

Hand-held Learning

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At the National Maritime Museum (NMM) we have recently completed a pilot project to determine whether the use of hand-held digital technology aids museum-based learning. Did integrating specially adapted mobile phones into our transatlantic slavery study day really enhance our Key Stage 3 visitors' learning, as we had hoped, or did students simply enjoy playing with them?

We have spent a number of years developing a successful programme for secondary schools, offering unique, curriculum-based learning around a range of themes, from transatlantic slavery to modern astronomy, environmental sustainability to modern business leadership. After trialling different approaches it has become clear that a streamlined programme of study days provides teachers and students with the required quality of learning opportunities and resources to make a visit to the Museum truly 'worth it'.

KS3 Slave Trade

As part of this approach, we now offer a Key Stage 3 transatlantic slavery study day during which students engage in a number of activities to answer key questions: these include an introductory discussion, object handling, access to manuscripts and exploring collections in the Museum's Atlantic Worlds gallery. The activities involving object-handling and investigations of manuscripts enable students to adopt a variety of learning styles, promote discussion and encourage them to utilize and develop higher-order thinking skills. The existing paper-based gallery trail, however, lacked many of these opportunities.

To truly live up to our marketing claims of providing a 'unique and exciting learning experience', it was clear that we needed to find a solution to this problem. How

could we best facilitate a relevant, engaging and inspiring experience, in a gallery that includes complex and sensitive histories, for the diverse range of students participating in the study days? Research suggested the answer lay in the use of hand-held digital technology;

Unwilling wholly to commit to this approach without rigorous testing, we found a 'half-way-house' solution in OOKL. Specially adapted mobile phones, loaded with their own unique software, can be leased from OOKL. Students can use the phones as a gallery research tool, taking photos, recording their ideas and accessing bite-sized pieces of text specially written for them about particular objects. They can save their pictures and other research in their own unique store, for later retrieval back at school via the OOKL website. The website also offers opportunities to use further specially selected material, including sound and video files, to help students continue their research and create their own presentation.

We did some formative evaluation which showed up some improvements that could be made both to the museum-based and the post-visit web-based activities. Evaluation conducted for us by Audience Focus found: all learning outcomes developed with the hand-held resource in mind were achieved; students found using digital technology easier and more enjoyable than paper and clipboards (all students became comfortable with the phones very quickly); and the mobile phone resource played a key role in initiating and sustaining the creation, exchange and sharing of information among students. We also found that it promoted focused follow-up work.

Conclusions

Clear, focused learning outcomes must be established from the start. 'Less is more': be selective and concise when uploading text and images to the mobile phones. Text should also be dynamic and promote further investigation, thinking and discussion, as well as providing relevant information. Breaking

a research topic down into a set of key, linked questions also provides opportunities for smaller groups of students to investigate one area fully, and to share their findings in the role of 'experts' with colleagues back at school, to gain an overall picture. Time spent developing clear instructions for teachers in preparing their students for this type of activity, and supporting them during the museum visit and back at school, all pays dividends in getting the most from this opportunity. Careful introduction of how to use the technology in the gallery, coupled with a written reminder of the task, further ensures that students are confident and focused.

Use of this technology clearly provides opportunities for students to personalize their learning, to learn actively and dynamically through a variety of learning styles, and to engage in an enjoyable and relevant learning experience. For museums and galleries, it offers opportunities to provide different perspectives on exhibition content, and to cater more effectively to a wide diversity of visitor needs. As an approach it has been trialled elsewhere with varying degrees of success to different audiences. At the NMM we have so far enjoyed success with just one audience in one gallery and look forward to its extension across our formal learning programme.

The advantages for enhancing learning and interpretation for visitors with different needs seem clear; the capacity of this technological approach to promote interaction and discussion, coupled with the 'fun factor' associated with using it would, we think, surely benefit our inter-generational groups. Its possibilities for opening dialogue between the museum and its visitors, encouraging deeper participation and lasting contributions to their experience could also be explored. In short, personalized, digital interpretation and learning certainly presents an exciting way forward for work in this area at the museum. As always, however, we should be rigorous in our approaches and never lose sight of what we are really trying to achieve.