

**AN ANALYSIS OF THE STATE OF ARCHAEOLOGY IN CANADIAN
PUBLIC SCHOOL CURRICULA**

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This article examines the nature and extent to which archaeology is covered in the Canadian public school curricula. I argue that the best way for the public to understand the importance of archaeology and heritage conservation is through school-aged education. To determine the extent of archaeological material in the school curricula, I examine the Social Studies curricula in each province and territory, and then review this coverage through statistical comparative analysis, determining that archaeology is not taught well, and when it is taught, lacks a Canadian focus. I also evaluate my findings to the guidelines developed by the Canadian Archaeological Association, to determine if its expectations for students' achievement in archaeology are appropriate and are being met, and identify what future steps for both the school system and the CAA might be to better address these guidelines. My research highlights the gap between the association and the curricula, and pinpoints what is lacking in archaeological education in Canada.

Archaeologists have long known that public support of archaeology is key to effective heritage legislation and the prevention of site vandalism and looting (Smardz Frost 2004). To get such support, the public must have a basic knowledge of archaeology. A national survey of the public's opinion of archaeology, shows that Canadians are interested in archaeology but do not know much about its role in Canada, or who is involved (Pokotylo 2002). As well, an earlier regional study discovered that British Columbians get most of their information about archaeology through museum programs, television, and travel (Pokotylo and Guppy 1999). Although Pokotylo and Guppy (1999:415) "expect academic sources to be more important in the future as archaeological content in school curricula continues to increase and the 'baby-boom echo' ... comes to age," a survey of introductory archaeology students at a Canadian University (Pokotylo 2007) showed they had little to no archaeology background and did not understand the discipline, let alone its role in heritage conservation. Academics might assume that school curricula provide archaeology education, but as undergraduate students entering the field do not have a basic knowledge of archaeology, this does not seem to be the case. To address this issue, I look directly at the school curricula to determine if and how archaeology is being taught in Canadian public schools and the extent to which the discipline is providing support.

METHODOLOGY

To determine the extent to which archaeology is being taught in Canadian public schools, I reviewed the curriculum guides for each province and territory. Within these guides are Prescribed Learning Outcomes (PLOs)—specific outcomes that students need to master. Depending on the province or territory, there can be many implicit PLOs in a specific course’s grade level, or just a few detailed ones. However, as they state the objectives that a student must reach, PLOs are the best way to determine if Canadian students are learning about archaeology. My first task was to determine what PLOs could be used to teach archaeology.

As each province and territory creates and manages its own school curricula, I had to examine each province and territory’s curriculum documents. There are three exceptions—Yukon uses British Columbia’s curricula; the Atlantic Provinces (New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland) use a shared curriculum framework; and Nunavut uses the Common Curriculum Framework within the Western and Northern Canadian Protocol for Collaboration in Education (WNCP). This latter curriculum was created with the collaboration of all the Western and Northern provinces and territories but is specifically used only by Nunavut.

To determine what PLOs could be used to teach archaeology, I looked at mandatory grade levels of Social Studies. Social Studies is mandatory up until

grade 9, 10, or 11 (depending on the province or territory). It replaces history and is defined as:

...a multidisciplinary subject that draws from the social sciences and humanities to study human interaction and natural and social environments. The overarching goal of Social Studies is to develop thoughtful, responsible, active citizens who are able to acquire the requisite information to consider multiple perspectives and to make reasoned judgments. The [curriculum] provides students with opportunities as future citizens to critically reflect upon past events and issues in order to examine the present, make connections with the past, and consider the future [BC Ministry of Education 1997:1].

Social Studies curricula are the best option for looking at archaeology. Although other subjects might briefly discuss the subject, Social Studies has the most potentially relevant material. In senior high school grades, students have the choice of taking several courses within Social Studies including law, civics, history, and geography, among others. Some provinces require students to take at least one elective within the Social Studies branch, but others do not have such a requirement. To be certain that all students had access to the same material, I decided to look at the curriculum guides for mandatory grades of Social Studies only.

