

Small screen, big picture:

Students explore TV journalism with streaming media

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Abstract This paper describes the use of Apple's *QuickTime* technology to webcast student-produced TV news and current affairs shows. Journalism educators prize opportunities to expose their students to the vocational demands of the media industry. The 2002 *CSU News* project gave journalism and online media production students at Charles Sturt University an opportunity to explore and hone production techniques, while experiencing some of the pressures of live presentation. The use of streaming media allowed the students to complete a learning journey through the television production process, from story conception to live broadcast of the finished product.

Keywords QuickTime, streaming, media, journalism, education, Internet, Web, webcast, news

Introduction

In 1994, Australian journalism educator Mark Pearson challenged his peers to 'take on a role as innovators and lead our students and our profession into the new era of journalism' (Pearson 1994, p. 102). The possible alternative was for Australian journalism courses to be caught lagging behind developments in the media landscape, particularly the rise of new information delivery systems such as e-mail, the World Wide Web, and mobile phones. Journalism schools were possibly in danger of producing graduates unable to meet a demand for what Pearson labelled 'versatile media communicators' (1993, p. 138).

This paper describes an adventurous approach to teaching television journalism in an increasingly digital and connected world. *CSU News* was a weekly live-to-Web news and current affairs program produced and presented by journalism and online media production students at Charles Sturt University in Bathurst. The project operated for 12 weeks in spring Session (July – November) 2002, and a similar activity is planned for 2003. *CSU News* was produced using Apple technology, including *Final Cut Pro* and *QuickTime Broadcaster* software.

It is nothing new for journalism schools to be criticised for losing touch with the realities of professional journalism (Herbert 1997), particularly when it comes to maintaining pace with technological change (Davidson Scott 1995; Lee and Fleming 1995; Broderick 2001). The nature of University budget planning, and the speed with which technology can change, make it a constant battle to maintain adequate and up-to-date equipment (Patching 1997b, p. 82). The apparent reluctance of some journalism schools to upgrade equipment and practices can in part be explained by these budgetary concerns (Davidson Scott 1995, p. 37).

However, some Australian journalism educators and trainers have pursued opportunities to explore the use of new technology in the classroom. For example, Stuart (1997) identifies Mitchell CAE — now Charles Sturt University (CSU) — in Bathurst as one of the first institutions to deploy a desktop publishing laboratory in the late 1980s. Journalism students at

Mitchell had previously been completing publishing assignments using Panterm video display terminals that would have been the envy of many contemporary professional newsrooms (Stuart 1997, p. 49). One of these machines remains on display in CSU's Computer Centre as part of a collection of now obsolete computer technology.

There are other Australian examples of technology innovation in journalism education (see Cameron 2002a) including the use of e-mail as a medium for regular student publications (Pearson, 1993); the use of the Internet and videoconferencing to conduct simulated news conferences (Mackey and Phillipps, 1997); the use of video to stimulate analysis of performance following simulated news conferences (Burns, 1996); the application of games technology to online journalism training resources (Cameron 2002b); and, as outlined in this paper, the use of streaming media to train students in television production and presentation.

The value of hands-on experience in journalism education

One of the defining features of journalism education in a university setting is the requirement that students demonstrate their understanding of core skills through production tasks (Burns 1996). This is managed in various forms, including student publications or broadcasts, classroom writing exercises, mock news conferences or simulated news events and internship placements. Regardless of the form it takes, teaching effective journalism practice necessarily involves a degree of simulation of those practices (Ester 2000). The *CSU News* project is an attempt to simulate some of the practices associated with the production and presentation of live news and current affairs.

Given that most people teaching journalism in Australia — an estimated 95% in 1997 — have had experience working in the mass media (Patching 1997a, p. 34), it is not surprising to find significant emphasis placed on learning vocational skills in these courses. Most working journalists are required to be able to produce some form of product, so it seems natural to put journalism students through a rehearsal production process. Patching's review of the academic workloads of Australian journalism educators highlights the applied nature of many journalism subjects, and the use of practical assessment methods in journalism courses. The reliance of many courses on weekly writing tasks and/or production of print, broadcast and online publications results in an assessment load that 'is much heavier and more consistent than that required for traditional liberal arts subjects' (Patching 1997a, p. 39).

The journalism classroom often departs from a "chalk and talk" theoretical focus. Stuart (1997) describes how from the early 1970s some Australian journalism courses were providing students with access to on-campus radio and television facilities, or entering into arrangements with local broadcasters. Many were also using both regular and ad hoc campus-based publications as teaching tools, or developing publishing relationships with local newspapers. At the high end today are quality public projects such as The University of Queensland's *Queensland Independent* newspaper, Charles Sturt University's National Radio News service, and Queensland University of Technology's nightly TV news broadcasts (Patching 2002).

