

Original Article

Genre-based approach for teaching academic writing for undergraduate engineering students

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ABSTRACT

It is commonly agreed that academic writing for undergraduate non-native English students is a daunting task because of the low entry level of their English proficiency as well as lack of academic writing skills. A lot of attention has been paid to the writing teaching approaches to help the students learn about writing process, writing content, and genre-based perspectives have emerged as a new approach to teaching and learning academic writing. This study is carried out to (1) examine a practical application of Macken's framework of teaching writing within genre-based perspectives in the University of Science and Technology – the University of Da Nang and (2) investigate the effectiveness of genre-based perspectives in teaching academic writing for undergraduate students by analyzing the assessment instrument rubric of the diagnostic and final test. The subjects consisted of 31 freshman undergraduate engineering students at the University of Da Nang during the first semester of 2020 academic year. The instruments used in this experiment include the students' diagnostic tests, lesson plans, and their final tests. The study reveals that with the implementation of innovative treatment – genre-based writing approach, a majority of students achieved their impressively high gain score in their final writing tests as well as made good progress in their writing performance and skills.

Keywords: Academic writing, genre-based approach, undergraduate students

Submitted: 07-05-2021, **Accepted:** 13-05-2021, **Published:** 30-06-2021

INTRODUCTION

The question arises as to whether writing skills are nature or nurture. This issue is discussed in Bazerman,^[1] Bhatia,^[2] Hyland,^[3] Grabe,^[4] Kress,^[5] Oshima and Hogue^[6] stated that "Writing abilities are not naturally acquired; they must be culturally (rather than biologically) transmitted in every generation whether in schools or in other assisting environments.^[4]" This study takes the similar stance with Grabe^[4] on writing skill achievement. Writing skills are learnable and students can acquire and evolve their writing skills if they are well-trained or well-assisted in learning writing skills.

It is commonly agreed that writing is a productive skill and a lot of efforts should be made to help students with their writing tasks. In other words, they should be provided with some advice, feedbacks, and assistance in writing skills and procedures. Principles and methods in teaching writing

are various within numerous perspectives. Among these perspectives, genre-based perspective derived from functional grammar developed by Hyland.^[3] Halliday and Matthiessen offered a new and efficient way in teaching writing.^[7] Brisk claimed that genre-based perspective seems to be very helpful for teachers as it offers an easily comprehensible method to guide and instruct their students in the use of language, particularly in academic contexts.^[8] Analyzing and identifying contextual and linguistic features of the model texts in a given genre allow students to have a competence to produce their own texts of a given genre. It is a direct and clear way to teach writing.

First, what is genre? The concept of genre itself came under scrutiny for the 1st time in the late 18th and early 19th centuries.^[9] Scholars working with genre theory have made great progress in recognizing and defining the typical character of genres. Halliday, in his theory of systemic functional linguistics, assigns genre to the mode (i.e., the role of language) in a social

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context. Along with Tenor (the roles of social actors) and Field (what is happening, purpose), Mode helps predict register, or “the configuration of semantic resources that the member of a culture typically associates with a situation type. It is the meaning that potential available in a given social context.”^[3]”

Swales identified a genre as “a class of communicative events, the members of which share some set of communicative purposes.”^[10]” Duff viewed genre “a recurring type or category of text, as defined by structural, thematic, and/or functional criteria.”^[5]”

According to Martin and Rose,^[11,12] “genres are defined as a recurrent configuration of meanings and that these recurrent configurations of meanings enact the social practices of a given culture.” They also gave some examples of kinds of such genres as: (1) Stories with macro-genres: Observations, personal recounts, anecdotes, narratives; (2) histories with macro-genres: Biographical recounts, historical recounts, historical account, and explanations; (3) reports and explanations with macro-genres: Reports, explanations, genres in science and multimodal reports, and explanations; and (4) procedures and procedural recounts with macro-genres: Procedures, procedural recounts, protocols, procedural systems, and macro-genres. Johns also noted that genre has become a term that refers to oral and written responses by speakers or writers to the demands of social contexts.^[13]

This study explores and adopts genre theory from functional grammar suggested by Hyland^[3], Martin,^[14] Martin and Rose,^[11] Martin and Rose^[12] because their genre perspectives are closely related to language teaching and learning: Appropriateness of linguistic forms to achieve communicative purposes in certain contexts. In addition, according to Johns, the Sydney School of genre theory has been applied successfully in Australian schools and in adult migrant education.^[13]

What is Genre-based Approach?