To determine what PLOs could be used to teach archaeology, I first had to identify which PLOs were archaeology-specific. As archaeology is not a common word used in PLOs, I created a list of search terms that relate to archaeology: *archaeology, anthropology, antiquity, prehistory, aboriginal, First Nations*, and

culture. This yielded 90 PLOs that could include some aspect of archaeology. My next objective was to describe these outcomes and determine which of them were useful in teaching archaeology.

DATA DESCRIPTION

Demographics

I first examined demographic information about the applicable PLOs: the province or territory and grade level they were from (Tables 1 and 2). As noted above, Social Studies curricula are divided between nine provinces and territories: BC, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, the Atlantic Provinces (ATP), the Northwest Territories, and Nunavut (through the Western and Northern Canadian Protocol for Collaboration in Education, or WNCP). Table 1 shows a large difference between provinces and territories in the number of applicable PLOs. It is important to note that although some provinces and territories do not have many PLOs relating to archaeology, some have only a few PLOs for the whole grade level. For example, Quebec uses a different grade system, with one PLO for the entire grade. Therefore, the number of PLOs per province or territory is not necessarily the best indicator of region is doing the best job of teaching archaeology.

I next analyzed the grade levels of the applicable PLOs (Table 2), from kindergarten to the highest grade of mandatory Social Studies (between grades 9 and 11). As grades have different themes, and not all themes relate to archaeology, I did not expect every grade to have relevant PLOs. An ogive (Figure 1) showing the cumulative percent of PLOs over grade level makes it easier to determine at what grade levels students learn about archaeology in each province and territory. Three streams can be identified in Figure 1. The first stream (Northwest Territories, Alberta, and Ontario) teaches most archaeological information in the early grades. The second stream, characterized by BC, Saskatchewan, Manitoba, and Nunavut (WNCP framework), starts teaching archaeology early and continues teaching it through senior grades. The third stream (Quebec and the Atlantic Provinces) teaches the majority of the archaeological information in more senior grades.

Variables

To determine how appropriate the applicable PLOs were in teaching archaeology, I created 13 variables to describe the PLOs, their purpose in teaching archaeology, and their usefulness. These variables are all ranked from *no mention*, *somewhat mentions*, and *mentions* with respect to the PLO content (see Table 3). I chose this simple ordinal scale as most PLOs fit somewhere between the *no mention* and *mentions* levels.

To briefly discuss the variables, firstly approximately half of the PLOs have explicit material to teach, where the rest are more vague. Looking at the time period of which these PLOs fit in to, the majority are rooted in the past and address heritage.

Regarding the populations and interactions mentioned in the PLOs, many of them are indigenous specific. I used the term 'Indigenous' as wording is very different depending on the provinces' or territories' curricula and includes terms like First Peoples, First Nations, Aboriginal, Métis, and Inuit. Looking at the rest of the population groups mentioned in the PLOs, almost none discuss classical archaeology, settler populations, or contact archaeology (first contact between indigenous groups and European explorers, settlers, or early government).

Although it is arguably beneficial that classical archaeology is not discussed, it is interesting that contact or settler populations and interactions are not greatly mentioned in archaeology curricula, as they are important aspects of Canadian archaeology.

To determine how often archaeology was explicitly addressed in the PLOs, I used the variable 'Archaeology'. As very few PLOs contain the word *archaeology*, I knew that not many of the PLOs explicitly addressed archaeology. Therefore, by using an ordinal variable I hoped to find a few more involving archaeology. As 50% of the PLOs do not mention archaeology, many PLOs I found through my search terms do not actually involve archaeology. Although some fall into the

somewhat mentions category, i.e. by discussing the subject matter archaeology would have to be discussed, it seems that archaeology is not often mentioned in Canadian curricula.

In examination which if any of the PLOs involve heritage conservation, I noticed early on that a definite difference exists between an appreciation of cultural heritage and a preservation of cultural heritage within the PLOs. Therefore, I constructed two variables, one determining *appreciating* cultural heritage and another describing *preserving* cultural heritage. Although a few more PLOs fall into the 'Appreciate' category, cultural heritage is not often discussed. To determine if any PLOs describe the process and objects of archaeology, I created two variables: one to determine if any PLOs describe the archaeological process or method and another to determine if any PLOs mention archaeological artifacts (Table 3). As is visible in the table, the process and object of archaeology are rarely part of the curricula.

