Perceptions of archaeology amongst primary school aged children, Adelaide, South Australia

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Abstract

A public archaeology programme was initiated at the Fern Avenue site (an early nineteenth century Adelaide jam factory) as an integral part of the archaeological investigations conducted between March 2000 and November 2000. One component of the public archaeology programme was an archaeological education programme for primary and early secondary aged school children. The primary school component of the programme provided 583 inner-city primary aged school children (aged between 7 and 11) with a classroom introduction to archaeology followed by practical on-site experience. This paper focuses on the outcomes of the primary school class-based teaching. Analysis of the children’s written schoolroom answers has enabled a basic evaluation of the students’ overarching perceptions relating to Australian archaeology.

In general, this study suggested that the primary aged school children involved in the programme understood that archaeology involved ‘investigating the past’ and ‘excavation’. However, comprehension beyond these fundamentals was limited – especially in terms of more specific knowledge, such as an understanding that Australian archaeology comprised the major disciplines Aboriginal, historical or maritime. Although the children’s initial understanding of archaeology was limited, it held a high level of appeal. The base interest generated by archaeology was used to teach the fundamentals, whilst the site visit compounded and enhanced most of the students’ awareness of the discipline, creating a memorable experience for all involved.

Introduction

In Australia, interpretation of archaeological sites (Aboriginal, historical and/or maritime) to the public has grown and expanded over the past two decades. The recent inception of public outreach components in several archaeological projects has seen many varied examples of public interest in archaeology (e.g. Briggs 2002; McKenzie 2002; Steele and Owen 2002a, 2002b, 2003; Steele et al. 2003). The inclusion of public interpretation has allowed projects to expand in new directions and acquire funding from different and alternative avenues (McKenzie 2002). An increased public awareness of archaeological activities can strengthen, enhance and gather support for archaeology. However, it has been suggested that the apparent professional perceptions of archaeology are not mirrored by the general public’s awareness of our archaeological activities (Balme and Wilson 2004; Gibbs and Roe 2002:21). It was clearly stated by Gibbs and Roe (2002:21) that one contributing factor might include ‘the generally poor exposure of primary and secondary school children to studies of domestic archaeology in all its forms’.

Currently archaeology is not widely taught as an individual discipline within schools. With the curriculum of Australian schools struggling to fit existing subjects into their timetables, as well as the ever-growing information technology disciplines, archaeology is not likely to break in as a stand-alone subject. However, it is often used within history, ancient history and social science subjects. In 2002 the Commonwealth Government highlighted that the use of artefacts etc, was becoming an effective teaching tool:

Resources for learning history are no longer just the books written for school students. Increasingly students are engaging with artefacts, pictures, buildings and landscapes, recordings, personal interviews and original documents and assessing their value as evidence of the past (National Centre for History Education 2002).

As archaeological educator Karolyn Smardz (1997:104) suggests, teachers do not have the time to become an archaeologist in order to teach about the discipline, therefore, the best way to get archaeology into schools is to involve an archaeologist, either by providing a user friendly education package (a ‘canned class’) or going into the classroom yourself and/or inviting the classroom to your site. The authors are not suggesting that all archaeologists have the time to be teachers. However, if time permits and a site is available, a great opportunity is created. This is seen through many recent archaeological projects, including those conducted within Sydney’s Rocks district in the 1990s, inviting children on-site to ‘experience’ the past (Karskens 1999:17). Melbourne school classes were present on-site during the 2002 excavations of Casselden Place (McKenzie 2002), allowing them the opportunity to see some of the less glamorous aspects of urban archaeology, cesspits and all. The authors decided that a great way to get archaeology into Adelaide schools was to do it themselves, by lending time, knowledge and the site to educating children about the importance of the discipline in understanding the past and their local community history.

A number of schools projects have been implemented as part of wider public archaeology programmes conducted by the authors (Owen and Steele 2001a, 2001b, 2002). It was hoped that these programmes would not only take archaeology into the classroom, but also allow community participation and understanding of the importance of protecting ‘local’ heritage. One of the schools projects enabled primary aged children to experience archaeology in a school environment (via lessons conducted about archaeology by archaeologists) and actively on-site (via site tours, excavation, artefact processing and drawing). This paper discusses the results from a component of the Fern Avenue schools programme.

