Teaching Electronic Creative Writing:
A Report from the Creative Industries Frontline

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> Whether or not books and other traditional literary technologies survive, the dominant medium in the foreseeable future will be electronic, digital, with the Internet the probable universal provider. I anticipate that literary artists will gravitate toward this powerful medium. But if they do not, if literature does not in fact find a place there, then the vast majority of the human race will simply do without it, and thus, whether the new generations know it or not, they (all of us) will be greatly impoverished.
>
> – Robert Coover (qtd. in Electronic Literature Organization 2003)

Introduction

Since 2000 the authors of this paper have developed and taught a unit at Queensland University of Technology (QUT) in Brisbane, Australia: a unit which, after various changes, is now known as *KWB370 – Electronic Creative Writing*. The unit has run (with considerable annual enhancement and redevelopment) in each first semester (February-July) since then, as part of the undergraduate Creative Writing course, and is now offered to postgraduate coursework students as well. The unit was developed partly in response to demands for more technological literacy skills to be embedded in key units across the university, but a more significant motivation was the developers' desire to embrace, represent, and contribute to the then still-emergent genre of literary hypertext as a valid and viable option for creative writers both as creative artists and industry professionals. This is also in line with its home Faculty's re-orientation from a Faculty of Arts to a Creative Industries Faculty, which includes a strong interest in professionally relevant graduate outcomes, and with QUT's overall focus on providing its students with skills which are of immediate use outside of academia.

Although hypertext writing has been taught in U.S. colleges for almost a decade, in developing our approach we could find few Australian models apart from the visionary work of the Media Studies programme at Royal Melbourne Institute of Technology, Melbourne, which has been teaching hypertext theory and practice since 1995, and the School of Arts, Griffith University, Gold Coast, which has also offered a CyberStudies major within its undergraduate Creative Writing degree since 1999 (Zervos 2001). Although this lack of local prototypes was initially somewhat daunting and, of course, we were interested in these Australian and U.S. approaches, we also experienced this relative lack of models as an advantage, enabling us to explore the teaching of what we knew was a new media art form in an equally new way. We

felt, and remain, excited and privileged to be working in such new territory: while the existing body of literary hypertexts (as well as the critical and theoretical work on them) is growing, we were always cognisant that the recognised first literary hypertext experiment, Project Xanadu, was only imagined by Ted Nelson in 1960 and not really published until a decade later (Project Xanadu 2003).

Although certainly admirers of such past achievements, the vibrant current state and future potential of literary hypertext, we were (and are) not working from a blindly utopian position and, in developing and further reworking this unit, have kept in mind hypermedia author Michael Joyce's warning that "in coming to teach with and talk about electronic forms of writing and discourse we must be aware of our desires and wary of what we are rapidly becoming used to in their representations, for what we are used to we often become used by" (1998: 164-5).

There is, in other words, the danger of limiting the inherent possibilities of hypermedia writing in, and through, the very act of teaching it – if the teaching methods and tools used solidify into a set of routine practices which do not encourage conceptual, practical, and theoretical exploration beyond their current boundaries by the students, or into practices which are overly driven by a given format which students are asked to aim for. In our view, the best way to avoid such stagnation is to combine practical, skills-based work which can provide a production framework without limiting creative opportunities with a theoretical and critical approach which looked at hypertext as an industry as well as a creative genre. In the design of this unit, this meant that we wanted to enable students to acquire the skills to locate, analyse and critique, as well as write and publish, literary hypertexts. The unit was thus, from the beginning, aimed at students who wanted to work towards vocations involving professional writing in industry or the professions as well as at creative artists and those planning a portfolio career mixing these two.

Defining Electronic Creative Writing

In designing a unit to teach electronic creative writing, it was of course first necessary to arrive at a working definition for this form of literary hypertext production. This in itself is a difficult task because the range of creative writing formats on the World Wide Web (which presents only a subset of all electronic creative writing media, of course) is broad and varied. It includes forms from relatively basic multilinear storytelling in the 'choose your own adventure' mode to multimedia-enhanced hypertext poetry, to immersive 2D or 3D virtual reality environments that are used for digital storytelling. Additionally, of course, the subject matter and literary styles in hypertext writing are just as varies as those in other forms of creative writing, and run the gamut from poetry to prose fiction and nonfiction. We also had to keep in mind the complexity and depth of knowledge that was realistically possible to impart to students in the space of one semester, and our desire to publish the best student works in

our online journal of creative writing, **dotlit**, alongside refereed work solicited from the wider community.

We opted, therefore, for a definition which would start from a break with the traditional linearity of print (as well as radio and TV), where texts are by and large encountered in a sequential process following through from start to finish. Here, the work of Roland Barthes in *S/Z* (1974) was highly useful; in this book, Barthes explores and dismantles the common assumptions of print storytelling and goes to great lengths to break down his source text into its constituent elements. These elements, which Barthes calls 'lexias', are the "blocks of signification" (1974: 13) which join together to create a coherent story, and as hypertext scholars such as Ilana Snyder (1996) have pointed out, they are also the basic units of hypertext writing. So, in converting a print piece to hypertext, one would break it up so there is one lexia per hypertext page, and link these together sequentially; in creating a multilinear story based on this linear source, one could then add further storylines to branch off from selected lexias, returning eventually to the main storyline or developing into entirely new narrative territory.

Explaining creative hypertext writing in this way means that we are not confronting creative writing students with an entirely new mode of writing, but instead build on their established knowledges and expand them further to suit the new medium (in fact, this is not unlike linear stories themselves may be expanded into multilinear pieces). It does not cover the entire range of possibilities offered by electronic creative writing, however, and so our definition also extends further to include hyperfiction forms which break with linearity altogether. The lexia model remains useful even for these texts, as single pages tend to continue to contain topically unified segments of such pieces which are then linked to other segments in a variety of ways. Further, by pointing out that blocks of signification can also be non-textual (in the narrow sense of the word, meaning literal *text*), we are also able to account for images, animations, sound and video elements which some students may hope to include in their works. In all, then, we could say that what we refer to as electronic creative writing works in this unit are *creative works whose constituent lexias are arranged in multi- or non-linear patterns using the interconnection mechanisms of networked electronic media* (namely, hyperlinks in HTML).

Because of the networked nature of hypertext works, we also stress very strongly the use of lexia maps in analysing and developing electronic creative writing pieces. While more linear texts can usually be represented in the form of an outline, with headings and subheadings identifying key sections and their subsections, this is less applicable for multi- or non-linear work. Rather, such texts are usefully described as a network of elements which can be traversed through a variety of alternative pathways. It must also be kept in mind that HTML links are generally uni-directional (unless we take into account the 'back' button on Web browsers), which means that readers will move through a hypertext on their own account, but using one-way connections made by the text's author. Lexia maps therefore

must also show the direction of any connections between lexias; only this enables us to identify what paths through a hypertext piece are truly available to a reader.