Finally, I wanted to identify what PLOs are actually useful for teaching archaeology, and used my own judgment to determine what PLOs are useful. I defined *useful* as relating to the subject of archaeology or heritage conservation, or PLOs that could easily include archaeology. The *not useful (no mention)* category includes PLOs that I considered not at all relevant or useful for teaching archaeology. These PLOs are irrelevant for the teaching of archaeology but got into the data set with the original search criteria. They include PLOs such as

“compare governance in Aboriginal cultures with governance in early European settlements in BC and Canada” (BC Ministry of Education 2006:34). Although not many PLOs specifically refer to archaeology, only 26.6% of the data fall under the *not useful* category. The *somewhat useful (somewhat mentions)* category includes PLOs that are somewhat relevant for the teaching of archaeology, especially in a province or territory with a curriculum that does not specifically mention archaeology. They include PLOs such as “describe technologies used by Aboriginal people in BC and Canada” and make up 46.8% of the data set (BC Ministry of Education 2006:34). The *useful (mentions)* category includes PLOs that are relevant and useful for teaching archaeology, and constitute 26.6% of the data. Although these PLOs are useful for teaching archaeology, not all of them explicitly mention archaeology.

CANADIAN ARCHAEOLOGICAL ASSOCIATION DATA

One goal of my research was to ascertain the amount of support the discipline is providing to archaeological education. Therefore, I next compared my data set of PLOs to the curriculum guide created by the Canadian Archaeological Association (CAA) in 2001. The *Archaeology Canada* curriculum was “developed through consultation with the educational and archaeological communities to share archaeological content with Canada's educators and students” (Lea 2001). The 10 chapters are designed as lessons for students in three

ranges of abilities: junior (grades 4-6), intermediate (grades 7-10), and extension (senior students who want a challenge) (Canadian Archaeological Association 2001). Each chapter includes information about archaeology, lesson goals, defined vocabulary, resources, suggested lessons for each ability, evaluative strategies, discussion topics, and resources. The ten chapters are:

What is Archaeology?

Archaeology as a Resource Process

Surveying the Site and the Soil

The Archaeological Process

Keeping a Record

How Old Is It?

Classification and Analysis

Caring for the Past – Conservation

What Does It All Mean? – Interpretation

Sharing the Past – Publication and Exhibition

These detailed and well-documented lesson plans were promoted to teacher groups across Ontario and at CAA conferences, and were one of the bases of an archaeology program taught in the Durham area in Ontario (email communication with Joanne Lea, October 7, 2011). However, this curriculum guide is in little use today and does not have prominence on the CAA website. To find out the effect, if any, this curriculum framework has had on the various provincial and territorial

curricula, I created a set of variables from the outcomes of the 10 chapters and used them to describe my data set (Table 4).

As is visible in Table 4, the CAA curriculum is not visible in the Canadian Social Studies curricula. Archaeology is rarely mentioned, defined, or distinguished from other disciplines. Frustratingly laws or ethics involving archaeology are never discussed, nor are heritage conservation issues addressed. The methods of archaeology are rarely explained, nor is the process of interpretation of artifacts or the archaeological record. Finally, archaeological sites and publication are rarely if ever mentioned.

As is obvious in Table 4, only a few PLOs had positive results within the CAA variables, which Table 5 examines directly. Two PLOs address all the variables, one from the Atlantic Provinces (ATP) grade 10 curriculum, and one from the Saskatchewan grade 9 curriculum (New Brunswick Ministry of Education 1997; Saskatchewan Ministry of Education 2009). The grade 10 Social Studies curriculum in the ATP has the largest archaeological focus of any grade and has some excellent PLOs. However, none of them relate to Canadian archaeology, but instead focus on “paleoarchaeology” and classical archaeology. The Saskatchewan curriculum is by far the best for an archaeological focus. However, from my research into their curriculum development, it appears their archaeological focus in the curriculum came well before the CAA curriculum guide was established (Rollans 1990). Therefore, from my data description it is evident that the CAA curriculum guide has not had much (if any) effect on the curriculum. The CAA guide may have had an effect on the WNCP curriculum, as it was created at the same time as the guide, and does contain some PLOs with an

archaeological focus (the curriculum document is from 2002, the foundation document from 2000). However, the foundation document for the curriculum mentions neither archaeology nor the CAA (Western Canadian Framework for Collaboration in Basic Education 2000).

