Measuring Fluency in English Language Writing

by
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Abstract

The present study was undertaken as part of a large-scale replication of aspects of Bonzo's examination (2008) of the effects of topic selection (teacher-selected versus student-selected) on written fluency. Participants engaged in six 10-minute writing sessions over a three week period. During this time, control of topic selection alternated between teacher and student so that by the end of the study each participant had written on three teacher-selected topics and three topics of their own choice. Student output was textually analysed and assigned a score for fluency. Means for both teacher-selected and student-selected topics were then subjected to a Correlated Samples t-Test. Results of the t-Test indicate that topic control did affect written fluency, with participants scoring significantly higher when given the freedom to select their own topics.

Key Words: writing fluency, writing in English as a foreign language, topic control, timed writing, writing with computers, L2 writing

1. Introduction

In response to the increasing demand for high level language skills both in industry and academia, the study of English in tertiary settings throughout Asia is transitioning from a mere formality to a serious attempt at achieving an acceptable level of proficiency. As a part of this transition, the priority of developing English writing skills is being reassessed in many curricula. Despite these efforts, however, writing remains one of the least developed skills among EFL learners. With limited contact time between English teachers and their students, it is important to determine the most effective interventions for developing fluency, complexity and accuracy in student writing. Unfortunately, all too often the first two of these aspects of a student's development in writing are sacrificed to the third. Accuracy (or correctness) has taken undue precedence over a student's ability to create meaning in a foreign language.

There is a considerable body of research investigating the most effective ways of fostering writing skills in L2 learners. In terms of the present study, however, there are several findings that merit special consideration. Way, Joiner and Seaman (2000), for instance, argue against writing tasks designed strictly for teacher evaluation purposes, suggesting that these lack meaning for the students. In a similar vein, some researchers have made the case for content-focussed rather than form-focussed writing tasks (Jones, 1982; Smith, 1994) on the grounds that they result in greater

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levels of student engagement. Heilenman (1991), meanwhile, notes that most student writing lacks an exploratory dimension and often becomes little more than a mechanism for the practice of target forms.

The concerns mentioned above are reflected in Bonzo's original research, which opted for short writing tasks that focus on fluency and complexity rather than correctness. Crucially, student writing was not used for evaluation purposes, a fact that was made clear to the participants from the outset. While the present study differs from Bonzo's original in a number of ways, it maintains the priority of mitigating the salience of students' beliefs that their writing must be free of errors. Student output was not used for evaluation purposes, and participants were simply instructed to do their best where spelling and grammar were concerned.

2. Purpose of Study

A number of factors informed the decision to replicate Bonzo's study in an Asian context. Firstly, the study provides a unique opportunity to diagnose the strengths and deficits of the participants in the realm of written production. Secondly, the activity itself (10 minutes of uninterrupted writing in the target language) is beneficial to the students' language development. Finally, replicating the study in a Japanese tertiary setting would reveal if Bonzo's findings are generalizable to a broader population, or if his results are the product of an intervening cultural variable. As curricula evolve over time, it is important to evaluate and re-evaluate not only the linguistic goals of a course of study, but also the means and methods used to help the student achieve those goals. The majority of textbook material aimed at enhancing students' competency in writing forces the student to conform to a set of pre-selected topics in the hope that these will facilitate the productive use of various target forms. Although the present study hones in on the first of Bonzo's (2008) original research questions: "Does topic selection control (teacher-selected topics versus participant-selected topics) influence a participant's fluency in writing (as measured by a general fluency index)?" (p. 724), the underlying question the study seeks to answer is where the locus of control ought to reside in a typical writing task.

2.1 The Present Study

The present study was preceded by a small-scale pilot study which sought to ensure the efficacy of the procedures and gauge the practicality of using computers and Internet resources to collect the participants' writings. A single class of 16 students completed four 10-minute writing tasks (two teacher-selected topics and two student-selected topics) using personal computers. Rather than saving compositions on the student server, where virtually any person with access to the University network could view them, the researcher set up Moodle forums that were hidden as soon as a task was completed. As these procedures posed no major problems during the pilot, they were adopted for the present study with only minimal changes. It should be mentioned, however, that the present study required participants to complete six 10-minute writing sessions instead of the four required by the pilot. The reason for this change was based on the teacher's belief that the task was worthwhile in and of itself, and that more time on task would yield more benefit for the participants.