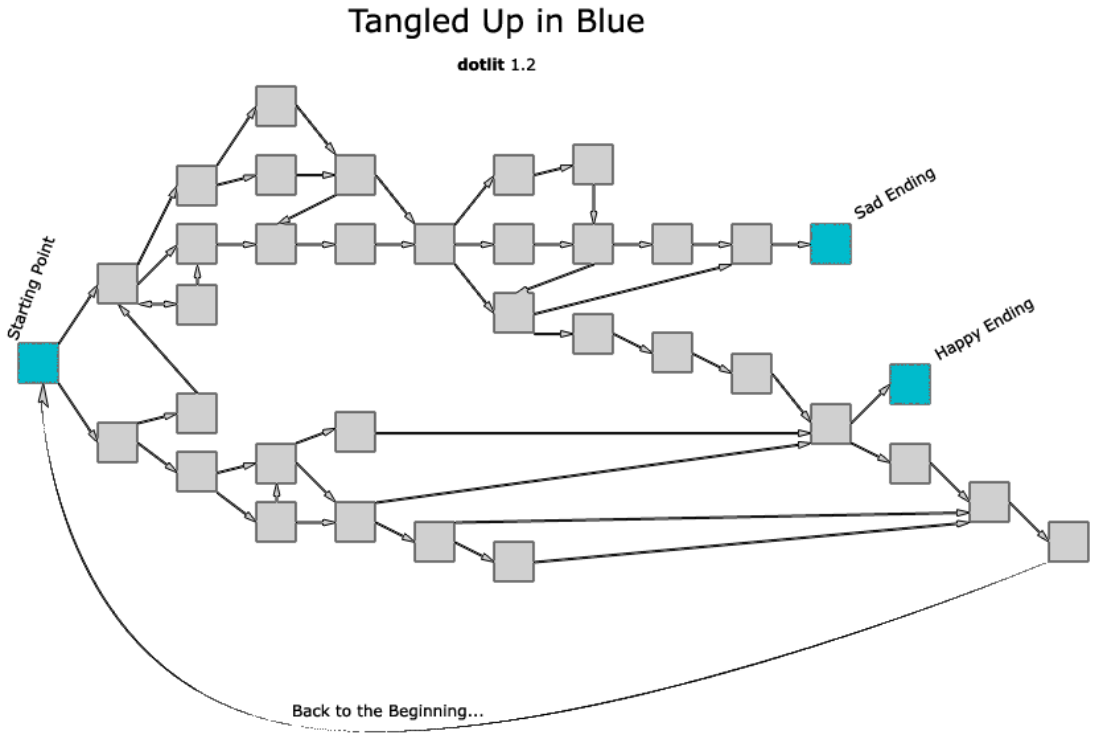

Figure 1: Map of "Tangled Up in Blue" by Eileen Salisbury; text published in dotlit 1.2 (2000) <http://www.dotlit.qut.edu.au/200002/tangled.html>. This map is used in lectures to demonstrate multilinear storytelling.

Developing *Electronic Creative Writing*

Early conceptual work on this unit at the start of 2000 also coincided with, informed, and was informed by the development of a QUT-based online journal of creative writing, which was eventually named **dotlit** (located at <http://www.dotlit.qut.edu.au/>). With Axel Bruns as chief Web designer, **dotlit** was a collaborative project between the creative writing and media & communication disciplines at the university, with support from the Queensland State Government funding agency Arts Queensland. It followed on from Bruns's work as a co-founder and Web developer for the highly successful *M/C – A Journal of Media and Culture* and its companion publication *M/C Reviews* (<http://www.media-culture.org.au/>). **dotlit** is a refereed twice-annual journal publishing poetry, fiction, and creative nonfiction as well as commissioned works and reviews, and has now also taken over from Queensland's premier, but recently discontinued, creative writing print journal *Imago*.

In the lead-up to the second issue of **dotlit**, published in November 2000, the decision was made to also publish creative hypermedia works in a special section. This initial collection of works combined unsolicited (but refereed) submissions of hypermedia pieces

with selected student works emerging out of a prior version of *Electronic Creative Writing*, in which students used the hyperlink function in Microsoft Word to link to other Word documents and so create a relatively primitive, non-HTML-based hypertext.

The experiences made in converting these texts into **dotlit** articles, and the favourable response to even these simple hypermedia pieces, contributed to our interest in establishing a unit which would teach electronic creative writing by much more immediately and intensively teaching students to write pieces for the predominant hypertextual medium of the day, the World Wide Web. It was obvious that this could not rely on the limited hyperlinkage features found in Word, which also suffers from endemic problems in its text-to-HTML conversion functions. Similarly, it was also evident that the publication of selected pieces in **dotlit** could be sped up significantly if they were created specifically with this possibility in mind, adhering to the overall **dotlit** design paradigms (font and colour choices, file structure and naming conventions, etc.). Fortunately, both issues could be addressed through the use of the templates functions offered in Macromedia Dreamweaver, which in 2000 had begun to establish itself as the industry-standard package for Web development.

Electronic Creative Writing was, from its conception, to be a compulsory unit for students enrolled in the undergraduate Creative Writing degrees, now renamed the Bachelor of Creative Industries (Creative Writing) and the Bachelor of Fine Arts (Creative Writing). Recently, it has also become an elective in a number of creative writing postgraduate coursework degrees. Unlike a number of our other creative writing units, however, it is not an open elective and is, thus, unavailable to students from anywhere else in the university.

In developing the unit we wanted to utilise the practical skills and conceptual background students had already acquired in linear narrative through their previous units, and this meant that we positioned the unit in the third and final year of studies. This is important, as the unit's starting point is that students bring with them a sophisticated understanding of what traditional linear narrative is, and have had extensive practice in writing traditional linear narrative. The unit does not have to spend valuable time defining these, but can build on and expand these knowledges and abilities. We chose the name *Electronic Creative Writing* because, although using a hypermedia platform and sophisticated IT infrastructure, we wanted a key focus in the unit to remain on the content creation component of literary hypertext writing – seeing this unit as 'creative writing' as much as 'electronic', and our students as content creators for digital media first, and electronic publishers second.

In a nutshell, then, our unit takes in a group of creative writing students, many of whom have little or no experience in reading, let alone writing, literary texts on the Web, and ends with a cohort who can not only plan, develop, create and publish their own literary hypertext works, but can also locate, analyse and critique non-linear hypertext narratives and have an informed perspective on the electronic publishing industry. Crucially, therefore, this unit interweaves theory *and* practice. We enable students to understand the nature of literary hypertext, the way it works, and its potential as an art form and as an emergent creative industry, as well as enable them to develop and critically evaluate their own (and other

artists') creative practice in this area. We also provide students with an understanding of the environment for e-publishing as a creative industry: its history, current processes and the possible future directions in which it, and its markets, may develop. This means that the unit has various strands, each of which is articulated, developed and interwoven as the unit progresses.

