

Visualizing Blogs: The “to-do-or-not-to do dilemma” in EAP Writing Online

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Abstract. This paper reports on a study examining the effects of visualizing online writing activities on student behaviors and learning outcomes. A design-based research approach was adopted to develop and integrate theory and practice in natural educational settings (Anderson & Shattuck, 2012). The study was conducted in an 18-week, semester-long undergraduate English for freshman engineering students course. The course was in a blended face-to-face/online format, using Moodle, and covering the four skills of listening, reading, speaking, and writing. A blog visualization tool, designed as a monitoring system visible to the instructor and all students, was implemented throughout the semester. Data from 28 students were analyzed, with the students’ written consent. A mixed-method design was chosen for triangulation, using three data sources: pre-/post-course writing proficiency tests, an online post-course questionnaire, and online writings on Moodle. The research found that the self-regulatory mechanism supported a regular and high level of work performance of the entire class. The class average scores on writing tests showed gradual and steady progress. In addition, the phenomenon was observed in which students showed indecision about whether to work more or less relative to the performance of other students. Those students eventually deciding to work less showed certain regression in writing proficiency at the end, even if they started at a higher level than the class average. This situation, called the “to-do-or-not-to-do dilemma,” is considered a potential negative effect of the monitoring system. A monitoring system for self and others can be a positive factor that improves the regular work performance of a learning community, leading to a higher outcome. However, the study suggests the need for appropriate counter-measures against possible demoralization in the individual and/or the entire class.

Keywords: information visualization, blog, forum, social dilemma, EAP writing, blended learning.

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1. Introduction

This paper reports on the final stage of a research study that examined the effects of visualizing students' online behaviors on their learning outcomes. The research was conducted in a basic English for Science Purposes (ESP) course for freshman engineering students.

A literature review of major CALL-focused international journals (CALICO, Computers and Composition, LL&T, ReCALL, Systems) over the past decade (2001-2011) reveals that similar research has not been reported examining the effects of visualizing learners' online writing on their learning outcomes in foreign language learning.

Prior to the current study, two pilot studies found correlations among the frequency of using a blog visualization tool, the amount of blog postings, and improvement in English writing ability (Miyazoe & Anderson, 2011). However, in a one-semester experiment, the observed progress in writing ability was small, and it was not clear if this positive effect occurred because of the novelty of implementing new technology. In its final stage, this research therefore sought to answer two questions: 1) Does an environment in which students can monitor their own and other class members' work performance produce net learning outcomes in terms of writing proficiency? and 2) Does this monitoring become a stable learning strategy for the students over a one-year longitudinal intervention?

2. Method

A total of 28 engineering students in a night program participated in the data collection and provided their written consent for analysis and possible publication of the results. The course included one year of spring and fall semesters, each lasting approximately 18 weeks with holidays and school events. Four-fifths of the students participated in both semesters; five students were new to the class in the fall.

The intervention included the use of a blog-viewing tool, regular blog writing, and pseudonym use, all developed and viewable on a Moodle course web space. Writing at least one blog post per week was recommended, without penalty for not posting. These conditions were the same throughout one year. As a natural part of the course design, to make it more challenging in the second semester, five optional essays (approximately one essay every two weeks) were required in the fall to allow the students to practice writing essays in addition to blogs. This assignment was accompanied by a one-time guidance session to introduce the academic writing structure before the due date for the second essay assignment.

For triangulation, a mixed-method approach of using both quantitative and qualitative approaches was chosen (Creswell & Plano Clark, 2007). Three data sources

were consulted: 1) pre- and post-course writing proficiency tests, 2) an online survey, and 3) blog and forum essay postings that were stored on Moodle. Of the participants, 27 students completed the optional online survey.

The pre- and post-course English writing tests simulated the opinion essay writing section in the Test of English for International Communication (TOEIC). The tests were prepared and administered in a plain text format on Moodle with a 30-minute time limit. Different essay topics that used a compare/contrast structure with accessible topics were selectively chosen for pre-/post-test comparison. The digital TOEIC essays were copied onto paper scoring sheets, assigned randomized identification numbers, and evaluated by two experienced native English higher education teachers; for comparability of the results, the same raters were used for spring and fall.

