

PUBLISHING WITH FRIENDS: EXPLORING SOCIAL NETWORKS TO SUPPORT PHOTO PUBLISHING PRACTICES

Paula Roush

*Arts, Media and English in the Faculty of Arts & Human Sciences
London South Bank University*

Ruth Brown

*Learning and Teaching Enhancement Unit
London South Bank University*

ABSTRACT

Publishing with friends is the account of an action research cycle in which a print-on-demand website, Lulu.com, became a classroom for second and third year digital photography students to publish their photobooks. Building on the earlier use of a blogging platform as a personal learning environment, this narrative explores the pedagogical prospects of the read/write web, and illustrates the way in which students use social networks for creative produsage (Bruns, 2008). Students were positive about the pedagogical approach, and the opportunities to gain valuable hands-on experience in their chosen field of study.

Keywords: produsage; social networking; photobook pedagogy; e-tivities, digital photography, artists' publications

INTRODUCTION

The web is coming of age. Predicted almost 20 years ago, users with relatively unsophisticated information technology skills are now able to use the internet as a medium to communicate and publish in what we have chosen to describe as the read/write web. (Also known as Web 2.0 technology, the "read/write web" seems to us a more descriptive appellation.) The increasingly ubiquitous nature of the web, and its unquestioned affordances, now challenge the academy to embrace technology in appropriate curricula and, in the process, to investigate the move from an industrial production model to the pragmatics of the web-led produsage, or user-led production, approach. Bruns (2008) focuses on the fluidity of the produsage process as a main characteristic – it is in the evaluation, the flexible leadership, its iterative nature and the attribution of social capital, rather than an end product, that the concept is defined.

Produsage in the higher education setting is the underlying theme of the chapter which maps this particular instance of produsage onto Bruns' model. In the process, it describes the pedagogical underpinnings of the inquiry through the account of the use of the read/write web as an environment to teach students of digital photography; discusses the design of learning

tasks and the engagement of students in the design of an assessment and feedback rubric; and explores the findings from the students' evaluation of the research intervention. Lastly, the implications of the research for future iterations of the digital photography units are set out.

BACKGROUND

The roots of the read/write web were described by Berners-Lee and Cailliau (1990); they explained hypertext and foresaw two phases in its development: firstly the use of existing browsers to access information (the read web) and also ease of publication on the web (the write web) with "the creation of new links and new material by readers. At this stage, authorship becomes universal." The authors predicted that "this phase [would] allow collaborative authorship" facilitated by the annotation of existing data, linking and adding documents.

Almost two decades later, their vision has become a reality. Online participatory culture is ubiquitous, and evidenced by the popularity of social network and media-sharing sites, multi-player games and other applications generally known as social software.

The academy is slowly entering this stage of "collaborative authorship". The term "classroom of the read/write web," coined by Richardson (2006), uses a familiar metaphor to translate this into a teaching and learning construct. Educators can assemble their own toolbox of freely available applications using the self-publishing technologies now abundant on the Internet; these may include weblogs, wikis, aggregators, social bookmarking, photo-sharing, rubric-making tools and many others. In his model, Richardson provides a pedagogical framework for the integration of these technologies in teaching and learning, in the context of the publishing affordances of the read/write web, and emphasizes the four core literacies – reading, publishing, collaborating and information management – that can be developed in the online environment.

In practice, the read/write web classroom demands major shifts in the ways we think about content and curriculum. Richardson (2006) identifies these as follows: the web is viewed as an open classroom; learning takes place 24/7 in interaction between online peers and experts; collaboration leads to the social construction of meaningful knowledge; teaching is democratized, a conversation rather than a lecture; knowing where to find information takes precedence over the acquisition (and regurgitation) of facts; students aspire to edit information critically, to develop active reading and writing skills; web applications are used as digital notebooks to store and share information found online; writing is lent richness by augmentation with photography, audio and video; mastery of skills is demonstrated and assessed in the product (e.g. digital content creation) and marked tests are dispensed with; and, finally, course materials and coursework are a contribution to a larger body of knowledge

(the web), can be reused by others, and are not completed and discarded at the end of the semester.

This model of the open classroom is a major challenge for the academy. Many artists and designers already use the read/write web in their everyday life, but universities seem reluctant to make the transition from an industrial age concept of knowledge (production) to one more in tune with the information age model of user-led education (produsage). Bruns (2008) coined the word produsage to describe the process of user-led production in the setting of networked practices.

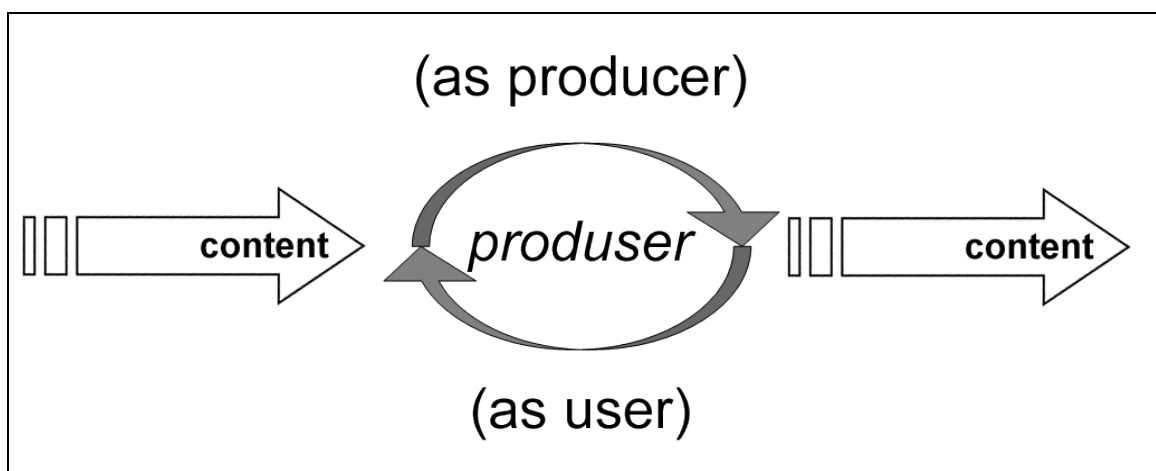


Figure 1: The produser. (© 2008, Axel Bruns. Used with permission.)

Engagement in the read/write web or, more specifically in this instance, in the contemporary online self-publishing environment, allows academe to explore novel opportunities for teaching and learning. These are underpinned by the four key principles of produsage: the implicit evaluation by the community of users of artifacts produced by individuals; the flexible leadership of projects which is grounded in personal strengths; the recognition of the iterative and inherently “unfinished” nature of the produsage process which is constantly revised by interested parts of the community; and the recognition of excellent individual contributions to the community by attributing social capital.

