Introduction

Skeletal material although reasonably robust, deteriorates with handling often damaging important archaeological specimens. In addition, the educational value of these human remains is often limited to the institution in which they are held. It is difficult for a variety of reasons for diverse groups of students to gain access to the skeletal material and for those that do access it, there is a clear realisation, that the bones are friable and literally turning to dust.

There was clearly an opportunity to develop a valuable digitised resource and also to have the added value of preserving the existing skeletal material that is very delicate and friable. There are some limited resources available to the archaeology community, but nothing of the scope that this project hoped to address.

The aim of this project was to examine the practicality of producing a digitised resource using non-contact scanning laser digitisation techniques of rare skeletal remains of a high status individual who was hanged, drawn and quartered and recovered from Hulton Abbey in Stoke-on-Trent, Staffordshire.

These resources can be actively used for forensic science and for archaeology teaching. They may equally be adopted for a variety of subjects due to the interdisciplinary nature of the information illustrating the enormous potential of these digitised resources. The material can be used for research in biological anthropology, palaeopathology and forensic anthropology, but also has historical applications as well as providing teaching aids in photographic studies, computing and e-learning technologies.

In the future as such a resource develops and expands, digital cataloguing would allow for comparative examination of the skeletal material, allowing specimens of academic importance to be utilised by undergraduates, postgraduates and indeed academics at all levels.

Materials and Methods

Using The FARO arm non-contact scanning digitisation equipment (below), laser scans were made of the skeletal remains to show the bone structure and the injuries on the bones caused peri-mortem during the execution.

Results

The images can be rotated 360° in all orientations. There is a zoom and measurement facility available on the software which is freely available to view the data files.

Conclusion

In combination with the DVD from the first HEA funded project (http://www.heacademy.ac.uk/physics/home/projects/digitisationproject) these resources may be accessed by a variety of users for their own particular learning outcomes.

It can be discipline specific (e.g. forensic science or archaeology) but equally be used at the other end of the spectrum for public engagements.

Ideally, those who utilise this digitised resource for their own purposes will have set learning outcomes which generically could include:

- Understand and undertake the methods of producing accurate archaeological/ anatomical drawings/photography
- Understand and apply the requirements of archaeological/anatomical recording procedures.

In addition, the following transferable skills could be developed and enhanced:

- Critical thinking
- Team working and independent working
- Communication skills, both written and oral
- Observational skills
- Problem solving skills
- Recognition, description and reporting skills
- Accuracy in working and reporting
- Analytical and practical skills
- Numerical skills
- Enhanced visual literacy in the making, understanding and interpretation of forensic photography.

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