Science Education via Archaeology: Enriching High School Curricula through Adapted Primary Archaeology Literature

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1. Research Context

Archaeology is rarely discussed in grade school classrooms. Recent research[1,2,3] has demonstrated the utility of adapted primary literature for improving student comprehension of, engagement and interest in science. We present a preliminary overview of related research focused on improving student understanding of archaeology using adapted literature.

2. Research Aims

Our research has two primary aims:
1) to foster better student understanding of archaeology in high schools
2) to develop adaptations of primary archaeology literature for use in high school curricula.

3. Methods

We followed well-established methods for literature adaptations in science[1,2,3]:
- selected an archaeology paper with clear reasoning and one which employs scientific methods[4]
- the elements of reasoning[5] were isolated and defined in the paper
- judged critically which concepts and graphics should be clarified and/or maintained in the adaptation
- paraphrased and condensed text.


The original paper by Bell and Renouf focuses on the relationship between Maritime Archaic Indian (MAI) site distribution and relative sea level (RSL) in Newfoundland (see supplement 1).

They ask two questions: Can RSL history explain the:
1) uneven distribution of late MAI (5500-3000 BP) sites?
2) absence of early MAI (8000-5500 BP) sites?

To make the study easier to follow for students (i.e., non-archaeologists), the original text was paraphrased using non-academic language (see supplement 2).

The word count was condensed: original: 5,028 words; adaptation: 2,243 words (not including references).

We reduced the number of and enhanced original (Fig. 1) figures with colour (Fig. 2) to make them more visually appealing and easier to follow.

5. Implications

There are several implications of incorporating adaptations of primary archaeology literature into high school curricula. These include:
1) a deepened grasp of the source of archaeological knowledge and scientific knowledge in general
2) citizens better placed to interpret scientific findings and to appreciate their sources of strength as well as their limitations
3) an introduction to “living knowledge” or knowledge in the making instead of knowledge that is already fixed
4) may foster improved interest and engagement in archaeology
5) could lead to better integration of archaeological subject matter in high school curricula.

6. Next Steps

This project is on-going and we plan to:
1) develop a series of adapted primary literature on Newfoundland MAI and other relevant archaeological topics
2) make these series available online including interactive Flash® applets and questions.

We encourage others to follow suit and develop adaptations in archaeology and other social science subjects.