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# Effects of rhetorical text analysis on idea generation and text quality

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Producing a meaningful written discourse in a foreign language requires a high cognitive effort of EFL learners. They face challenges caused by L2 word or grammar-related difficulties, and also by the L2 genre and genre conventions that may be quite different from what they experienced in their L1. The present study focusses on the support offered to Vietnamese L2 writers to overcome these hindrances. An intensive four-week writing intervention was designed and tested to examine whether encouraging genre awareness via a short session of sample text analysis could empower students to conduct effective brainstorming for argumentative writing. In a pre-test post-test control group design with switching replications, with 66 EFL intermediate undergraduate participants, the study obtained four indicators of L2 argumentative writing quality: idea generation, productivity, global text quality and self-efficacy. The results showed that participants integrated the sample text analysis into the idea generation stage. They created significantly longer self-expressive free writing texts, perceived the generated ideas as more useful, and used more of these ideas in their argumentative texts composition, compared to students from the control condition (with teacher instruction only). No treatment effects were found for productivity, global quality of final text, and self-efficacy. Students in both control and treatment conditions generally showed a significant improvement on these variables.

**Keywords:** idea generation, sample text analysis, argumentative writing, second language writing, self-efficacy, text productivity

## Introduction

Expectations and practices related to the teaching and learning of academic writing differ considerably between cultures and countries. In each country, academic writing practices are grounded in the country's particular culture and tradition

(Kostrova & Kulinich, 2015; see also Graham & Rijlaarsdam, 2016). English language teachers in Vietnam tend to find “writing a complicated skill to teach” (Nguyen, 2009, p. 61), while their students complain that “writing [is] difficult and unrewarding” (Tran, 2007, p. 153; see also Luong & Nguyen, 2008). Among all genres of academic writing in English, the argumentative essay that requires a writer’s self-authority on stance and voice has been found to be the most difficult for Vietnamese student-writers (Trinh & Nguyen, 2014). How to support their students to prepare content and language before processing their texts is a major concern for English as a Foreign Language (EFL) teachers in Vietnam (Nguyen, 2009). Particularly problematic is helping student-writers to adopt a particular stance for an issue and to generate ideas to support this stance in the prewriting stage.

Researchers explain these observations in light of two cultural peculiarities. First, Vietnamese culture emphasizes collective values of agreement, harmony between community members, politeness in linguistic forms and indirectness in raising an issue (Hy, 1990; Nguyen, 1956; Pham, 2011). Students in cultures influenced by such a community and consensus tradition tend to express moderate public opinions and seek agreement on the different sides of an issue in developing their argumentative writing (Hinkel, 2002). Striving for interpersonal harmony, group membership and immediate good feeling must precede individual free will, autonomy, uniqueness, or tough insistence on truth in Vietnamese communication (Pham, 2011). Vietnamese student-writers transfer this practice of inductive and indirect communication in L1 to their writing in L2 (Nguyen, 2009). This L1 practice conflicts with L2 readers, especially from an Anglophone or Western culture, and expectations induced in English textbooks used in Vietnam. These readers are interested in a writer’s stance that conveys “... different kinds of personal feelings and assessments” (Hyland, 2008, p. 9), and “authorial voice which set you apart from every living human being despite the common or shared experiences you have with many others” (Steward, 1972, as cited in Bowden, 1995, p. 175).

Secondly, in Vietnamese cultures, given the fact that teachers are more senior and knowledgeable than students, their expert status gives them the voice of highest authority in class discussion matters; they are, therefore, believed to be the experts with the highest voice of authority in class discussion matters (Nguyen, 1989; Tran, 1999). In L1 as well as in L2, Vietnamese students expect their teachers to provide them with the content of their text, so that students are sure that they articulate the appropriate content in their compositions. Researchers reported “[an] imitation of the model text given by their [L2 writing] teacher with the similar topic” (Trinh & Nguyen, 2014, p. 65) and a tendency to be “passive and depend on their teacher and samples for ideas rather than being independent” (Tran, 2007, p. 158).

This tradition is in conflict with L2-writing practice in Vietnam, which is based on Anglo-American pedagogy and handbooks, requiring a writer's independence in thinking and generating ideas in the prewriting stage. For instance, in a much used writing course book for undergraduate student-writers (Mosaic 1 Writing-McGraw-Hill, 2007), each chapter that deals with a specific genre asks students to do free writing as a prewriting activity for content generation. For example, to prepare students for writing an essay arguing for or against an issue related to crime and punishment, a 15-minute free writing task suggested writers do the following: *Have you ever witnessed or been involved in a crime? Do you have a strong opinion on an issue related to crime or punishment? Choose one of these questions to answer and write for 15 minutes without stopping* (task extracted from Chapter 10, Mosaic 1 Writing). Vietnamese students get stuck when confronted with such an idea generation task; pencils are held for a long time with no words appearing on draft papers. However, the practice of teaching to write in L2 for Vietnamese students is not suitable to tackle such blockades. In practice, instruction focuses on correcting structural errors and analyzing sentence building in sample texts, not on what to write and how to write (Trinh & Nguyen, 2014). Sample text analysis activities focus on *forms* of writing, not on content. Refocusing such customary sample text analysis activities into activities which support idea generation might be a simple but effective change.