One of our fundamental principles, however, in designing *Electronic Creative Writing* was that we would value content over design. This emerged out of an observation that in many hypertext and hypermedia *design* units students were primarily taught practical literacies in key design tools such as Dreamweaver, Flash, and Photoshop while failing to address the fundamentals of effective story development, or that they covered such content development issues as little more than an afterthought. Students focussed on building their skills in the relevant applications without considering the uses of programme functions for their own creative work, and only later would devise a more or less creative piece to showcase as many of their newly acquired design skills as possible. The resultant works would often be technically impressive but creatively inconsistent and uninteresting.

Working within a Creative Industries Environment

In *Electronic Creative Writing*, by contrast, students focus on the creative development of their story ideas (throughout roughly the first half of semester) *before* they enter the computer labs to do practical work on their hypertexts. This unit, therefore, is not concerned first and foremost with teaching hypermedia design *literacy*, but rather with what might be termed 'hypermedia design *creativity*'. While this must necessarily include teaching a certain amount of design skills, for our cohort of creative writing students we consider such skills to be secondary to solid content development skills. This is also in line with the overall placement of this unit in the various curriculum options that are now on offer through the Creative Industries Faculty: increasingly, many incoming students will have developed some hypermedia design knowledge already through the Faculty core unit *KKB818 – Introduction to Multimedia Technology*, which is typically taken in an early semester of the undergraduate degrees, and will also have attended introductory creative writing units, while *Electronic Creative Writing* will usually be a third-year choice for students. We can therefore expect a certain level of prior knowledge and can focus on gradually interweaving and, through synthesis, enhancing existing creative and design skills.

Electronic Creative Writing is also in line with a fundamental driver of the establishment of Creative Industries at QUT (superseding the previous Arts Faculty in 2002). One of the key realisations which led to the development of the Creative Industries Faculty was that graduates in what could be characterised as the arts and media fields increasingly found themselves in employment situations which required a vast range of distinct, but interrelated, skills across the so-called creative industries – those industries centred around activities which have their origin in individual creativity, skill and talent, and which have the

potential for wealth and job creation through the generation and exploitation of intellectual property. The new course structure in the Bachelor of Creative Industries degree options available at QUT recognises this by breaking down students' allocation to only one or two home disciplines during their studies, replacing this siloised degree structure with inherently interdisciplinary degree offerings where students cannot help but encounter common issues of importance to *all* creative industries practitioners, as well as experience aspects of a wide variety of CI disciplines. So, in our unit, too, students work within varied disciplinary approaches of (chiefly) creative writing and communication design, as well as visual arts, communication, and media studies, an experience which stresses the importance and value of acquiring interdisciplinary skills.

In line with this interdisciplinary approach, this unit is team-taught by staff from different disciplines at QUT (two in 2000 to 2002, three in 2003). The team now draws from staff in Creative Writing, Media & Communication, and Communication Design – each discipline contributing essential skills and key knowledges to the unit. We also believe team teaching sets up a dynamic of approaches which are sometimes competing or contrasting – which, in turn, underscores the range of choice in possible writing and publishing strategies. We thus consciously incorporate a high level of collaboration and collaborative work into the unit's teaching and learning strategies. In this way, the students also learn from each other. Peer review and workshopping is a central methodology used to generate increased self-awareness of problems and possibilities, and collaborative work often comes about spontaneously in the laboratory sessions where students frequently assist, help and advise each other. The teaching philosophy could be summed up as being a face-to-face in-class collaborative intellectual and creative experience supported by a high-tech interface to sophisticated IT infrastructure.

Final-year students are also able to see some very practical uses for their newly developed content-design synthesis skills in the real-world workplace, where many creative writing students (as other graduates) will work in, or with, electronic media. One very practical outcome for many of our students is the publication of their finished work in **dotlit: The Online Journal of Creative Writing**, which is produced at QUT. While not primarily a student journal, each year we select the best hypermedia works by students in *Electronic Creative Writing* to be published in **dotlit** (and the page templates used by students are already prepared to enable a speedy transition from final student projects to publication in the journal). This publication of their work in a refereed academic journal constitutes a very useful CV reference for the selected students, of course. The possibility of publication also serves to encourage students to work hard towards their final project.

Unit Content Structure

As noted before, the content taught in *Electronic Creative Writing* is divided roughly into two parts, respectively focussing on the theory and practice of creative hypermedia

development – or perhaps more precisely, on the theoretical and conceptual work which underpins electronic creative writing in the first section, and on the practical and technical writing and design work which follows on from this first component in the second.

Theoretical and Conceptual Work

In this unit, we chose to reverse the usual order of teaching electronic creative skills: very early in the unit, our students are asked to begin to develop their story concepts ('story' here being used in the widest possible sense, as the range of acceptable works contains not only hyperfiction, but also hypermedia nonfiction, poetry, and other Web-based installations). We also encourage them to explore a great variety of published creative hypertexts, from the classic piece *253* by Geoff Ryman to works by Stuart Moulthrop, Michael Joyce, and other noted authors, and also including the large number of hypertext works we have published in our own online creative writing journal **dotlit**. Regardless of their technological support structures, these works serve as inspiration for our students' own story ideas, and we ask students to examine them for their narrative structures rather than for the technologies used to create them. Again, this approach also reflects our fundamental view that encouraging students' creative exploration must come before their application of technical skills.

The theory component of the unit involves a discussion and investigation of non-linear literary narratives on the Internet and in non-electronic forms, as well as an investigation of the industry of electronic publishing. Alongside the students' examination, critiquing, reading, planning and writing of non-linear narratives, students also engage in a programme of reading and class discussion which addresses electronic publishing as an institution, looking at its, albeit short, history, its current operation, and its possible futures.

This seeks to identify both the advantages and disadvantages of e-publishing. Advantages include the increased potential for internal multimedia content within a work, increased potential for both formal and informal collaborative work, increased exposure to national and international audiences and markets, increased possibility of interactive reader feedback, increased ease and decreased cost of distribution, potential for long-term exhibition through electronic media, possibility of a marked reduction in the time lag between submission and publication, and development of an ecologically sustainable paperless publication model. Other advantages include that electronic writing is more 'malleable': that the author can theoretically change already published work, publish their voice alongside their text, and easily add a link to a published work in a CV or promotional resume. A sophisticated advantage often identified near the end of the unit is that non-linear writing can encourage non-linear thought, and thus, even students who do not want to pursue further work specifically in hypertext writing feel that they have increased their creative capital and abilities.