3. Participants

Participants for the present study were drawn from three intact classes in their first semester of university study. Although they were samples of convenience, assignment into one of the two treatment conditions (teacher-selected topic first, student-selected topic first) was random. The total number of participants after mortality was 67, 43

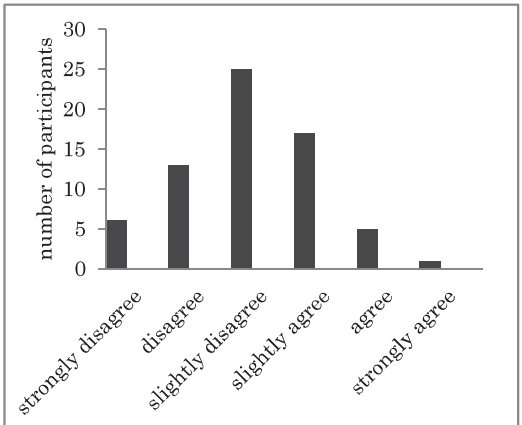

Fig.1. Generally, I like writing in English.
全体的に言って、英語で文章を 書く（ライティング）のは楽しい。

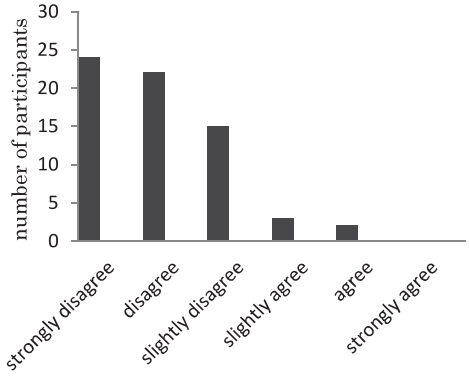

Fig. 2. Generally, I think I can write fast in English.
全体的に言って、英語で文章を書くのは速いと思う。

males and 24 females. Gender was not controlled in the study as it was not considered to be a variable of interest. 64 of the participants spoke Japanese as their first language while the remaining three were native Chinese speakers. As the Chinese native speakers were small in number (and their fluency scores did not suggest that they were outliers), they were not treated as a separate population.

Biographical information was collected from the participants prior to the study and each was asked to complete a survey related to their English language experience as well as their beliefs and habits regarding writing. Concerning age and English language learning experience, there was little variation among the participants. 64 of the 67 students who took part in the study were either 18 or 19 years old, while the remaining three ranged in age from 20 to 22 years. 12 of the participants indicated having attended supplementary English language classes at some point, while the remaining 55 experienced a standard public school English education. None of the participants reported having lived or studied abroad.

As shown above (Figure 1) most participants expressed an aversion to the activity of writing with roughly 66 percent indicating disagreement with the statement: "Generally I like writing in English." Likewise, when asked to assess their written fluency in terms of speed, the vast majority indicated a lack of confidence in their abilities (Figure 2).

4. Procedures

All three classes that participated in the study received a 30-minute orientation explaining the rationale of the study and the procedures to be followed before and after each writing session. Each participant was also provided with an explanatory leaflet (written in Japanese) for reference purposes. Both the orientation and the leaflet emphasized the fact that writing collected during the study would not be used in determining student grades for the course — a measure intended to reduce anxiety and avert the phenomenon of participants producing as little as possible in order to avoid making mistakes (Perl, 1979; Rorschach, 1986; Sandler, 1987). Participants were encouraged to write as much as possible within the time limit and to not worry about spelling or grammar. As

dictionaries were not permitted, participants were advised to write the Japanese equivalent of any word whose English translation they did not know. Prior to each of the six writing sessions students were reminded of the following: 1) write for the entire 10 minutes; 2) don't worry about spelling or grammar; 3) writings will not be used for the purpose of evaluation. Writing topics were announced after the Moodle login procedures had been completed and students had entered the appropriate topic forum. As an extra precaution, participants were asked to type the topic in the subject line of their forum posts. In the case of self-selected topics, no coaching was offered by the teacher. However, the example topic "Family" had appeared in the orientation material and many students selected this as one of their three free topics. No pre- or post-writing activities took place, nor were the participants offered written or oral feedback on their compositions.

During the pilot study, it had often been noted that students would delete phrases or entire sentences from their compositions. Fearing the effect this would have on the results of the study, it was decided to advise participants against the practice. However, as it could not practically be enforced, no attempt was made at an outright prohibition.

