Screen and Shipwrecks: Bridging the Divide

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Abstract

The use of visual media is an aspect of recordkeeping and a necessary component of outreach and community engagement in maritime archaeology. Recent technological innovations have created the need to acknowledge multiple available methods of transmitting information to the public. Cross-disciplinary education in screen and archaeology provides students with an innovative means to enhance archaeological knowledge at the tertiary level and the skills to better inform the public through the use of digital media and practice.

Introduction

In 2008, the Departments of Archaeology and Screen and Media at Flinders University were given a substantial infrastructure and equipment grant to purchase a High Definition video camera (HDV) with an underwater housing. This interdisciplinary partnership has encouraged the development of knowledge to use the equipment, and then how best to use it in the context(s) of research, teaching and learning. Archaeology students know how to dive and work underwater, and Screen students know how to record and edit, but gradually we have bridged this gap so that both groups can work together on projects, combining expertise in the two areas.

Project Aims

The collaborative program bridges the divide between archaeologist and screen-practitioner perspectives. Screen and Media education is used as a tool to prepare archaeologists for future issues (dealing with hosting, presenting, proper representation of data in the media) and proper collection of data in the field. Best practice informs sustainable management as archaeologists trained in screen media make the best use of the tools available to provide an accurate record of investigated sites. Engaging screen practitioners in the issues relating to archeology enables them to tell more accurate archaeology narratives and confidently address issues in archaeological ethics and practice.

Collaborative Education

Collaborative teaching and cross-disciplinary education provides a proactive means of training future archaeologists and screen professionals to protect, preserve and interpret underwater cultural heritage (UCH) through film. The ability to video record underwater opens the door to many opportunities for both disciplines. Jointly, the most obvious advantage is the ability to write, produce and edit screen stories with underwater content.

Initially, both groups are taught to use the camera on land so as to practically learn the skills of dealing with concepts of exposure, colour temperature, focus and composition in

a straightforward environment. They are then taught how to put the camera into its waterproof underwater case, or housing, how to verify the housing is watertight and how to operate the housing.

The next step is to learn and practice the procedure for handling equipment in and out of the water, how to keep camera equipment dry and how to communicate with each other once they are in the water. Safety issues are also addressed at this point. Students are taught to prepare the cameras on a jetty or boat, get them into the water, safely change tapes and batteries and then clean up the gear after the shoot. Finally, students are able to practice using the equipment in the water, with the aim of collecting images that could later be constructed into meaningful, informative, culturally accurate stories. The significance of making documentaries about places and items of UCH is in opening a window that would otherwise be closed to most people.

Theory

Maritime archaeology and visual media have been hand-in-hand since underwater footage was shot at Uluburun in the 1960s. Peter Gathercole, Jane Stanley and Nicholas Thomas (2002:158) stated, “Archaeology can lead visual art in a socially responsible direction”. It naturally follows that screen and media studies and relationships can educate archaeologists-in-training about how to best convey the results of their research to the public.

Archaeology students bring their unique knowledge and understanding to the development of the content; while screen students lend their technical and aesthetic skills to the telling of the story. As both students exchange skills and knowledge, more complex issues and stories can be communicated through the use of relevant sound and pictures. Both groups of students work together in the planning of shots, the structure of the edit and in making choices around who will provide the narration and where will interviews take place.

The videos are produced by staff and students and made to screen within the university context so the authors are able to receive feedback on their narrative choices from staff and students directly involved in the creation of the ideas and research. “Archaeologists should make sure to be critically engaged with the structure, as well as the content, of our documentaries,” (van Dyke 2006:372). These videos are screened to both Archaeology and Creative Arts students, leading to an inter-disciplinary dialogue around technical and narrative issues.