Halliday and Matthiessen presented three strata of language resources available to users to achieve their communication goals: Semantics, lexicogrammar, and phonology and these three levels function in close interrelation.^[7] For writing, the first two language strata: Semantics and lexicogrammar are more essential to make written texts comprehensible and relevant. The most common writing genres in universities are academic writing such as formal letters, emails, reports, case studies, literature reviews, designing and reporting surveys, and essays. It is crucial to note that each genre differs and is acquired through writing process teaching and writing practice.^[8]

Halliday’s theory of genre has been extended and applied into teaching and learning in classrooms. According to Macken, there are three stages in writing teaching strategies within genre-based approach.^[15]

Macken adopted genre-based theory and suggested that the teachers first model the text from a genre and analyze their typical linguistic features, then assist students to find out the given genre’s social purposes.^[9] When students can remember and recognize the particular text type of that given genre, they are given a great deal of time and effort to produce their own texts. It is essential that students have more chance to work on with the linguistic possibilities of the given genre at the very beginning of the writing process.

Hyland^[3,16] shared the same three stages in teaching and learning writing [Figure 1]. They are (1) examining semantics and lexicogrammar of the model texts; (2) constructing the new texts together, started to draft, and self-edit; and (3) discussing the draft with the peers and the teachers, eventually write their own texts.

METHODOLOGY

Data Collection

With the population of 31 fifty undergraduate students in the University of Science and Technology, all participants are voluntary, and there is no compensation for their participant. The questionnaires in English were developed based on research aims and objectives. All participants were invited to fill out the questionnaire by exploiting Google Forms. In total, 187 questionnaires were filled out during online survey, resulting in a response rate of proximately 89%.

Data Analysis

This applied quasi-experimental research involves estimating the effects of the new treatment – genre-based approach in teaching academic writing for freshman engineering students. A comparison is drawn between genre-based perspective and traditional writing teaching process (pre-writing, while writing and post-writing) [Table 1].

One Group Diagnostic and Final Test Design

Bonate suggested two kinds of pretest-posttest designs.^[17] The first design is involved with a single subject that is measured on two separate occasions and researchers examine and diagnose the differences between the first and second measurements while the second one is when a single subject receives treatment intervention before the measurement of the posttest, after completion of pretest. One group diagnostic and final test design were made to measure the changes of every single subject after receiving the innovative intervention. A single group of 31 subjects took a diagnostic test measure their levels and then the innovative treatment is applied for three months. The final test was taken to remeasure their levels. Figure 2 demonstrates how one group diagnostic and final test design was carried out.

