The Effects of Computerized Graphic Organizers on Students’ Performance in English Reading and Writing Tasks

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ABSTRACT

The study investigated the effects of the intervention of a computerized graphic organizer (CGO), Inspiration, on a group of EFL college students’ performance of English reading-to-write tasks. Students were given two pretests to determine their entry levels of English proficiency of reading and writing. After the CGO treatment, they were given two posttests. Both pre- and post-intervention measurement involved writing a summary of, and then a response to a source article, both being rated based on a writing rubric. The summaries were further analyzed using idea units. An evaluation questionnaire was also given to understand the participants’ perceptions of the CGO treatment. With the assistance of Inspiration plus the traditional instruction, the participants’ reading and response writing performance was found to have improved, also confirmed by their perceptions. The benefits of the cognitive strategy inherent in graphic organizers plus computer facilities are argued to contribute to the gains.

Keywords: Computerized Graphic Organizers, EFL, English, Reading Task, Writing Task

INTRODUCTION

Some English teachers may have thought that it was difficult to combine reading with writing practices, and thus have designed reading and writing activities separately (Wallace, Pearman, Hail, & Hurst, 2007). To perform authentic communicative tasks, learners rarely use either reading or writing alone; reading and writing practices are often mutually supportive (Grabe, 2003), and reading comprehension can be strengthened through writing practices and vice versa. Thus, teachers can help students develop literacy strategies that successfully facilitate their integrated reading-writing tasks. Among several pedagogical techniques, Wallace et al. (2007) suggest that graphic organizers can be utilized to enhance students’ reading
comprehension by enabling them to organize and summarize their thoughts, and then generate in-depth responses through individual or group writing activities. In the process of combining reading with writing, students can be more aware of text structures through graphic organizers. It can be expected that once students become familiar with L2 textual patterns, they can transfer skills learning from reading into their follow-up writing task through the experience of adopting graphic organizers as cognitive support.

Graphic organizers (GO) thus become commonly used devices for teaching reading and writing skills. They are often referred to as several other synonyms, such as flowcharting, concept mapping, or semantic mapping (Chuang, 2007; Geva, 1983; Huang, 2003; Kuo, 2003; Liu, Chen, & Chang, 2010). As useful pedagogical devices, graphic organizers have been highly recommended and widely used in English- as-a-first language (L1) and second language (L2) instruction. Potentially, reading-writing unified activities can accelerate the effectiveness on language learning through the assistance of using graphic organizers which highlight the text structure and relations among main ideas and details. A body of research on GOs has documented the effectiveness of their applications to either reading or writing tasks. In terms of reading instruction, GO implementation has been shown to enhance reading comprehension on students of different educational levels (e.g., Huang, 2003; Tai, 2008). In writing instruction, GO strategies also help students better generate and organize ideas at the pre-writing stage (Chuang, 2007; Sinatra, 2000). Meanwhile, Ojima (2006) noted that learners applied GO strategies distinctively based on their personal experiences and motivation.

With the advent of widespread technological advancement for enhancement of the literacy skills (e.g., Chang, 2013; Liou & Lee, 2011), aside from traditional paper-and-pencil graphic organizers, the use of computerized graphic organizers (CGO) has been found effective in studies on Taiwanese college students for either writing or reading purpose ((Liu, Chen, & Chang, 2010; Sung, 2008). However, little research using paper-based GOs or CGOs has been conducted from an integrated reading–writing perspective. Such a gap indicates a strong need for investigating reading and writing together when CGO is brought to the picture in order to prepare students for the real-world multi-skill communicative needs.

Different assessment measures used in the past GO literature were argued to be responsible for their mixed findings in L2 classes (Grabe, 2003; Jiang & Grabe, 2007). Common reading comprehension tasks, such as multiple-choice questions, fill-in graphic organizers and the recall of idea units, did not seem to be equally sensitive to GO facilitation (Jiang & Grabe, 2007). Compared with other measures, it is suggested that summarization can serve as a more comprehensive measurement to demonstrate the effects of GO training (Jiang & Grabe, 2007). Thus, the use of summary evaluation enables teachers and researchers to reexamine and explore L2 literacy development from a reading-writing perspective (Grabe, 2003).

To fill the gap of the previous literature, the purpose of the present study is to explore the use of computerized graphic organizers in a reading-writing task by examining students’ written summary as well as response performance. The following sections include relevant literature review concerning the relations between reading and writing, GO use in both reading and writing instruction, a brief introduction of computerized graphical organizers, and last, the needed research on this topic.

**REVIEW OF THE LITERATURE**

Interaction between reading and writing has been a main concern in academic English contexts since reading and writing may enhance the learning of content, the development of literacy skills, and the acquisition of language abilities (Grabe, 2003). The body of L1 reading-writing literature mainly focuses on their shared processing and knowledge sources, interaction between reading and writing, and content learning through reading and writing skills
The Impact of Four Reading Motivational Constructs on Motivating EFL Learners to Read Online Texts in English
www.igi-global.com/article/impact-four-reading-motivational-constructs/77627?camid=4v1a