DISCUSSION

Teaching strategies

As noted in the demographic description, the provinces and territories are split into three different groups of teaching archaeology based on the distribution of PLOs through grade levels. To determine if there were differences in the content of the learning outcomes depending on these three groups, I first looked at the amount of useful learning outcomes that each group contained (Table 6). Table 6 shows that the percentage of useful information is different between the three groups. Both the *teach early* and *teach throughout* groups have the *somewhat useful* category as their top rank (at 62.5% and 46.9% respectively), whereas *teach late* has *useful* as its top rank (at 55.6%). Looking at the *useful in teaching archaeology*, *teach late* has a much higher percentage (55.6%) of PLOs in this category than either *teach throughout* or *teach early*. This indicates that only one of these teaching strategies—teaching archaeology in later grades—has a high

amount of useful outcomes, and that perhaps this group better succeeds in teaching archaeological material.

I also examined the number of specific archaeology outcomes each teaching strategy contained (Table 7). Again, there is a difference between the three methods, with *teach late* containing many more archaeology specific outcomes than the other two groups (83.3% in comparison to 62.5% and 39.1%). Again, this comparison outlines that archaeology is perhaps better taught at later grades.

Canadian content

Although more archaeological information is taught in provinces that give it a more senior focus, it is important to look at the Canadian content of the material. It is important that we have a Canadian perspective in archaeology education so that students learn about their national heritage and the importance of preserving archaeological material. For the sake of simplicity I propose that Canadian content equates to the amount of indigenous specific material presented, as that is what is the predominant practice of Canadian archaeology. Table 8 shows a stark difference between the *teach late* group and the other groups. However, it is the *teach late* grouping that is lacking, with only 16.7% of its material having an indigenous content, vs. 75% of the material for each of the other groups. This comparison shows that although the *teach late* group may have a better archaeological focus, it is not succeeding at providing Canadian content, something that is essential to teaching archaeology, especially in terms of heritage

conservation. Although it is quite possible to give students a good grasp of archaeology without ever mentioning Canada's relation to the field, promoting heritage conservation in Canada cannot occur without making a Canadian connection to the field. Within these regional groupings in terms of student age, it appears that no area is successful in teaching Canadian archaeology. Either students are not gaining much archaeological knowledge but *are* learning about indigenous groups, or they are gaining archaeological knowledge but *are not* learning about local indigeneity.

I also wanted to investigate the amount of overall Canadian content. Firstly, it is obvious that there is not a large archaeological content in Social Studies curricula throughout the country (remember that 50% of the PLOs do not mention archaeology). I wanted to determine if the PLOs that did at least somewhat mention archaeology contained some Canadian content. As I previously discussed, we want students to learn about archaeology so that they understand the importance of heritage conservation, most importantly, in their own regions and country. To explain the importance of heritage conservation, it is essential that archaeology being taught in schools has a Canadian focus. A crosstabulation between 'Indigenous Specific' and 'Archaeology', shows the lack of archaeology-specific PLOs that contain indigenous-specific information (Table 9). Only one PLO out of the 90 actually discusses both indigenous-focused and archaeological-focused material. Although two-thirds of the PLOs are at least somewhat

indigenous specific, only one is both indigenous and archaeology specific. Looking at the *somewhat mentions archaeology*, more of them tie together with indigenous specific, with 11 being *somewhat Indigenous specific*, and 10 being *Indigenous specific*. Overall, over half of the *somewhat mentions archaeology* group at least somewhat mention indigeneity. Although 57 PLOs at least somewhat mention indigenous populations, less than half (22) at least somewhat mention archaeology. It is important to realize that only 1% of the PLOs specifically mention indigenous groups and archaeology, showing a very low percentage of true Canadian archaeological content.