Disadvantages are identified as the authors' increased exposure to pirates and plagiarists, the proliferation of vanity and subsidy publishing, the lack of editorial intervention and quality control, and an often inadequate promotion, marketing and distribution – in short,

commercial potential – of e-publications. Computers are obviously much more expensive, less portable and less eye-friendly than the printed page, and are still not accessible to vast sections of humanity.

Students often display a sophisticated understanding of the print publication environment and industry, and often make queries such as whether an e-publication counts as 'publication' if a print journal seeks 'previously unpublished' work, whether publication on your own site is an advantage or not, and how payment rates for e-published work compare with those in print. Some still see electronic publishing as 'not really being published', as somehow lacking in the substantial seriousness that book or journal publication conveys upon its author. (A belief that remains, sadly, shared by a number of academic as well as industry organisations.) Ethical issues, including copyright and intellectual property, are also addressed in the readings as well as in practice – 'can I use other people's images in my story?' being a common early question.

As a class we engage in wide-ranging discussions about films, television programmes and computer games which feature non-linear modes of storytelling. This allows students to begin to list various types of nonlinear narrative strategies and to analyse the ways these nonlinear forms function in each of these texts, as well as the various creative, artistic and interactive possibilities they offer authors and readers. The class usually has a common knowledge of an enormous body of relevant media texts which may include films such as *Groundhog Day*, *Sliding Doors*, *Memento*, *Magnolia, Run Lola Run*, *Rashomon*, and television shows *24* and *Boomtown*. In these discussions, students also begin to discover which types of nonlinear narrative appeal to them and what kind of stories they are interested in telling. The most popular of these approaches feature multiple story lines, multiple points of view, multiple or indeterminable endings, circular story forms, the ability to display characters' inner thoughts, and temporal and spatial dislocations, as well as the inclusion of multimedia forms and graphic design elements which function beyond 'illustration' to become story-telling elements in themselves. Students often identify the labyrinth, maze, quest, journey or encyclopedia/library as ways in which they are thinking of their story at this stage – and some begin to express the desire to use their work as a metatextual comment on the form itself.

We move quickly from students' own experience of 'choose your own adventure' books to use Murray Bail's novel *Eucalyptus* (1999) as a text for class discussion. Starting with the plot and setting, we discuss whether Bail's work is a nationalist text – asking how 'Australian' it is, and how 'understandable' it would be to an international audience. This leads to an examination of the Internet as a global publishing medium, and the idea of 'national' versus 'global' or 'local' literatures. We then address the characters in the book, with students mapping out their various relationships in a diagrammatic form. We discuss how the characters see their environment and their relationship to that wider world as well as their own inner thoughts, discussing how this is achieved on the print page – and how it could be achieved electronically.

"Beware," the father of one of the main characters warns her, "beware of any man who deliberately tells a story." At heart, *Eucalyptus* is a novel about stories and storytelling. We look at the various stories in the book, and how each works as both a complete tale within the book, and as an intrinsic part of the novel as a whole. We then count up how many different stories are told in *Eucalyptus* – there are more than 200 – and talk about how these are linked together. Students then work in groups to map these stories and their linkages, each group coming up with their own schematic way of expressing this. The issue of devising a beginning, middle and end (one of the traditional definitions of a story) is also discussed and interrogated in relation to the non-linear hypertext story.

About a quarter of the way through the semester, students also begin to work on their story proposal, including a lexia map of their finished work, and then draft and rewrite several versions of the content of their story. The development of the proposal and the various drafts of the content are undertaken both individually and in class, with feedback offered within a series of peer review workshops and written feedback from staff (on the proposal) and oral feedback (through an in-class workshop) on this content. Students have previous experience of in-class workshopping, and of the methodologies for interrogating others' work and offering constructive feedback, but this knowledge needs to be reinforced and supported in these peer review sessions. Basically, students are asked to present their proposals to a small group and 'pitch' their idea. The other students then seek to locate the strengths and potential weaknesses in the proposal, commonly identifying where the story is still actually linear, where the progression through the work seems unsatisfactory or where the student has been too ambitious in the number of storylines, characters, technical elaboration and other such aspects of the work.

Practical and Technical Work

While content development is under way from the early stages of the unit, we introduce the technology of electronic creative writing only some time later – at a point where students have already begun to sketch out some of their ideas and need to begin to explore how such ideas may be able to be realised. Here again, however, we prevent students from simply applying available technology to their story ideas, in a way which would lead to creative ideas being subsumed by students' growing technical skills: rather, the technologies of Web design (and to a lesser extent graphic design) are introduced on a level which is initially kept separate from the creative work.

Teaching the practical aspects of creative hypermedia work for the Web begins with a workshop in week four of the semester. In this two-hour computer lab session, students are introduced to Dreamweaver, our hypertext editor of choice. During this session, however, we make no direct reference to students' own creative work, nor to the page templates which will ultimately be used in the creation of students' hypermedia pieces. Rather, we introduce the methods for hypermedia development using Dreamweaver, and also briefly explore the

underlying structure of the HTML code which is created in the process. (Again, it is important to note that *Electronic Creative Writing* does not aim to provide an overall introduction to Web design, so the fundamentals of HTML are only touched upon, and advanced functions of Dreamweaver are ignored. Such issues would have been covered by students taking *Introduction to Multimedia Technology* or other communication design units.)

Overall, this introductory session covers:

1. Setting up a 'Site' in Dreamweaver.
   Enables the software to keep track of all files created or used by an individual student.
2. Setting up the Dreamweaver graphical user interface.
   Arranging the workspace in a useful manner – with emphasis on the site files and edit history boxes.
3. Opening a new window and doing text editing.
   Gradually builds from basic word processing functions to some more advanced text formatting, and in the process explains some of the key principles of HTML – such as portability across display devices and accessibility for a wide range of readers.
4. Exploration of underlying HTML code and invisible elements.
   Utilises the mixed (code/content) view option in Dreamweaver, and enables students to see the immediate effects of their editing in the code. It also provides a closer look at the overall tag structure of hypertext mark-up language, and introduces the header tags and their functions.
5. Modification of global properties.
   Using the 'page properties' window to apply background colours and images, change text and link colours, and adjust page margins.
6. Adding common elements.
   Insertion of common elements such as images (including roll-over images) and tables, using Dreamweaver functions. Modification of element properties (image size and alignment, table borders, cell spacing, padding, alignment, and backgrounds, etc.).
7. Adding links.
   In previous steps, students worked within a single file. Now they are asked to create multiple files and link between them.
8. Help functions.
   The session ends with a brief introduction to the help and tutorial functions within Dreamweaver.