### **Genre pedagogy, idea generation practice and research in an EFL setting**

In the Vietnamese and Asian context of the present study, the problem lies in "what to write", In addition to the process knowledge of "how to write" (Trinh & Nguyen, 2014; see also Deng, Chen, & Zhang, 2014). In a review of empirical research on differences between L1 and L2 writing, Silva (1993) concluded that L2 writers did invest a lot of time in idea generation and in figuring out the topic in the prewriting stage, but did not succeed in generating useful material: many of the generated ideas were disregarded and never found their way into the written texts. Since then a few studies on the effect of interventions focusing on forms of brainstorming on L2-text quality have been published (Maghsoudi & Haririan, 2013; Manouchehry, Farangi, Fatemi, & Qaviketf, 2014; Rao, 2007). These studies were brainstorm training studies, with series of strategy instruction sessions in which one (Maghsoudi & Haririan, 2013) or two kinds of brainstorming strategies were trained (Manouchehry et al., 2014). In Rao's study (2007), the brainstorm activity was more than individually generating ideas, but contained all kinds of activities to share and organize ideas. In any case, these studies did not measure the quantity and quality of the generated ideas, nor did they isolate the genera-

tion of ideas as an individually fundamental component. For our aim, to improve the brainstorm activity itself, via refocusing on an already existing practice of analyzing sample texts, these studies do not provide much information. We did not find empirical research that studied the effect of a content oriented, genre-based approach on idea generation in the prewriting stage. Therefore, we moved to studies on the effects of sample text activities, in the framework of genre analysis. We searched for studies to warrant our hypothesis that rhetorical analysis might boost effective brainstorming of L2 writers on three sets of variables: rhetorical awareness (i) guides content generation and organization, (ii) reduces L2 writer's block in brainstorming activities, and therefore (iii) supports self-efficacy in content generation.

Genre analysis might provide students with a framework for composing their own texts (Hyon, 2001, 2002; Yasuda, 2011). Students from multilingual backgrounds need the support of samples to understand what is required (Ahmed & Ahsan, 2011). L2 researchers report that exposing students to samples of a particular genre helps students figure out "specialized configurations" of a genre; that helps activate students' prior reading and writing experiences for a new task of writing related to that genre (Gui, 2008, p.57, see also Elashri, 2013). Awareness about the purpose of writing, the writer's role, and the audience in a particular genre will help students build "genre schemas" including contextual text factors, the potential audience, and the content components (Ahmed & Ahsan, 2011, p.58). Analyzing a writer's choice of arguments, structures, and language presented in a sample text might contribute significantly to L2 writer-students' "actual development" of self-production of a written text (Lin, 2006, p.72).

Analyzing sample texts might also contribute to a reduction in students' worries about writing in a second language (Lee, 2012; Rahman, 2011). Analyzing genre features and their communicative purpose might encourage students' involvement in a given genre and activate their prior experience and background knowledge related to that particular genre (Ahmed & Ahsan, 2011, see for details chapter 4 on an approach to genre analysis, p.53–68; Bhatia, 1993). Genre analysis provides students with a chance 'to read as the writer', to consider the text thoughtfully and critically from the writer's perspective. This can promote students' "*writerly engagement with texts*" (Cheng, 2008, p.66). Research on genre-based writing instruction for EFL academic writing students in Asia also reveals their self-perception of better writing with regard to both content and structure (Deng et al., 2014, see chapter 4 on developing EFL learners' generic competence in reading and writing, p.31–50; Ahmed & Ahsan, 2011 on genre awareness and better confidence in L2 writing). Yasuda (2011) reported that students' higher awareness of form-function relationships positively influenced their confidence with regard to language use, text structures, and what content to be included in their composition.

## Free writing as an idea generation activity in the EFL classroom

To facilitate students' idea generation, some brainstorming activities, such as free writing, were introduced in second language writing classrooms. However, free writing, along with other prewriting activities for idea generation and organization, was reported with a moderate effect on writing quality. Studies that specifically investigated the effect of free writing on L1-writing were reported by Hillocks (1984, p. 157): the effect size was small ( $ES = .16$ ); Graham and Perin (2007) found a moderate effect on L1 text quality for prewriting activities, such as brainstorming and organizing ideas by means of a semantic web ( $ES = .32$ ), groups brainstorming ideas for text ( $ES = .06$ ). There is no research that reports effects of genre awareness on written brainstorming (free writing). However, research reported a strong impact of providing specific writing product goals on writing quality, compared to general goal setting (Graham & Perin, 2007). We may expect that knowledge about the rhetorical situation sets goals for probing ideas and structuring text organization (Dymock, 2005; Englert & Hiebert, 1984; Reynolds & Perin, 2009).

### The present study

The customary practice of using sample texts by Vietnamese teachers in the prewriting stage might be a bridge to overcome the problem of individual idea generation and voice when the focus of the analysis of these texts moves toward rhetorical thinking. Engaging students in sample text analysis might help students to become aware of what they are expected to do with regard to form and content development, which might increase students' confidence in the prewriting stage and guide their idea generation. Students might become aware of how a writer generates idea for the text under analysis, and balances factual arguments, opinions and illustrations by using "guiding questions" which can help them think about the purpose of writing, to place themselves in the role of the writer, the potential readers, and understand the social context of writing. The awareness of content components in a finished text might provide a clue for (i) the students' own idea generation in their prewriting stage, and consequently for (ii) their final text production, (iii) final text quality, and (iv) writing self-efficacy.

In this study, free writing is the main activity in the prewriting stage for idea generation. The activity was implemented in both treatment conditions for three reasons. First, we assumed that this activity may boost individual idea generation. Therefore, the act of explorative free writing could reveal the writer's personal stance and beliefs in an issue at stake. Second, this unstructured, informal prewriting may prevent or alleviate possible writing difficulties caused by L2 formal language usage constraints. Further, free writing might activate writers to generate

content which is even new to themselves: writing as discovery (see Elbow, 1973; Galbraith, 2009). We hypothesize that free writing can not play its role of activating students for idea generation successfully in the Vietnamese EFL writing context because of students' reluctance to take a stance in writing themselves, in expressing their feelings on an issue and because writing, a cognitively "unnatural" act (Dryer, 2015, p. 29; Pinker, 2014, p. 77), is something most students in the educational setting find difficult and challenging (see discussions of Chandler, 2007, on students' fear in writing and Gillett, 2012, on writing as the most problematic area in EAP teaching); we hope rhetorical sample analysis will ease the problem by providing an idea of what another EFL writer did with the genre and encouraging them to think in the position of the writer.

Therefore, we formulated the following research question:

*What is the effect of rhetorical sample text analysis on students' idea generation in the prewriting stage, and as a consequence on text productivity, text quality, and self-efficacy in an EFL writing classroom?*

We hypothesize an effect of rhetorical sample text analysis on quantity and quality features of the brainstorming activity and therefore on the quality of the final text and on writers' self-efficacy.