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Background to the Fern Avenue public archaeology programme

The Fern Avenue Community Gardens Archaeology Project (FACGAP) was based in Unley, approximately 3km southeast of Adelaide, South Australia. The archaeological site was a late nineteenth century factory, The Fullarton Jam Factory (Owen and Steele 2000). The site was located in what is now a community garden, leased by the Unley Council to a gardening group, Alternate 3 Inc. (A3). A3 had divided the gardens (total dimensions 40m x 70m) into several plots where ‘green’ produce is grown.

The Jam Factory site was re-discovered by a local environmental conservation group (Green Corp) who started building a pond feature for A3 over the archaeological site. Their building work uncovered foundation walls and a large quantity of associated artefacts. It was known locally that a jam factory was located on the Fern Avenue site, as a number of attempts had been unsuccessfully made to locate a circular bucket well associated with the factory for use within the contemporary gardens. At the request of the Unley Council and the Unley Museum, Flinders University Archaeology Department was invited to excavate on the site.

Collaboration between the Unley Council and Flinders University indicated that a public archaeology programme would permit the local community to become actively involved in the archaeological project. As such, the archaeological programme was devised so that it could incorporate ‘public activity’ (Owen and Steele 2002). The overall public archaeology programme saw in excess of 1,500 members of the public visit the site during public open days and school visits.

Overview and aim of the schools archaeology programme

The schools project was devised, implemented and taught by the authors and Kate Walker (Unley Museum). Every local primary school in the Unley area was invited to participate in the programme. The timeframe for the schools programme was initially two full weeks during May 2000. Due to the popularity and demand for the programme, another week was added during the second excavation season (September 2000). Overall, the project taught 583 children from 22 school classes – encompassing a total of 11 in-schools sessions and 22 on-site sessions.

The principal aim of the school programme was to provide the children with a basic understanding of archaeology – where the focus was on the methods archaeologists use to gather information (i.e. background research and excavation) and how archaeologists interpret this information to decipher past human activities. This aim was addressed through two distinct components – class-based teaching and site-based excavation and teaching. In school, archaeology was introduced to the children through interactive worksheets (the first of which can be described as a questionnaire), a series of small group and whole class discussions and finally artefact analysis. On-site the children were permitted to excavate under controlled conditions, draw artefacts they had excavated and follow an interactive site trail (Owen and Steele 2002). The data used in this study derives solely from the class-based teaching questionnaires.

Methods

Preparation

The class-based teaching was conducted within school property, in the dedicated classroom normally used by the class. An arrangement was made with each teacher during the scheduling for the schools programme, where one hour was dedicated to the in-class component. This class-based teaching was always conducted prior to the site visit. The initial classroom-based approach was important as it introduced the children to the archaeologists in an environment with which they were already familiar, thus reducing the distractions and excitement associated with new surroundings.

The authors had expressed the wish to teach the children without prior instruction by the class teachers. However, prior to our entering the classroom it was not known what, if any, information was given to children by their respective teachers. Nor was it possible to determine the students’ prior knowledge of archaeology, derived from formal school teaching or mainstream media. It should be noted that any teacher-derived instruction could have biased the results of this study, however, no indication was provided during teaching, by either students or teachers, that formal archaeological instruction had been given prior to our visit.

Questionnaires

The primary objectives of the class-based lessons were to:

- Gauge the students pre-teaching ideas about archaeology (the results from which were used in this research);
- Instruct the children on the basic premises of archaeology – correcting any inaccurate preconceived ideas; and
- Prepare the students for the forthcoming site visit.

It was expected that by the end of the classroom lesson students would have a basic understanding of the main facets of archaeology in Australia, with a focus on Australian historical archaeology. Basic rules and restrictions placed upon the students for their site visit were also made clear at this point.

