

PROF532C The Professional Practice of Tertiary Teaching

TASK 2

Craig Hight

Design and evaluate a teaching initiative, taking account of related scholarship.

1. INTRODUCTION

This task is based on a case study which I am contributing to a TLRI (Teaching and Learning Research Initiative) funded research project headed by Dr. Marcia Johnson titled 'Exploring E-learning Practices across the Disciplines in a University Environment'. The project is being run through the Wilf Malcolm Institute of Educational Research (WMIER) in the Faculty of Education.

Existing Practice in SMST102

Increasingly the Screen and Media Studies programme at the University of Waikato expects students at second and third year levels to have generic computer literacy skills that extend beyond simple word processing. The learning of skills inherent to creative software is closely integrated into conceptual work in media studies and is required for students to complete assessments. The challenge for the programme, however, is to design first-year papers that can provide a foundation in such skills, within a curriculum that must address a wide range of students' existing skills and experience with computers, and within the practical constraints of large class sizes (up to 200-300 students) and limited availability of computer labs.

This initiative relates to a piece of assessment which students completed for SMST102 Media Cultures for 2009-2010 (N.B. the course title was 'Media and Society' in 2009). Prior to 2009, each student was required to attend 3 distinct labs during the semester in order to acquire specific digital skills. Because of the volume of students and the physical limitations on timetabling the teaching rooms, each lab consisted of 2 one-hour sessions conducted over two weeks. The first week of a lab introduced students to an assessed task and specific tools, and in the second week they used these to complete the task. The students from each tutorial group, consisting of up to 25 students, all attended a lab each week together.

Here is an overview of these labs from the 2008 course outline:

2. LABS,

Worth 15% total

There are three labs, worth 5% each.

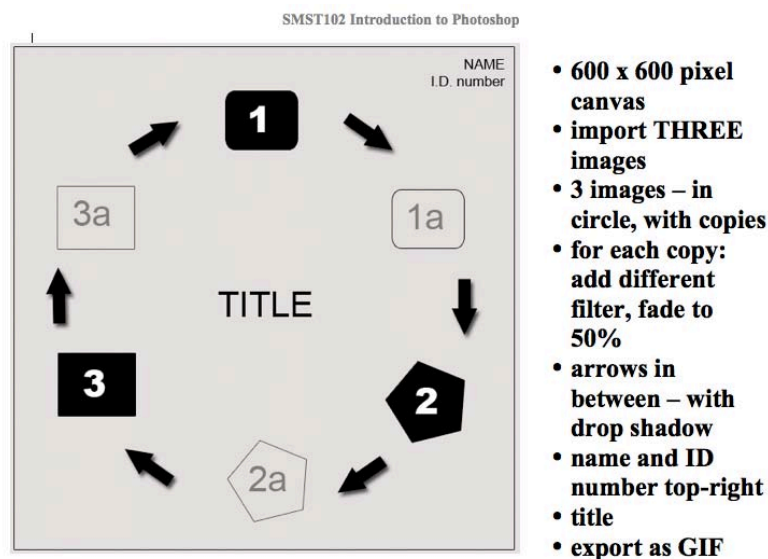
The labs provide an opportunity to learn practical skills which relate to topics covered in the lectures, tutorials and readings. The labs begin in the THIRD week, and as shown below, there are THREE labs in the paper. Each tutorial group will rotate between each of the labs; so each group will attend a different lab every third week. Make sure that you know the order of labs for your tutorial group (they will be listed in Moodle).

The lab topics are as follows:

Lab	Tuesday 12-1	Wednesday 2-3	Thursday 1-2
Research skills <i>Runs for 1 week</i>	Library level 2 Tute room	Library level 2 Tute room	Library level 2 Tute room
Online assessment <i>Runs for 2 weeks</i>	JB.08	JB.08	JB.08
Photoshop <i>Runs for 2 weeks</i>	KB.01	KB.01	KB.01

One of these labs was the Photoshop lab where students were required to familiarise themselves with Adobe Photoshop in the first session (see Appendix 1), a widely used image manipulation program, then use this program to construct a composite image. The proprietary Photoshop software was installed in one computer lab in K basement. While in previous years a tutor had served as demonstrator, in 2008 I conducted all of these labs myself.