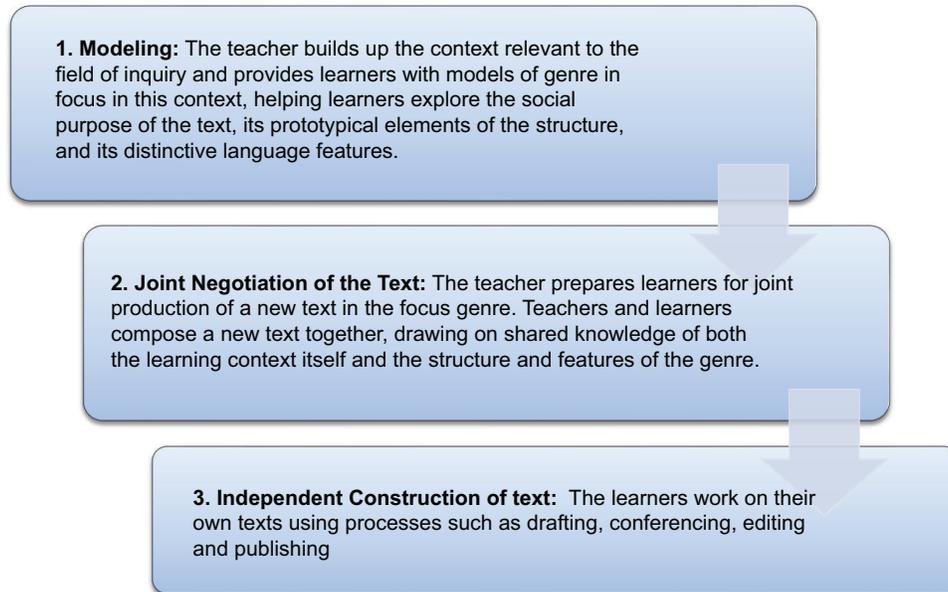


Figure 1: The framework in teaching writing within genre-based perspective^[15]

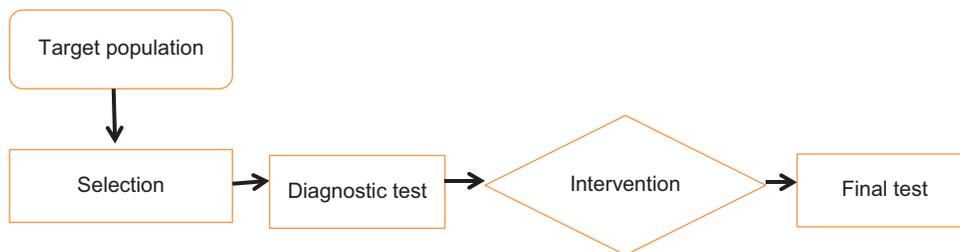


Figure 2: Diagnostic and final test design of the study

Table 1: A summary of the data sources in the study

Data source	Data collection and analysis
Diagnostic test	The scores of diagnostic test were collected and analyzed to evaluate students’ writing skills and competence
Final test	The scores of final test were collected and analyzed for change measurement
Students’ writings	The teacher marked the writing and awarded the scores on content, language based on the rubrics (Appendix 1)

DISCUSSION

Experimental Treatment

Instead of utilizing standard treatment – recursive writing approach with three teaching stages, genre-based approach was adopted as an experimental treatment to teach short essays for undergraduate students in this study. Table 2 draws a direct comparison of recursive writing approach and genre-based approach.

The study planned fifteen 3 h lectures for undergraduate student writing course. This course aims at providing students with

necessary skills for writing academic essays in English. In addition, students will be challenged to learn how to write basic paragraphs and various types of essays for their high education. “Writing Academic English” by Oshima and Hogue^[6] is adopted as textbook and class activities were designed and carried out in conjunction with three stages in writing teaching strategies developed by Macken discussed in Section 1.

At the initial stage, a model essay was shown to the students and they performed an analysis of its typical structures, language use while the teacher walked around the class offering some assistance. It is noted that it is an explicit way for them to find out how an essay is structured and why it is written in the way it is. Working with model essays enables them to have a close look at appropriate linguistic choice both within and beyond the sentence to create a comprehensive essay. In addition, students can examine the outline, the main ideas and supporting techniques employed in the model. With the assistance of brain storming strategies and lexicogrammatical learning strategies, they can draw an essay outline on their own and can reflect their knowledge, arguments, and experience in English through a well-constructed essay [Figure 3].