While in the following weeks the focus of teaching returns to theoretical and critical issues and creative content development, students are expected to explore the tutorials included with Dreamweaver in their own time during these weeks, either in the labs or by

using the free 30-day trial version available from Macromedia on their private computers. They are asked *not* to begin the design work on their main project and, indeed, cannot do so without an introduction to the page templates which they will need to use. Again, this serves to focus students' creative energy on story development in and of itself, rather than compromising their creative work by tying it too closely to technological foundations. However, their developing practical skills can now begin to inform their development of the creative structure of their works, and they are better able to judge the feasibility of their creative ideas.

Students return to the computer labs in week eight. Following a lecture the week before on translating the structure of their stories into a hypertext page structure, and having submitted their story proposal which included a structural map of their intended lexias, students are now able to begin work on converting the creative content of their stories into hypermedia works. The week eight lab class therefore introduces the **dotlit** page templates which will be used to create these pieces.

The page templates themselves serve a number of purposes. For one, they do of course enable an easy transition of selected high-quality student works into future issues of the journal. Further, however, they also provide some basic common structures which are highly valuable to students confronted for the first time with creating hypertext works. The templates prescribe certain fundamental layout and formatting conventions, including the **dotlit** font and colour scheme and overall page layout. This means that students are able to build on an existing, established design paradigm rather than having to devise their own; the use of ready-made templates also removes a need to teach students how to create their own templates within Dreamweaver. At the same time, on the other hand, there remains considerable design flexibility *within* the overall **dotlit** design paradigm, which can be utilised by students where this is appropriate.

The templates and a supporting folder hierarchy are stored in a ZIP archive file on a common student server. From here, students unpack them onto their own storage partition on the student server. Unpacking from the ZIP file ensures that all students work with a standardised file structure, which also means that finished student works can be easily transferred to the teaching staff's testing folders for marking, and further to the **dotlit** Website if they have been selected for publication. The ZIP file contains a text file with instructions for working with the template, and submitting the final project.

Fundamentally, the use of templates highlights the questions about design choices which students will have to address in creating their hypertexts. When are alternate font faces, font or background colours, or other formatting choices appropriate? What purpose do they serve? How do they contribute to effective storytelling? Where starting from a blank page will encourage students to experiment to a point where stylistic effects often overwhelm content substance, beginning from within a common template ensures that the introduction of idiosyncratic design elements is properly justified before it is attempted.

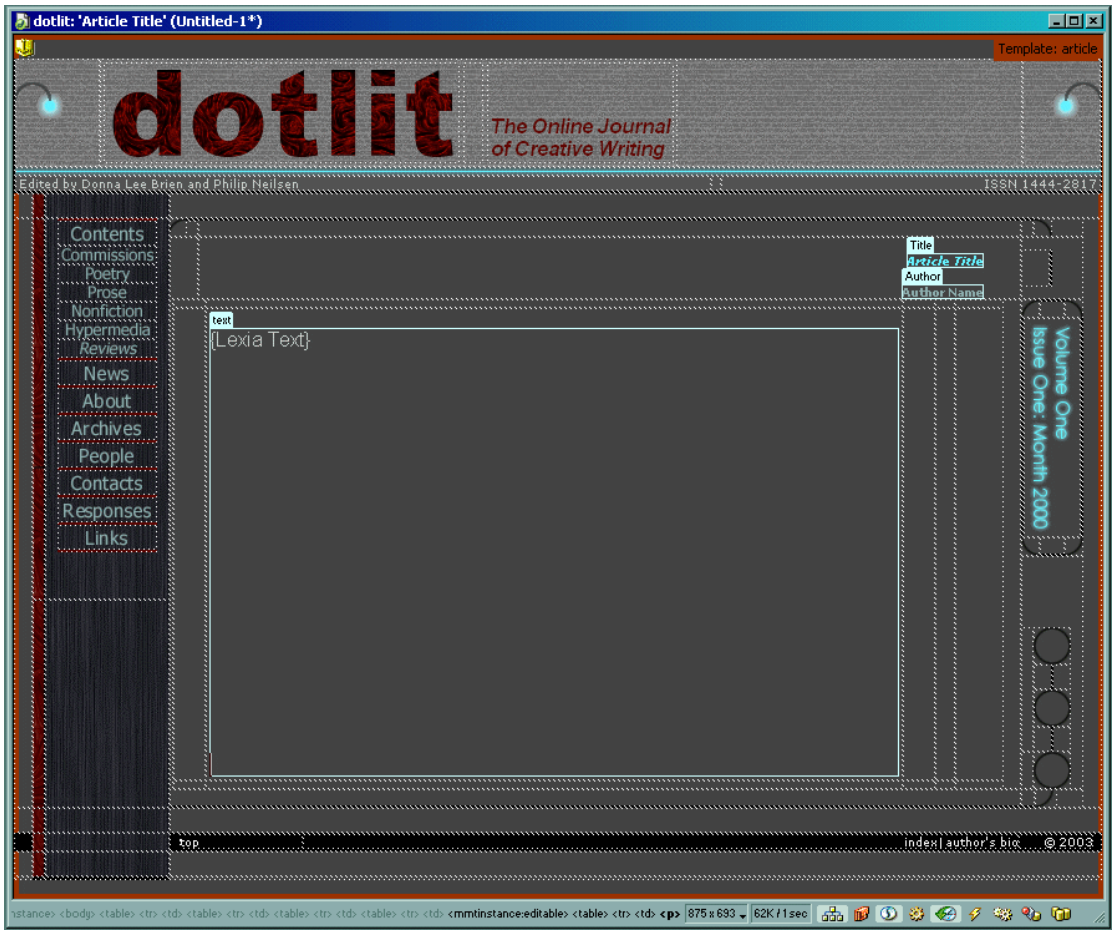

Figure 2: The dotlit template, highlighting three editable areas – story title, student name, and body text. Inside the body text area, changes to font and background colours, font faces, and other formatting options are enabled. (Dreamweaver screenshot)

After this first session using the templates, students are now able to transfer any already completed text for their story lexias into the page templates, and are encouraged to continue this process outside of class times. During this transfer, they will also encounter further problems where text which seemed effective in the word processor is unconvincing in its new format, and needs to be reconceptualised. Additionally, students are now also able to explore formatting options where appropriate (for example by displaying different points of view in different fonts or colours, or by formatting different document types within their piece in different ways). Students may also want to include images or sounds.

Any problems at this stage are dealt with in subsequent lab sessions, in weeks nine through thirteen. Week nine also focusses on linking together the lexias which have been created, and on evaluating the effectiveness of intended lexia structures. Much of the teaching work in these weeks consists of working with students individually: providing help and advice where problems occur, and catering for specific needs such as help with scanning and editing images or creating basic animations using Flash, Photoshop, or similar softwares. For smaller groups of students whose knowledge is advanced enough and whose projects

warrant this, there is also an opportunity to learn further Dreamweaver skills, for example the use of layers or cascading style sheets to create specific effects in their hypertexts. During these weeks, there exists no set lesson plan, and teaching staff must respond to student requests as they emerge. Clearly, this requires a well-rounded knowledge of Dreamweaver and other applicable softwares. Again, in these lab sessions students also frequently develop and apply their skills by helping one another and commenting on one another's works. Where there is the time, we can also facilitate this interaction by instigating a round of peer reviewing of students' works in progress, by asking them to swap places with a fellow student to critique their work.