All students in this lab completed the same generic exercise, which was to build an image that resembled the following structure (this was given to them on OHT in the second half of the lab):



The objective of the Photoshop lab was to ensure that everyone in the paper had at least some basic skills in using image manipulation software. The exercise required them to import, duplicate, manipulate (resize and add filters), and reposition images from the internet, together with adding a shape (arrows) and text (name and ID number). Note that the actual *content* of the final image (i.e. the choice of imported images) was not an important part of the grading for the exercise.

Most students found the Photoshop exercise achievable in the second 50 minute lab session, although there was a wide variation in the existing skills held by individual students. Tutorial groups invariably worked together, as those with more computer skills (even existing Photoshop experience) were called upon by their classmates to help. In the assessed part of the lab I gave as much help as needed for everyone to complete the task - it was not so much a test as an opportunity for everyone to achieve skills to a particular level.

The benefits of these multiple labs were that students were introduced to a variety of digital and research skills that applied to other pieces of assessment running through the semester, and culminating in the final essay. Here students completed both a written essay and a 'visual abstract'. The following are the specific criteria for the visual abstract for the Final Essay from the 2008 course outline:

Your essay needs to include a visual abstract as the front page:

An abstract is a brief overview of the content of a piece of work. Your visual abstract needs to use images (and text, if needed) to summarise the overall argument of your essay.

- *You are recommended to use Photoshop to construct your visual abstract. A canvas sized 450 x 600 pixels (width 450, height 600) will fit easily into an A4 page. Export your abstract as a JPEG or GIF file from Photoshop, then insert your image into your essay document.*
- *Remember to properly reference images that you use in your abstract (include these in a separate section labelled 'Images' in your bibliography).*

A key outcome of the Photoshop lab, then, was to ensure that all students had the capability to complete the visual abstract that formed part of their final piece of assessment. Extra drop-in labs were held in the two weeks leading up to this submission, to support those students still new to Photoshop.

The limitations of the Photoshop lab partly stemmed from practical constraints. The software itself was too expensive for many students to afford for their own laptops and home machines, it was certainly not worth purchasing for just those taking this first-year paper, and there were no alternatives on campus which all students could easily access. During the multiple face-to-face instructional sessions, all students worked through the same set of introductory Adobe Photoshop concepts, regardless of whether or not their image processing skills were basic or advanced. Given the range of students' computing proficiencies, some of them found the task of producing their own images difficult, while others were bored by its simplicity. Due to these lab and software constraints, there was no flexibility in the timing of assessments as we had to keep large groups of students 'moving' through the labs and curriculum concepts in order to cover the first-year

requisite skills. There was little time for students to work at their own pace in learning the software.

2. INSPIRATION FOR THE NEW PRACTICE: theoretical and pragmatic

The inspiration for a change in the practice outlined above was inspired by three key prompts. The first two of these are related to the nature of the SMST102 paper itself; practical constraints in operating lab exercises and efforts to introduce open source software developments to first year students. The third, and most enduring, inspiration is a set of assumptions about learning informed by literature arguing for a change to student-centred learning approach within the digital mediascape.

Practical constraints

These should be obvious from the description above of the existing practice. Taking large groups of students through compulsory lab exercises creates a number of constraints on the nature of teaching practice. The Photoshop software could only be on a limited number of machines, within teaching rooms that need to be timetabled in competition with other papers. This limited the amount of time which could be focused on specific tasks, and left us searching for more useful ways of engaging with technologies.

Software Studies

The teaching of pieces of software within the Screen and Media Studies programme increasingly engages with my own emerging interest in the comparatively new field of software studies (Fuller, 2003; Fuller, 2008; Hawk et al, 2008; Johnson, 1997; Johnson, 2001; Manovich, 2001). As outlined by Manovich (2008), this is a new paradigm for intellectual activity focused on the need 'to investigate both the role of software in forming contemporary culture, and cultural, social, and economic forces that are shaping development of software itself' (p6).