The model of the creative as an online produser (Bruns, 2008) is useful as it expresses the authentic practice of artist-teachers and artist-students. The term encapsulates the reality of artistic creative environments such as photograph- and video-sharing blogs, and social network sites like Flickr, YouTube, MySpace and Facebook and 3-D multi-user spaces like Second Life.

The focus is often on the personal content that circulates in these sites. While life caching (uploading of personal content for friends and family) may be one application of these

platforms, specific groups of users have emerged which engage in the proper produsage of creative content:

... within such produser groups, content is exchanged not merely for its inherent personal or communicative value, but overtly as creative work to be showcased to and exchanged with other members of the community. Participants both comment on and critique one another's works; they collaborate on creative projects both by pooling together their individual collaborations to form a composite whole, and by directly editing, rearranging and remixing the material already provided by others; and in the process they in effect collaboratively curate an ever-expanding, constantly changing exhibition of the community's creative works. From such practices also emerge heterarchical structures of recognition and merit within the community. (Bruns, 2008, p229)

Specific studies on the impact of Flickr in photographic creative practices have revealed the personal and learning implications of the photo-sharing site. From her study, Van House (2007) reveals four social uses of personal photography: firstly, it is a memory device to build narratives of the self; it also serves as a form of self-representation or self-portrait; it may be a way of creating a relational sense of togetherness, an expression of sociability; and it can also have the purpose of displaying one's artistic and creative work, a kind of sociable exhibition. In the academic context, the use of Flickr in blended teaching for a first year photography unit articulates with the students' daily use of social networking sites for their photo practices (Robbie & Zeeng, 2008). Flickr's tools for commenting on and notating each other's images facilitates analytical critical reflection and feedback between students. It also situates their work in the nexus between students' studies and their professional practice; allows conversations to develop beyond the classroom, which addresses the balance between work and study; and is an affordable way of exhibiting images publically.

Studies of print-on-demand, and its relationship with photography and design communities, are also available. Lulu.com, in particular, is referenced in studies of the relationship between self-publishing and emerging online economies. Anderson (2006) explores Lulu as a prime example of the existence of long-tail markets, which are possible because of the unlimited shelf space provided by online digital databases. The reputation economy is a description of the self-promotion value attached to publishing; it explains the added attraction of publishing online, a motivational factor that outweighs the small sales volumes that characterise these niche markets. Specifically, the adoption of print-on-demand to self-publish photobooks allows emerging photographers to bypass the lengthy process involved in traditional publishing, with total financial independence – there is no need to fundraise – and full editorial control (Forrester, 2007).

Against this background, the possibility of teaching units on photobook publishing in an authentic produsage environment was a motivating factor in engaging in this qualitative pedagogical project. Other higher education projects using Lulu.com for graphic design are available (Philippin, 2008; Hochschule Darmstadt, 2008) but none comments on the pedagogical process involved in using the platform, choosing instead to present the students' work as an enquiry into the digital printing output achievable at Lulu. Our study explores the features of lulu.com that can be used as part of a "classroom of the read/write web" and discusses the results with reference to the self-publishing capacities involved in reaching the learning outcomes.

CASE STUDY: PHOTOBOK PROJECT FOR PHOTOGRAPHY STUDENTS

There is an expanding field of inquiry into what constitutes artists' publications. Critical features of this interest are the combination of artistic approaches with networked practices, and the investigation of the latest technologies that many artists and publishing groups have started to explore as an alternative to traditional press. An artist's book, in this genre, is not an illustrated book characterized by high production values and a conventional separation text-image; nor is it a photo album containing the family's best moment's snapshots. Instead, it means working within a "zone of activity" (Drucker, 2004) at the intersect of conceptual art and photography, independent publishing, activism, fine art practice, sculpture, installation, book arts, performance, self-publishing fairs, and online produsage environments and social networks. The terms of reference for artists' publications may still be vague, but there is general agreement amongst practitioners and scholars that the final criteria rest upon the engagement of the work with the specific features of a book; this is the expression of the work's 'bookness'.

The emphasis of the photo publishing unit of this study is the genre of the photobook, "a book – with or without text – where the work's primary message is carried by photographs ... an event in itself ... a concise world where the collective meaning is more important than images" (Parr & Badger, 2006). This implies that the students come to think of the photograph in relational terms, develop skills as curators or editors, and learn to use current available digital technologies to publish and distribute independently. The genre has been developing since the conception of photography, but as printing technologies have gravitated towards a networked model, photographers have adapted their practices to take advantage offered by print-on-demand (POD) publishing models.

Teaching photographers to develop photobooks also means going beyond focusing on the 'best photo' to consider photographs as groups or collections. Free from the conventional photo-to-print relationship, the learner starts thinking in terms of the book's visual structure (Smith, 2005). The unit of meaning – the graphic layout as double page spread or as subchapter – conceptualises the narrative or meta-narrative aspects implied in grouping,

serializing and sequencing the photos. Experimenting with the conventions of the book page becomes a key pedagogic strategy. The process allows deliberate disruption of conventional book flow – the distribution of text and image to create movement from page to page – to raise awareness of the relationship between page and image.

The book-making process starts with the creation of book dummies, 3-D mock-ups of the book that provide an excellent tool to play with the images and develop understanding of visual structures. Teaching the fundamentals of photobook publishing also implicitly equips students with in-depth knowledge of prepress, the steps necessary to prepare the work for a commercial printer. In the adoption of the desktop environment for publication design, creating a book means assuming responsibility for a series of processes: layout, typography and text formatting, preparation of images in Photoshop (color space and resolution), preflight and the creation of a robust .pdf file that the commercial printer will translate into a professional-looking photobook. Understanding and anticipating the printer's output environment is thus an important part of the learning program.

Why teach book arts in a produsage environment?

While opportunities for self-publishing of photography online abound, few students take full advantage of the possibilities offered by the online photobook companies, like Lulu or Blurb. While students already use Flickr, deviantART and other photo-sharing sites for their photos, research shows that many photographers are exploring the professional photobook companies' sites for publishing their book works (Forrester, 2007). For our students, engaging in the professional environment represents the next step in their development; having completed a photographic brief, their focus changes to considering the editing of their work with a view to publication. Whilst other university assignments are produced for the teacher and the classroom, studying this unit unlocks the many possibilities of the classroom of the web.

With the availability of these technologies and the widespread opportunities for online publication, creating a photobook implies thinking beyond the screen and positioning the photographic work in the wider publishing context. Taking into account the current interest in e-books and readers, it is still a challenge in this unit to combine the best of digital technologies and paper-based media. Facilitating a semester unit on book-making for digital photographers means considering the book in the age of the digital press; the enterprise of the online print-on-demand photobook companies offering the latest developments in “digital/paper hybrid product” (Sarvas, Mäntylä & Turpeinen, 2007); and the paper-digital technologies that allow for both printed and online book publishing outputs.

