Writing Supported by Virtual Reality

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In a recently published article in *British Journal of Educational Technology*, co-authored by Hwang & Chang (2019) examined how the spherical video-based virtual reality (SVVR) approach can support descriptive article writing in Taiwan senior high school writing classes.

In traditional language learning activities, as the authors identified, there is usually no chance for students to develop in-depth feelings about the context of topics, resulting in low learning motivations and limited expression in the writing process.

To provide in-depth experiences and to facilitate students’ descriptive article writing, the study introduced an SVVR system that used 360-degree photos or videos in a VR environment supporting students before they started to write. Two classes of 11th graders participated in the study, 30 students being allocated to the experimental group, and 35 students to the control group. After students understood the writing tasks and read a descriptive article text about the Jade Mountain in Taiwan, the students in the experimental group used the SVVR to experience the ascent of the Mountain, while students in the control group only watched videos and saw photos of the Mountain. The study was conducted in 2 weeks with 3 hours of class per week. Before and after that, a pre-test and a post-test on their writing performance and questionnaires were conducted. The results showed that:

- While students’ writing performance in both groups was similar in the pre-test, students who learnt with the SVVR approach obtained better post-test results in terms of content and appearance than students in the control group, but not in the organization or the vocabulary use.
- Students learning with the SVVR approach also outperformed control group students in creativity tendency and writing self-efficacy in the post-test.
- However, the experimental group students and control group students did not differ in learning motivation and cognitive load in the post-test.

The authors suggested that SVVR is worth promoting in school settings for language courses and experiential learning activities, because it is a low-
tech and low-cost way to provide deep experience in specific learning contexts.