I think of software as *a layer that permeates all areas of contemporary societies*. Therefore, if we want to understand contemporary techniques of control, communication, representation, simulation, analysis, decision-making, memory, vision, writing, and interaction, our analysis can't be complete until we consider this software layer. Which means that all disciplines which deal with contemporary society and culture - architecture, design, art criticism, sociology, political science, humanities, science and technology studies, and so on - need to account for the role of software and its effects in whatever subjects they investigate. (Manovich, 2008, p8)

Manovich uses the term 'cultural software' to refer to 'software programs which are used to create and access media objects and environments' (Ibid), which includes programs such as Adobe Photoshop and its open source derivation GIMP. Material about the software studies approach is discussed in early lectures in SMST102, to provide a broader context for thinking about the significance of software itself, and the development of open source programs like GIMP in particular.

Selected literature: e-learning and media studies 2.0

The software studies approach suggests that students need to have time to consider the nature of the software they are encountering, both on an everyday basis - Word (Fuller, 2003, pp 137-165), PowerPoint (Adams, 2006; Tufte, 2006), internet browsers, and so on - as well as those that they are being introduced for pieces of assessment, such as GIMP. The experience of learning such software, then, needs to be both contextualised within a more critical framework and more personalised to individual learning styles than is practical in compulsory groups labs under time constraints.

These assumptions are also informed by a number of recent debates over how media studies as a discipline should respond to the emergence of web 2.0. Merrin (2006; 2009) has proposed the need for media studies to shift to something he terms 'Media studies 2.0' and requiring the abandonment of key aspects of the discipline on the grounds they are 'outdated' and derived from 20th century models of communication. His commentary has sparked intense debate over the extent to which the discipline needs to be embedded more explicitly and completely within social, cultural and political paradigms emerging within and fostered by digital technologies, and the implications of these paradigms for research and teaching practices (Gauntlett, 2009; Taylor, 2009). Within media studies programmes, this has provided impetus for explorations in integrating more 'participatory' teaching models, drawing upon and embedding contemporary media technologies within current teaching practices (Jenkins, 2009).

These disciplinary debates parallel broader arguments offered by a variety of educational theorists who insist on a transformation of learning approaches within educational institutions which they characterise as naturalising teaching practices which are hundreds of years old (Wheeler, 2001; Oblinger and Oblinger, 2005). Young learners in particular are typically seen here as out-pacing, and being left frustrated by, out-dated modes of tertiary teaching (Anderson and Elloumi, 2004). In the wake of the emergence models of knowledge generation generated by participatory media, some theorists query the need to reserve any special status for the academy itself, such as Siemens (2006; 2009). In a much smaller context, these broader debates and theoretical currents have provided inspiration for the design of a new practice for SMST102, incorporating materials and resources developed within participatory online communities.

3. THE NEW PRACTICE: a blended approach

The new practice for SMST102 has focused on a 'blended learning' approach (Bonk and Graham, 2005), implemented using an open source piece of software, the GNU Image Manipulation Program (GIMP), and Moodle (which ironically itself has developed using open source principles). The definition of blended learning used here is that suggested by Graham (2005):

Blended learning systems combine face-to-face instruction with computer-mediated instruction.

For SMST102, this involved an emphasis on online resources supplemented by optional face-to-face instructional labs. Graham would term this 'activity-level blending', given that

the remainder of the paper focused on face-to-face sessions with supplementary materials provided online (Graham, 2005, p11), but it is also a form which transforms the pedagogy for the Image Exercise. Instead of a curriculum focused on giving introductory instruction on Adobe Photoshop through replicating the same lab sessions with all students, the new approach has the key advantage of allowing a differentiation between existing skill levels of incoming students. Resources designed for more confident or experienced computer users have been moved into the Moodle environment, and students can work through them at their own pace, during their own time. Face-to-face instructional time in the computer lab can now be focused on helping less experienced students develop requisite introductory image processing skills.

The software package GIMP provides the same general functionality for general users as Photoshop, but is available as freeware and meshes usefully with conceptual material at first-year covering open source developments within digital media. Differentiating between students according to existing skill levels allows for a number of more specific resources to be constructed. It creates the possibility of focusing available time within labs more at the introductory level for novices with these kinds of computer software, by moving online those resources designed for more confident or experienced computer users. In addition, students are required to assume more responsibility for the management of their own learning.