An additional opportunity in such produsage environments is the uploading and sharing of images, mainly an individual activity, or the creation of personal sets of photos. The art of

produsage, however, also offers other possibilities, such as the sourcing of images from pools, or creating groups on particular themes; this activity exemplifies a shift from the photographer-author to the photographer-editor, involved in the curation of collections. Such collective (or networked) projects are exemplified by photographers editing found photography (Brittain, 2006) or the management of photos uploaded by participants into paper-based publications, as in JPG magazine (Bruns, 2008). Thus, the opportunity of teaching students to work as editors of someone else's material is indispensable to publishing practice and in this instance the involvement in social networks is an essential way of sourcing images.

The unit aims were to:

- identify and analyze the context of self-publishing practices, as evidenced by participation in rubric-led assessment and feedback, and the participation on e-tivities at Lulu.com;
- demonstrate a critical understanding of the genre of photo publishing, as evidenced by the output of two photo publications (a photobook and a photo magazine);
- develop skills in visual communication, as evidenced by their work with the structure of the visual book including creating a book dummy, using InDesign to layout photo and text; and
- use the print-on-demand publishing model, as evidenced by the use of Lulu publishing and networking platform.

Research methodology

This study is shaped by an action research methodology. A qualitative research paradigm, the aim of an action research cycle in an educational setting is to identify an area of practice that might benefit from improvement, to design an intervention and implement it and then to observe the effect on the learning experience (Arhar, Holly, Kasten, 2001). This case study describes a single iteration of this “reflect, act and observe” cycle with relation to the two cohorts of students that participated in the research; it builds, however, on an earlier intervention described below and anticipates a further cycle in the final reflection.

The choice of a produsage environment

The project built on an earlier photo publishing unit, from the first semester of the 2006/07 academic year. In this earlier (level 3) unit, the digital photography students used WordPress blogging platform, to publish their coursework and Lulu.com to publish the finished photobook. As they were entering the final year of their studies, it was important to address the acquisition and consolidation of a series of digital literacies and capacities that allowed

them to engage critically with these online environments, whilst simultaneously creating quality professional work in them. This included the publication of their critical writing as well as their photographic portfolios and, in particular, introduced the use of the digital press for the publication of paper-based photo books.

We noticed, however, that not all students participated at the same level of engagement. Whilst some engaged with the produsage environments, finding and analyzing pertinent information and contributing to the conversation via posts and comments, others needed extra support to actively engage with the produsage tools. We also found evidence of what Bruns describes as a new form of digital divide, “between those already tuned in to the produsage process and those not yet motivated to participate, as well as between those who already have the skills and capacities to contribute ...and those for whom participation in such environments remains an apparently insurmountable challenge.” (2008, p.338)

The development of a blended learning pedagogical approach with the selection of Lulu.com as the main produsage environment – both as a digital notebook and publishing platform – and the inclusion of e-tivities and rubrics to encourage peer feedback aims at improving on the earlier pedagogical framework.

According to a recent study (Forrester, 2007), there are more than 55 online photobook companies all offering similar print-on-demand services. In each, the user downloads the company’s software (or the software is browser-based), inserts the photos and text in pre-designed templates, chooses a binding and cover format, and places an order which is printed and delivered, typically, in 10 days.

Lulu, however, has special produsage features that make it a preferred choice for teaching: it may be viewed as a two-sided produce-sell (or dashboard-storefront) platform. The dashboard is a private node (accessible only when the user is logged in), which accesses ‘my projects’ (a catalog of all the user’s books), as well as the user’s storefront, blog, groups, message box and friends. Additional account management features such as account preferences and access to the files associated with the user’s publishing activity are also available from the dashboard.

On finding a (prod)user’s name in Lulu (often through a search box), one is directed to their storefront – a public-facing interface which can be fully customized by the seller, and which provides a variety of information about their associated activities: a profile, list of lulu friends, group memberships, lulu interests, published books, blogs and other feeds (del.icio.us bookmarks, for example).

An important storefront feature is the book page, which offers information about the book: a preview, publisher and licensing information, a description of the book content, and the book

specifications (number of pages, use of color or black-and-white, format and binding). The page also states the prices for printing and downloading (which may be different), the book's tags, categories, reviews, and sales information such as the lulu sales ranking and other books bought by the customers who bought the book. A link to the shopping basket allows the viewer to place an order, pay and enter a (virtual or actual) shipping address. If the book download is free, clicking on the 'download now' button initiates its download. Opening the tags or categories reveals a catalog of other publications with similar tags and categories, and the licensing link accesses the licensing deed: either copyright or a chosen variation of creative commons.

The screenshot shows the Lulu Marketplace interface. At the top, there is a search bar and navigation links like 'Publish', 'Buy', 'Services', 'Community', 'My Lulu', 'Help', and 'Lulu Demo'. The main header reads 'Lulu Marketplace: Arts & Photography'. The featured product is 'Alternative to 'subculture' gone mainstream (LSBU version)' by Karel Polt. It displays two book covers: one showing a man's face and another showing a close-up of a man's face. To the right of the covers, there are buttons for 'Download free' and 'Download Now', and 'Paperback book £14.90' and 'Add to Basket'. Below these, technical details are listed: 'Download: 1 documents, 87729 KB' and 'Printed: 88 pages, 15.24 cm x 22.86 cm, perfect binding, full-colour interior ink'. A 'Description:' section follows, stating: 'Portraits of a boy and a girl who could be described as gay, but who have decided to portray themselves as something alternative to the mainstream gay culture.' Below the description is a 'Keywords' section with tags like 'photography', 'portraiture', 'gay', 'lesbian', 'bi', 'sexuality', 'sexual', 'young', 'boy', 'girl', 'London', 'England', 'Karel polt', 'karello', 'youth', 'alternative', 'subculture', 'culture', and 'mainstream'. At the bottom, there are buttons for 'Read Review', 'Share This', 'Report this item', and 'View Back Cover'. Publisher information is listed as 'Publisher: Karel Polt, c/o LSBU BA (Hons) Digital Photography', 'Copyright: © 2007 Karel Polt Creative Commons Attribution-NonCommercial-ShareAlike 2.0', 'Language: English', and 'Country: United Kingdom'. A 'Listed in' section shows 'Arts & Photography'.

Figure 2: An example of a student's book page from Lulu.com

The Lulu community supports forums, groups, a newsletter and the Lulu blog. The forums, in a variety of subjects related to self-publishing such as cover art, or storefront, are maintained by Lulu experts and archived in a variety of self-publishing related threads, easily accessible via search menus. International forums provide support in a wide number of languages, and users can also start their own group for more focused interests such as book promotion or teen literature.