To increase validity, the raters worked independently without being informed of the existence of the co-rater. The order of the essay topics (one was pre-test, and the other was post-test) was also not known by the raters. The same scoring rubrics used for scoring opinion writing in the Test of English as a Foreign Language (TOEFL) offered by the ETS (Trew, 2010, p. 157) were used. The rubrics provided scores ranging from 0 to 5 points, and the raters were asked to use 0.5-point intervals for accuracy of the results and interpretations.

A post-course online survey was administered in an anonymous format to ensure a high response rate. The survey contained a question regarding the frequency of use of the viewing tool to verify the possible correlation between tool usage and students' online behaviors.

The blogs and essay assignment posts on Moodle were copied from the system and used for quantitative analysis from various perspectives.

3. Results

Because of space limitations, only the critical findings are selectively reported. Overall, the students' participation in online writing was constant throughout the year. The average number of blog posts per student was 11.5 ($N = 28$, $SD = 6.95$) in the fall and 11.03 ($N = 31$, $SD = 4.24$) in the spring.

Figure 1 summarizes the total number of blog posts per week and essays per each assignment during the semester to depict the students' overall participatory behaviors. Blog and essay writing post frequencies are juxtaposed to highlight the possible interrelationships in terms of workload. The seven squares represent the total number of essays posted on each day of the week. The two squares in Week 2 and Week 18 correspond to the two TOEIC-type opinion essay tests, and the five squares in between represent the five essay assignments. The decline in Week 16 corresponded to winter break. In this research, the negative correlation between blog posts and essay posts is considered to reflect the students' strategy for balancing their workload between the two assignments.

Figure 1. Total number of posts per week during the semester*

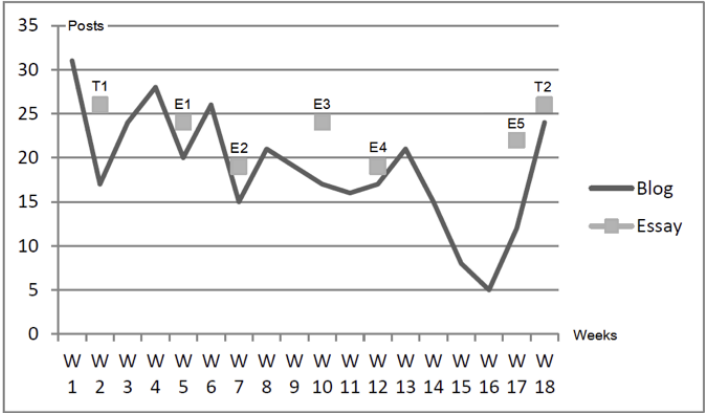


Figure 2 summarizes the average scores of the students who took both the pre and post TOEIC-type essay tests in both spring and fall semesters. The slight decrease from the spring post-test to the fall pre-test (2.05 to 2.03) can be explained by the inclusion of five new students in the fall as well as the two-month summer break between semesters. It is noteworthy that from the spring pre-test to the fall post-test, the average score for the entire class improved from 1.84 to 2.25 (an increase of 0.41 or 22.3%). Therefore, in this research, the writing proficiency of the students made continuous improvement over the course of the one-year experiment.