## Method

A pre-test post-test control group design with switching replications (Shadish, Cook, & Campbell, 2002) was used to examine the effects of text analysis on idea generation, the quantity and quality of the final text, and students' self-efficacy in writing (see Table 1).

After the first post-test,  $MO_2$ , both groups swapped: group 2 (CE) served as the experimental condition and group 1 (EC) as the control condition. The design allows us to test our hypothesis twice while participants undergo both treatments, in different orders. Therefore, we expect an effect of the activity of rhetorical text analysis in panel 1 as well as in panel 2, so that in the end both groups will not differ on the dependent variables, as we have no reason to hypothesize a sequence effect of the interventions: no instructional attempts were made in the second panel control condition to transfer the learning from panel 1 to panel 2, in order to keep the control condition as pure as possible. Thus students received instructions, although different ones, to enhance their writing performance in both conditions, instead of an untreated control group in which poorer performance might simply be attributed to a lack of treatment.

**Table 1.** Research design

Group	Panel 1		Panel 2		MO <sub>3</sub>
	MO <sub>1</sub>	Treatment <sub>1</sub>	MO <sub>2</sub>	Treatment <sub>2</sub>	
Random 1 (EC) ( <i>n</i> = 33)		E		C	
2 (CE) ( <i>n</i> = 33)		C		E	

*Notes.*

E = Experimental condition: Rhetorical text analysis and free writing.

C = Control conditions: Instruction and free writing.

Group 1: E-C = Experimental condition in panel 1, Control condition in panel 2.

Group 2: C-E = Control condition in panel 1, Experimental condition in panel 2.

MO = Measurement Occasions (1–2–3 for idea generation, text productivity, text quality and self-efficacy).

*Writing Topics.*

MO<sub>1</sub> = Sex education in schools, MO<sub>2</sub> = Abortion, MO<sub>3</sub> = Animal testing.

Treatments: E = Corporal punishment in schools, C (following text book): Capital punishment.

All participants received the same reading materials at each measurement occasions.

## Participants

Participants were 66 students of EFL intermediate level, of two age groups (19–21 and 22–27 years old). The younger group of students had earned a seat in the university course after passing a national university entrance exam; they followed the mainstream, uninterrupted path from upper secondary education to university. The older group had finished part of the undergraduate program 2–3 years before the start of the experiment, and then they had returned to the university to complete their undergraduate program. Although there might be a difference in life experience, work experience and problem solving ability between the two groups, they were both ranked by the university as being at the intermediate level of EFL competence.

All participants were from the Mekong Delta Vietnam, and shared a similar social, cultural, demographical and economic context. The proportion of females (69%) was significantly higher than the proportion of males, which is common for language classes in Vietnam. Of the participants, 14% were Khmer, an ethnic minority group in Vietnam.

Participants were randomly assigned to the EC or CE group, resulting in 14 younger students and 20 older students in the EC group, and 13 younger and 19 older students in the CE group. The same teacher taught all lessons. The number of Khmer students was equally divided over both treatment groups.

All students showed a commitment to the learning activities: they attended the course regularly and actively, and completed all the required writing assignments and questionnaires.

## Intervention

The experiment took four weeks (three meetings of two and a half hours per week) in Tra Vinh University, Mekong, Vietnam. The instructor informed the students of the experiment's purpose and that data from the course would be treated confidentially and used for research purposes. The instructor explained that all students would have exactly the same learning activities and writing assignments, however, these would be provided in different order. The students were asked to participate fully in all the course sessions.

Table 2 summarizes the course program for both the experimental and control conditions. After both groups swapped conditions, the same program was implemented again.

**Table 2.** Course program and two conditions with session 2 as a distinctive session

Session	Duration	Experimental conditions: Rhetorical text analysis and free writing	Control condition: Regular course
1	20'	<i>Orientation</i> on argumentative genre features including writing purpose, audience, features/components expected by asking questions to probe students' prior knowledge on the genre, and whole-class recollection of what makes an argumentative text convincing.	
2	30'	<i>Rhetorical text analysis:</i> students read a sample text arguing against corporal punishment in school in groups of three and analyze the sample text in relation to the discussion questions in the Orientation phase. The sample text was an argumentative essay, written by a Vietnamese EFL student who graduated from the university in the year before the experiment.	<i>Instruction on essay structure (following the text book):</i> Students share their experience of writing a good essay of five main paragraphs: one introductory paragraph, three main body paragraphs and one conclusion, in groups of three. Students read and answer comprehension questions on rhetorical features of a newspaper article in the text book illustrating how a person supports his point of view about a more open policy from the government on street-vending.
3	15'	<i>Free-writing:</i> Look at some pictures of the issue at stake and write freely on the issue. The experimental group received a picture, from the public media, of a child suffering corporal punishment; the control group a picture of protests for and against capital punishment in the textbook. Students of both groups write freely on the issue. The activity intended to probe students' stance on the topic.	
4	15'	<i>Topic involvement:</i> Each student rereads their free writing paper and identifies the standpoint they will take for their essay; students highlight the ideas and details that they perceived as being important and relevant for talking about the issue.	
5	25'	<i>Rationale activation:</i> students determined their level of agreement with pro and contra statements/arguments on the issue of corporal punishment provided by the teacher and on the issue of capital punishment in the textbook. For example	

Table 2. (continued)

Session	Duration	Experimental conditions: Rhetorical	
		text analysis and free writing	Control condition: Regular course
		students rate their agreement with the statement “States can’t say that they value life if they have the death penalty” on a scale from 0 to 5 (5 as the strongest level of agreement) and explain why they rate that number.	
6	30’	<i>Rhetorical training:</i> instructions on citing authorities in sentences, paraphrasing ideas, and exposing weaknesses in the opposing arguments	
7	60’	<i>Documentation:</i> students read information sources including four documentary articles presenting relevant statistics on the problem, what experts say about the double effect of each problematic question. The resources are provided by the teacher. The length of the information input is similar and time for reading is the same for the experimental and control groups.	
8	25’	<i>Writing preparation:</i> Adapting the free writing draft (see above) and using information from the other sessions to draw an essay map for the final text composition.	
9	70’	<i>Writing:</i> Writing a full argumentative text on the issue at stake with the writing prompt “Should corporal punishment have a place in education?” for the experimental group and “Capital punishment is essential to control violence in society. To what extent do you agree or disagree?” for the control group. Both groups write with pen and paper.	

