

Paper Crane Project Progress Report 2022-2023

- Project Name** : Paper Crane Project
- Project Purpose** : To develop a curriculum to teach nuclear history and discourse to Chicago Public School middle school students.
- Project Member** : Yuki Miyamoto, Aiko Kojima Hibino, Jessica Kibblewhite, Laura Gluckman, Sarah Zhou Rosengard
- Project Funders** : Union of the Concerned Scientists, Hiroshima Peace Creation Grant
- Report period** : September 2022 ~ August 2023

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1. Project Activities (as of August 26th, 2023)

a. Target subjects

6th grade students at National Teachers Academy (NTA) in Chicago Public Schools (CPS)

b. Duration

Preparation: September, 2022 ~ April, 2023, Teaching: April ~May, 2023. The project is ongoing.

c. Background

In summer 2019, a Chicago Public high school located in the north of the city discarded [a number of copies of John Hersey's *Hiroshima into a dumpster*](#). In light of this incident, we realized how little students learn about nuclear weapons (their power and aftereffects) even in college, and we thought that particularly in the city of Chicago, home to the University of Chicago, which made a significant contribution to the Manhattan Project, the significance of nuclear weapons in history and their negative legacy should be taught in pre-university education. Also inspired by the passage of "[Teaching Equitable Asian American Community History \[TEAACH\] Act](#)" in Illinois in April 2021, which requires all public schools to teach Asian American community history in the 2022-23 school year, this project aims to create a curriculum to teach nuclear history and discourses to middle school students in CPS, that will be adopted by many schools in Chicago and Illinois after the 2022-23 school year, when the TEAACH Act takes effect.

In the school year 2021-2022, we developed a pilot version of the curriculum and taught to 6th grade students at one CPS school, NTA. Structured Academic Controversy (SAC) method proposed by Jessica Kibblewhite and Laura Gluckman was used to teach the unit for both social science and science. SAC is a method in which both sides of an issue are examined and a conclusion is reached through discussion. Unlike debates, the purpose is not to decide who wins or loses, but to examine the issue from all angles and build a common understanding. The SAC theme for social science/ELA was "Should the U.S. government have used nuclear weapons against the Japanese people during World War II?" and the theme for science was "Should the U.S. government make nuclear power the primary source of electricity to reduce CO2 emissions?" In social science, students came to the consensus that the U.S. government should not have used nuclear weapons against the Japanese people during World War II with the consideration of racism and its impact on humans and society. In science, the class discussion led to the conclusion that nuclear power could be effective as a countermeasure against climate change, but that its danger and unethical nature were problematic.

d. Progress (September 2022 ~ August 2023)

Goals for School Year 2022-2023

Based on the outcome of the 2021-2022 pilot curriculum teaching, we identified goals for the School year 2022-2023. First, we planned to expand the teaching to the entire 6th grade students at NTA as opposed to half of the grade in the previous year. This expansion of targeted students had another significance because, at NTA, 1 of 4 classes is a gifted class by Chicago Public Schools definition, which means that students' competency in English and Math is 1-grade level ahead, while the other 3 classes are regular classes. In the previous year, the classroom that was taught with our pilot curriculum was the gifted classroom plus one general classroom.

Expanding this curriculum to the entire grade means that the majority of the students who would learn our curriculum will be in general classrooms in which often many students' competency do not reach the expected grade level. Teaching this unit in general classrooms would actually reflect a more accurate reality of the public school environment. Therefore, our second goal is to modify and restructure our pilot curriculum to be more comprehensible and accessible to students whose academic skills are at 6th graders or below level. Third, as we observed the students' confusion in the debate in science last year, we decided to restructure the unit in science. In the previous year, Laura Gluckman started the unit with basic nuclear physics and moved to radiation's health and environmental impact. Students also learned about climate change and they seemed to be perplexed by all the information at hand. Our goal this year was to restructure a science unit to encourage students to advance their critical thinking about nuclear power.

Unforeseen Contingencies Which Affected the Project's Progress

Although we started the school year with the identified goals, we could not make progress as intended due to several unexpected events. First, the pandemic's impact on students' academic achievement was serious (ref. ["COVID Hurt Student Learning" by Education Week, November 30, 2022](#)), and we found that the reading and comprehension skills of many students this year were 2 or 3-grade levels below the expected level for 6th graders and they are not equipped with necessary skills to engage in a complicated discussion surrounding nuclear weapons and power, such as critical reading, citing sources, making a claim based on evidence, etc. Second, Laura Gluckman, our science teacher, had a medical condition which forced her to take a leave from December to April. Third, ELA teacher left the school in December, and Jessica Kibblewhite, our social science teacher, had to take over both social science and ELA starting in January, which enormously took her capacity.

e. Results and Impact

Social studies: Although Jessica Kibblewhite taught related units and concepts, such as immigrants and diaspora, she could not teach the nuclear unit this school year.

Science: Laura Gluckman restructured the nuclear unit to start with environmental justice this year in opposition to nuclear physics in the previous year. We also welcomed [Sarah Zhou Rosengard](#) as a new member of the project. She is an oceanographer and an Assistant Professor of environmental chemistry at School of the Art Institute of Chicago. In collaboration with Sarah Rosengard, Laura Gluckman prepared the unit and started teaching it in April, however, there was not enough time to complete the unit with the students' final project. Please refer to her report attached below.

Yuki Miyamoto, Aiko Kojima Hibino, Laura Gluckman and Jessica Kibblewhite wrote an article on the School year 2021-2022 activity and submitted it to [The Asia-Pacific Journal: Japan Focus](#). The manuscript was peer-reviewed and requested a revision. The revised manuscript was submitted and awaiting publication.

Yuki Miyamoto and Aiko Kojima Hibino took an interview our School Year 2021-2022 activity by Nuclear Hotseat Podcast, which was published on October 4, 2022.

- October 4, 2022, Nuclear Hotseat (nuclear issue podcast) ["NH #589: "Cool" Nuclear History Education for Kids – Prof. Yuki Miyamoto, Aiko Kojima Hibino"](#)

2. Financial Report

The project is funded by Union of Concerned Scientists (\$9,950) and Hiroshima Peace Grant (\$1,797.76). After the first year's spending, we started School Year 2022-2023 with a balance \$6,242.27 and \$511.82. With the limited progress, we expended significantly less than we proposed for the School Year 2022-2023. The remaining balance as of August 26th, 2023 is \$4,783.99 and \$451.91. The project is ongoing and the remaining amount will be used for next year. The details of expenditure and the next year's budget were reported to both funders.

3. Future Plans

In July 2023, we reviewed this year's progress and discussed future developments. First, both Laura Gluckman and Jessica Kibblewhite will leave 6th grade next year and will teach 7th-grade science and 8th-grade social science respectively. Sarah Rosengard will take a leave in November. Second, Laura Gluckman would like to start front-loading much earlier than in previous years, in September. The majority of the 7th grade science unit will be life science, and the nuclear unit will be in accordance with its curriculum requirement. Jessica Kibblewhite also would like to start front-loading in September. She plans to teach the nuclear unit in accordance with the 8th grade Civics in the second semester of which the Action and the Research Project will be a part. We reached out to [Facing History and Ourselves](#) in the hope that the collaboration would help expand this curriculum to other schools and grade levels.