



# Online interventions to help college students to improve the degree of integration of their argumentative synthesis

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## Abstract

Writing an argumentative synthesis is a common but demanding task, consequently undergraduates require some instruction. The objective of this study was to test the effectiveness of two interventions on integrative argumentation: one of them was focused on the product features of argumentative texts; and the other one on the processes involved in the written argumentation. Sixty-six undergraduate students participated voluntarily. As an academic task, they were asked to write a pre-test synthesis after reading two sources which presented contradictory positions about an educational issue, then to read two new texts about a different but equivalent issue, and write a post-test synthesis following one of two types of instructional virtual environments. The instructions, implemented in Moodle, presented similar tools, employing videos, graphic organizers, and exercises. The first condition ( $n=33$ ) focused on the linguistic features while the second ( $n=33$ ), focused on the process, including explicit instruction and a script with critical questions to guide the reading and writing processes. In this study we have also analyzed how the students in the process condition answered some of the critical questions. The results show that the level of integration of the written products improved in both conditions, although this improvement was more pronounced in the process intervention. Nonetheless, the products that achieved medium and maximum integration were still limited. Despite the lack of a relationship between how students answered the critical questions and the level of integration in their post-test, the case analysis highlights certain educational implications and further research.

**Keywords** Synthesis writing · Argumentation · Academic writing · Online learning · Critical questions

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