Practice-led Research

The last three years have been spent defining and refining our methodology and teaching philosophy. The methods for taking cameras underwater for university research are necessarily different from those employed by commercial film and television producers. Each activity must be safe, informative and replicable in a student context. All students must be able to participate on some level in the production. It must provide opportunity for relevant feedback and reflection on practice for both students and staff. This section discusses the Flinders University underwater archaeology video program from 2008-2010.

2008 Collaborative Teaching

2008 concentrated on building the working arrangement between the Maritime Archaeology Program and Screen and Media. In May 2008, Screen and Media and the Maritime Archaeology Program received a Flinders University equipment grant to purchase an Amphibico underwater housing, a Sony Z7 camera and ewa®-marine underwater bags for Sony PDX10 video cameras with the view to utilizing cross-departmental skills for the production of archaeological documentary projects. There was a steep learning curve as staff realized the complexities of getting students in the water and the current obligations for Flinders University Occupational Health and Safety (OH&S) Guidelines. In the first year the Amphibico housing was not used.

One of the first issues we had to address was getting divers and non-divers working together. Most of the Screen and Media students were non-divers and could not assist with collection of video data below surface. As a temporary stopgap all 2008 filming was conducted on land and mostly focused on capturing images of jetties and small wrecks close to shore.

We also dealt with issues of perception. Screen and Media students believed that everything maritime archaeologists did was in the water. Maritime Archaeology students thought cameras were point-and-shoot fun toys. In August 2008 Mark Staniforth led an assessment of a ferro-cement hull in Port Adelaide (Mulloway Studio, *et al*. 2009). Due to very low visibility, underwater footage was not recorded. Sian Bates, a Flinders University honours student, filmed the documentation of the project from land. In 2010 this footage was edited and made into a film by Deb Shefi, a Flinders University doctoral candidate (Shefi 2010). Sian Bates also assisted with the Society for Underwater Historical Research assessment of the *Nelcebee* (Bates 2008b). This video was screened at the 2008 Australasian Institute of Maritime Archaeology (AIMA) in conjunction with a poster presented by Zack King and Steven Lake (King and Lake 2008).

We have been fortunate to draw on the expertise of local and world-renowned underwater cinematographer Malcolm Ludgate ACS.[1] Sian Bates compiled a short interview-based documentary with Ludgate describing underwater camera techniques (Bates 2008a).

2009 Collaborative Teaching

Field projects scheduled for 2009 necessitated the training of archaeological staff and supervisors in the basics of camera operation and screen theory. In preparation for the 2009 Maritime Archaeological Field School at Mount Dutton Bay, Helen Carter taught a one-day workshop in camera use for supervisors and staff. Up to this point cameras were used only as recording devices — footage shot by maritime archaeologists was stream of consciousness and purely observational. Most were single shots with a noticeable lack of structure. The workshop addressed the necessity for capturing a variety of shots, with a strong beginning, middle and end to the story, which could then be edited into a suitable narrative. The camera should be used to observe many angles, details, textures and perspectives of the

[1] Australian Cinematographers Society (ACS)

subject. Archaeologists were also taught the basics of recording technically proficient images and sound.

The February 2009 Maritime Archaeology Field School/Australian Leadership Awards Fellowship Program at Sceale Bay and Mount Dutton Bay utilised Screen and Media staff and equipment to record field practice and produce a short documentary. The Flinders University Maritime Archaeology Program was the recipient of an ALA Fellowship Program grant to support travel and accommodation for mid-career maritime archaeology professionals from the Asia-Pacific region to participate in the field school. *Teaching Underwater Cultural Heritage* was produced as a record of this program (Carter 2009a).

One PDX10 and tripod were used at the Mount Dutton Bay site to record field operations and one PDX10 camera, bag and tripod were used to record activities at Sceale Bay. PDX10 cameras and bags were utilized on-land and in-water by staff and students. Staff and students were interviewed and commented on their progress of learning skills in recording cultural heritage. Collected footage resulted in the documentary *Teaching Underwater Cultural Heritage* (Carter 2009a). *Teaching Underwater Cultural Heritage* was shown at the 2009 United Nations Educational, Scientific and Cultural Organization (UNESCO) meeting in Paris.