As with the earlier practice, the focus has remained on students acquiring and demonstrating a specific set of digital skills, combined with some minimal conceptual criteria. The face-to-face lab sessions are now more focused, designed to provide more flexible opportunities for students to learn to a level where they can complete an assessed image manipulation exercise. A more detailed set of instructions developed by the lecturer (see Appendix 3) and initial components of an image are provided online, through Moodle. The exercise is deemed to be completed by a student once she submits to Moodle an amended image. Once graded these images are uploaded to the Moodle glossary function, which allows for the rotation or random display of images to the Moodle paper community – serving as a prompt for those yet to complete the assignment, and a demonstration for students of a variety of strategies for completing the exercise.

The exercise is compulsory for all students, and expected to be completed in their own time at any point during the semester. They are free to use their own resources (including their own copy of Photoshop, or a downloaded copy of GIMP on their own computer). Students determine for themselves their entry level, how they should go about completing the exercise, and consequently the resources which they should target;

- Online instructions written by the lecturer based on online tutorials, which are downloadable from Moodle (see Appendix 3)
- In-class introductory instruction from a demonstrator (the lecturer or a tutor), in timetabled lab sessions. These optional labs work through the main features outlined in the online instructions, but they crucially also serve as drop-in sessions for all students throughout the semester.
- A selection of links to online tutorials providing introductory instruction in GIMP (built by the GIMP online community). Some are text based, similar to the online instructions in format, others are videos demonstrating specific use of features.

- Links to downloads for GIMP (for both PC and Mac) and documentation webpages, including online manuals running hundreds of pages long.

4. EVALUATION OF THE NEW PRACTICE

This new practice was evaluated by drawing together both quantitative and qualitative information from tutors and students during the semester.

1. An initial anonymous e-learning survey was made available for all the case studies in the TLRI project, built using surveymonkey.com and linked from the Moodle communities of all the papers involved in the project. The survey covered general questions related to experience with e-learning and students' digital skills, and was used especially to generate comparative data over the case studies (see Appendix 2 for a small selection of the quantitative data generated by this survey).
2. Anonymous quantitative data was collected throughout the semester on student participation in labs, and their completion of the exercise, using the reports feature of Moodle (see Appendix 4).
3. Student feedback on their ability to easily access and use the GIMP resources, how and where they completed the exercise, and on the value of the exercise itself, was gathered informally by tutors during the paper (as part of the normal weekly tutors briefing and debriefing meetings intended to gauge student progress). Tutors offered a summary of feedback from students; there are 8 tutors assigned to the paper in 2009 and 5 tutors in 2010.
4. Further feedback on the exercise was gathered by tutors in the final weeks of the paper, through tutorials, and (in 2010) discussed with the tutors in a focus group conducted at the end of the semester. A key focus of discussion here was how students within each tutorial understood, and shared knowledge, about the exercise, and whether they worked collaboratively on completing it.
5. Specific questions on the Image Exercise were included within the online course appraisal forms for the paper in both 2009 and 2010 (see Appendix 5).

Evaluation results

Overall, the e-learning survey and course appraisal data provided some (incomplete) contextual data, and were useful for tracking differences in attitudes toward technology in different cohorts. The most valuable forms of data gathered were the qualitative feedback gained through formal and informal means, which addressed students' motivations and attitudes toward engaging with the Exercise.

There were some key differences between the 2009 and 2010 cohort of students moving through SMST102, and these shaped both the manner in which students approached the Image Exercise and the results of the various evaluation methods outlined above. In 2009, the paper was core for the entire first-year intake for the Bachelor of Communication Studies and the BA major in Screen and Media Studies. Because of changes to the BCS degree after a review of Communication Studies in late 2008, Screen and Media in 2010 was no longer participating in the BCS. Instead the SMST102 paper was part of the new

degree the Bachelor of Media and Creative Technologies (taught across FASS, the Faculty of Education and the Faculty of Computer Science):