If the archaeology-specific PLOs do not have a Canadian content, what are they about? Table 10 shows that 90% of the PLOs do not have a classical focus, and of the six PLOs that specifically mention archaeology, only one somewhat mentions classical periods. Also, out of the 39 PLOs that somewhat mention archaeology, only three mention classical periods, and only four of them somewhat mention classical periods. Therefore, there is little relationship between classics and archaeology within the school curricula. Clearly, the archaeology-specific PLOs have neither a Canadian content nor a classical content.

To look more closely into these six PLOs, I analyzed them on their own. Only one mentions indigenous populations and only one mentions classical periods. All six somewhat mention heritage, and all at least somewhat mention the past. Two somewhat mention an appreciation for cultural heritage, and two somewhat

mention a preservation of cultural heritage. Five at least somewhat mention the archaeological process and record, and five at least somewhat mention artifacts. None of these six PLOs are from lower grades—one is from grade 5, two from grade 8, one from grade 9, and two from grade 10.

Looking at these six specific PLOs, it is clear that provinces and territories are not succeeding at teaching archaeology to students, and when they do, the outcomes relate more to vague facts about the practice of archaeology in general than to a specific time period or region.

Two good cases

I wanted to review cases where archaeology was taught well in a Canadian province or territory. The first example is Saskatchewan. Saskatchewan has 12 PLOs in my data set, from grades 2 to 9. However, none are archaeology and indigenous specific. Although 10 PLOs at least somewhat mention indigenous groups, only one somewhat mentions archaeology and mentions indigenous groups. Within the 12 PLOs, only one somewhat mentions archaeology, and only one mentions archaeology. You might well ask why then, is this province considered a “good case”? It gets such a distinction because of *one* PLO:

Examine the challenges involved in obtaining information about societies of the past.

a. Analyze the advantages and disadvantages of oral accounts as sources of information about historical events.

- b. Describe the role of archaeology in obtaining information about societies of the past.
- c. Explain various technologies used in archaeology (e.g., shovels, brushes, carbon dating, GPS cartography, satellite imagery).
- d. Present results obtained and techniques used in ongoing archaeological digs (e.g., Wanuskewin, Eagle Creek; Point-à Callières, Montréal; Pompéi, Italy; Dufferine Terrace, Québec City; Fort Temiscaming, Québec; Ahu o rongō, Easter Island).
- e. Investigate the role of literature, visual arts, music, newspapers, photographs, and other artifacts in obtaining information about past societies.
- f. Recognize the dynamic nature of historical knowledge by identifying examples of changes occurring in the interpretation of history as a result of new information uncovered or acknowledged. [Saskatchewan Ministry of Education 2009:21]

This grade 9 PLO not only asks students to discuss the role of archaeology, but also it relates to past societies, specific techniques (such as carbon dating!), and specific archaeological sites (including Canadian ones). This PLO is an outstanding example of what archaeology education should be. It ties together the methodology of archaeology as well as current technologies and practices, all in

relation to important sites. However, it **does not** have a heritage conservation content. In fact, none of the Saskatchewan PLOs specifically mention heritage conservation.

Another good case is the Atlantic Provinces. The grade 10 curriculum has an entire chapter relating to archaeology, including method and process and the archaeological record. However, these PLOs lack any Canadian focus and do not even give examples of any sites, neither Canadian or worldwide. Although two PLOs mention archaeology, neither of them mention indigenous groups. Although the archaeology-specific PLOs do not relate the methods of archaeology to specific sites or regions, they do at least have an archaeological focus and therefore remain a good example overall.

A not-so-good case

I also wanted to compare these good examples to a province that does not teach archaeology nearly as well. British Columbia warrants such a distinction.