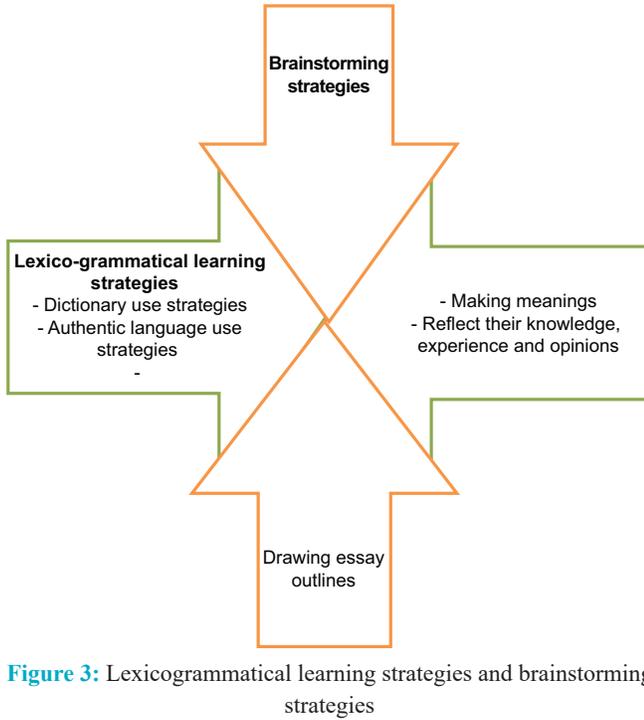


Figure 3: Lexicogrammatical learning strategies and brainstorming strategies

Table 2: A comparison of recursive writing approach and genre-based approach

Usual standard treatment	Innovative treatment
Recursive writing approach	Genre-based writing approach
<p>Pre-writing: Prepare content, grammar, and vocabulary for the task</p> <p>During writing: Engage learners in recursive writing, self-editing, and revisions</p> <p>Post-writing: Help learners reflect on and revise their writing based on feedbacks from peers or instructors</p>	<ol style="list-style-type: none"> 1. Modeling: The teacher builds up the context relevant to the field of inquiry and provides learners with models of genre in focus in this context, helping learners explore the social purpose of the text, its prototypical elements of the structure, and its distinctive language features 2. Joint negotiation of the text: The teacher prepares learners for joint production of a new text in the focus genre. Teachers and learners compose a new text together, drawing on shared knowledge of both the learning context itself, and the structure and features of the genre 3. Independent construction of text: The learners work on their own texts using processes such as drafting, conferencing, editing, and publishing^[15]

After their close look and analysis of the model essay, the teacher and learners collaborate to share their responses, opinions and reproduce a short essay based on shared knowledge of both the learning context itself and the structure and vocabulary use of the model essay at the second stage. It is crucial for the teachers to have to class management to make

sure that all students are involved in this joint negotiation. Particularly, students engaging this collaborative writing activity can share their own ideas, enhance their interpersonal skills, and become good listeners.

In the final stage of this framework, students are asked to draft their own essays by exploiting brainstorming and lexicogrammatical learning strategies they have learned. It is essential for them to proofread their own writing for grammar, word use, and content before peer-editing or final editing of teachers. To offer great assistance of editing and evaluating, teachers should give them the assessment instrument rubric to help them analyze and evaluate the writing efficiently and logically and see the expectation of their work. Pasquarelli pointed out that teachers should apply the assessment rubric giving students a score for each bullet within each category and students can determine the strengths and needs for their writing piece.^[18]

Measurement the Changes of Diagnostic and Final Test Results

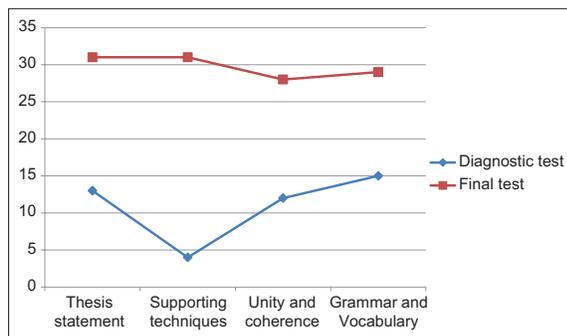
Let T1= diagnostic test, T2 = final test, ET= experimental treatment, D= T2-T1 (gain scores). D can demonstrate the differences in the results of T1 and T2.