This production-driven approach continues on campuses today, as journalism schools utilise studios, desktop publishing spaces, and computer laboratories as their classrooms. Patching's survey of outlets for students' practical work in 1996 found that more than half of the 22 institutions contacted had an outlet for radio production work, while a much smaller number

(3) offered some television production experience beyond the level of mock exercises. Of the same institutions, 19 offered regular or occasional print publications (Patching 1997b, p. 65).

The quantity and quality of this student output is recognised by the annual Ossie Awards for student works awarded by the Journalism Education Association (JEA). Membership of the JEA is drawn primarily from journalism teachers in Australia, New Zealand and the South Pacific (JEA 2001). In 2002, there were twelve award categories for undergraduate and postgraduate print, TV and radio productions. These categories span news reporting, print features and broadcast current affairs. There were also awards for best regular and occasional student publications in any medium (JEA 2002). The diverse award categories point to the range and volume of practical journalism being undertaken by undergraduate and graduate students on Australian campuses.

It is worth noting that while the Ossie Awards are yet to include a specific category for Internet-based publications, more and more journalism schools have moved to include elements of technology and new media production as part of their practical training (Nicholson 2001). *CSU News* is certainly one of the first examples of an Australian journalism school deploying streaming media technology as part of a television training program (Mollison 2003).

The *CSU News* project

In July 2002, final-year undergraduate Communication students at Charles Sturt University's Bathurst campus began a series of four-week workshops to hone their TV news and current affairs production skills. The class consisted of 26 students majoring in broadcast journalism, and 18 students with an online media production major. The workshops required the students to shoot and edit local television news stories each day using Apple's *Final Cut Pro* video editing software, and compile them into a bulletin at the end of the week. That process was repeated for three weeks, and then the fourth week of each workshop was dedicated to longer and more detailed current affairs stories. These also were compiled into a program. The weekly news bulletins and the current affairs program were broadcast live via the Internet from an on-campus studio using Apple *QuickTime Broadcaster* software and a *QuickTime Streaming Server*.

Blake (2000) identifies at least two main uses journalism educators have found for the Internet. The first is as a library, with an emphasis placed on teaching research and computer-mediated communication skills. The second is as a "virtual classroom", capable of 'supplementing or replacing the physical classroom as an instructional medium' (Blake 2000, p. 4). The first approach has been reflected in the inclusion of computer-assisted reporting subjects and methods in journalism curricula (see for example Tapsall and Granato 1997; Quinn 1997). The second approach is increasingly seen in the development and use of distance education resources for both on-campus and external students in a range of disciplines (see for example Chickering and Ehrman, 1997; Brennan 2000; McCombs 2000; Cashion and Palmieri 2002).

There is a significant third use of the Internet by journalism educators — that of a publishing medium to mirror new industry work practices, and to showcase student work to a larger potential audience than other forms of course-based publishing. Journalism schools have not evenly embraced online publication, as they respond to the potential of the Web in 'fits and spurts' (Sutherland and Stewart 1999). Nonetheless there has been constant revision to

curricula over recent years to accommodate the teaching of multimedia and online publishing skills (Blake 2000; Huesca 2000; Nicholson 2001), and many courses now use the Web as a medium for publishing student work (Patching 1997b; Nicholson 2001).

As well as introducing students to online publishing processes it can also prove a more cost effective way to manage student publications, compared to the increasingly prohibitive expense of traditional methods such as hard-copy print runs (Friedland and Webb 1996). Jonassen, Carr and Yueh (1998) also argue students learn more as producers of materials than they do by studying them, and ‘designing multimedia presentations is a complex process that engages many skills in learners’ such as project management, research, presentation and reflection.

Some metropolitan courses have been able to make regular use of commercial or community TV services as an output for student-produced work (Patching 1997b). Although CSU operates a very successful radio newsroom providing hourly bulletins to stations around Australia via a satellite network, our location in a regional area has limited the television training opportunities for our students. Web streaming was seen as a way of introducing a regular live production into the TV news training schedule.

The final Session of Charles Sturt University’s BA (Communication) degree is structured to allow students to focus on core practical subjects as a way of polishing their entry-level vocational skills. In 2002 the subjects JRN309 Broadcast Journalism Workshop and MST317 Online Media Production Workshop were combined into a single class to allow the TV/online project to develop. The class was split into three groups, each rostered on for a four-week workshop block. Students not working on the television component were either completing a similar intensive practical session in radio journalism, or were free to work on other major projects or internships.

