

## Big History and Big History Education in Korea

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Big history is one of the attempts to analyze the whole history of the Earth with a balanced perspective and it deals with the largest time and space scale. Big history begins from the big bang, the origin of the universe and tries to find out the origins of everything on the basis of interactions between human beings and the nature, and the whole universe beyond the human-centered historical narratives. Today, we need to understand history of the whole human beings to overcome global problems such as global warming, nuclear war and global poverty. So, big history emphasizes the large pattern through that human history is a part of history of the Earth, and history of the earth is also a part of the whole universe.

David Christian, who is a professor of Macquarie University in Sydney, Australia, used big history for the first time. Since 1989, he has taught history of the whole universe and he coined the term big history in 1991. He suggested that there are different time scales in history, so we need to study the whole past to understand human beings as the descendent of *Homo sapiens*, and big history, which goes back to the origin of the universe, can show various scales of time and space to put together the past.

In this sense, big history needs different disciplinary backgrounds and knowledge to understand human history, history of the Earth and the universe. As a result, big history has to be based on the interdisciplinary studies that emphasize communication, coexistence and convergence more than any other subjects. And it is necessary in that we can solve many global problems with the perspective of big history.

Big history project begins with Bill Gates, the former president of Microsoft. He mentioned that big history is a discipline which contains everything within a single frame and big history is the proper methodology that makes possible to break the boundaries between

the natural sciences and humanities with interactions and communication. So, they started big history project, which is online education program in 2011. Big history project divides time and space with eight thresholds. Threshold is the phase or situations that new different complexity happened. The first threshold is the big bang and the last threshold is Anthropocene. At first, there were 5 pilot schools in the United States and 2 pilot schools in Australia. Then it spreads so rapidly, so there were more than 50 schools in the United States and 20 schools in Australia, and 5 pilot schools in Korea in 2012.

Since 2010, I have taught big history to university students, but I had a chance to teach big history to high school students in fall semester in 2012 as a big history pilot program. This special big history class began as an extra-curriculum for high school students with the help of Korea Foundation for the Advancement of Science and Creativity (KOFAC). Big history as an extra-curriculum, Korean big history pilot program tried to adopt big history education model, which analyzes different scales of time and space from the Big Bang, the creation of the Universe 13.8 billion years ago to present and to future to improve flexibility and creativity for teen agers in Korea.

This big history pilot program had three purposes. The first is to develop creative convergence understanding between the natural science and humanities. The second is to understand the nature and characteristics of global society and the third is to solve global problems. To accomplish these purposes, we began big history pilot program in Korea. This program started at two middle schools, two high schools and one class at my university. These were big history pilot program that is performed in the United States and Australia as a new curriculum to pursue the convergence between the natural sciences and humanities. So, it can be corresponded with global society because big history education needs global cooperation.

Big history pilot program proceeded for ten times, and every time was composed one hour lecture and one hour activity. For this curriculum, we supplemented eight thresholds of big history project, and we made the main themes for big history class. To begin big history pilot program, the Institute of World and Global History at Ewha Womans University made a course big history teachers' workshop for ten times. This workshop was to understand main concepts of big history, such as ingredients, goldilocks' conditions, complexities and eight thresholds and apply these things in the real education situations. Especially, David

Christian, one of the founders of big history had participated in teachers' workshop and we discussed the purpose and methodology of big history education in Korea.

Now, I explain big history pilot program more specifically. There were two middle schools that implemented big history program, one is public and ordinary school and the other is private and special school, because most students were talented students. The purpose of big history pilot program in different levels of middle school was to cultivate new convergence perspective on the foundation of communication and integration and to examine possibilities of creativity with big history's perspectives in different educational levels.

Students who participated in big history pilot program were 8<sup>th</sup> and 9<sup>th</sup> graders in middle school, so teachers taught general frame and structure of big history by explaining main concepts of big history with storytelling in one hour lecture. And they experienced big history concepts through performance, paintings and mind maps.

Big history pilot program in high schools also began two different types, such as public high school and private high school. This was to compare with two different situations of high school, because there are two types of high schools in Korea. One is high school that just follows the decisions of Korean government and the other is high school that has more choices to select curriculums. So we began big history pilot program in different levels to compare the results and meanings of big history education. Especially, high schools in Korea teach subject called "common science", but it is just a combination of physics, chemistry, biology and earth science without storytelling. So, common science has lots of difficulties and limitations as a convergence education. In this situation, many teachers expect that big history can be an alternative for common science for the development of convergence education in Korea. I had big history pilot program at my university, Ewha Womans University for 30 high school students. They were selected 30 different high schools in Seoul and I had 10 times of big history classes, one hour lecture and one hour activity. Most students liked big history perspectives and some of them wanted to be a big history teacher. They realized the importance of convergence education through big history's perspective and different activities helped them to understand concepts, frames and patterns of big history more easily.

Of course, there are many things for spreading big history in Korea. Teachers who participated in big history pilot program pointed that we need more specific structure and

materials for education and interesting things for relationship between the lecture and the activity. In spite of these limitations, big history pilot program was the first convergence education between the natural sciences and humanities and it showed that big history can help students not only to have more information and knowledge, but also to have meaningful knowledge within a larger frame.

Now, we made a big history regular course at Hana Academy Seoul, and we are going to teach big history for 11<sup>th</sup> grader for one year course. We need many things such as textbook, class material, curriculums because most big history materials are English. We are publishing 20 volumes of big history series in Korean for teenagers. This series include 8 thresholds of big history project and 12 mini thresholds. Some of books already published and I am writing about the 4th threshold, the origin of agriculture.

I have taught big history for 5 years in Korea, and it was hard because there were few people who study big history right now. But I expect that it will be better with big history pilot program and regular course and I think big history is one of the most interest things in my life and others.