In the final lab class, instructions for submitting the finished hypertexts are also repeated. Because all students have been working within the standardised file structure as encased in the template ZIP file, they are able simply to copy their main development folder to a floppy disk or CD-R for submission. They are also required to provide printed copies of all pages to enable us to attach written comments about specific elements of the hypertext.

Assessment Approach

The assessment approach in *Electronic Creative Writing* largely mirrors the overall focus on content *and* design. Assessment-wise, students are first asked to complete a purely analytic assessment item which requires them to evaluate an existing piece of creative hypertext work on the World Wide Web (excluding pieces published in **dotlit**, for obvious reasons). Their analysis is shared with the class in a brief oral presentation in weeks 3 to 7 – we teach in a multimedia-equipped environment, so students can locate and project the site to illustrate their analysis, which is later also submitted as a written assignment. If suitable, this may be published in the reviews section of **dotlit**. This exercise aims to improve students' knowledge of the range of existing hypertexts, enabling them to critically engage with and assess the various pieces they find and to identify genre possibilities and limitations, and provides some inspiration for their own work, as well as helping them find potential publication venues for future work. It is also a key exercise in assisting the development of critical skills that can then be directed to their own work. This hypertext analysis and review exercise is worth 25% of the total marks for the semester. It should be noted here that reviewing has already been an assessment item in a previous (and also compulsory) unit, so students begin this task with a set of standard skills in this area.

Further, students must submit a project proposal by week 8. This outlines both the creative content of their suggested piece and its hypertextual structure, and must include a graphical map of their intended lexias. Beyond its immediate role in assessment, this map is a key visualisation tool for students and teaching staff: on the one hand, it is useful for students as they work on their hypertext in later weeks of the semester. It helps them to identify what possible pathways through a piece a Web reader could take and how individual elements of the piece connect to one another, and to write their piece with this multilinearity in mind. It

also enables them to keep track of what work they have done already and what work is yet to be completed, by marking down notes and references on the lexia map itself. On the other hand, it also allows teaching staff to get a clear overview of the project, to evaluate its scope, and, especially, to ascertain that the project proposed by the student truly moves beyond basic linear storytelling towards multi-linear or nonlinear hypermedia.

Both the project proposal and the completed project are team-marked by two teaching staff, who respectively assess them on creative and technical merit. In this, creative merit covers aspects such as quality of the writing, story structure, and other creative writing aspects. In themselves, the criteria employed here are quite similar to criteria which are used for marking creative writing work in other media forms. We do, however, also assess the degree to which a piece is suitable for the hypertext medium and utilises that medium's specific opportunities. Technical merit, by contrast, refers to the quality of the submitted HTML files themselves, and includes criteria assessing students' compliance with the templates, their use of formatting options, links, images and other hypertextual elements. Here, the underlying principle in marking is one of appropriateness to the content – so, for example, students can gain maximum marks for their use of images even if they have refrained from using any images at all, *if* this lack is appropriate to their piece. Conversely, they will lose marks if their hypertexts are overloaded with superfluous formatting choices (different font faces, sizes, and colours; images; sounds; etc.).

Creative and technical marks each make up half of the total marks for each of the assignments, with the project proposal worth 25%, and the final hypertext 50% of the total marks for the semester. In line with QUT's overall assessment aims, then, the first two assessment items constitute formative assessment (serving to contribute to student learning and to inform their further work), while the final project is summative in nature (presenting a conclusion to the learning process in this unit).

Creative Writing / Content Criterium	Max. Marks	Marks Awarded
7 The piece is original, evocative/ resonant and almost flawless in technique. The main ideas are insightful and persuasive, the style is original and graceful, description and dialogue totally convincing, and the piece, without any significant revision, would be publishable in our literary magazine **dotlit** (or equivalent) or could be submitted in a portfolio of best work for a undergraduate writing program.	22-25	
A sophisticated piece, the ideas are persuasive, the style is graceful, and there are very few technique/technical problems with the writing. Editorial changes we suggest have to do solely with the stylistic concerns that would make this work as polished as a 7 (i.e., some sentences, though technically apt, can be compressed, or can have more evocative images, or a specific idea or moment or character might be developed more). Demonstrates insight. Useful in a portfolio.	18-21	
5 The piece is very competent — adequately constructed and focused and shows talent, but some of the writing lacks verve and sophistication, and the ideas, though potentially interesting, have not been developed in such a way to make them sufficiently engaging. There are a few technique/ technical problems, such as overuse of vague or generalised writing, choppy prose due to repetitive simple sentence structure, imprecise word choice, passive construction, and occasional passages that are flat, or overwritten or spelled out.	16.5-17	
4 The piece is competent and passable, and has definitely met the basic requirements, but a considerable amount of the writing and ideas are flawed as in 5 above but more so. More technique/technical problems, and flat or incoherent passages.	12.5-16	
3 Almost a 4.	11-12	
2, 1 Failing grades The overall structure of the piece is haphazard, the ideas lack focus, concepts lack originality, and the writing is full of typos and spelling errors, and serious writing problems like tense shifts, point of view shifts, subject-verb agreement problems, and sentences that simply do not make sense.	6-10	
Automatic failure For plagarism.	0	
Possible Maximum	25	

Technical Criterium	Max. Marks	Marks Awarded
Technical Setup		
File naming	1	
File structure	1	
File interlinkage	3	
Consistent author name and article title attribution	2	
Aesthetic Presentation		
Page layout	2	
Use of colours	3	
Use of fonts	3	
Use of images and other multimedia content	3	
Content		
Lexia choice	4	
Lexia interlinkage	3	
Total	25	

Figure 3: Final Project Marking Criteria (left: creative merit; above: technical merit)

Unit Outcomes

We believe that this unit delivers a variety of beneficial outcomes both for our students, for ourselves as editors of **dotlit**, and for QUT as a whole. The first is partly evident from the consistently positive responses which we have received from students, personally and through QUT's unit assessment mechanisms – the results of which have consistently revealed high student satisfaction with the unit content. Student remarks on these questionnaires often describe how they initially felt reluctant, unconvinced, intimidated and/or uninterested in hypertext, but as the semester progressed became increasingly involved and also began to understand the worth of this unit to the portfolio of skills and abilities which they will soon turn into their employment resume. This is true even if they were not particularly interested in pursuing a career as a literary hypertext author. Student results in this unit are also well above average, despite our very critical marking approach. This is all the more remarkable given that many of our students begin from having absolutely no practical Web design experience.