A typical workshop week would begin with a Monday morning editorial meeting to discuss the news of the day — a process similar to that occurring in TV newsrooms everywhere each day. One student would be nominated to act as the Chief-of-Staff, and would lead the group through a discussion of the news agenda. In the early stages, stories were generally sourced from the local newspaper or from the on-campus radio newsroom. As the workshop progressed, students were better able to suggest their own ideas as they followed up new angles to stories previously covered. Most also seemed to develop a greater general awareness of local issues as they took the time to read through the local newspaper each day, listen to local radio news, or tune into nightly regional TV news bulletins. Several also came into the workshops having just completed internships at either the Prime or WIN network newsrooms based in the nearby city of Orange.

Once a list of possible stories had been generated, the journalism students would nominate which one they would be covering that day and an online media production student would volunteer to assist them. This formed the basic production team, consisting of a journalist and a cameraperson/editor. However, this was a fluid arrangement as in some cases journalism students would work together to handle both the reporting and shooting/editing roles. Some online media production students also chose to explore the role of reporter. The main requirement was that each student pursued a daily task and gathered a range of suitable material to submit for assessment at the end of the workshop process. As a rule the group was split into six production teams each day, as this was the number of camera kits that could be guaranteed for the workshop.

Each production team was equipped with a Sony VX-2000 digital video camera, a tripod, and external microphone. In the first few days of each workshop the students were given instruction on the techniques of shooting a television news story. The broadcast journalism majors had some experience from an earlier subject, in which they'd been required to shoot and edit their own TV news story, but they generally lacked technical skills. The online media production majors generally had very good camera skills, but had not yet received specific training in approaches to news and current affairs production. Both groups generally adapted well, and were able to share specialist knowledge on the job. A daily "show-and-tell" session following the daily news meeting provided an opportunity for staff and students to discuss performance and technique.

Having lined up a suitable story, students would generally spend the morning shooting footage and conducting interviews, and then return to the on-campus Media Centre building in the afternoon to edit their stories. The class was given exclusive access to an editing lab equipped with six Apple G4 computers running *Final Cut Pro 3* with OS X. They also had access to a shared lab with Apple iMac computers running the same software. As shown in Figure 1, students could digitise their footage straight from the camera via FireWire connections, and start editing. To record a voice-over for narration, students could plug a microphone into the camera and record in the editing lab, or in a small soundproof booth available in the Media Centre. On average each group was able to finish one story per day, or at least provide a rough edit for the following morning's feedback screening.



Figure 1: Students use FireWire and Final Cut Pro to capture video footage.

A shared network drive was used within the Media Centre to swap material from computer to computer if required, such as "stock footage" to be used for follow-up stories or small segments being edited into program opening titles. The shared drive was also used to store graphic resources, such as logos, that could be imported into *Final Cut Pro* to give the stories a consistent look. Other online resources such as help files, production documents and manuals were also available via this network drive.

As the week progressed the students would be encouraged to start thinking about how the stories might be brought together into a coherent package. By Wednesday, a journalism student would be appointed producer to oversee editorial aspects such as the selection and completion of stories for the weekly program. An online media production student would be chosen as technical producer to oversee the technical aspects such as compiling tapes and producing opening and closing title sequences.

A Thursday afternoon deadline would be set, and the student reporters would have to provide their edited piece and a written introduction for their story that would be read by the program presenter. The producer would gather and sub-edit these scripts, add any material that was required, and then type the final script into an autocue computer ready for the next day's broadcast. The technical producer would compile tapes of the finished stories according to the agreed running order, and ensure the studio set and control room were ready for use. A student would also be chosen as the on-air presenter, giving them time to prepare a suitable wardrobe for the next day's performance.

On the Friday, the students would gather mid-morning and prepare for typical studio production roles. These included a director, vision switcher, tape operator, floor manager, sound operator, autocue operator and cameraperson. A friend or two to act as cheer squad or make-up assistant usually accompanied the on-air presenter. The downmarket-chic undergraduate "uniform" would be temporarily discarded for the best on-camera suit or outfit, and the presenters never failed to impress with their transformation from rumpled student to groomed pre-professional.

Our Apple-based streaming broadcast system was built around a PowerPC G3 running *QuickTime Broadcaster 1*, and a PowerPC G4 running *QuickTime Streaming Server 3* with *OS X Server 10.0.4*. The server system had been installed as part of a regular equipment upgrade the previous year, but this was the first project to come along to make significant use of it. *QuickTime Broadcaster* was available as a *free* download from Apple, which made it our first choice instantly. The analogue video and audio output of our control room, combining tape feeds and live studio cameras, was fed into a digital/analogue converter. The digital signal was then sent via FireWire into the G3, where *QuickTime Broadcaster* was used to encode and broadcast the webcast stream. This was then delivered via the *QuickTime Streaming Server*. A simple Web page (www.csu.edu.au/newmedia) was created to explain the purpose of the CSU News broadcasts, and to point viewers to the *QuickTime* stream.

