. (2006). Writing power into online discussion." *Computers and Composition*, 23.1, 108-124.
- Barab, S. A., & Duffy, T.M. (2000). From practice fields to communities of practice. In D. H. Jonassen & S. M. Land (Eds.), *Theoretical foundations of learning environments* (pp25-55). Mahwah: Lawrence Erlbaum Associates.
- Barton, M. D. (2005). The future of rational-critical debate in online public spheres. *Computers and Composition*, 22, 177-90.
- Behrens, L., & Rosen, L. J. (Eds.). (2005). *Writing and reading across the curriculum* (9<sup>th</sup> ed.). New York: Pearson Longman.

- Blythe, S. (2003). Meeting the paradox of computer-mediated communication in writing instruction. In P. Takayoshi & B. Huot (Eds.), *Teaching writing with computers: An introduction*. (pp. 118-127). Boston: Houghton Mifflin Co.
- Bonk, C. J., & King, K. S. (1998). Computer conferencing and collaborative writing tools: Starting a dialogue about student dialogue. In C. J. Bonk & K. S. King (Eds.), *Electronic collaborators: Learner-centered technologies for literacy, apprenticeship, and discourse* (pp. 3-23). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Comeaux, P. (2002). Teaching and learning with interactive technologies: What have we learned and where are we going?" In P. Comeaux (Ed.), *Communication and collaboration in the online classroom: Examples and applications* (pp. 242-254). Bolton, Massachusetts: Anker Publishing Co.
- Fife, J.M. (2008). Enhancing face-to-face class discussion through electronic discussion forums. In T. Carter & M. Clayton (Eds.), *Writing and the iGeneration: Composition in the computer-mediated classroom* (pp. 37-47). Southlake: Fountainhead Press.
- Hand, B., & Prain, V. (2002). Teachers implementing writing-to-learn strategies in junior secondary science: A case study. *Science Education*, 86, 737-755.
- Hewett, B. L. (2006). Synchronous online conference-based instruction: A study of whiteboard interactions and student writing. *Computers and Composition*, 23.1, 4-31.
- Kelland, J. H. (2006, May). *Constructivist theories and online learning best practices: A discourse analysis*. Paper presented at the National Conference On-Line Proceedings, Toronto, ON.
- Lauer, J. M. (2004). *Invention in rhetoric and composition*. West Lafayette: Parlor Press.
- Lauer, J. M., & Asher, J. W. (1988). *Composition research: Empirical designs*. New York: Oxford UP.
- Olaniran, B. A. (2005). Computer-mediated communication as an instructional learning tool: A course evaluation. In P. Comeaux (Ed.), *Assessing Online Learning* (pp. 144-158). Massachusetts: Anker Publishing Co.
- Paulus, T. M. (2007). CMC modes for learning tasks at a distance. *Journal of computer-mediated communication*, 12.4, 1322-1345.
- Pennington, M. C. (2008). The impact of the computer in second language writing. In M. Sidler, R. Morris, & E. O. Smith (Eds.), *Computers in the composition classroom* (pp. 404-424). Boston: Bedford/St. Martin's.
- Richards, L. (2005). *Handling qualitative data: A practical guide*. Thousand Oaks: Sage Publications.
- Rickly, R.J. (2004). Computer-mediated communication as reflective rhetoric-in-action: Dialogic interaction, technology, and cross-curricular thinking. In J.A. Inman, C. Reed, & P. Sands (Eds.), *Electronic collaboration in the humanities: Issues and options* (pp. 35-48). Mahwah: Lawrence Erlbaum Associates.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2<sup>nd</sup> ed.). Thousand Oaks: Sage Publications.
- Trupe, A. (2004). Re-entry women students' online collaboration patterns: Synchronous conferencing in a basic writing class. In J.A. Inman, C. Reed, & P. Sands (Eds.), *Electronic collaboration in the humanities: Issues and options* (pp. 133-49). Mahwah: Lawrence Erlbaum Associates.
- Yancey, K. B. (2003). The pleasures of digital discussions: Lessons, challenges, recommendations, and reflections. In P. Takayoshi & B. Huot (Eds.), *Teaching Writing with Computers: An Introduction* (pp. 105-117). Boston: Houghton Mifflin.

---

Manuscript received 31 Dec 2009; revision received 20 Apr 2010.



This work is published under a Creative Commons Attribution-Non-Commercial-Share-Alike License  
For details please go to: <http://creativecommons.org/licenses/by-nc-sa/3.0/us/>