



The Impact of Input Enhancement through Multimedia on the Improvement of Writing Ability

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Abstract

This study examined the role of input enhancement through multimedia on the improvement of EFL learners' writing ability. The researchers focused on the use of two writing tasks with the input enhanced using the Adobe Flash CS4 Professional Program. The tasks included text unscrambling or ordering task, which required the students to re-arrange the sentences to form a paragraph, and an editing task entailing performance on cloze-elide tests. Seventy homogenous female students studying English as an L2 participated in this study. They were divided into one control and two experimental groups. Initially, a writing pre-test was given to all the participants to measure their writing ability at the outset of the study. During the 8-week treatment period, the first experimental group received the writing tasks in an animated form and used computers to perform them in groups. The second experimental group received the same input in the paper-and-pencil format but performed the tasks in groups, and the control group neither received the cloze-elide and text unscrambling tasks nor any kind of multimedia treatment; however, they practiced writing in a conventional way by analyzing the writing samples given to them in groups. At the end of the treatment, a paragraph writing post-test was administered to the three groups. The results revealed that both experimental groups had significantly outperformed the control group, with the multimedia group also having outperformed the paper and pencil experimental group, lending support to the theory that enhancing the input through multimedia provides the opportunity for extensive visualization of the content, affects learner knowledge, and thereby produces more competent writers. The results also demonstrated the effectiveness of the use of cloze-elide and unscrambling tasks in training more skillful student writers.

1. Introduction

Writing is believed to be a rational activity and the most demanding of all language skills. It is also a skill that many teachers find difficult to teach and, as a result of this, a skill many learners do not enjoy [1]. That is why during the last two decades there has been a surge in the introduction of new techniques for helping students become better writers. The results of many studies (Ellis, 1994; Fotos, 1995; Harley, 1998; Leow, 1998; Sharwood Smith, 2000 cited in Chuo, [2]) support the theory that enhanced input or input that has been rendered more salient to the learner relates to the ease with which different elements of language can be noticed and so learned. In addition, the use of multimedia provides the opportunity for extensive visualization of the content and can fortify students' imagination and creativity [3]. Classroom tasks that are performed through using technologically advanced devices such as computers, overhead video projectors, and software programs can greatly motivate students, who are otherwise usually unwilling to write in L2, to become involved in writing more than before [4]. Although the studies conducted



on either input enhancement or technology are not new, relatively few have combined the two, and even fewer have examined the effects of input enhancement through multimedia on the students' writing ability.

2. Background

An integral part of participating in a new culture setting is learning how to communicate with other people through writing [5], whether the interaction takes the form of traditional paper-and-pencil format or the most technologically advanced devices. Nowadays, traditional, mechanical, product-oriented exercises in language classes have been largely discredited by researchers, and it is emphasized that traditional writing does not provide useful feedback on the strengths and weaknesses of students and cannot be used to exactly measure students' progress due to its cultural and linguistic bias.

Byrne [6] maintains that during the recent years there has been an increased interest in doing research on L2 composition through implementing a variety of tasks in creative ways. One of these innovative ways is to use different types of cloze test. According to Farhady [7], each of the three major types of cloze tests can be used for both teaching and testing purposes. In addition, teachers can implement other motivating writing tasks including paragraph assembly, sentence combining and text-unscrambling by using pictures, photographs, and slides to provide a shared experience for students and to arouse motivation [5, 6]. Teachers can accomplish such tasks by using visually-based materials classified as (1) single or sequence of photographs, (2) physical objects, and (3) charts, diagrams, maps, etc. [8, 9]. Chuo [2] holds that visual input elicits interaction and encourages output. So, input, interaction, and output can be regarded as three vital elements in second language writing.

The kind of language input which can be enhanced through the use of multimedia involves processing linguistic complexity, quality, quantity, variety, genuineness, and relevance [10]. The term multimedia can be used as a medium with multiple content forms. It is used in contrast to media which only use traditional forms of paper-and-pencil material. Multimedia includes a combination of text, audio, still images, animation, and video. Here, the input is usually recorded and played, displayed or accessed by information content processing devices, such as computers and other electronic devices. Multimedia also describes electronic media devices used to store and experience multimedia content [3].

3. The study

3.1 Participants

The participants were 70 Iranian intermediate female students in three intact classes, which were randomly assigned to one control and two experimental groups.