*Note.* The grey row marks the only difference between the two conditions in scene 2 of the whole sequence.

Participants in the rhetorical text analysis condition read a text the instructor provided them with, and analyzed the text for content, organization, and expression. Guiding questions for analysis were (i) Who are the intended readers? What will they be interested in? (ii) What is the purpose of the text? (iii) Is the text unambiguous/accessible to the readers? How are the thoughts organized? (iv) What is the thesis statement? Where does it appear in the text? (v) What arguments support the thesis? (vi) How is the thesis confirmed in the conclusion? (vii) Could the arguments be more streamlined and compact? (viii) Do wording and grammar structure support the articulation of thoughts?

In the control condition participants worked for 30 minutes on essay structure, reading a text and answering questions from the textbook they used regularly (see Chapter 10 on Crime and Punishment of Mosaic 1 Writing student book by Pike-Baky & Blass, 2007, p.186–207). They worked on questions and tasks on (i) vocabulary development for an argumentative topic, (ii) recognizing provable statements, (iii) using conditional sentences and relative clauses, and (iv) editing and rewriting a paragraph on people’s faith in the criminal justice system.

## Measures

Scores for four dependent variables were obtained: *idea generation*, *productivity*, *text quality*, and *self-efficacy*.

*Idea generation* was operationalized by three indicators: (i) Generative productivity: number of words in the free writing text; (ii) Perceived usefulness: number of ideas highlighted in the free writing text as being relevant for the final text, and (iii) Usefulness: number of highlighted ideas from the free writing phase that were incorporated in the students' final text. Two raters counted the ideas highlighted and the ideas coming back in the end text. Inter-rater agreement was good ( $r = .99$  and  $r = .92$ , respectively). For the final score, we used the mean score of both raters.

*Productivity* was operationalized as the length of the final text in terms of number of words.

*Text quality* was measured by a holistic rating of the argumentative quality of students' texts. We adapted Hamp-Lyons (1991) scale for text quality measurement. We revised the layout of the scale, de-emphasized the language skills, such as grammatical structure and vocabulary, and focused instead on "position/stance support", "complexity of arguments", and "rhetorical features" which were the three main components of a good argumentative text that we expected the students to improve in. In addition, we created a set of three benchmark essays, because a rating procedure with anchor texts contributes to higher rater reliability (Schoonen, 2005; Tillema, Van den Bergh, Rijlaarsdam, & Sanders, 2012). The average benchmark text was assigned an arbitrary score of 100 points. Each student's text was judged according to the text rating scale, consisting of three anchor texts, one of average quality and a stronger and weaker text, accompanied by an analytic description. The same three anchor texts were used at MO<sub>1,2,3</sub>. The anchor texts were chosen from the texts students wrote at each measurement occasion. Scores could range, theoretically, from 0 to  $\infty$ . In a training session we established the clarity of the analytic description of the three benchmark texts, and clarified the scoring rule of judging a text in comparison to the average benchmark text and in reference to the rating scale. In total, 192 final texts were collected, which were rated by 17 Master students in English, from a university in the Netherlands. Raters earned credits and received a small amount as compensation for their work. Each text was judged by three raters, sets of raters varied as raters were assigned to texts using a design of overlapping rater teams (Van den Bergh & Eiting, 1989). We used the mean jury score per text as the score for text quality; while the inter-rater reliability between the three raters per text was satisfactory ( $r = .80$ ).

*Self-efficacy* was measured with a 19-item questionnaire, adapted from the writing self-assessment rubric for student-writers in the course book published by McGraw-Hill (Pike-Baky & Blass, 2007, see chapter 10 on argumentative writing). Items were a mix of general writing skills and items on the specific genre at hand: argumentative texts. Some sample items were (with item-rest correlations between brackets): “I think I could write an introduction in which I introduce the issue and my main points” ( $r_{\text{item}} .83$ ), “I think I could substantiate my main points with strong supporting ideas” ( $r_{\text{item}} .84$ ), “I think I know the characteristics of a good piece of writing” ( $r_{\text{item}} .73$ ), “I think I know the strategy to keep writing” ( $r_{\text{item}} .78$ ), “I think I know the strategy for organizing the content of a written text” ( $r_{\text{item}} .77$ ). Students responded to the items on an 11-point Likert type scale, from 0 (= no confidence) to 10 (= high confidence). The questionnaire reached an appropriate level of reliability through three measurement occasions (Cronbach’s  $.94 < \alpha > .97$ ). See Appendix A for the questionnaire.

## Procedure

Data were students’ free writing texts, final texts, and a self-efficacy questionnaire. As shown in Table 1, data were gathered on three occasions: just before the start of the course ( $MO_1$ ), just before the groups swapped conditions ( $MO_2$ ), and just after the course ( $MO_3$ ). The writing prompts varied per measurement occasion (see note in Table 1).

With respect to the free writing text, students received a blank paper and a picture of the issue at stake as writing prompt. Then they were asked to look at the picture, feel free to express what they think, write as fast as possible without worrying about structure, mechanics or organization of the language, only focusing on words, ideas flowing out, and putting them on paper: to explore their ideas. All students were given 15 minutes for each free writing session, as we followed the commonly advised time for non-stop brainstorming, quick writing (Elbow, 1973). Then they used a marker to highlight the ideas and details that they perceived as valuable, important, and/or relevant in talking about the issue in the free writing texts. Nine different students of both conditions were absent from class in one or more sessions so we did not have their texts at all three measurement occasions. In total, 189 free writing texts were included in the analysis: 62 at  $MO_1$  and  $MO_2$  each, and 65 at  $MO_3$ .