2009	2010
SMST102 core for BCS and BA	SMST102 core for BMCT and BA

In 2009 students entered the paper with a wide variety of skills, including many who had little or no experience of image manipulation software such as Photoshop and a generally uneasy relationship with new technologies (see Appendix 2). There was an early rush of attendance at labs followed by a consistent use of these sessions throughout the semester (Figure 1, Appendix 4). Most students in 2009, however, waited until the end of semester, the final deadline, to submit (Figure 6, Appendix 4). Feedback gained through the tutors suggested there was some level of confusion over how to approach the assignment, and for many students a lack of understanding of the time required to familiarise themselves with the software and complete the task (some apparently *under-estimated* the time required and procrastinated, while others were intimidated by having to negotiate a new program and *over-estimated* what was required). Overall, most students tended to leave their efforts until the last minute, ignoring the opportunity to pace their learning through the semester. This is perhaps not a surprising result for first - year students.

In 2010 the class consisted of a noticeably different cohort. Most significantly, they formed a more coherent group moving through from A semester in the BMCT/BA, where they received some basic instruction in pieces of creative software (including Photoshop). A much smaller proportion of this 2010 class than the previous year had no experience with such software, as reflected in the comparatively poor attendance at labs (Figure 2, Appendix 4). Students also appeared to be much more comfortable in downloading GIMP onto their own machines, or alternatively using Photoshop to complete the exercise.

As a result of the feedback from the 2009 class, there were some changes made to the conduct of the Image Exercise for the 2010 instance of the paper. The deadline for submissions was moved to slightly earlier in the paper (11 October) and a much greater effort was made to introduce and explain the reasons for the Exercise within an early lecture, particularly in couching GIMP (and Adobe Photoshop) within broader patterns of software development. Despite these changes the pattern of submissions of the Image Exercise was generally the same as the previous year (Figure 7, Appendix 4). Overall, feedback suggested that while the 2010 students were typically much more comfortable with the exercise, they tended to wait to see what others had done first, through viewing the Moodle glossary, before submitting their own images (Figure 5, Appendix 4). These students also demonstrated the familiar pattern of focusing exclusively on assessment deadlines, rather than developing more useful skills in time management.

5. REFLECTIONS

Given the changes in student cohort in 2010, and their greater ease with forms of cultural software, the most immediate conclusion to draw from this year is that instead of serving to introduce, familiarise and 'demystify' image manipulation software, the Image Exercise can be more directly focused on conceptual work. The future design of the Exercise, in other words, needs to begin with a different set of assumptions about the existing skills of students, and to instead to task students with using software in a more critical and creative fashion.

This case study also demonstrates the value of a blended approach to at least some forms of introductory instruction in software. The response from students to providing a variety of online and in-class resources and space to explore programs in their own time has been generally positive. Not surprisingly, this was particularly the case for students (in 2010) who had already gained some instruction in at least some form of cultural software. Overall, this approach appears to open new opportunities for creative and practical-based teaching practice which is too often constrained by practical concerns of access to technology and software provided by a host institution.

The use of open source software, together with active encouragement for students to download and explore in their own time, provides one pathway for providing blending instruction in this way. In comparison to the previous practice it has provided for a less constrained and hence less stressful series of learning encounters with students (within the optional labs / drop-in sessions). There are, however, inevitable trade-offs in this change in practice, the most significant of which is that the teaching staff are not present to coach students through their learning (on a personal note, I found that I missed not having the same opportunity to engage with all the students in a large class). For both 2009 and 2010 there was also a minority who did not complete the assignment, which while consistent with first-year patterns still contains the possibility that a small minority were left feeling unsupported and unfocused for this piece of assessment.

This case has broader implications for the future design of the Screen and Media Studies programme. The programme is looking to move more resources online, to enhance students' self-directed learning, and encourage initiative and creativity from students in determining how (i.e. using which skills) they decide to complete pieces of assessment in more advanced papers. Providing instruction in a more extended set of creative and critical skills that can be assumed of all students within the programme is intended to provide a broader and more active interchange between student conceptual and practical work (These goals are also at the centre of the design of the new Bachelor of Media and Creative Technologies degree). The real benefits of this should be felt at graduate level, as students come into papers with confidence that they can engage with more complex learning exercises in a variety of ways. The resulting critical and creative skills sets that graduates and postgraduates achieve are intended to provide both a range of marketable skills and a solid foundation for life-long learning. The experience of this case study offers encouragement of further experiments in blending learning approaches within this overall shift in programme design.