First and foremost, however, the success of this unit can be measured by the quality and range of the student hypermedia pieces we have been able to publish in **dotlit**. At present, some 50% of all final projects in *Electronic Creative Writing* now qualify for publication in **dotlit**, to the point where – with the unit running in first semester – we are now in a position of holding over some articles for the second issue each year, in order not to overload **dotlit** with hypermedia works.

Student works published range from Angela McIlveen's hand-drawn and digitised hypermedia cartoon "angel" to Florence Fong's "Reunion Dinner", a work investigating the inner workings of an Asian-Australian family complete with recipes. They also include Kerri Ullrich's experimental hypertext "escape", taking a non-linear approach to its subject, and Daniel Pollard's "Townsville" which uses varied formatting options to put its reader on the document trail to unravel a mystery. However, it is perhaps unfair to single out specific pieces over others: it is the combination of all of these works which demonstrates best the wide range of approaches and ideas that our students have been able to apply in their electronic creative writing endeavours, even while remaining within the overall design parameters established by us as teachers and by the **dotlit** page templates.

At the very least, in any way, this unit provides graduates with a number of advanced technological literacy skills, abilities and outcomes that they can add to their employment resumes and creative portfolios. We believe that graduates use the skills acquired in this unit in their working lives after leaving QUT. Current university data on graduate destinations (QUT Careers and Employment Graduate Destinations Survey) reveals not only a high number of graduates from Creative Writing in full-time employment, but also that they are earning a very high average income. Students who completed this unit during the survey period fell into two cohorts, the undergraduate degree (then named Bachelor of Arts – Creative Writing Production) and the postgraduate coursework degree (then named the

Graduate Certificate in Arts – Creative Writing). Two thirds of 2001 graduates who completed their Bachelor degrees in 2001 responded to the survey. 64.28% of these were in full-time work, with only two working part-time but seeking full-time work and only one graduate unemployed. Their average salary was A$39,100. Although the postgraduate coursework student response rate was only 37.50%, the results reflect those above, with no graduate reporting that they were unemployed or working part-time but seeking full-time work, and an average income at A$47,333. All these figures are significantly above the QUT, and national, averages. High satisfaction with university performance was perhaps best reflected in the fact that all past undergraduate and postgraduate survey respondents who were undertaking further study were studying at QUT (QUT Graduate Destinations Survey 2002).

While such figures can only reflect on the Creative Writing course as a whole, a course of study in which this unit is only one of twenty-four units completed by students, anecdotal evidence suggests a number of past graduates are directly employed on electronic publications as copywriters, editors and in other positions, while many attest to using their skills in areas such as writing and editing for electronic media, multimedia design and editing, electronic publishing, and online research, analysis, and critique on a daily basis in their jobs. Such graduates are currently working in publishing, literary and arts administration, journalism, digital and multimedia industries and other related communication areas, including positions in local, state and federal governments.

A number of ex-students have also developed and published their own hypertext work outside of **dotlit** and/or developed their own online publications as a direct result of this unit. So far, one student has proceeded to Honours work in hypertext writing, and there is current interest by two potential Masters students in taking on such work as a major research project in 2004.

Outlook

The lecture/seminar component of this unit, focussing on creative content development, has to date taken place in a single group. This class has worked as a traditional lecture and also by dividing into small working groups within the single large classroom for small group activities when necessary. This single group then breaks into groups of 16-20 for their laboratory work. The size of the class has, however, grown steadily from less than 30 in 2000 to 48 in 2003. Increased course-wide intakes for 2002 and 2003, partly caused by the exceptionally strong demand for Creative Industries degrees, mean that this number will increase further in 2004 and 2005. Considering this we have decided from 2004 to split the lecture/seminar group into a more traditional lecture/tutorial pair of sessions to ensure that students continue to have the chance to work creatively in a small group context.

We have noted that each year students are entering the unit with an increasing level of knowledge of literary hypertext. While this is still a minority of the class, this may change significantly in the future with the ever-increasing presence (and popularity) of literary

hypertext on the Web, as well as an increased commitment by high schools to teach this genre. The Board of Studies of New South Wales, for instance, which defines studies for high school students in that State, decided in 2002 to include hypertext fiction its new 'Stage 6' secondary school curricula with Shelley Jackson's *Patchwork Girl* and Deena Larsen's *Samplers* among the prescribed texts. Further, the role of *Introduction to Multimedia Technology* as a core unit in the Creative Industries undergraduate degrees will also have an impact on the foundational skills of incoming students. The writing of, and about, hypertext is in such a state of surging growth that we will obviously have to continue to update class content to keep abreast of developments as well as of the increased sophistication of knowledges students bring with them to the class.

The ever-changing nature of the electronic environment, the growing student intake into the unit, and the resultant need to develop mechanisms of coping with increasing student numbers are not the only factors impacting on the further development of this unit. QUT recently reconfigured what used to be its Faculty of Arts to develop Australia's first Creative Industries Faculty, and this has brought about some significant changes. The Faculty now combines a range of arts and media disciplines from dance, drama and creative writing to communication design, journalism, and media & communication; furthermore, it takes a flat structure in which there are no independent and isolated schools within the Faculty, only disciplines which are designed to be open and transparent to one another and which are strongly encouraged to take interdisciplinary approaches to research, teaching and learning. This is in recognition of the changing nature of arts and media, or more precisely *creative industries* workplaces in the new economy: the Faculty recognises that most graduates in this area will find themselves doing predominantly project-based work in a variety of related areas, and will need to develop portfolio careers which demonstrate their ability to work in a range of environments and with a range of partners.

Electronic Creative Writing was in the fortunate position of prefiguring many of these changes. Its content and teaching team were already highly interdisciplinary in nature: while Donna Lee Brien is a creative writer and academic, also has a strong background in literary studies and the visual arts as a curator, art historian and project manager, and is based with the Creative Writing and Cultural Studies discipline at QUT, Axel Bruns is a media studies scholar specialising in Internet studies as well as a professional Web developer, and located within the Media & Communication discipline. In terms of content, our unit combines material from creative writing and literary and cultural studies with elements from communication design, and also includes media & communication, visual arts, and even music and video knowledges. It is therefore very much at home in a Creative Industries Faculty.

Our students, too, benefit from this embedding in the creative industries in a variety of ways. First and foremost, the electronic creative writing skills they develop will stand them in good stead even beyond the immediate area of self-motivated creative writing – many creative writing graduates will continue to positions in industries which rely on their creativity in devising attractive and inventive texts, and increasingly these texts will be developed

especially for the online medium. Conversely, 'hypertext' approaches to creative writing are also increasingly evident even in fundamentally linear media such as print and broadcast, where for example TV shows such as *24* or *Boomtown* or films such as *Timecode*, *Magnolia*, or *Run Lola Run* break away from standard linear storytelling in a variety of innovative ways, where interactive TV seeks to converge broadcast and Internet media, or where computer games blend storytelling and user-driven action.