With respect to the final text, students in both conditions wrote an argumentative text in 70 minutes. Six different students of both conditions did not submit their texts in one of the three measurement occasions. Overall, 192 texts were included in the analysis: 63 at  $MO_1$ , 64 at  $MO_2$ , and 65 at  $MO_3$ . All texts were hand-

written and typed out by research assistants to reduce the effect of handwriting quality on raters' assessment.

Finally, students completed a 19-item questionnaire on self-efficacy at the three measurements occasions, which took about 14 minutes to complete each time. Eighteen different students of both conditions did not submit their questionnaire at the three measurement occasions. In total, 187 self-efficacy questionnaires were completed and analyzed: 59 at MO<sub>1</sub>, 64 at MO<sub>2</sub>, and 64 at MO<sub>3</sub>.

## Analyses

The scores on three indicators of *idea generation* – generative productivity, perceived usefulness, and actual usefulness – were highly correlated, especially number of marked ideas in free writing (perceived usefulness) and number of marked ideas coming back in the final text (actual use): correlations ran from  $r = .66$  for pre-test scores to  $r = .82$  for scores on MO<sub>2</sub>. (See Appendix B, Table B1.) The other correlations between the three variables varied (from  $r = .14$  to  $r = .36$ ). To examine the effect of condition on *idea generation*, we therefore used multivariate analyses of covariance in both panels with condition as independent variable, the three indicators of idea generation in MO<sub>2</sub> as dependent variables, and the pre-test scores of the three indicators as covariates. In panel 2, this analysis was repeated with MO<sub>3</sub> scores as dependent variables. Subsequently, we used paired samples t-tests to examine the differences between measurement occasions within conditions.

To examine effects on the other three variables – *text productivity*, *text quality*, and *self-efficacy* – we ran univariate analyses of covariance and paired-samples t-tests similar to the analyses described above.

## Results

In this experiment, we tested the effect of rhetorical text analysis, in a four-week intervention, on the generation of ideas in free writing, on text productivity, global text quality, and self-efficacy. We tested the effects of the intervention twice via a switching replication design. Table 3 provides means and standard deviations of all variables and indicators in the two panels, separately for the control and the experimental condition. (See also Figure 1 for the three significant effects.) At the pretest, no significant differences between the two groups were observed,  $\lambda(5,50) = 1.74$ ,  $p < .141$ ,  $\eta^2 = .149$ .

**Table 3.** Means (standard deviations between brackets) for three measurement occasions (MO<sub>1</sub>–MO<sub>3</sub>): Group EC: experimental condition, then control condition; Group CE: control condition, then experimental condition

Variable	Indicator	Group	MO <sub>1</sub>	MO <sub>2</sub>	MO <sub>3</sub>
Idea generation	<i>Length of free writing texts</i>	EC	140.52 (48.10)	176.28 (61.43)	175.37 (61.19)
		CE	156.55 (56.19)	165.1 (41.20)	232.73 (59.88)
		EC	3.16 (2.27)	5.62 (3.22)	3.53 (2.66)
	<i>Number of ideas marked in free writing texts</i>	CE	3.97 (1.96)	3.23 (2.08)	3.82 (2.99)
		EC	1.68 (1.40)	3.62 (2.71)	2.29 (2.10)
		CE	2.39 (1.36)	1.27 (1.29)	2.39 (2.19)
Text productivity		EC	245.44 (77.46)	392.32 (98.58)	403.75 (103.16)
		CE	288.84 (71.40)	393.03 (96.99)	459.27 (154.13)
		EC	75.94 (42.55)	126.51 (50.50)	131.64 (62.31)
Text quality		CE	106.99 (63.56)	156.26 (102.94)	142.47 (75.17)
		EC	5.31 (1.52)	5.50 (1.51)	5.94 (1.41)
		CE	5.47 (1.28)	5.56 (1.36)	6.28 (1.12)

*Notes.*

*Length of free writing texts* was measured by counting the number of words in the free writing texts

*Number of ideas marked in free writing texts was measured* by counting the number of ideas that students have highlighted by coloured marker pens in their free writing texts as being relevant for their final texts

*Number of marked ideas used in final texts* was measured by counting the number of highlighted ideas from the free writing texts that were incorporated in the students' final texts

Text productivity was measured by counting the number of words in the final texts

Text quality was measured by using the benchmark rating procedure in which 100 reflects the quality of the average benchmark text

Self-efficacy was measured by using a 19-item questionnaire, on an 11-point Likert type scale

## Generation of ideas

In panel 1, the multivariate covariance analyses with the three dependent variables showed a significant effect ( $\lambda(3, 48) = 8.58, p < .001, \eta^2 = .35$ ). Subsequently, the univariate results showed positive effects of text analysis on all three variables. The experimental condition, in comparison to the control condition, wrote longer free writing texts ( $F(1, 54) = 5.08, p = .029, \eta^2 = .09$ ), highlighted more ideas that they perceived as useful from the free writing texts ( $F(1, 54) = 23.21, p < .001, \eta^2 = .32$ ), and used more ideas from the free writing texts for their composition ( $F(1, 54) = 19.52, p < .001, \eta^2 = .28$ ).

Since at the end of panel 2 both groups had participated in both the control and experimental condition, we did not expect to find differences between conditions. However, in panel 2 the multivariate covariance analyses also show a significant effect of condition on the dependent variables ( $\lambda(3, 53) = 6.18, p = .001, \eta^2 = .259$ ), in favor of the then experimental condition. Subsequently, the univariate results showed positive effects of text analysis on one variable *Length of free writing text* ( $F(1, 59) = 12.01, p = .001, \eta^2 = .179$ ). The difference in effect sizes between panel 1 and 2 indicates a sequence effect; for productivity in free writing CE (instruction, then text analysis) is more effective than EC (text analysis, then instruction).