Of all the online photobook companies, Lulu is the one that offers the platform with the most interesting blend of features with which to teach digital photobook publishing. In the first place, the dashboard is the most project-oriented of all the photobook companies; it allows students to design their books using InDesign, the desktop publishing software used in class, and to upload the resulting PDF file, while other companies require the use of their own software. Further, unlike other companies that keep the design document in-house for printing-on-demand purposes only, lulu allows the design document to be accessed and shared digitally.

The online store also offers two methods of making the content available: the print version delivers a paperback that can be purchased using the online ordering process (shopping basket; online payment and delivery to the shipping address); and the download version, either as a paid or free PDF download. Whilst other companies may offer an online store, they do not offer access to the digital files. The dual options of the lulu online store integrate well with the principle of common gains/individual rewards of the produsage environments.

Blogs, another of Lulu's tools, create opportunities to publish works-in-progress and to receive feedback from peers; the comments feature encourages analytical reflection and an extension of the online conversation beyond the classroom. The groups and friends' lists (social networking features) promote working as a group and extending classroom support into the online space.

Lastly, the forums in which users and experts exchange information on topics related to many aspects of digital online publishing offer a pool of extra teachers, available 24/7, that are supplemented by live help from Lulu, a feature that makes possible to obtain support from a company representative via a chat board.

The design of learning tasks

The embedding of the teaching in this produsage environment was achieved by using a blended pedagogical framework, which consisted of twelve weekly face-to-face meetings in the media lab interspersed with eleven³ weekly e-tivities.

A particular intention in the design was a balance between individual expression and group work. The first project, an individual photobook, called for the selection of photos from students' own archives, the development of a visual structure for the book, the preparation of a book dummy, and the final production of the photobook. This project carried 25% of the marks for the unit. The second assignment was a collaborative one: working as editorial team, each group created a collective photo magazine using photos selected from a social network situation. They were required to prepare and submit a magazine dummy showing the visual structure, and to publish the photo magazine in Lulu.com. This, too, accounted for 25% of the marks for the unit.

The balance of the assessment was by way of weekly structured e-tivities (Salmon, 2004), posted to Lulu.com. The e-tivities supported the process in which students were required to analyze the production process and to reflect on online research and peer feedback. Each week's e-tivity was designed to further embed the online publishing environment in the students' experience, and dovetailed with the face-to-face activity for the week. In week one, for instance, the e-tivity was designed to help students become familiar with Lulu's tools. Subsequent e-tivities explored the definition of photobook, the structure of a visual book, how to create book and photo magazine proposals and dummies, participation in group forums, customizing the storefront for a book, bookmarking using del.icio.us, and book reviews. The last e-tivity required the students to reflect on their Lulu experience.

In addition to those available in Lulu.com, students used a variety of other digital tools for this project, including proprietary software and a free online platform. Adobe CS3 software was used for photo publishing. This package has been developed for desktop publishing and includes InDesign (for publication design), Photoshop (for color space management and photo optimization) and Bridge (for photo management). All the prepress was handled in InDesign.

To operate in the lulu.com environment, students created personal profiles and learned to use the various features related to managing publishing projects; they customized their blogs and storefronts, and developed a social network with their peers and the lulu community. In order to participate in the weekly e-tivities, they learnt how to blog (using the Lulu.com blogging tool), how to create links and post images, and how to reply to each other's messages. To collaborate during the design phase, they subscribed to the group's forum and participated by posting their questions and replies. To share their research on photo publishing with each other, they learned how to create a del.icio.us account and to use the features of social bookmarking.

Creating a framework for feeding back and assessing the process and the product

A fundamental philosophy underlying the development of this unit was Biggs' constructive alignment (2002). In this approach, it is the articulation between the stated learning

outcomes, the teaching (and learning) activity and assessment that results in a meaningful learning experience. The approach to assessment that was used in this unit is commonly referred to as “criterion-referenced”. Biggs (1999) states that there is “no *educational* justification for grading on a curve” (emphasis in original), a reference to the relatively common practice of measuring students’ performance against that of the rest of the group. We believe that assessing against criteria measures more objectively the extent to which students have achieved learning outcomes, and that, for this reason, it is a more student-centred approach.

It is apparent from the statement of the learning outcomes and the description of the learning activities that there is a causal connection between the two. This is no quirk of fate; the relationship was built into the design of the unit by adopting a constructive alignment approach. Similarly, attention was paid to the crafting of the assessment criteria. They were developed by the students in a joint activity with the teacher; in the process, the students not only gained insight into the purpose of assessment but were also empowered by the process of identifying the most important criteria against which to evaluate their work.

Using the learning outcomes as a point of reference, the learners were required to develop assessment criteria that would be used in rubric form to mark their projects. They were provided with a list of questions to guide their discussion, and were asked to engage with the following tasks: firstly, they had to develop six assessment criteria that articulated with the learning outcomes; then they were asked to rank these criteria, from most to least important; and finally, each group presented their two top criteria to the whole class.

During this report back process, all the groups’ top criteria were written up on the board, and the whole class agreed on the four criteria that articulated most closely with the learning outcomes for the unit; these criteria then formed the basis of the assessment. This engagement in formulating the criteria against which their work would be measured empowers students with a sense of ownership, and a real interest in their own learning process (Stix, 1997). Andrade and Du (2005) point out the added value of using rubrics “to clarify the standards for quality performance, and to guide ongoing feedback about progress toward those standards.” The incorporation of rubrics into learning design helps the students to visualize what it means to successfully address the learning outcome and to adjudge the quality of their own and others’ work; in this sense, rubrics can also be said to be an instructional tool.

Once the assessment criteria were agreed upon, the class created an “irubric” which was developed using RubricStudio software from FacultyCentral.com. We define an irubric as a carefully crafted matrix that lists the assessment criteria and qualitatively describes different levels of excellence in achieving each criterion. This matrix constitutes the marking grid used

by the teacher and students. The assessment criteria were listed down the left side of the rubric and the excellence descriptors for each criterion were entered in columns headed 0-5 (the potential marks for each criterion). The rubrics were used in two distinct ways: firstly, they provided a frame of reference within which to generate peer and tutor feedback. They were also used by the students and the tutor, as well as the second marker, as the statements against which the students were graded.

Different approaches to feedback

Rubrics are often used for assessment, but our review of literature on rubric-referenced assessment revealed that they can be a good tool for both assessment and feedback. Mertler (2001) points out that the analytic nature of the rubrics offers added advantage: the degree of feedback offered to students – and to teachers – is significant, and students receive specific feedback on their performance with respect to each of the individual scoring criteria – something that is unlikely to occur when using other forms of feedback.

In addition to this use of what we term “rubric-referenced feedback”, students were required to provide feedback on the development of their peers’ projects in the e-tivities. In that this second kind of feedback takes place in the distributed learning environment of the students, we have chosen to call it “distributed feedback”.