Although BC has 14 PLOs from grades 4, 9, 10, and 11, none of them mention archaeology, an appreciation for cultural heritage, or conservation of cultural heritage. Three PLOs somewhat mention artifacts, but only five were somewhat useful for teaching archaeology. However, 13 out of the 14 PLOs mention indigenous populations. Although BC does not ever discuss archaeology in its Social Studies curriculum, it does an excellent job of detailing indigenous groups within the province and their role in present society. Although BC does a great

job teaching indigenous culture and history, this teaching needs to relate to archaeology, a very important part of the province's cultural heritage and an important part of ongoing land claims cases.

CAA variables

Finally, I wanted to analyze the variables I created from the CAA curriculum guide. Given there was a very low level of positive results from these variables, I want to point out the lack of information about heritage conservation in this data set. Only four PLOs at least somewhat mention heritage, and only two of these somewhat mention archaeology. None of the PLOs that mention archaeology mention heritage, basically showing that heritage conservation is not discussed in Canadian classrooms in relation to archaeology. None of the PLOs mention laws or ethics relating to archaeology. Only one PLO (the PLO from Saskatchewan previously discussed) mentions sites. These results point out the very sorry state of archaeology education in the Canadian school system. The CAA curriculum guide was designed for public school classrooms and was lobbied for in Ontario (email communication with Joanne Lea, October 7, 2011). However, it has absolutely no presence in the curriculum of any province or territory, and even within the WNCP curriculum, which was created shortly after the CAA guide was released, there is no observable presence. Although the WNCP curriculum does have one PLO that mentions heritage, "respect artifacts and places of historical significance" (Western Canadian Protocol for Collaboration in Basic Education

2002:84), it does not mention archaeology. As well, this one PLO is insufficient to show that the CAA guide improved the Canadian curricula. Significant change is needed if we want students to learn about archaeology and, more importantly, heritage conservation.

CONCLUSION

My goal for this research was to assess the nature and extent archaeology is being taught in Canadian public schools and the extent to which the discipline is providing support. Given my research, I am confident in stating that archaeology is not taught well and not taught much in Canadian schools and the support that the discipline offers is not always well received. I searched every Social Studies curriculum document in the country and identified 90 prescribed learning outcomes (PLOs) that could relate to archaeology out of the 1000s of PLOs in Social Studies. Out of these 90 PLOs, only 6.7% *specifically related to* archaeology. I also discovered that provinces have different teaching strategies, whether they teach the information in early grades, throughout, or in later grades. The latter strategy has a much better success rate for archaeological material, although this material does not have a Canadian content. I also determined that the archaeological material that Canadian students are learning is not specific to classical periods, settler populations, or contact interactions. Very little of it is even Canadian specific. The excellent curriculum guide created by the Canadian

Archaeological Association is not reflected in the curricula, even though it was advertised to schools throughout parts of the country. Worst of all, students are not learning about heritage conservation, one of the main reasons why public education in archaeology is so important.

Basically, the very little archaeology-relevant information that is being taught Canadian public schools does not provide a Canadian content, nor does it teach heritage conservation. Although provinces that teach archaeological content in later grades have more relevant information, local content is lacking. As I have noted it is possible to teach archaeology in Canada without a Canadian perspective, but it is impossible to teach heritage conservation within archaeology without a Canadian perspective. We want students to learn about archaeology so that they understand the importance of heritage conservation, most importantly in their own regions and country. Students need to understand that archaeology happens in their own backyards.

Although my research presents a bleak picture of archaeology education in the Canadian classroom, it is not all bad news. Provinces and territories are succeeding in teaching indigenous material, especially the idea that indigenous culture is both thriving and an important part of the Canadian identity. This topic is highly relevant within cultural heritage and will hopefully help to inspire a generation of Canadians. It would be fruitful to work with indigenous groups to

promote education in local communities and to tie education about their culture and heritage with archaeology.

The future for archaeology education lies within a bottom-up approach. As we can see with the lack of success of the *Archaeology Canada* guide, trying to influence curricula does not have much of an effect. Instead, we need to consider archaeology programming at museums and other interpretive sites to allow students and teachers to engage in the material outside of the designated curriculum. Future research into these endeavors, and how to engage the general public in the importance of archaeology, is essential to create interest in the subject and in heritage conservation in general. Hopefully with further research we can more successfully engage and educate the Canadian public in the near future.