At the project’s inception it was decided that the best way to gauge the students’ pre-existing knowledge of archaeology was through a series of question sheets, which were to be filled in by small groups of students at the start of each lesson. It was a requirement that the students were not provided with an archaeological understanding prior to filling out the question sheets. Therefore class sessions followed a prescribed order: an introduction to all of the tutors followed by a split of the class into groups of 6-8 children with one archaeologist per group. Each group was then provided with two of four worksheets. The worksheets were designed to gauge the students’ general knowledge of archaeology and ask one additional question relating to archaeology.

The four questions were:
1. What is archaeology?
2. How do archaeologists look for and find archaeological sites?
3. What do archaeologists look for and find?
4. Why do archaeologists look at peoples’ old rubbish and buildings?
The first worksheet given to every group was entitled ‘What is archaeology?’ while the remaining three worksheets were shuffled and distributed between the groups.

Each worksheet had sufficient space for the group of children to supply four responses to the header question. The students were then asked the question by the attending archaeologist. Once an answer was supplied it was put for discussion to the group and written by a child on the questionnaire sheet. If any children had not been involved in the discussion they were asked to supply the next response. It is worthy of note that during the early sessions it was recognised that the majority of students confused palaeontology with archaeology and it was decided, therefore, that before starting the activities it would be explained to the children that dinosaurs are studied by palaeontologists, and the questions were only interested in what archaeology was and what archaeologists studied. This subsequently negated the inclusion of the answer ‘dinosaurs’, ‘fossils’ etc from the results of the study.

Although this method of teaching could be assessed at times as ‘guiding’ the students, it should be noted that such instruction was kept to an absolute minimum and that the aim of teaching was to provide students with an appropriate understanding of archaeology. When all questions were completed, an open forum amongst the students was conducted. This discussion ran through the questionnaire sheets – where students from each group were asked to read out their favourite answers. The FACGAP archaeological project was then introduced using more sheets designed to explain the archaeological site and processes involved with excavation.

Analysis

Compilation of the results from these four worksheets provided the opinions of 583 school children aged between 7 and 11. For each question the results were compiled and allocated into categories using a statistics computer programme called Statistical Package for Social Sciences (SPSS). In order to compile the results it was necessary to only record keywords – so that all words with the same meaning (i.e. dig or excavate) were recorded under the same category. The tally for each category was divided by the total number of worksheets completed; this provided a percentage affirmative response relative to the total number of worksheets. The results from the study are displayed in Tables 1 to 4.

The breakdown of the keywords (categories) of archaeology was hoped to give an understanding as to the themes the students were interested in and the ideas and concepts of the discipline that were present (true or otherwise) amongst the classes. The results could therefore be looked upon as a guide for the areas within archaeology that need more exposure or representation within the schools.

Results

**Question 1: ‘What is archaeology?’**

Table 1 presents the results from the question ‘What is archaeology?’: Many children initially associated archaeology with dinosaurs, or fossils. However, as mentioned above, palaeontology was ruled out before the sheets were begun. Therefore no responses to Question 1 included fossils, dinosaurs or rocks as the general misconceptions were already addressed. Table 1 indicates that nearly every response included an association with general artefacts. Excavation, research and things in the past featured among three-quarters of answers, whilst archaeological sites, standing structures (such as the pyramids) and specific artefacts only received a mention around 25% of the time.

It appears that children have an understanding that archaeologists search for items associated with people who lived before their birth. Children also have a clear understanding that archaeology involves both field excavation and prior library/university etc research. Following the promising initial knowledge of archaeology, understanding of what exactly is studied and how it is studied becomes more vague. It is speculated that the children’s initial ideas relating to archaeology have been formed by popular media images. Many films featuring archaeology focus upon retrieving a specific artefact, often involving a basic excavation. The locations of the artefact are often undefined, where newer films, such as *Tomb Raider*, move away from the old popular archaeological destination of Egypt. On a positive note, it appears that the image of the treasure-hunting archaeologist is not believed, as only 9% of responses included the word ‘treasure’ or ‘gold’.