To test the developmental pattern of the three variables in panel 2 for the two conditions, we ran paired-samples t-test between  $MO_2$  and  $MO_3$ . The EC condition revealed only a decrease in *Number of ideas marked in free writing texts* ( $t(30) = .19, p = .003$ ). The CE group showed a significant increase in two out of the three variables: *Number of marked ideas in free writing texts used again in final texts* ( $t(29) = 2.94, p = .006$ ) and *Number of words of free writing texts* ( $t(29) = 11.01, p < .001$ ). In sum, this means that we found an effect of rhetorical text analysis on *Number of marked ideas in free writing texts used again in final texts* and *Number of words of free writing texts*. These effects were maintained for the students of the EC group when they returned to the regular course. For *Number of ideas marked in free writing texts* we found a sequence effect that showed that students who attended first the control condition and then the experimental condition, generally marked more ideas than the other students, while the EC students – first experimental and then control condition – showed a decrease in number of marked ideas when they participated in the control condition.

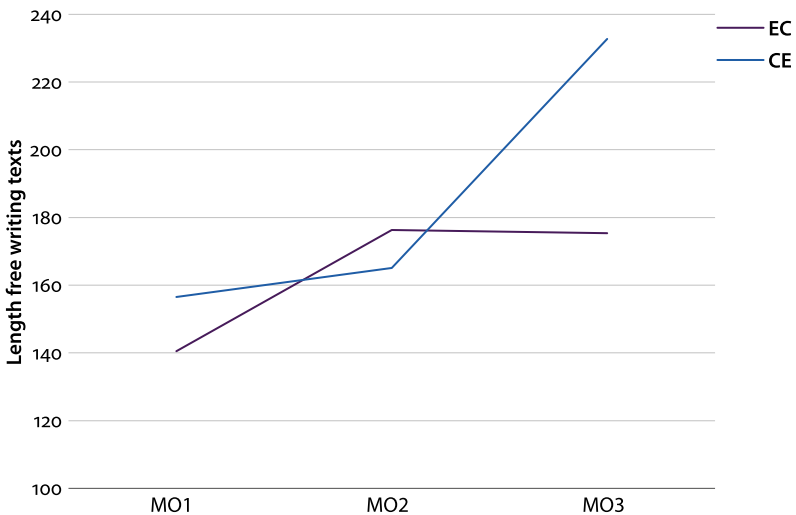
## Productivity and quality of final text

No condition effect was observed at  $MO_2$  for text quality ( $F(1, 60) = .586, p = .447$ ), nor for productivity ( $F(1, 60) = 2.748, p = .103$ ). For both variables, the pretest score

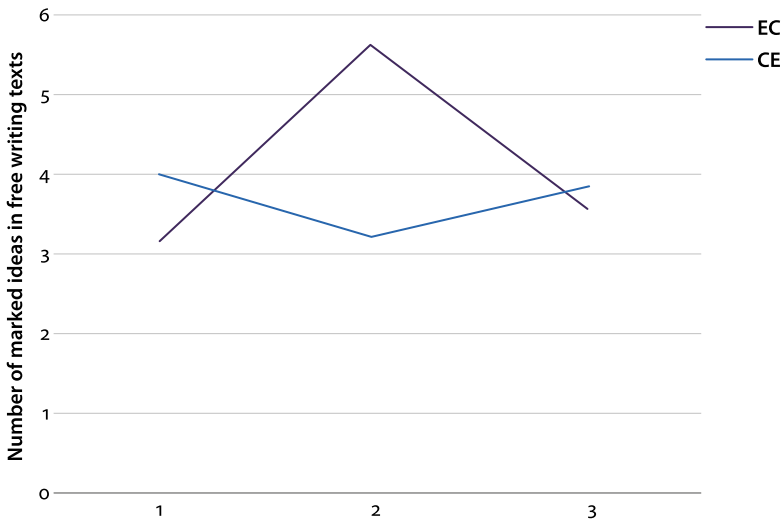
contributed to the model ( $F(1, 60) = 6.936, p = .001$ , and  $F(1, 60) = 45.914, p < .001$ , respectively), indicating that the scores correlated between measurement occasions. At  $MO_3$  no effect of condition was observed for text quality ( $(F(1, 62) = .123, p = .727)$ ), but an effect was found for productivity ( $F(1, 62) = 4.282, p = .043, \eta^2 = .067$ ), in favor of the experimental condition in the second panel.

### Self-efficacy

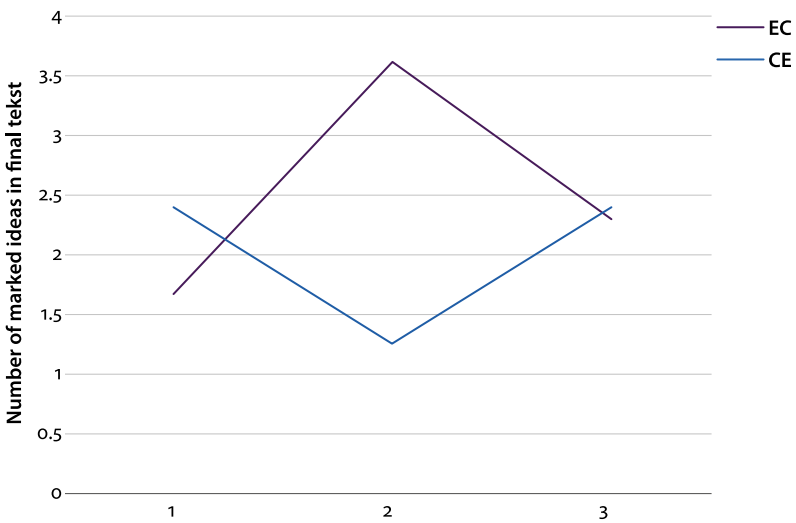
In panel 1 and 2, no effects of rhetorical text analysis were observed on students' self-efficacy in text writing. Paired-samples t-test between  $MO_2$  and  $MO_3$ , to test the development pattern of self-efficacy in panel 2 for each condition separately, did show a statistical difference for both conditions: the control condition (group EC;  $t(25) = 4.52, p < .001$ ) and the experimental condition (group CE;  $t(30) = 5.047, p < .001$ ). The findings imply that both conditions supported the increase of students' self-efficacy in writing. The finding also implies that the condition effect on brainstorming variables is not due to condition effects on self-efficacy.



a.



b.



c.