There is also the wider issue of our students' overall technological literacy:

> Universities assume a significant responsibility in identifying technological literacy as a generic capability that all graduates should possess and be able to use effectively as appropriate to their professional and discipline areas … What is clearly anticipated is the need for students and staff to be sufficiently prepared in a technological world to cope with changing technologies and to incorporate a critical perspective on the application of technology in their current or future professional lives. (Rossiter & Watters, 2000)

It is obvious that our students' technological literacy is much improved by developing their active literacy as media producers through this unit in addition to more passive literacies as consumers or critics.

Finally, students who take part in projects which are as inherently interdisciplinary and collaborative as this unit are also well prepared to serve as project coordinators in the industry, where they will have to manage teams of contributors from a wide variety of different disciplinary backgrounds. For better or for worse, such project-based work, in temporary employment for the duration of the project, is now a common pattern for work within the creative industries, and project coordination is a major area of employment for multi-skilled graduates.

While already well prepared, therefore, we will continue to build the interdisciplinary aspects of this unit. In the first instance, we will do this by building further links with the Communication Design discipline at QUT. In the current semester (1/2003), we are employing postgraduate student Oksana Zelenko from Communication Design as a further tutor for the unit, and we hope to increasingly include her as a lecturer. Further, we are also connecting the unit with new unit offerings in the Creative Industries Faculty. CIF now offers the faculty core unit *Introduction to Multimedia Technology* (students are required to do four of five cores during their Bachelor of Creative Industries degree), which means that future students in *Electronic Creative Writing* can be expected to begin from a better developed skills set than previously, enabling us to focus on developing their creative hypermedia knowledge rather than building its technological foundations. This will further improve the quality of work our students will be able to deliver. But there is also a possibility of direct collaboration with *Interaction to Multimedia Technology* and its students. As a practice-oriented unit, *IMT* focusses on teaching active technological literacy, with less emphasis on content, while

Electronic Creative Writing continues to emphasise the creative skills of hypermedia writing over pure design skills. So, in semesters when both units run simultaneously, there are obvious options for allowing students in one unit to collaborate with students in the other, creating a joint work which is assessed according to each unit's criteria. This further contributes to developing our students' skills in interdisciplinary project-based work.

While any forward planning must be contemplated within Faculty and Discipline budgetry constraints, we are also very interested in developing a connected, advanced unit of electronic writing and publishing. One way we envision achieving this would be to keep the existing unit as *literary fiction* electronic creative writing, and develop a new unit as *creative nonfiction* electronic writing. Creative Nonfiction is already an area of significant teaching and learning in our creative writing degree, with two units in this area: *Arts, Humour and Travel Writing* and *Life Writing*. Taking one (or both) of these units as prerequisites would allow a similarly advanced starting point as for the existing unit – with no need, for example, to explain the generic conventions of creative nonfiction. Such a development would have the potential to explore the embedding of referencing and other citation forms, together with more outward linking as well as setting up related and networked pieces. This would address a general problem with much nonfiction publication on the World Wide Web, where authors fail to connect their own articles with the wider array of information on their topic that is available online. By encouraging good referencing and interlinking practice in nonfiction authors (whether writing what would be defined as *creative* nonfiction or working in journalism or other media industries), the quality and user-friendliness of their work could be much improved.

Five students in the current (2003) class are actually working on an early prototype for this new unit. They have been commissioned by the 9th Battalion of the Queensland Army (Royal Queensland Regiment) to research and write a number of stories of members who served in the Second World War. These stories will be creative nonfiction in genre, hypertext in nature and will be presented in **dotlit** as a special section, as well as forming the first product of a hopefully ongoing relationship with the Army which will result in a large-scale resource site telling the past, present and future stories of the 9th Battalion. It is envisaged that this site will be developed with Communication Design, and possibly also drawing input from Journalism and other disciplines.

This type of project, utilising students' creative, imaginative, writing, research and hypertext skills is the very kind of real-world outcome that the Creative Industries Faculty promotes. It not only engages students in very real learning experiences, but produces outcomes that have an immediate and real audience. For us as unit developers it provides the chance to tailor an academic unit to suit project- and publication-specific outcomes, without sacrificing any academic or intellectual aims.

Conclusion

Judged on the basis of outcomes for students (in terms of creative work produced, practical skills acquired, and overall knowledge generated), student responses, and ongoing enrolments, we believe *Electronic Creative Writing* to be a significant success in curriculum development. We know of few units at Australian universities which cover a similar range of topics and skills and produce comparable outcomes. *Electronic Creative Writing* is also a highly important unit in preparing students for the workplace environments they are likely to encounter, and we would encourage more universities to introduce electronic creative writing units into their creative writing courses, rather than teach writing and design skills separately.

Sadly, there are to date very few academic teachers who combine the diverse disciplinary knowledges required to teach an electronic creative writing unit – creative writing experts frequently do not possess sufficient hypermedia development skills, while hypermedia design experts are not necessarily also able to teach creative writing. Here, the team teaching approach taken in our unit is invaluable, as it combines and integrates the various forms of expertise which different staff members are able to contribute. As creative industries concepts begin to reshape the university environment, team teaching also allows us to lead by example: the interdisciplinary cooperation that students encounter through this form of teaching demonstrates the increasingly interdisciplinary nature of any workplace in the creative industries. Whether they refer to it as 'creative industries' or not, it seems highly necessary to us that universities recognise this interdisciplinarity and prepare their students for this environment. To ignore it would be to do a significant disservice to their students.

Clearly, many variations on our approach could be developed. Depending on the overall curriculum and on technologies available at the teaching institution, as well as on the level of creative writing and hypermedia design skills in incoming students, creative writing or hypermedia design aspects could be stressed further, or backgrounded. Similarly, the intended format of student projects could be adjusted to suit specific target publications, or to be suitable for an end-of-semester exhibition. We do not claim that our approach is unique, but we do believe it provides a useful template for teaching electronic creative writing.

Perhaps most importantly, it should be stressed that teaching electronic creative writing in any of its forms is not an exercise in obscurity: while not yet a major industry, creative hypermedia is a growing and important form of creative work – especially when considering the role its practitioners will also play in ancillary industries like communication design, advertising, scriptwriting, computer games development, and others. Much like creative writing overall, electronic creative writing is a key creative endeavour in the new, networked and computerised creative industries environment. It has real relevance and real applications in a wide range of professions. And, as Jach points out, by teaching electronic creative writing, we can contribute to the future of this emergent artform: "to be an artform rather than merely a function, an artform needs its own aesthetic language, which multimedia is in the process of developing. An advantage of this point in time in terms of multimedia is that we can have a say in the development of that aesthetic vocabulary" (1997).

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