It is clear that working online guarantees neither student participation nor feedback. E-tivities (Salmon, 2004) are, however, a useful approach to increase online peer-feedback and their potential was explored throughout the 12 weeks teaching semester. In addition to the articulation between learning tasks and the e-tivities, outlined above, the e-tivities were used to enhance the feedback activity in various ways. Firstly, students were required to give feedback each week on each others’ posts (the e-tivity defined the task to be completed and the requirement to respond to peers’ work). Then Salmon’s weaving technique was used to integrate the themes of the students’ posts and to create a weekly summary that was posted to the blog. In two e-tivities, learners were asked to contribute to group discussions on photo publishing, and in another, they were asked to swap reviews of each others’ books and post them to each others’ storefronts. The last e-tivity required that learners reflect on the Lulu.com experience: their work, their peer’s feedback about the course and the technology used. Figure 2, below, sets out the last e-tivity:

| | |
|---------------------------------|--|
| E-tivity 11: My Lulu experience | |
| Purpose: | Now that you are an expert in photo publishing, Lulu and print-on-demand, it's time to review all that happened, and share what you've learnt. This can help you put your experience in perspective and also help other people who are still on the look out for a way to publish their photobook. The best thing you can do to help others is to share your experience with them! |
| Task: | <p>Write about your experience in photo publishing with Lulu. Your reflection should include at least one of the following issues:</p> <ul style="list-style-type: none"> • Digital pedagogy: what are the differences between learning digital media in online and in offline environments? • Communities of practice: what does it means to learn in a community that extends the classroom into the publishing market?. • Vernacular versus academic culture: what are the implications of circulating the work in the field of popular culture side by side with non academic, 'amateur', production? • A challenge to the hierarchical nature of the institution; what is the personal and social impact of starting publishing while you are still a student? • The meaning of self-publishing: what does it mean to publish independently of a selection by committee (editors/ curators)? • The value of publishing as a group, relying on the support of your peers' network. • The advantages/constraints imposed by the POD templates on the format of the photobook. • The lulu environment compared to other (publishing) social network sites. |

Figure 3: E-tivity 11: My Lulu experience (after Salmon's e-tivity model, 2004)

THE FINDINGS: STUDENTS' PERCEPTIONS OF THEIR ENGAGEMENT IN THE READ/WRITE WEB ENVIRONMENT

We have described, this far, the rationale for (and the design and implementation of) the interventions that engaged the digital photography students in the produsage environment of the read/write web. In this section, we will report the students' own perceptions of the experience.

While students were free to write about any of the issues suggested in e-tivity 11, four emerged as particularly important to them: digital pedagogy; communities of practice; the

value of publishing as a group; and the comparison of the Lulu.com environment with other social networking sites.

Digital pedagogy

The Lulu.com environment forced a steep learning curve for both teacher and students. While really good for publishing, Lulu is not particularly appropriate for communication and group work; searches for information are painful, the menus badly organized, and the navigation system awful! Nonetheless, students identified positive benefits from the experience. The novelty of the method was deemed appropriate by students: *“Learning mostly online through practical demonstrations and experimentation on various related websites with self-publishing and online collaborative rubrics to assess our projects provided a new experience, for me at least”,* and *“Personally I believe anything that challenges the norm and gets you thinking in different ways is a good thing. This module is not presented to us in a traditional, stuffy, listen and take notes old school university style. We are studying a new art form and our lecture methods should reflect the move away from tradition.”*

Another student remarked on the benefit of the hands-on approach: *“It is easier in my opinion to learn digital media practices on the Internet as opposed to the classroom or lecture hall – personally I am a more practical individual and feel the need to actively do something to learn effectively”,* which underscores the need to recognize different students’ different learning styles. There was also a link made between the day-to-day online activities of students and the shift towards the Internet as a teaching medium: *“I welcome online learning as an idea very warmly. As most of my generation is connected to the Internet one way or another anyway, it’s only a matter of when digital pedagogy becomes a standard.”*

A caveat against seeing online learning as a silver bullet came from two students who showed their appreciation of more traditional approaches. *“Learning about digital media in an online environment as opposed to a more traditional format (i.e. a classroom) has been slightly chaotic at times. It’s an unfortunate fact that sometimes you simply need a person on hand to help with problems, and online learning cannot always provide this.”* and *“The printed handouts on prepress fundamentals for InDesign were very useful too, as most of the class had not used this software previously.”*

Communities of practice

Students explored the concept of community of practice in a very practical way in these units. This student seems to doubt the personal value, but clearly recognizes the benefits to classmates: *“Learning by way of a community has been great for this unit, though I have not myself benefited from being part of a community it has clearly been a help to some members of the class who find websites and concepts such as those we have been studying more*

difficult than the theoretical issues in photography.” Another student came face to face with the diversity to be found in such a group: “Become [sic] an online community was an interesting look at the class and how each person expressed themselves. There was such an array of difference in style of each person’s e-tivities and how they coped with doing them.”

A particularly interesting comment was from a student who clearly found the online community too large for their liking but who had come to recognize that there were certain benefits. *“Like many others in our class, I found publishing our work online and making it available for anyone in the world to buy a very exciting aspect of the unit, and probably one which we would be keen to explore in the future. Publishing on Lulu however does put our work in with thousands of similar pieces, some interesting pieces and some rather less well put together. It would be good to find a more specialist online publishing site for our photobooks & photomags, however this would mean losing the huge numbers of visitors to Lulu. It’s a trade-off I guess.”*

The value of publishing as a group

The principle value related to working as a group that was identified by the students was that help was immediately available: *“The support of the group was very helpful, especially the ability to post questions to the online forums and answer other’s queries very quickly.”*

Another student valued the collaboration in the community, too: *“There was a lot of help being given through blogs, forums and in person between all classmates during this period. Considering so many seemed unfamiliar with Indesign only a few weeks ago we all managed to create and upload an interesting mix of books into the Lulu store.”*

It is interesting that none of the students identified any of Johnson and Johnson’s five pillars of group work (n.d.): positive interdependence; group interaction; individual and group accountability; interpersonal skills; and group processing as valuable in the course of this unit. Their focus appears to be at a micro- rather than a macro-level.