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TABLES

Table 1. Distribution of PLOs applicable to archaeology by province and territory.

Province / Territory	<i>n</i>	%
BC	14	15.6
Alberta	3	3.3
Saskatchewan	12	13.3
Manitoba	23	25.6
Ontario	2	2.2
Quebec	2	2.2
ATP	16	17.8
Northwest Territories	3	3.3
Nunavut	15	16.7
Total	90	100

Table 2. Distribution of PLOs applicable to archaeology by grade level.

Grade Level	<i>n</i>	%
K	0	0
1	0	0
2	6	6.7
3	0	0
4	18	20.0
5	24	26.7
6	5	5.6
7	0	0
8	14	15.6
9	8	8.9
10	14	15.6
11	1	1.1
Total	90	100

Table 3. Data described by initial variables.

Variables	No Mention		Somewhat Mentions		Mentions		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Explicit	45	50.0	19	21.1	26	28.9	90	100
Past	5	5.6	81	90.0	4	4.4	90	100
Heritage	3	3.3	85	94.5	2	2.2	90	100
Indigenous	33	36.7	23	25.5	34	37.8	90	100
Classical	80	88.9	7	7.8	3	3.3	90	100
Settler	78	86.7	12	13.3	0	0	90	100
Contact	77	85.6	7	7.8	6	6.6	90	100
Archaeology	45	50.0	39	43.3	6	6.7	90	100
Appreciate	75	83.3	11	12.3	4	4.4	90	100
Preservation	86	95.6	3	3.3	1	1.1	90	100
Process - Method	83	92.2	5	5.6	2	2.2	90	100
Artifacts	60	66.7	28	31.1	2	2.2	90	100
Useful	24	26.6	42	46.8	24	26.6	90	100

Table 4. Data described by CAA variables.

Variables	No Mention		Somewhat Mentions		Mentions		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Archaeology Mentioned	45	50.0	39	43.3	6	6.6	90	100
Archaeology Defined	90	100	0	0	0	0	90	100
Archaeology vs. Paleontology	90	100	0	0	0	0	90	100
Pseudonyms	51	56.7	26	28.9	13	14.4	90	100
Types of Archaeology	88	97.8	2	2.2	0	0	90	100
Laws or Ethics	90	100	0	0	0	0	90	100
Heritage	86	95.5	3	3.4	1	1.1	90	100
Conservation	90	100	0	0	0	0	90	100
Method or Process	87	96.7	2	2.2	1	1.1	90	100
Tools or Instruments	88	97.8	1	1.1	1	1.1	90	100
Record	88	97.8	2	2.2	0	0	90	100
Explanation	88	97.8	2	2.2	0	0	90	100
Interpretation	88	97.8	2	2.2	0	0	90	100
Classification	90	100	0	0	0	0	90	100
Sites	88	97.8	1	1.1	1	1.1	90	100
Publications	90	100	0	0	0	0	90	100

Table 5. Expression of relevant PLOs through several CAA variables.

PLO	Types of Archaeology	Heritage	Method or Process	Tools or Instruments	Record	Interpretation	Sites	Region	Grade
Examine the challenges involved in obtaining information about societies of the past. a. Analyze the advantages and disadvantages of oral accounts as sources of information about historical events. b. Describe the role of archaeology in obtaining information about societies of the past. c. Explain various technologies used in archaeology (e.g., shovels, brushes, carbon dating, GPS cartography, satellite imagery). d. Present results obtained and techniques used in ongoing archaeological digs (e.g., Wanuskewin, Eagle Creek; Point-à-Callières, Montréal; Pompéi, Italy; Dufferine Terrace, Québec City; Fort Temiscaming, Québec; Ahu o rongu, Easter Island). e. Investigate the role of literature, visual arts, music, newspapers, photographs, and other artifacts in obtaining information about past societies. f. Recognize the dynamic nature of historical knowledge by identifying examples of changes occurring in the interpretation of history as a result of new information uncovered or acknowledged.	Somewhat	Somewhat	Somewhat	Mentions	Somewhat	Somewhat	Mentions	Saskatchewan	9
Identify the contribution to civilizations of the Mesopotamians and Egyptians. • Develop a chart which illustrates our debt to the early river-valley civilizations. • use items in school garbage can to illustrate the archaeological technique of reconstructing of society	Somewhat	No	Somewhat	No	Somewhat	Somewhat	Somewhat	Atlantic	10
Appreciate the technologies of early societies	No	Somewhat	No	No	No	No	No	Manitoba	8
demonstrate awareness of the role of archaeology in providing information about past societies	No	Somewhat	No	No	No	No	No	Nunavut	8
respect artifacts and places of historical significance	No	Mentions	No	No	No	No	No	Nunavut	8
Identify the methods used by archaeologists to reconstruct the past	No	No	Mentions	Somewhat	No	No	No	ATP	10