All three classes that participated in the study were taught by the same teacher (also the researcher) thereby eliminating the possibility that any observed differences could be attributed to a teacher effect. The research design used in the present study (see Table 1) differs slightly from that used by Bonzo (2008), in that groups alternated from one topic type to another each time the activity was conducted. Bonzo's groups wrote on the same topic type for four successive sessions before alternating.

Table 1. Descriptive statistics.

Session	Group 1	Group 2
one	Hobbies	Self-selected
two	Self-selected	Hobbies
three	Future dream	Self-selected
four	Self-selected	Future dream
five	Favorite class	Self-selected
six	Self-selected	Favorite class

5. Data Collection and Analysis

5.1 Fluency

Unlike Bonzo's original, the present study made no attempt to analyse student output for lexical or syntactic complexity. Rather the focus remained squarely on the notion of written fluency. One of the problems encountered by Bonzo in his 2008 study was how to define and measure fluency in writing. Although a simple word count could be considered a measure of fluency, it is incapable of detecting excessive redundancy, which is a common feature of emergent L2 writers. Instead, Bonzo elected to define fluency "as a ratio of total different words occurring in an entry to the total words in the entry" (p. 728). However, rather than express this ratio as a percentage, which can be misleading in situations where the ratio of unique words to total words is identical but the length of the entry differs, Bonzo adopted a more refined measurement of fluency originally suggested by Carroll (1967). The general fluency index used both in the present study as well as Bonzo's original is calculated according to the following formula: $F=U/\sqrt{2}T$ (where F is the fluency score for a particular writing sample; U is the number of unique words in the sample; and T is the total number of words in the sample).

Student compositions for each of the six writing sessions were individually copied and pasted into an online concordancing program in order to determine the total number of words as well as the number of unique words. Using these values, fluency scores were calculated for each of the

samples according to the above formula.

5.2 Results

In addressing the question of whether or not topic-selection control influences a participant's fluency in writing, mean fluency scores were calculated for the three teacher-selected topics as well as the three participant-selected topics. A Correlated Samples t-Test was then conducted on the resulting values to determine whether or not the difference in means was statistically significant. As Table 2 shows, writing fluency increased significantly when topic selection control was in the hands of the participants.

Table 2. Topic Control and the General Fluency Index

n	Teacher-Selected Mean Fluency	Participant-Selected Mean Fluency	Difference in Means	*t*	*p* (two-tailed)
67	3.2338	3.3824	-0.1487	-4.37	$p < .0001$

6. Discussion

Although the statistical analysis reveals a significant difference in the general fluency index of teacher-selected versus self-selected topics, there are a number of factors to bear in mind. The fact that the study consisted of only three writing sessions in which the participants were permitted to choose their own topics makes it entirely possible (perhaps even likely) that had the study been sustained over a greater number of sessions, participants might have run out of ideas or exhausted the number of topics they could write on with higher levels of fluency. Furthermore, as was the case in Bonzo's study, the "research did not control for redundancy, circumlocution, brainstorming while writing, or pre-writing planning, all of which contribute to differing levels of produced text" (p. 730).

On the other hand, it is important not to underestimate the strength of the findings. The Correlated Samples t-Test has the advantage of eliminating variances by essentially comparing participants to themselves. All of those who took part in the study produced writings for both teacher-selected and self-selected topics. Additionally, the intervening variable of improvement over time was contained by the short life-cycle of the study (three weeks) and the fact that topic selection control alternated between teacher and participant with each session.

7. Conclusions

EFL courses around the world, regardless of their focus or objectives, share a common struggle: how to achieve the diverse goals of foreign language learning in ways that are meaningful, authentic and engaging for the students. While this struggle has long been fought by classroom teachers, it is now being taken on by the language learning research community as well. While the present study cannot claim to provide all the answers, in the realm of writing at least, it seems that outsourcing a measure of control to the students can lead to modest improvements in learning outcomes. Although the allure of crafting writing tasks in which learners practice forms encountered elsewhere in the curriculum is great, the present study indicates that it is perhaps best avoided. The pedagogical implications of this are obvious and easy to implement in the classroom. As opposed to imposing writing topics, teachers and curriculum designers should afford learners greater opportunities to exercise the freedom of choice.

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