A comparison of Lulu with other (publishing) social networking sites

There were varying opinions about the usability of Lulu.com relative to other social networking sites. One student commented that, *“Other social networking sites feature the same kind of real time features that Lulu does but many offer better usability and are far more effective than other websites available.”* Another clearly felt that the social side of the site was a positive: *“Lulu.com has much more of a social side to it than most other self-publishing websites”* but agreed with the critique on its usability: *“Whilst the design of the site is at the very least questionable, it does for the most part work well if you have the time and patience to figure it out!”*

This student pointed out that the cost effectiveness of Lulu was possibly outweighed by its design. *“To be able to publish your work cheaply and easily is a great asset afforded to us as a group, but Lulu seems to be experiencing problems with the way it functions. It is tricky to use and everything seems to take a long time to do. Unlike other sites that involve social-networking, Lulu suffers from a lack of user friendly features.”* In addition, she offered some useful comments on the overall impact of using a better managed site: *“Overall, I see Lulu’s merits and potential and also value certain aspects of the site but I think that with a better technical support and development the site should be more accessible and thus would have more of an impact and not come across as amateurish as it does now. Would the site be more interactive like Facebook with constant technical updates which facilitate the use it would be more popular and more people would use it, thus creating a bigger market for self-publishing.”*

Possibly the view of the majority is summed up in this student’s comment: *“Unfortunately, Lulu.com is not exactly a user-friendly environment and it isn’t welcoming enough for constant digital activities like blogging, commenting and change of information. There are other, far more sophisticated environments for that (e.g. Facebook), which make users want to spend as much time as possible online.”*

It is apparent from some of these remarks that the students lost sight of the requirement to compare Lulu.com with other publishing social networks. Nonetheless, their comments clearly indicate that they were at times frustrated by the Lulu experience.

Other themes that emerged from the students’ writings

Some additional themes surface in the reading of the students’ reflections. Firstly there is a concern about the ownership of their work: *“Another issue that was voiced by a large amount of our group was the fact that, while publishing as students, we do not control the simple intellectual copyright to our work. This is instead handed to the University who could, in theory (I hope not practice), profit from our work and charge us royalties for what is essentially our own personal art.”* They also expressed a lack of experience and a lack of confidence with the medium: *“Having set tasks within Lulu really made me play around and explore the system, something I have previously not done before. I do tend still to be scared of computers and really have no idea what they are capable of doing for me. Throughout this term I have had to face this fear and play around, do a lot of problem solving on my own and learn that these systems actually have everything explained for you if you use their ‘help’ and ‘search’ options.”* Another student said: *“This has been a great struggle for me as I rarely use the Internet for social networking, I barely knew what a blog was. This unit was not something I enjoyed but I feel it helped me to get an understanding of how modern photographic practice operates on the Internet. I have learned how to produce my own book,*

which will be useful in the future I'm sure", which is a confident note upon which to wind up this discussion!

OVERVIEW OF OTHER FINDINGS FROM THE STUDY

From this study about the use of social networks for self-publishing, and engaging the students in the design of assessment criteria and the provision of feedback, we can confidently say that in a self-regulated learning environment, students can become a valuable source of feedback for their peers. It is also apparent that, with the right technology, feedback can be a tool for students to monitor their learning and guide them to achieve their learning outcomes.

In the Lulu.com domain, students viewed feedback through their familiarity with other social networking sites (SNSs). Throughout the semester, there was incidental collection of data which, when viewed holistically, points to cohorts of students who were generally comfortable in the online environment; who wanted a critique of their work in the form of feedback from the tutor, peers and the wider digital publishing community; and who would like to retain the benefits of face-to-face interaction in the classroom.

From a survey on their experience of SNSs, it was plain that the majority of the students (more than 90%) were competent in their use; almost 60% actively participated in more than one such site. While some of the students use SNSs to post pictures and stay in touch with friends – with some showing a preference for one SNS over another – their primary interest was to get feedback on their creative practice. One student explained, *"I use Flickr as a means of receiving feedback on my photographs and as an online portfolio - I prefer its emphasis on the work I produce and not on social aspects prevalent in many other sites with similar intentions"*, while another said, *"I use deviantART - a large artistic network which supports other artists and generally gives lots of feedback."* A third said, *"I use deviantart.com - to showcase my photography and receive detailed critiques based upon them. Also used to socialise with people who have similar interests. Research tool."*

This desire for feedback carried over into the Lulu environment. While Facebook, MySpace, Flickr and deviantART are used to post images and communicate with friends, they are also perceived as a way to get feedback about their creative practice from a like-minded community of artists. In the same way, students expected similar opportunities for feedback in a pedagogical project that is situated on a SNS; some saw this as a major advantage of delivering the course on Lulu as opposed to the classroom: *"The support of the group was very helpful, especially the ability to post questions to the online forums and answer other's queries very quickly."*

But others expected more! *"I do not see any advantages from publishing my book in a group (apart from getting one review) as only a few people downloaded it (which I cannot change*

and it's okay) and even less left comments in my development blog, which was incredibly disappointing as I put a lot of work into it and hoped to get some good feedback and constructive criticism. However, this is not lulu's fault but more the group motivation so I think next time there is a unit with such a heavy reliance on online media there should be more emphasis on the importance of this online activity and networking."

DISCUSSION

This study explored the features of read/write web to teach digital photobook publishing in a higher education context. The choice of Lulu.com as a software environment was partly a response to the hybrid digital-paper nature of the print-on-demand photobook project. The variety of tools available on the Lulu.com platform allowed us to view in context the core capacities of the digital art worker, the 5Cs of creative, collaborative, critical, combinatory and communicative work that characterize the art of produsage (Bruns, 2008). Figure 3 depicts the Bruns' produsage model in the context of this study:

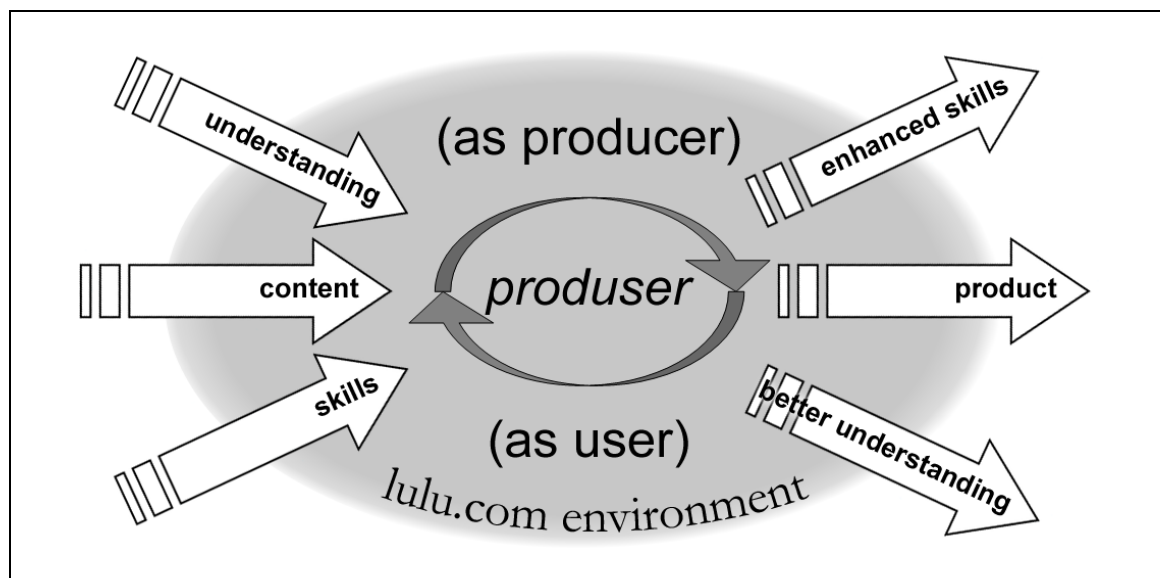


Figure 4: The produser in the lulu.com environment. Adapted from *The produser* (Figure 1 above.)