Bibliography

- Adams, C. (2006) 'PowerPoint, habits of mind, and classroom culture', *Journal of Curriculum Studies*, Vol. 38, No 4, pp. 389-411.
- Anderson T. and F. Elloumi (eds.) (2004) *Theory and Practice of Online Learning*, Athabasca University, available under CC licence at http://cde.athabascau.ca/online_book/
- Bonk, C. J. and C. R. Graham (eds.) (2005) *The Handbook of Blended Learning: Global Perspectives, Local Designs*, San Francisco, Pfeiffer.
- Fuller, M. (2003) *Behind the Blip: Essays on the Culture of Software*, New York, Autonomedia.
- Fuller, M. (ed.) (2008) *Software Studies: A Lexicon*, Cambridge, The MIT Press.
- Gauntlett, D. (2009) 'Media Studies 2.0: a response', *Interactions: Studies in Communication and Culture*, Vol. 1 No. 1, pp. 147-157.
- Graham, C. R. (2005) 'Blended Learning Systems: Definition, Current Trends, and Future Directions', in Bonk, C. J. and C. R. Graham (eds.) (2005) *The Handbook of Blended Learning: Global Perspectives, Local Designs*, San Francisco, Pfeiffer, pp. 3-21.
- Greenhow, C., B. Robelia, and J. E. Hughes (2009) 'Learning, Teaching, and Scholarship in a Digital Age: Web 2.0 and Classroom Research: What Path Should We Take Now?', *Educational Researcher*, Vol. 38, No. 4, pp. 246–259.
- Hawk, B, D. M. Rieder, and O. Oviedo (eds.) (2008) *Small Tech: The Culture of Digital Tools*, Minneapolis, University of Minnesota Press.
- Jenkins, H. et al (2009) *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*, Chicago, The MacArthur Foundation, available at http://mitpress.mit.edu/books/full_pdfs/Confronting_the_Challenges.pdf
- Johnson, S. (1997) *Interface Culture: How New Technology Transforms the Way We Create and Communicate*, New York, HarperCollins Publishers.
- Johnson, S. (2001) *Emergence: The Connected Lives of Ants, Brains, Cities and Software*, London, Penguin Books.
- Manovich, L. (2001) *The Language of New Media*, Cambridge, The MIT Press.
- Manovich, L. (2008) *Software Takes Command*, book draft released under CC license, 11/2008, available at <http://lab.softwarestudies.com/2008/11/softbook.html>
- Merrin, W. (2006), 'Media Studies 2.0', <http://mediastudies2point0.blogspot.com/>, accessed August 2010.
- Merrin, W. (2009) 'Media Studies 2.0: upgrading and open-sourcing the discipline', *Interactions: Studies in Communication and Culture*, Vol. 1 No. 1, pp. 17-34.
- Oblinger, D. G. and J. L. Oblinger (eds.) (2005) *Educating the Net Generation*, EDUCAUSE E-Book.
- Siemens, G. (2006) *Knowing Knowledge*, George Siemens, available from http://www.elearnspace.org/KnowingKnowledge_LowRes.pdf

- Siemens, G. and P. Tittenberger (2009) *Handbook of Emerging Technologies for Learning (HETL)*, University of Manitoba.
- Taylor, P. A. (2009) 'Editorial introduction – Optimism, pessimism and the myth of technological neutrality', *Interactions: Studies in Communication and Culture*, Vol. 1 No. 1, pp. 93-110.
- Tufte, E. R. (2006) *The Cognitive Style of PowerPoint: Pitching Out Corrupts Within*, 2nd edition, Cheshire, Graphics Press.
- Wheeler, S. (2001) 'Information and Communication Technologies and the Changing Role of the Teacher', *Journal of Educational Media*, Vol. 26, No. 1, pp. 7-17.