**Table 1 Responses to the question: ‘What is archaeology?’**

<table>
<thead>
<tr>
<th>Category</th>
<th>% Affirmative Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artefacts, material, objects</td>
<td>97</td>
</tr>
<tr>
<td>and other ‘items’</td>
<td></td>
</tr>
<tr>
<td>Digging or excavating</td>
<td>78</td>
</tr>
<tr>
<td>Research</td>
<td>78</td>
</tr>
<tr>
<td>Association with the word ‘old’</td>
<td>63</td>
</tr>
<tr>
<td>Mention of the past</td>
<td>41</td>
</tr>
<tr>
<td>Mention of specific artefacts (i.e. bones, tools)</td>
<td>25</td>
</tr>
<tr>
<td>Looking at standing structures</td>
<td>25</td>
</tr>
<tr>
<td>Mention of ‘archaeological sites’</td>
<td>22</td>
</tr>
<tr>
<td>History</td>
<td>19</td>
</tr>
<tr>
<td>Associated with the word ‘ancient’</td>
<td>16</td>
</tr>
<tr>
<td>Antiquity of artefacts and sites</td>
<td>13</td>
</tr>
<tr>
<td>A career</td>
<td>13</td>
</tr>
<tr>
<td>Association with treasure (i.e. gold)</td>
<td>9</td>
</tr>
<tr>
<td>Associated with museums</td>
<td>9</td>
</tr>
<tr>
<td>Ethnography</td>
<td>6</td>
</tr>
</tbody>
</table>

Understandings of the specific time periods studied by archaeologists were very unclear, as indicated by the frequency of responses featuring the words ‘old’, ‘the past’, ‘history’ and ‘ancient’. Younger children had little comprehension of time, especially timeframes that extend beyond 100 years. It was noted that an understanding of time was best described by genealogical references or a timeline drawn on the classes’ white-board. An association with history and mention of archaeological sites resulted mainly from individual children having visited Australian sites of national importance – such as the Rocks in Sydney, or Uluru in the Northern Territory. The presence of archaeology and Aboriginal or Australian importance presented at these sites has made a distinct impression upon visiting children.

Few children associated the discipline with museums, universities or any other institutions which may utilise
archaeology such as national parks and governments. Those who made the connection went as far as acknowledging that the artefacts that archaeologists find end up in museums.

**Question 2: ‘How do archaeologists look for and find archaeological sites?’**

The majority of children (78%) assumed that sites were actually discovered through the process of excavation. This is not surprising given the presence of excavation in the first sheet responses, and possibly a throwback to the many Egyptology films where archaeologists spend many months fruitlessly excavating sand dunes. The second most popular response – history books and records (67%) – is promising and may relate to in-school activities conducted by the students.

Looking for structures; photographs, pictures and maps; geophysical techniques (mainly associated with metal detecting); and oral histories each commanded approximately a 33% response. Each of these techniques is entirely valid and probably indicates intuition on the children’s part. Some children also assumed that a lot of luck plays a part in site detection, as accidental discovery was listed by 11% of groups.

**Question 3: ‘What do archaeologists look for and find?’**

Table 3 provides the results to the question regarding what exactly archaeologists hope to find. It was assumed by all children that the question suggested discovery through excavation, thus discounting any information available through scientific analysis of materials, post-excavation work, oral histories, landscape surveys etc. Therefore the question’s wording may have biased the answers gathered. However, if the answers are related to items discovered through excavation then it can be seen that most children (81%) assumed that archaeologists looked for buried structures. This was a more accurate answer considering that treasure and/or gold was only mentioned in 19% of responses. Additional items discovered by archaeologists appeared to focus on modern European artefacts (historical artefacts 69%, glass 25%, metal 19%, ceramic and pottery 13% and machinery 6%). The inclusion of a general category of Indigenous artefacts (25%) demonstrated the children’s awareness of Aboriginal archaeology, however their knowledge of individual Indigenous artefacts appeared limited. Stone tools (6%) and rock art (6%) being the readily identified artefacts associated with that branch of
Australian archaeology (In one exception to this trend where one mother of a student was an archaeologist, the response towards Indigenous finds was much more comprehensive, see Fig. 3). It is not surprising that most children could identify historical period artefacts, as they are similar to those used today. A lack of Aboriginal sites and/or artefacts mentioned in responses potentially derives from an underexposure to Aboriginal culture during primary school years. The inclusion of stone tools amongst the responses possibly originates from visits to museums or images of ‘stone-aged’ peoples associated with pre-European Australian society.