Using the software to explore the meaning of **co-creativity**, and developing new work in dialogue with other creators was successful; meaningful learning was achieved in the group process, from establishing the cohort's online community to engaging in authentic group work by publishing the collective magazines. As has been noted, however, the technologies that support this interdependency are still in their infancy and in need of further development. Lulu.com is no exception. Studies have shown that people use social networking sites and media-sharing platforms to find people they already know with whom to work. If the interfaces make it difficult to find such friends and classmates, this can be a major barrier (Boyd & Ellison, 2007). The social browsing, for example, that is such a great feature of

Flickr and Facebook, is still very limited in Lulu; enhancing this tool to the level of other SNSs would be a great asset. There is, in general, a need for better interfaces to facilitate produsage (Lerman & Jones, 2006):

As social networks grow, it will be impossible for users to keep track of their contacts through the kinds of simple interfaces now offered. Better interfaces, for instance ones that create personal Explore pages by finding ‘interesting’ images from among those produced by the user’s contacts, are a feasible solution to information overload. (p8)

The **collaborative** aspects associated with sharing one’s work on the Internet require an understanding of appropriate legal frameworks, and this is greatly encouraged by Lulu’s support of varied licensing deeds. The software’s embedded licensing menus – with scope for creative commons licensing – provide a good opportunity to discuss the licensing of creative work, whether this is available as a free download, or as a profitable POD. The legal framework for this project – the Creative Commons Attribution Non Commercial Share Alike 2.0 negotiated with the University’s copyright lawyer – offers a context within which to discuss issues of intellectual property in the academic environment. For the students, the principle of sharing their photographic work as a free downloadable PDF can be a watershed; this may be the first occasion in their time at university that their work is placed online, and made available for others to use.

The **critical** tools embedded in the software – the use of blogs for commentary and feedback, and the potential for peer review in the book pages – generated possibilities for giving and receiving constructive feedback as part of the ongoing collaborative process. The traditional domain of the “crit” session in art and design studio practice was partially moved into an online environment: this is a way of addressing the changing patterns of student learning and the students’ push for independent learning (Percy, 2004).

In the read/write environment, students can explore each other’s work in their own domain and engage at their own pace; the opportunity appears greatly appreciated as time pressures arise as a result of the new work/study balance (Robbie & Zeeng, 2008). There are also issues raised that relate to an understanding of the students’ needs and expectations in relation to online critical engagement. When used in the context of book reviews, the peer review in Lulu.com can be as effective as that on fanfiction sites where beta-readers working in the same genre can help emerging authors develop genre-specific skills (Black, 2005). On the other hand, using the software to facilitate feedback can be disappointing, for instance when students invest a lot of effort in customizing their blogs and there is a lack of comments or, specifically, substantive ones (Stern, 2008).

The process of breaking down the complex assignments of photo publishing into a granular sequence of simpler tasks (from photo editing to online publishing) engaged the students in a series of mix and remix **combinatory** processes, and encouraged them to harness individual chunks of information. This is associated with engagement with multiple literacies; additional online tasks such as customizing profiles and storefronts, creating links, and uploading images side by side with text all encourage the development of all-round skills, and create a measure of granularity that is reinforced by drawing on the software's ability to aggregate feeds. This multimodality hallmarks young people's creative online practices (Thomas, 2007) and is connected with the aesthetic of remixing. It is a sign of new networked material, intelligences and tools (Perkel, 2008) that characterizes the photobook and photo magazine assignments through the remixing of one's own work and the work of others for the photo magazine.

The **communicative** aspects of the software, used by the students to publish their book analysis, pitch for their proposals, post questions and get technical help, were central to eliciting mutual constructive criticism between the participants; overall, the publishing of the work process as a digital sketchbook serves as "tangible evidence of participation" (Soules, 2001). This archive of works in progress and the development of ideas is still available online at <http://stores.lulu.com/photocultures>, and can be accessed by others.

Lastly, the platform provided an opportunity for the students to publish a photobook and a photo magazine in 12 weeks, a work flow that is only possible using an online photobook company. They did this with no financial burden and with total editorial control, a real achievement considering the limited opportunities available and the restrictive editorial policies of most established publishing houses. Whilst the field of artists' publications has always been strategically associated with independent publishing initiatives, self-publishing is still considered a stigma for some (Forrester, 2007). With the increasing availability of print-on-demand it may be the best opportunity for emerging and established photographers alike to embrace it.

FUTURE IMPROVEMENTS AND RECOMMENDATIONS FOR PRACTICE

Feedback received from students and colleagues has been used to develop the latest version of the course, which is currently running with 34 level 2 digital photography students. For example, we removed the magazine brief and concentrated instead in the photobook, so that students can focus on developing critical thinking in the process of creating a single photo publication.

This is complemented by a move to reduce the number of activities. Developed by Professor Gilly Salmon of Beyond Distance Research Alliance at the University of Leicester, *Carpe Diem* is quick prototyping methodology to repurpose existing material for online delivery.

Feedback from a *Carpe Diem* workshop that focused on this unit helped us to identify and retain the most successful e-tivities and discard the rest. The four e-tivities that remain address two particular areas: two encourage students to write about their own photobook and publishing practice, and the other two involve writing about their peers' photobooks and publishing practices. This allows for both self-reflection and collaboration, and students are supported by particular readings that coincide with the start of the e-tivities and help them to develop reflexive and critical skills in the analysis of photobooks, a zone of critical activity.

Finally, in response to the critique of the social aspects of Lulu as a networking environment, we decided to diversify. In addition to Lulu.com as the publishing site, in the latest action research cycle we use Facebook as the main social networking site for group communication and Blackboard, the University's virtual learning environment, as the repository/archive for all course documents.

