

Climate Change Literacy Through Writing: Successes in an Undergraduate Writing Course

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Basic science literacy, especially with regards to climate change science, is often lacking in traditional K-12 and undergraduate education. This leads to broad misconceptions of scientific ideas based on distorted presentations of science in the media and via colloquial understanding. Current educational research suggests that the teaching and learning of science can happen in many ways, whether it is through lectures, labs, research, inquiry or informal learning activities. This study was motivated by the desire to investigate the ability to teach climate change science content in the non-traditional mode of an undergraduate composition and writing course. This technique offers educators another option for integration of climate change material into their curriculum. The study incorporates the assessment and evaluation of student writing, in-class participation and student self-evaluations from “Writing about Change: Global Environmental Change and Society” a writing course that fulfilled a requirement to graduate from the University of California – Santa Cruz. The course was taught Winter Quarter 2007 with a total of 28 days of instruction and the participation of 20 undergraduate students.

The overarching goals of this study can be broadly classified as attitudinal, skills development and content retention. This study was designed to address three broad questions related to the above broad goals: i) Did students leave the class more comfortable and confident with climate change issues and content? ii) Did students develop skills that are useful for reading and writing about scientific material related to climate change? iii) What did students learn (retain): more general concepts or specific facts regarding climate change? Analysis and coding of student work clearly show that students were successful in developing skills for understanding and utilizing scientific information via writing and making thoughtful judgments regarding the reliability of climate change science in various media. Additional analysis of student work and responses are necessary in order to fully evaluate the depth and breadth of student understanding and retention of scientific content and concepts.