3.2 Instrumentation

- a) A teacher-made achievement test consisting of 29 vocabulary, 26 grammar, and 17 reading multiple-choice items used to homogenize the participants in terms of language knowledge
- b) A paragraph writing pre-test on a given topic used to ensure the homogeneity of the three groups in terms of writing
- c) A composition writing post-test used to measure the effects of the treatment at the end of the semester



3.3 Materials

The materials used in the two experimental groups as input consisted of 8 cloze-elide and 8 text unscrambling passages. In text unscrambling tasks, the students were to re-arrange the sentences to form a paragraph by identifying the topic sentence, supporting ideas, and the concluding sentence [5]. In cloze-elide tasks, the learners were required to read the text and identify the redundant words. The multimedia group received the writing tasks animated by Adobe Flash CS4 Professional Program. Computers and overhead video projectors were used to present the input. The second experimental group received the same input in the paper-and-pencil format, and the conventional method was used to teach writing to the control group. All groups studied Interchange III [11], units 1 to 7, in the course of 8 weeks.

3.4 Procedure

Initially, all the three groups took a test of homogeneity and a writing pre-test, as a result of which 2 of them were excluded from the study. Then the 16-session (each 30 mins.) treatment period began. A pedagogical cycle consisting of four stages for teaching each paragraph type was then created and employed during the treatment:

Stage 1: Based on a model introduced by Arnaudet and Barrett [12], the classroom moves in all the three groups included (a) explanation by showing graphs and advanced organizers (with the exclusion of graphs and advanced organizers in the control group), (b) analysis of a model paragraph, (c) focus on the exclusive enumerators and their grammatical differences for each of the genres, and (d) explanation of the usage of the paragraph type.

Stages 2 and 3: The students in the two experimental groups received two unscrambling tasks and two cloze-elide tests in the second and third stages of the educational cycle. They performed the tasks in small groups by interacting and exchanging opinions in 10 minutes. Then the original form of the text was given to them to help them check their choices and pay attention to the targeted features in their groups, while the teacher provided the necessary help and feedback. The multimedia group received the writing tasks animated by Adobe Flash Program and used a computer to perform them in groups. The second experimental group received the same input in the paper-and-pencil format, and the control group practiced writing following the process approach but in groups.

Stage 4: Here, all the students wrote a paragraph individually in the class in the same genre taught to them. After drafting, they received peer-feedback under the supervision of the teacher. Then they were asked to revise and edit their work at home. The teacher provided written corrective feedback on the papers of all the three groups.

Finally, in order to measure the effects of the treatment, a writing post-test was given to all the participants at the end of the semester. Two experienced raters rated the pre-test and post-test using the analytic scale for rating composition tasks by Brown & Baily [13].

4. Data analysis and results

4.1 Homogeneity Test

Initially, a teacher-made language proficiency test was given to the three groups to ensure their homogeneity. The KR-21 reliability of the proficiency test was 0.79. The content validity of the test was also confirmed by experienced colleagues teaching the same book at the same Institute. After checking the scores for outliers, 2 students were excluded from the study and 70 comprised the main participants of this study.

Later, a one-way analysis of variance was conducted to compare the means of the three groups on the proficiency test. As shown in Table 1, there was no significant difference between the three means.

Table 1. One-way ANOVA for homogeneity test

| | Sum of Squares | df | Mean Square | F | Sig. |
|-----------------------|-----------------------|-----------|--------------------|----------|-------------|
| Between Groups | 33.82 | 2 | 16.91 | 0.279 | 0.758 |
| Within Groups | 4066.87 | 67 | 60.70 | | |
| Total | 4100.70 | 69 | | | |

4.2 Pre-test

In the next phase, a writing pre-test was administered in order to measure the participants' writing skill before the treatment. With the observation of the normality of distribution within each group on the pre-test, a Levene's test of homogeneity of variances with $F(2, 67) = 0.203$, $P = 0.817$ (two-tailed) was followed by a second one-way ANOVA. The inter-rater reliability of the writing pre-test was 0.91, showing a high consistency between the two raters. The results of the ANOVA (Table 2) also demonstrated the homogeneity of the three groups in terms of writing.