Figure 2. Change in English writing proficiency over the course of one year

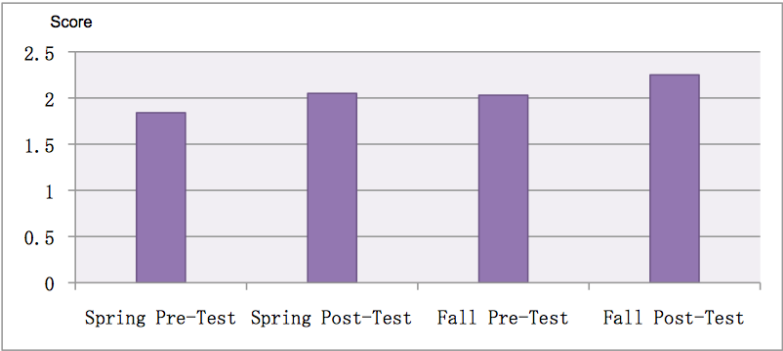
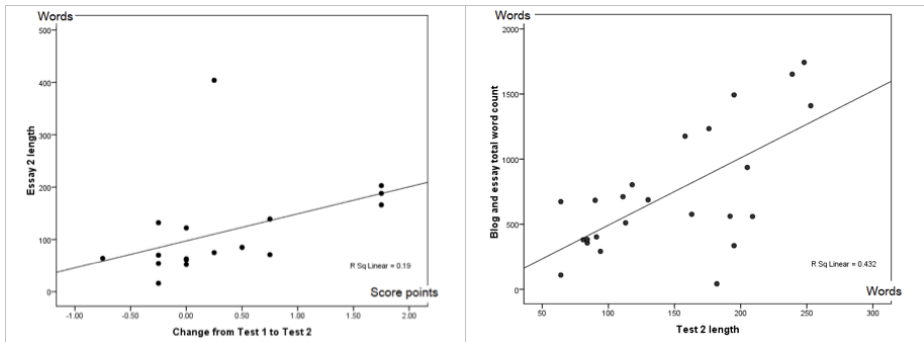


Figure 3 summarizes the changes in scores on the essay tests and the length of the Essay 2 assignment immediately after the essay structure guidance session (on the left)

* T: Test, E: Essay assignment

and the total length of blog and essay assignment posts in word count and the length of Essay 2 (on the right). All of the essay lengths were analyzed, and the length of Essay 2 proved particularly worthy of attention. The data of 25 students who completed both tests in the fall were included to find factors that produced the higher learning outcomes. Word count was used because in the tradition of research on writing, that statistic is considered an indicator of progress in writing ability (Wolfe-Quintero, Inagaki, & Kim, 1998). A high correlation was found between the change in test scores and the length of Essay 2 (Figure 2: left side, $r = .675, p < .01$). Moreover, a strong correlation between the post-test length and the total length of the blogs and opinion essays that each student produced (Figure 2: right side, $r = .672, p < .01$) is noted. This may suggest that among the five essay assignments, the length of Essay 2 was the most accurate predictor of the progress that the students would demonstrate toward the end of the course.

Figure 3. Post length and change in writing proficiency.



Finally, further analysis focusing on those students who made progress (improved group) and those who regressed (regressed group) over one year reveals that viewing the lower performance (in writing ability) of other members may have discouraged those with initial high scores from making efforts to improve. At the end of one year, the initial high scorers were overtaken by the initial low scorers.

4. Discussion

This research suggests that monitoring both one’s own and others’ work via the viewing tool appeals to the self-regulatory mechanism of a learning community supporting the regular and high levels of work performance of the entire class. The students in this study demonstrated adequate progress in writing ability over a one-year course period. However, the study also observed evidence of two diverging directions in class members who were motivated to work more and those who were motivated to work less, who eventually regressed in the targeted skill. The authors call this struggle of

indecision whether to do more or less the “to-do-or-not-to-do dilemma,” describing a situation in which a student hesitates about the degree of commitment to the workload of a learning community.

A monitoring system of work performance for self and others can be a positive factor that improves the regular work performance of a learning community, leading to a better outcome. However, the study suggests that this monitoring system should be accompanied by appropriate countermeasures against possible demoralization in the individual and/or the entire class.

Acknowledgments. We would like to thank Dr. Shinichi Sato for his kind support in maintaining his blog-viewing tool, PISION.

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Published by Research-publishing.net
Dublin, Ireland; Voillans, France
info@research-publishing.net

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CALL: Using, Learning, Knowing
EUROCALL Conference, Gothenburg, Sweden
22-25 August 2012, Proceedings
Edited by Linda Bradley and Sylvie Thouésny

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ISBN13: 978-1-908416-03-2 (paperback)
Print on demand (lulu.com)

British Library Cataloguing-in-Publication Data.
A cataloguing record for this book is available from the British Library.

Bibliothèque Nationale de France - Dépôt légal: décembre 2012.