As the service was being conducted as a first-time trial, it was not widely publicised. Audiences consisted mainly of School of Communication staff and students, friends and family of students in each workshop, and interested Division of Information Technology staff keen to measure the effects of the streaming media on their network. Most weekly programs attracted only a handful of viewers. However, feedback from the students involved in the webcasts was overwhelmingly positive. They were asked to prepare a written report as part of their assessment, and most included some commentary on the benefits of the process. While some noted occasional technical problems, and the lack of a substantial audience for these trials, most still felt it was a valuable exercise and a positive way to end the production cycle each week.

Reflections

Constructivist learning principles inform this project, with a basic belief that (a) learning is an active process of constructing rather than acquiring knowledge; and (b) teaching should acknowledge and support that construction and not merely supply information (Bruner 1966). Constructivism now serves as an umbrella for a diversity of views on teaching and learning, and constructivist concepts have been embraced widely within educational research, theory and policy — to the point where any other approach is attacked for being ‘passive, rote, and sterile’ (Duffy and Cunningham 2001). Driscoll (1994, p. 376) suggests the growing popularity of constructivism mirrors the increasing availability of digital technologies, as computers offer ‘effective means for implementing constructivist strategies that would be difficult to accomplish in other media’.

While accessibility to computer networks and multimedia-capable computers has improved the delivery of materials, the problem remains that computers and multimedia in education ‘have naturally been conceived as teachers and sources of knowledge, rather than tools for learning’ (Jonassen, Peck and Wilson 1999, p. 12). A traditional view of technology-as-teacher treats digital and interactive media primarily as a source of information, with its main role to somehow transfer that information to the students.

The constructivist approach of this project argues for digital media to be considered in the role of technology-as-partner, with its main role to simulate real-world problems and production processes. Instructivist approaches to journalism education and training do not make sense, given the practical nature of the journalism profession and the value placed on critical thinking. This project reflects the argument that students learn better through activity rather than through instruction and memorisation, as ‘learning is not a spectator sport’ (Chickering and Ehrmann 1996).

The Apple platform provided a very easy path to Web streaming, nicely rounding off a production process that took students on a scaffolded learning journey from story conception through to live broadcast. The student’s experiences transferred to learning outcomes, illustrated by their ability to quickly develop their basic *Final Cut Pro* skills during the workshop, freeing them from major technical concerns and allowing them to concentrate on the editorial quality of their stories. The workshop approach resulted in ample high-quality content for “showreels” to send to potential employers.

QuickTime Broadcaster was free to download, and easy to install and operate. A straightforward user interface allowed us to start our weekly webcasts with just a few mouse clicks. It integrated easily with our *QuickTime Streaming Server*, requiring minimal technical support from IT staff after the initial set-up. The ability to automatically save a live broadcast to hard drive proved useful, as students could easily review their performances without having to spool through a master analogue recording of the program.

Further observations of the learning outcomes came via anecdotal feedback from the students, as well as commentary provided in their reflective post-workshop written reports. These indicated the live broadcasts had been a positive development. The students enjoyed having a program to work towards each week, rather than just a deadline to submit work for assessment. Figure 2 is a still image taken from one of the live broadcasts, showing a final-year journalism student introducing a current affairs story. While many were more interested

in pursuing a traditional TV career, rather than jobs in Web-based media, they were enthusiastic about the use of the Internet to share their work with a wider audience.



Figure 2: Broadcast journalism student Holly Hearne presents a live webcast.

Staff also found the webcasts a useful addition to the workshop structure. It allowed us to incorporate exercises in studio production and presentation that would have seemed quite hollow if the outcome was merely a tape of a mock bulletin. Framing the exercise as a live webcast produced a real deadline pressure, and a sense that the production was for a real (albeit small) audience. Building towards the weekly webcast provided opportunities for focussed discussions, just-in-time training and reviews of works in progress that scaffolded the broader project. The technology was easy to work with and, despite the difficulties of deploying new digital technology into an ageing analogue production environment, the live webcasts proved a relatively stress-free teaching tool.

The workshop approach will continue in the spring Session of 2003, with plans to again incorporate a streaming media component. CSU's Media Centre has been re-configured to provide a permanent studio space for news and current affairs webcasts. It is likely that the project will be more widely publicised this time around, at least to the University community, thus raising the stakes for the next group of students.

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