Table 2. One-way ANOVA for the writing pre-test

| | Sum of Squares | df | Mean Square | F | Sig. |
|-----------------------|-----------------------|-----------|--------------------|----------|-------------|
| Between Groups | 0.74 | 2 | 0.37 | 0.074 | 0.929 |
| Within Groups | 336.60 | 67 | 5.02 | | |
| Total | 337.34 | 69 | | | |

4.3 Post-test

At the end of the treatment, a writing post-test was administered to the three groups. The inter-rater reliability was 0.86, which was quite satisfactory.

With the observation of the normality of the three distributions on the post-test, a Levene's test with $F(2, 67) = 2.85$, $P = 0.065$ (two-tailed) was followed by a one-way ANOVA. As table 3 shows, the difference between the means of the three groups on the writing post-test was significant.

Table 3. One-way ANOVA for the writing post-test

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|-------|
| Between Groups | 130.57 | 2 | 65.28 | 19.292 | 0.000 |
| Within Groups | 226.72 | 67 | 3.38 | | |
| Total | 357.30 | 69 | | | |

Then a follow-up test of Scheffe was run to locate the exact places of difference between the means of the three groups (table 4).

Table 4. Scheffe test for the writing post-test

| (I) Groups | (J) Groups | Mean Difference (I-J) | Sig. |
|----------------------|----------------------|-----------------------|-------|
| 1 Control Group | 2 Experimental Group | -1.67* | 0.010 |
| | 3 Multimedia Group | -3.36* | 0.000 |
| 2 Experimental Group | 1 Control Group | 1.67* | 0.010 |
| | 3 Multimedia Group | -1.69* | 0.010 |
| 3 Multimedia Group | 1 Control Group | 3.36* | 0.000 |
| | 2 Experimental Group | 1.69* | 0.010 |

* The mean difference is significant at the 0.05 level.

The results of the post-hoc Scheffe test indicated that both experimental groups had significantly outperformed the control group, with the multimedia group having outperformed the paper and pencil group.

5. Conclusion

The results of this study were two-fold: first they demonstrated the usefulness of using unscrambling and cloze-elide tasks in the improvement of the participants' writing ability and, second, they proved the effectiveness of input enhancement through multimedia in helping L2 learners become better writers. The members of the multimedia group expressed great motivation and interest in performing the animated tasks and found them very helpful. The findings also lend support to the claim that the use of more technologically advanced devices in classrooms will lead to extensive visualization of the content, affect learner knowledge, and thereby learner behavior [2].

6. References

- [1] Reilly, J. & Reilly, V. (2005). *Writing with Children*. Oxford: Oxford University Press.
- [2] Chuo, T. W. I. (2007). The effects of the web quest writing instruction program on EFL learners' writing performance, writing apprehension, and perception. *TESOL-EJ*, 11 (3), 1-27.
- [3] Gascoigne, C. (2006). Toward an understanding of incidental input enhancement in computerized L2 environments. *CALICO Journal*, 24 (1), 147-162.
- [4] Cunningham, K. (2000). Integrating CALL into the writing curricula. *The Internet TESL Journal*, 6 (5). Retrieved August 26, 2007, from <http://iteslj.org/Articles/Cunningham-CALLWriting/>
- [5] Raimes, A. (1983). *Techniques in teaching writing*. NY: Oxford University Press.
- [6] Byrne, D. (1988). *Teaching writing skills*. Harlow: Longman.



- [7] Farhady, H. (1996). Varieties of cloze procedure in EFL education. *Roshd Foreign Language Teaching Journal*, 12 (44), 217-229.
- [8] Kang, S. (2004). Using visual organizers to enhance EFL instruction. *ELT Journal*, 58 (1), 58-66.
- [9] White, R. & Arndt, V. (1991). *Process writing*. Harlow: Longman.
- [10] Doughty, C. & Long, M. H. (2002, February). *Creating the optimal learning environment in a DL language course*. Paper presented at Title VI conference on distance learning of the less commonly taught languages. Retrieved on January 20, 2003, from <http://langinnovate.msu.edu/commpapers.html#doughty>
- [11] Richards, J.C., Hull, J., & Proctor, S. (2005). *Interchange* (3rd ed.). Cambridge: Cambridge University Press.
- [12] Arnaudet, M. L. & Barrett, M. E. (1990). *Paragraph Development: A Guide for Students of English*. New Jersey: Prentice Hall Inc.
- [13] Brown, J. D. & Baily, K. M. (1984). A Categorical Instrument for Scoring Second Language Writing Skills: Language Learning (pp. 39-41). Michigan: Language Learning Research Club, University of Michigan.