Also in 2009, a Documentary Camera topic with an emphasis on underwater camera technique (SCRN8027/8028) was offered in semester 2 by the Department of Screen and Media. One doctoral candidate in maritime archaeology (James Hunter) completed the topic. This topic included trips to maritime sites such as the Ships' Graveyard at Port Adelaide, and produced two short student films (Rafferty 2009; Kalsan 2009).

In May of 2009 a project was designed to assist doctoral candidate Adam Paterson with the Port Adelaide Community Archaeology (PACA) project at Port Adelaide (Paterson *in prep*). A short documentary film was shot and directed by Helen Carter and edited by Ed Powell (Carter 2009b).

From semester 2 of 2009 Masters Classes were offered each semester that addressed camera use for terrestrial and underwater archaeological projects.[2] A two-part program, on the first Friday, Helen Carter repeated the workshop delivered to the staff/supervisors of the 2009 Field School to archaeology students. On the second Friday, students participated in a field practical. Archaeology students assisted with camera operation underwater. Screen and Media students assisted Helen Carter with aspects of camera operation above water. The semester 1 Master Class was the first time the Sony Z7 Camera with the Amphibico housing was used underwater by archaeology staff and students. A short film was made about this training day, *Teaching Underwater Cultural Heritage: using underwater cameras* (Carter 2010a). It used footage recorded by maritime students and terrestrial footage shot by Screen and Media students and was edited by a Screen and Media honours student (Carter 2010a). This film is available through the Asia Pacific Regional Conference on Underwater Cultural Heritage website at: http://www.apconf.org/about/video/.

[2] The Flinders University Department of Archaeology runs Masters Classes on Fridays throughout semester. These short topics are designed to offer students training in topics otherwise not covered in general teaching (e.g. archaeological illustration).

2010 Collaborative Teaching

By 2010, representatives from both departments had developed a workable program of training that prepared master students for camera operation and underwater filming through a program of Masters Classes prior to field school.

At the 2010 Maritime Archaeology Field School, Sceale and Streaky Bays (ARCH3309/8152) Z7 camera training was conducted with Helen Carter and other trained supervisory staff to provide direction to the participating students about filming techniques. In just one week in the field archaeology students gathered a wide range of footage including jetty surveys, measurements of a wreck at low tide, details of wood in a local museum, artifacts on a local beach and boat-based dive activities. This footage was used to make the film *Maritime Archaeology Field School 2010* (Carter 2010b)

A second underwater Masters Class was offered in a contained environment at the Adelaide Scuba swimming pool. This was designed to make training available to students who did not yet meet the strict Flinders University dive guidelines (and therefore could not dive in-field) and provided an opportunity for more Screen and Media students to join the Maritime Archaeology students in the water.

'Rushes'[3] were used as on-site training tools. This gave students an initial opportunity to view their footage directly after recording and receive feedback from a trained professional before returning to the water to rerecord. To the new divers, this class also demonstrated more practical issues such as buoyancy.

In 2010 the Maritime Archaeology Department's Associate Lecturer Emily Jateff and doctoral candidate Deb Shefi audited the Screen and Media *Underwater Cinematography* topic along with six Screen and Media honours students. This was the first time that Screen and Media students were registered as divers/snorkellers with Flinders University and allowed to take cameras underwater. Two documentaries were produced in 2010. The first was a record of archaeological investigations in the basement of the South Australian Maritime Museum Bond Store basement (ca.1854) conducted by doctoral candidate Adam Paterson (Shefi 2010). The second documentary titled *Torpedo Station* was produced by honours student Ian Bethune and recorded excavation of three test units at the Port Adelaide Torpedo Station conducted by doctoral candidate James Hunter (Bethune 2010; Hunter *in prep.*).

