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Judith De La Cruz
Northeastern Illinois University

Makai DeNeve-Arnham
Northeastern Illinois University

Scott Elgazar
Northeastern Illinois University

Anna Fimmel
Northeastern Illinois University

Sara Fox
Northeastern Illinois University

See next page for additional authors

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Presenter Information

Judith De La Cruz, Makai DeNeve-Arnham, Scott Elgazar, Anna Fimmel, Sara Fox, and Huseyin Colak

THE EFFECT OF HISTORICAL CASE STUDIES ON STUDENT'S UNDERSTANDINGS OF THE NATURE OF SCIENCE

Judith De La Cruz, Makai DeNeve-Arnham, Scott Elgazar, Anna Fimmel, Sara Fox, and Huseyin Colak, Ph.D
College of Education, Northeastern Illinois University, Chicago, IL, 60625

Preliminary research on the use of case studies in secondary science education has focused on modern examples. However, there is a paucity of research detailing the relationship between the use of historical scientific case studies and students' knowledge of the nature of science (NOS). Knowledge of the NOS is vital for a rich understanding of the discipline, and is needed in order for students to connect science-as-practiced to their lives. Our research seeks to delineate the relationship between the use of historical case studies and NOS. We seek to accomplish this first by writing a series of historical case studies, then identifying a set of questions to pose to students (either in survey or multiple-choice form) based on a comprehensive literature review. Students from Chicago public high schools will then be asked these questions before and after their exposure to the case studies. These surveys will serve as data for data collection. We hope that the creation of these historical case studies will expand students' NOS and allow them to connect scientific practice to their lived experiences. We also seek to generate a suite of historical case studies for use in any science teacher's classroom, and a template for any educator who want to repeat our action research.