Table 3 shows the T1 and T2 data for the comparison of the changes in the subjects. It is noted that both diagnostic and final test are well-designed to have structural and difficult equality to evaluate students' writing skill progress correctly and reliably in conjunction with their learning course outcomes. Indeed, to some extent, the diagnostic test is as challenging as the final test but a bit shorter. Therefore, the reliability of the gain scores is guaranteed and D can reflect students' performance and progress in their writing. During 3 months of three-credit writing composition course, 87% of subjects achieved $1.5 \leq D \leq 3$ and that can indicate much higher changes in their writing competence. The raw scores difference is minor in the small population of subjects (17%).

Students' diagnostic and final tests were marked in accordance with the assessment rubric [Appendix 1]. A close look at Figure 4 reveals that all of the students exploited supporting techniques in their final tests while only 13% of them utilized these kinds of techniques in their diagnostic tests. It can be seen that genre-based approach with the in-depth analysis of short essay models enabled them to explore more the typical structures and features of short essays, raise their awareness of supporting techniques, and learn how to use this techniques in each short essay skillfully and efficiently. In other words, it is extremely helpful to students' comprehension and performance of short essays. Rather similarly, Figure 4 also illustrates significant improvement in their performance in terms of thesis statement, unity – coherence, and grammar – vocabulary.

Table 3: Diagnostic and final test data for the measurement of changes

Subjects	Diagnostic tests T1	Final tests T2	Gain D
1	3	5	2
2	5.5	7.5	2
3	4.5	7.5	3
4	7.5	8.5	1
5	4.5	6.0	1.5
6	3.5	6.5	3
7	5.5	7.5	2
8	6.0	8.5	1.5
9	5.0	6.5	1.5
10	4.5	7.0	2.5
11	7.5	9.0	1.5
12	6.0	8.5	2.5
13	6.5	7.5	2
14	4.5	7.0	2.5
15	6.0	6.5	0.5
16	3.5	6.0	2.5
17	5.0	7.0	2
18	4.5	6.0	1.5
19	3.0	4.0	1
20	6.5	7.0	0.5
21	5.0	8.0	3.0
22	4.5	6.5	1.5
23	2.5	5.5	3
24	6.0	7.0	1
25	5.5	8.0	2.5
26	3.5	6.5	3
27	3.0	5.5	2.5
28	4.5	6.5	2
29	7.5	9.0	1.5
30	6.5	8.0	1.5
31	5.5	7.5	2.0

**Figure 4:** A comparison of PI achievement in the assessment rubric between T1 and T2

CONCLUSION

The emergence of the genre-based approach to the teaching of writing has made a contribution to writing progress for students in recent years. Macken has adopted this theoretical basis of the approach to develop his own 3-step teaching writing strategy. This paper reviews and discusses Macken's 3-step teaching writing strategy and applies it to lesson plan design and class activities. It is argued in this paper that the most significant contribution of the genre-based approach to writing is the achievement in higher gain scores in their final tests; the development of an explicit understanding of the nature of short essays as well as their typical lexicogrammar and content and the steady progress in their writing performance and self-revision and self-evaluation. It is hoped that this study adds to our understanding of how writing should be taught in a comprehensive and explicit way as well as what are the close relationship between language use and language learning in educational settings.

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APPENDIX

Appendix 1: Assessment Instrument Rubric

No.	Performance indicators	Scores				
		5	4	3	2	1
1.	Introductory paragraph has a general statement to attract reader's attention					
2.	Introductory paragraph has a thesis statement to state the main ideas of the essay					
3.	The body consists of more than one paragraph					
4.	The body paragraphs have supporting details: Facts, quotations, and statistics					
5.	The concluding paragraph is a summary or review of the main points discussed in the body					
6.	The essay has unity and coherence (transitional signals and the repetition of key nouns)					
7.	The grammatical structures and textual devices meet the nature of the writing					
8.	The essay has a wide range of vocabulary with relevant and natural usages					