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Award Abstract #0822354

Science Literacy through Science Journalism

NSF Org: [DRL](#)
[Division of Research on Learning in Formal and Informal Settings \(DRL\)](#)

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Program Manager: Julio E. Lopez-Ferrao
DRL Division of Research on Learning in Formal and Informal Settings (DRL)
EHR Directorate for Education & Human Resources

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ABSTRACT

This proposed four-year effort envisions a new approach to promoting science literacy through science journalism as a subject of study. It is premised on a critical set of assumptions: (a) Most citizens have the need to interpret scientific information found in popular media (e.g., newspapers, magazines, online resources, science-related television programs); (b) science journalism provides reliable, well-researched science information; (c) authentic science writing provides motivation to learn; and (d) standards

and rubrics specifically developed for evaluating students' science-related expository text do not exist. Thus, the project approaches science journalism as a means to assist students to investigate and coherently write about contemporary science and to learn to base assertions and descriptions on reliable, publicly available sources. To this end, the project aims to develop, pilot, and evaluate a model of instruction that focuses on the following aspects: (a) Identifying questions of both personal and public interest; (b) evaluating contemporary science-related issues; (c) making available highly regarded sources of information as exemplars (in-print, online, interviews); (d) synthesizing information; (e) assessing information based on fact-checking using the five Ws (who, what, where, when, and why); and (f) coherently explaining claims and evidence.

A hypothesis and a set of research questions guide this effort. The hypothesis is the following: If participating students successfully attain the fundamental elements of the proposed model, then they will become more literate and better critical consumers and producers of scientific information. The main guiding research question of the proposed activity is the following: Does the teaching of science journalism using an apprenticeship model, reliable data sources, and science-specific writing standards improve high school students' understanding of science-related public literacy? Secondary questions include (a) Is the teaching of science journalism an efficacious, replicable and sustainable model for improving science literacy?; (b) How useful are science-related standards and rubrics for scaffolding and evaluating students' science writing and science literacy?; and (c) What is the nature of the engagement in science that this apprenticeship invites?

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