**Figure 1.** Effects for Experimental group on Free Writing indicators for Text composition (E: MO<sub>1</sub>–MO<sub>2</sub>) and after switching panels (E: MO<sub>2</sub>–MO<sub>3</sub>): Length of free writing text, number of marked ideas and number of ideas in final text

## Discussion and conclusion

In this study, we examined whether rhetorical text analysis has a beneficial effect on students' generation of ideas in free writing, their text productivity, global text quality, and self-efficacy in the context of an EFL writing course for Vietnamese undergraduate students.

The results confirm the hypothesis that rhetorical text analysis affects the generation of ideas in the prewriting stage. We found an improvement in students' idea generation for all three indicators: (i) length of free writing text, (ii) the perceived usefulness of ideas in the free writing text, and (iii) the actual use of these ideas in the writer's final text. A maintenance effect was observed for two of the indicators: (i) length of free writing text and (iii) the actual use of ideas they generated in free writing for text composition. Rhetorical text analysis seems to offer a framework to help students to boost their self-expressive free writing, and to manipulate and capture strategically free writing as a valuable source for composing a more formal final text. Therefore, the use of rhetorical text analysis as a means to introduce student writers explicitly to what is required in a particular genre could be a meaningful pedagogical tool to be included in the writing programs for EFL students in a Vietnamese academic context. If students have practiced free writing, the additional introduction of function, goal, audience, and approach of a genre via a whole class analysis of a text could result in more productive free writing.

However, no effects of rhetorical text analysis were observed on the productivity or quality of the resulting text, nor on students' self-efficacy. This means that integrating rhetorical text analysis does not seem to contribute directly to final text productivity, final text quality and writers' self-efficacy. An L2-study on the effect of preplanning activities (Johnson, Mercado, & Acevedo, 2012) found no effects of idea generation, organization and goal setting on specific elements of texts produced. These authors suggested that other factors than pre-planning could explain the lack of effects, such as participants' general education, genre knowledge, and proficiency in English (Johnson et al., 2012, pp. 271–272). We consider four explanations for our findings.

The first explanation could be that the difference between the experimental and control conditions might be irrelevant for producing large differences in text quality and quantity, as well as in self-efficacy for writing. Both the experimental and the control conditions received instructions on good quality writing and the experimental group also received a short sample text for rhetorical analysis, which was quite effective for idea generation. Correlational analyses, for each of the conditions and measurement occasions separately, between the three brainstorm indications and text quality, revealed that only one out of 18 correlations

is significant (see Appendix B, Table B1). However, further explorations revealed that all three measurement occasions show a curvilinear relation between three brainstorm indicators and text quality, with a positive linear component, and a negative quadratic and cubic component, explaining 14 ( $MO_3$ ) to 22% ( $MO_2$ ) of the variance in text quality. It is beyond the scope of this paper, but further study might reveal whether the relation between this kind of content planning and text quality is indeed not linear, which may imply that certain control or regulation mechanisms must play a role to optimize the effect of the brainstorming activity on the resulting text. In another study on source based writing, we found similar curvilinear relations between, for instance, the number of times that writers read in the sources and the quality of the resulting paper: the more reading in the beginning of the process, the better the resulting text, until a certain optimum (Vandermeulen, Van Steendam, Rijlaarsdam, Van den Broek, 2018).

The second explanation is that students in both conditions were introduced to other writing techniques, such as topic involvement, rationale activation, rhetorical training, and documentation, between the written brainstorm and text composition phases. These additional elements might have leveled out differences in the quality of students' texts due to pre-planning variations between the conditions.

A third explanation relates to the measurement of text quality. One may put forward that a more fine-grained text analysis than a global quality score could have revealed specific differences in text quality due to conditions. Note that Johnson et al. (2012) did measure such specific elements of text quality, but did not find effects of pre-planning activities either. However, we deliberately refrained from more fine-grained analyses for at least two reasons. First, we aimed to improve the text as a whole. We positioned the study as a text writing study, not as a language acquisition study. Second, the validity of the holistic text score is high: juries of raters rated the texts reliably, and the distinctive power is obvious. Differences between participants were detected (variance), which proved to be stable within conditions (correlation between measurement occasions varies about .60). In hindsight, another option for the measurement of text quality could have been the level of controversy the text shows and the personal stance, in terms of content and wording. After all, one of the issues that plays a role in this particular context is that students have learnt to accommodate their texts to the cultural dominant opinions. Certainly, in the case that the text is read by the teacher, students may want to accommodate to what is usual, to the 'set values', despite a rich and personal brainstorm event. We also do not have any indications that could point to a less docile attitude in school writing as a result of students' participation in the course.

A fourth explanation might be that individual preferences may play a role. From studies by Galbraith (2009) and many others, we know that creating new

ideas during the prewriting stage is a result of the interaction between students' individual preferences and condition: some students create most new ideas during free writing, they prefer writing to explore, while other students create most new ideas during writing by first creating lists or schemes in the prewriting phase. We did not include writing process preferences as a variable in the research design, so this is still an open question. However, post hoc analyses with Hayes' process moderator analyses with the characteristics available in the design did not reveal any interaction with condition, proficiency level, or level of self-efficacy (Hayes, 2013).

An issue that is open to further consideration is a possible genre effect. For EFL writers a formal final text composition is far more constraining than expressive free writing, in terms of language usage and rhetorical requirements such as essay structure, balance between parts of an essay, word choice, and grammar appropriateness. These constraints might limit the EFL writers in elaborating their final text. Therefore, although students in the experimental condition were found to be more proficient in free writing, they did not differ from their peers in the control condition as to the length and the quality of their final texts, or in terms of their self-efficacy. A reason might be that students put quite some time and effort in the brainstorming phase, and writing the first draft, after which that draft tends to be the last draft, while in terms of content it is still an exploratory draft (Harris, Santangelo, & Graham, 2008). To have an effect on the quality of the final version of the text, at least for argumentative texts, students might need to write an informal draft after brainstorming and content selection, to keep the focus on content and organization, so that in a final version there is room for attention to formal aspects.