Outcomes

Outcomes of this work include a methodology for teaching underwater camera practice to university students, instructional videos for use in camera Masters Classes, a library of stock footage for use on student documentaries, videos which promote the work of the university in UCH and videos which convey edited versions of the efforts and meaning of specific archaeology projects.

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[3] 'Rushes' are unedited prints of a scene

Students also have additional skills for use in archaeological fieldwork and for producing their own videos, making them all more employable upon completing their degrees. Screen Students have been encouraged to pass dive medicals and to acquire diving qualifications. All students have increased their diving hours while maintaining all requirements as per the Flinders University *Diving Procedures Manual* (2008). Screen and Media Department staff have a greater appreciation of the issues and techniques involved in the field of archaeology and are better able to contribute to the production of meaningful underwater narratives.

Developing a Methodology (The Process)

The first three years of this collaborative project concentrated on developing a methodology for continuing practice safely within the university system. This stressed the following three points:

1) How to video-record underwater

Students worked with small cameras in basic underwater bags. We researched and practiced what camera-shots are required in order to edit sequences and scenes together. Students devised methods of communicating with each other in the water about what shot they were working on, whether it needed another take and/or other directorial input. Students also learned the best times of day to shoot and how to get the best lighting conditions for a particular location.

2) How to use the camera(s) and housing in the water

Masters Classes focused on issues of buoyancy, steadiness, focus and using light to the best advantage. Students would practice their skills in a swimming pool then review the footage with lecturers and go straight back in to the water to improve their camera-shots. Building on this experience students were able to apply these skills to using the more complicated Amphibico housing with a larger HDV camera. Procedures for handling and testing equipment in and out of the water were developed.

3) Advanced screen and media techniques

Through the documentary camera class students learned how to edit their material, to colour grade the footage and to create suitable sound tracks. By watching other films students explored how to visually take the audience into and out of the water, how to establish an underwater location or geography and how sequences are cut together.

2011 and beyond

Since the inception of this collaboration over a dozen films have been produced with input from students and staff from both departments. A review of the program and conducted research was presented at the 2010 AIMA Annual Meeting in Melbourne, Victoria (Carter, *et al.* 2010). In 2011 Flinders University announced the new graduate degree options *Graduate Certificate, Graduate Diploma* and *Master of Screen and Media Production*. Archaeology, Cultural Heritage Management and Maritime Archaeology topics are required as part of these degree options.

Masters degree classes are planned for the academic year 2011-2012 which include camera workshops, dives and events. Current Maritime Archaeology Program and Screen and Media graduate students are working on post-production of archaeological films recorded over the winter break. Screen and Media Department students are also finally able to dive and record their own footage.

Areas for future development include regularly using the videos we produce in films on topics (this is currently done to a limited extent), editing and sound for underwater footage and continuing theory and development in teaching. Efforts will be made to secure funding for larger scale projects and integration of film techniques into more research projects. Future projects will stress working relationships in site management, and current underwater sites of cultural significance including a special emphasis on the South Australian shipwreck *Star of Greece*. Experimentation with small Go-Pro cameras is of interest, as underwater they can achieve a full high-definition (HD) image and are relatively safe for students to use due to their incredibly small physical size (42mmx60x30mm).

Conclusion

Cross-disciplinary education in screen and archaeology subjects provides researchers and students an innovative means to enhance skills and knowledge and better inform the public through the use of digital media and practice. By combining our experience (archaeologists can provide the 'insider information', screen professionals the skills to turn it into a film) to produce multiple benefits. Archaeologists learn how to better translate data sets to the public and provide clarity on the role of the heritage-professional in the filmmaking process (Clack and Brittian 2007). Maritime Archaeology students learn about equipment needs and the video process, including what questions to ask and what types of camera-shots they need to get in order to create short documentaries. Screen production students and staff have a better understanding of archaeological method and theory which allows them to make better informed films.

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