Commented [DP1] : This is a difficult table to read, one workaround is to rotate column 1 text 90 degrees clockwise and use Legend/codes for the other columns (N=No, S=Somewhat)

Table 6. Crosstabulation of teaching strategies and 'Useful' in teaching archaeology variables.

'Useful'	Teach Early	Teach Throughout	Teach Late	Total
Is Not Useful in Teaching Archaeology	0 (0.0%)	23 (35.9%)	1 (5.6%)	24 (26.7%)
Is Somewhat Useful in Teaching Archaeology	5 (62.5%)	30 (46.9%)	7 (38.9%)	42 (46.7%)
Is Useful in Teaching Archaeology	3 (37.5%)	11 (17.2%)	10 (55.6%)	24 (26.6%)
Total	8 (100%)	64 (100%)	18 (100%)	90 (100%)

Table 7. Crosstabulation of teaching strategies and 'Archaeology' variables.

'Archaeology'	Teach Early	Teach Throughout	Teach Late	Total
Does Not Mention Archaeology	3 (37.5%)	39 (60.9%)	3 (16.7%)	45 (50%)
Mentions Archaeology	5 (62.5%)	25 (39.1%)	15 (83.3%)	45 (50%)
Total	8 (100%)	64 (100%)	18 (100%)	90 (100%)

Table 8. Crosstabulation of teaching strategies and 'Indigenous Populations' variables.

'Indigenous Populations'	Teach Early	Teach Throughout	Teach Late	Total
Does Not Mention Indigenous Populations	2 (25.0%)	16 (25.0%)	15 (83.3%)	33 (36.7%)
Mentions Indigenous Populations	6 (75.0%)	48 (75.0%)	3 (16.7%)	57 (63.3%)
Total	8 (100%)	64 (100%)	18 (100%)	90 (100%)

Table 9. Crosstabulation of 'Archaeology' and 'Indigenous Populations' (as a proxy of Canadian content) variable.

'Indigenous Populations'	Does Not Mention Archaeology	Somewhat Mentions Archaeology	Mentions Archaeology	Total
Does Not Mention Indigenous Populations	10 (22.2%)	18 (46.2%)	5 (83.3%)	33 (36.7%)
Somewhat Mentions Indigenous Populations	12 (26.7%)	11 (28.2%)	0 (.0%)	23 (25.6%)
Mentions Indigenous Populations	23 (51.1%)	10 (25.6%)	1 (16.7%)	34 (37.8%)
Total	45 (100%)	39 (100%)	6 (100%)	90 (100%)

Table 10. Crosstabulation of 'Archaeology' and 'Classical Periods' variables.

'Classical Periods'	Does Not Mention Archaeology	Somewhat Mentions Archaeology	Mentions Archaeology	Total
Does Not Mention Classical Periods	43 (95.6%)	32 (82.1%)	5 (83.3%)	80 (88.9%)
Somewhat Mentions Classical Periods	2 (4.4%)	4 (10.3%)	1 (16.7%)	7 (7.8%)
Mentions Classical Periods	0 (.0%)	3 (7.7%)	0 (.0%)	3 (3.3%)
Total	45 (100%)	39 (100%)	6 (100%)	90 (100%)