A last issue we would like to put forward is the context bound problem statement and the generalizability of the results. In the introduction of this paper, we positioned the problem in the Vietnamese-Asian context, as it was the cultural controversy between a Vietnamese L1 writing education practice of producing content that is approved by the teacher and the community, and the pedagogy employed in American-Anglophone textbooks used in higher education. Similar cultural controversies will play a role all over the world where the L1 national culture meets a more global culture. In this respect, the present study may contribute to the insight that creative teachers can build bridges. Here it was the genre-awareness that was used as bridge, but there are many more options, depending on the cultures that meet.

To conclude, the finding that rhetorical text analysis can contribute to students' idea generation might enrich the understanding of L2 writing process and form an appropriate component of effective L2 writing pedagogy, at least in a cultural context where individual thought is less appreciated.

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## Appendix A. Questionnaire to measure self-efficacy

Please comment on the assessments by circling the appropriate number

### Generating and organizing content

I think it is not very difficult for me to generate content for the text.

Not confident at all                      0 1 2 3 4 5 6 7 8 9 10                      Very confident

I think I could include lots of good ideas.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

I think I could write an introduction in which I introduce the issue and my standpoint.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

I think I could support my standpoint with strong arguments.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

I think I could substantiate my main points with strong supporting ideas.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

I think I could now it is not very difficult for me to organize my ideas.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

I think I could state my ideas in a well-organized form.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

I think I could explain my ideas clearly.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

### *Writing*

I think I have developed the topic well.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

I think I could write it so people understand.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

I think I know the characteristics of a good writing piece.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

I am happy with my writing.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

### *Strategy effectiveness*

I think I know the strategy for generating ideas for writing.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

I think I know the strategy for organizing the content of a written text.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

I think I know the strategy for keeping the writing going.

Not confident at all 0 1 2 3 4 5 6 7 8 9 10 Very confident

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I think I know the schemata of content organization of an argumentative text.

Not confident at all      0 1 2 3 4 5 6 7 8 9 10    Very confident

I think now I could evaluate my friend's text.

Not confident at all      0 1 2 3 4 5 6 7 8 9 10    Very confident

I feel more confident with my strategy for idea generation.

Not confident at all      0 1 2 3 4 5 6 7 8 9 10    Very confident

I feel more confident with my strategy for organizing ideas in a written text.

Not confident at all      0 1 2 3 4 5 6 7 8 9 10    Very confident

## Appendix B. Correlations between variables on three measurement occasions (Table B1) and of variables between measurement occasions (Table B2)

**Table B1.** Correlations between variable on three measurement occasions

	Measurement occasion															
	1					2					3					
	4	3	2	1	6	5	4	3	2	1	6	5	4	3	2	1
1 Total number of words counted in free writing	.347**	.137	.478**	.285*	.359**	.360**	.355**	.223	.563**	.299*	.355**	.249*	.380**	.574**	.347**	.347**
2 Total number of ideas marked in free writing	.660**	.0024	.174	.111	.721**	.048	.330*	.119	.823**	.242	.083	.133	.115	.139	.012	.012
3 Number of marked ideas in free writing coming back in text	.045	.113	.043	.087	.239	.083	.083	.083	.083	.083	.083	.083	.083	.083	.083	.083
4 Self-efficacy	.326*	.367**	.324*	.068	.439**	.439**	.439**	.439**	.439**	.439**	.439**	.439**	.439**	.439**	.439**	.439**
5 Final text length	.708**	.708**	.708**	.708**	.708**	.708**	.708**	.708**	.708**	.708**	.708**	.708**	.708**	.708**	.708**	.708**
6 Text quality	.359**	.359**	.359**	.359**	.359**	.359**	.359**	.359**	.359**	.359**	.359**	.359**	.359**	.359**	.359**	.359**

\* at the 0.05 level (2-tailed) \*\* Correlation is significant at the 0.01 level (2-tailed)

**Table B2.** Correlations of variables between measurement occasions

Variables	MO <sub>1-2</sub>	MO <sub>2-3</sub>	MO <sub>1-3</sub>
Total number of words counted in free writing	.587**	.612**	.659**
Total number of ideas marked in free writing	.340**	.363**	.492**
Number of marked ideas in free writing coming back in final text	-.039	.073	.337**
Self-efficacy	.613**	.813**	.499**
Final text length	.645**	.649**	.457**
Text quality	.360**	.392**	.274*

## Appendix C. Sample assignment on argumentative writing

Topic: animal testing

Nowadays animal experiments are widely used to develop new medicines and to test the safety of other products. Some people argue that these experiments should be banned because it is morally wrong to cause animals to suffer, while others are in favour of them because of their benefits to humanity.

Write an essay on the issue and argue for or against it. You can include information from the research resources provided.

## Appendix D. Average benchmark text on the topic of animal testing

(The text is original and not edited by the authors)

One of argumentative topics recently debated is that human should or should not testing on animals. I personally think that this is unnecessary for human development, especially in term of medical sides.

Reasons are pointed out from animal activists that animals are also lively human and they have the right to live. Animals are killed or died in medical research or scientific experiments which lead to the argument that using animals for testing is a moral crime while some other people say that animal testing has helped create new treatments and medicine for human diseases such as diabetes or malaria. However, according to Dr. Richard Klausner, former Director of the National Cancer Institute, with his research in 1998 named “Cancer Drugs Face Long Road From Mice to Men”, his findings marked that “We have cured cancer in mice for decades – and it simply didn’t work in humans.”

Since animal testing is still on track today; one of the current solutions on this argument for me is that government in each country should promote to establish organizations to protect animal rights so that scientists and researchers follow the strict rules. Therefore, results from experiments will be more meaningful and educational.

In brief, animals have been models for testing in order to promote human development, this must be considered and attract more attention from human as it affects society and every issue needs to be concerned and administered by government.

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In the original Online-First version of this article published 15 July 2019, the contributing authors were listed in the incorrect order. This has now been corrected in the present version. We apologize for any inconvenience caused.