Bones provided a significant response rate to the question (human remains 44%, bones 31% and animal remains 25%). This is understandable given the prevalence of human remains in popular media content, the general fascination and mystery surrounding human remains and also one of the general public’s favourite questions of archaeologists, ‘found a body yet?’.

**Question 4: ‘Why do archaeologists look at peoples’ old buildings and rubbish?’**

Table 4 presents the results to the final question relating to why we study peoples’ old rubbish and buildings. Every
group provided a response with answers which included ‘to understand and interpret the past’ (100% response). The remaining answers all favoured roughly equally (between 29% and 18% – except to discover what clothing people used to wear – 6%). The main secondary answers were ‘to understand housing and living conditions’ and ‘for the archaeologists’ personal gain’. The first of these answers follows logically from an understanding of the past, whilst the second implies a comprehension that archaeologists enjoy their discipline and study. From the answers to Question 3, it can be implied that the children did not believe that we hunted for treasure and thus the personal gain mentioned in Question 4 could relate to acquisition of knowledge or to archaeology as a job. 18% of children also saw archaeology as a mode of employment and also for education, teaching and learning.

Discussion

In general, it was noticed that previous knowledge of archaeology varied between children at all ages. It has been further observed over a number of public archaeology programmes conducted by the authors (Owen and Steele 2001a), that social setting (i.e. city vs country) influenced to a degree the existing knowledge of children. Prior knowledge also depends upon personal social experiences, for example, Figure 3 showed the responses of a group that contained the child of an archaeologist. Subsequently, this child was more aware of different types of artefacts than the other students. However, it is also acknowledged that the basic questions asked by this study did not attempt to reach into the past education of children – something which could be addressed by future studies.

Most of the students understood that archaeology involved ‘looking at old things’, some more than others (one particularly intuitive 10 year old accurately described the difference between palaeontology and archaeology for us before one class began). An overall misunderstanding exists regarding the timeframe within which archaeologists work (the confusion between when palaeontologic investigation ceases and archaeological work begins, as well as the crossover period involving megafauna). Prior to the differentiating discussion conducted before each class, practically all children initially associated archaeology with dinosaurs. This image is often not dispelled in schools and often carried into adult life (Balme and Wilson 2004; Steele and Owen 2002a).

Seeing past the children’s initial error, the broad image of archaeologists and their studies is fundamentally accurate, although detailed knowledge of the discipline is lacking. However, it has been made clear that presentation of a contemporary realistic understanding is not hard to install. Basic instruction about artefacts, sites and time periods can easily rectify such misunderstandings.

It is suggested that archaeology is a useful teaching tool for a myriad of reasons, including heritage protection, but less obviously for its employment of mathematical, scientific, social, communication and problem-solving applications. The authors are suggesting that involving archaeology in education is not difficult and the resources for doing such are growing in Australia. At a primary aged level, the use of basic information text and introductory ‘packages’ designed by or with archaeologists (Atkinson and Churcher 2003; Owen and Steele 2001c) can be accessed by teachers. From this an accurate introduction can be provided to children. Even a basic introduction such as this can dismiss common erroneous beliefs about archaeology. Such books and packages offer a diverse insight into the varying facets of archaeology and can offer other resources for children who wish to extend their archaeological knowledge outside of their standard curriculum.

At a secondary school level, archaeology’s potential to educate has been recognised by the New South Wales education board and subsequently archaeology has been integrated in courses offered at the high school level. Books and introductory packages are also available for students and teachers in lower secondary years (such as Godden Mackay Logan 2000; Zamarti and Cremin 1998), which can be used in conjunction with history and social science subjects.

Conclusions

As suggested above, personal experience is often one of the best ways for students to become aware of archaeology and its uses. Therefore it can not be left solely to the school educators to create access to archaeology for their students, it is also up to us as professionals to extend the invitation to ‘experience’ the past through archaeology. The Fern Avenue Community Gardens Project gave nearly 600 primary school students the opportunity to see, touch and experience a small part of their local community history, an experience they will remember and hopefully take into the future, and in return use to protect the past.

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