BIBLIOGRAPHY

- Anderson, C. (2007). *The long tail: How endless choice is creating unlimited demand*. London: Random House.
- Andrade, H & Du, Y. (2005). Student perspectives on rubric-referenced assessment. *Practical Assessment, Research and Evaluation*, 10(3). Retrieved October 09, 2008 from <http://pareonline.net/pdf/v10n3.pdf>.
- Arhar, J.M.; Holly, M.L. & Kasten, W.C. (2001). *Action research for teachers: Travelling the yellow brick road*. Upper Saddle River, NJ: Merrill Prentice Hall.
- Berners-Lee, T. & Cailliau, R. (1990). *WorldWideWeb: Proposal for a hypertext project*. Retrieved November 12, 2008, from <http://www.w3.org/Proposal.html>.
- Biggs, J. (1999). What the student does: Teaching for enhanced learning. *Higher Education Research & Development*. 18(1). 57-75.
- Biggs, J. (2002). *Aligning the curriculum to promote good learning*. Paper presented at Constructive Alignment in Action: Imaginative Curriculum Symposium, 4 November 2002. Retrieved November 15, 2008 from: <http://www.palatine.ac.uk/files/1023.pdf>.
- Black, R.B. (2005). *Online fanfiction: What technology and popular culture can teach us about writing and literacy instruction*. Retrieved October 10, 2008, from <http://newhorizons.org/strategies/literacy/black.htm>.
- Boyd, D.M. & Ellison, N.B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), article 11. Retrieved October 21, 2008, from <http://jcmc.indiana.edu/vol13/issue1/boyd.ellison.html>.

- Brittain, D. (2006). *Found, shared: The magazine photowork*. Brighton: Brighton Press.
- Bruns, A. (2008). *Blogs, Wikipedia, Second Life, and beyond: From production to produsage*. New York: Peter Lang.
- Drucker, J. (2004). *The century of artists' books*. New York: Granary Books.
- Forrester, L. (2007). *Self-publishing photobooks*. London: Louise Forrester. Retrieved November 22, 2008 from <http://www.lulu.com/content/4052229>.
- Hochschule Darmstadt (2008). *Dear Lulu*. London: Hochschule Darmstadt/Practise. Retrieved November 22, 2008 from <http://www.lulu.com/content/2709735>.
- Johnson, RT & Johnson, DW. (n.d.). *Cooperative Learning*. Retrieved July 22, 2008 from <http://www.co-operation.org/pages/cl.html>.
- Lerman, K. & Jones, L. (2006). *Social browsing on flickr*. Retrieved October 21, 2008, from <http://arxiv.org/abs/cs/0612047>.
- Mertler, C. (2001). Designing scoring rubrics for your classroom. *Practical Assessment, Research & Evaluation*, 7(25). Retrieved October 10, 2008 from <http://pareonline.net/getvn.asp?v=7&n=25>.
- Parr, M. & Badger, G. (2004). *The photobook: A history* (Volumes I and II). London: Phaidon.
- Percy, C. (2004). Critical absence versus critical engagement: Problematics of the crit in design learning and teaching. *Art, Design & Communication in Higher Education Journal (ADCHE)*, 2(3), 143-154.
- Perkel, D. (2008). Copy and paste literacy: Literacy practices in the production of a MySpace profile. In Drotner, K., Jensen, H.S. & Schroeder, K.C. (Eds.), *Informal learning and digital media: Constructions, contexts, consequences* (203-224). Newcastle, UK: Cambridge Scholars Press. Retrieved October 10, 2008, from http://sims.berkeley.edu/~dperkel/media/dperkel_literacymyspace.pdf.
- Philippin, F. (2008). *Reaktionen*. Retrieved October 10, 2008, from <http://www.lulu.com/content/3978261>.
- Richardson, W. (2006). *Blogs, wikis, podcasts and other powerful web tools for classrooms*. Thousand Oaks, CA: Corwin.

- Robbie, D. & Zeeng, L. (2008). Engaging Student Social Networks to Motivate Learning: Capturing, Analysing and Critiquing the Visual Image. *The International Journal of Learning*, 15(3).
- Salmon, G. (2004). *E-tivities: The key to active online learning*. Abingdon, Oxon: RoutledgeFalmer.
- Sarvas, R., Mäntylä, M. & Turpeinen, M. (2007). *Human-centric design of future print media*. Helsinki: PulPaper. Retrieved October 10, 2008 from http://pong.hiit.fi/dcc/papers/FuturePrintMedia_PulPaper07.pdf.
- Smith, K.A. (2005). *Structure of the visual book*. Rochester, NY: Keith Smith.
- Soules, M. (2001). *Collaboration and publication in hybrid online courses*. Retrieved October 07, 2008, from <http://records.viu.ca/~soules/hybrid2.htm>.
- Stern, S. (2008). Producing sites, exploring identities: Youth online authorship. In D. Buckingham (Ed.), *Youth, identity, and digital media* (pp. 95–118). Cambridge, MA: MIT Press. Retrieved October 10, 2008, from <http://www.mitpressjournals.org/doi/abs/10.1162/dmal.9780262524834.095>.
- Stix, A. (1997). *Creating rubrics through negotiable contracting and assessment*. Retrieved October 10, 2008 from http://interactiveclassroom.com/article_07.html.
- Thomas, A. (2007). *Youth online: Identity and literacy in the digital age*. New York: Peter Lang.
- Van House, N.A. (2007). Flickr and public image-sharing: distant closeness and photo exhibition. In Rosson, M.B. & Gilmore, D.J. (Eds.). *Extended Abstracts Proceedings of the 2007 Conference on Human Factors in Computing Systems, CHI 2007*, San Jose, CA, April 28 - May 3, 2007. (2717–2722).

RECOMMENDATIONS FOR FURTHER READING

- Berners-Lee, T. (2001). *Weaving the Web*. London: Texere.
- Burgos, D. (2006). *The structure and behavior of virtual communities engaged in informal learning about e-learning standards* (Estudio de la estructura y del comportamiento de las comunidades virtuales de aprendizaje no formal sobre estandarización del e-learning). Doctoral dissertation, European University of Madrid, Villaviciosa de Odón, Madrid, Spain.

- Burgos, D.; Hummel, H.G.K.; Tattersall, C.; Brouns, F. & Koper, R. (2008). Design guidelines for collaboration and participation with examples from the LN4LD (Learning Network for Learning Design). In *LN: Publications and Preprints*. Heerlen, NL: Open Universiteit Nederland.
- Figallo, C. (1998). *Hosting Web Communities*. New York: John Wiley.
- Hagel III, J. & Armstrong, A. (1997). *Net.gain: Expanding markets through virtual communities*. Boston, MA: Harvard Business School Press.
- Lave, J. & Wenger, E. (1991). *Situated Learning : Legitimate Peripheral Participation*. Cambridge, UK: Cambridge University Press.
- Lockyer, L.; Bennet, S.; Agostinho, S. & Harper, B. (Eds.). (2008). *Handbook of Research on Learning Design and Learning Objects: Issues, Applications and Technologies*. Wollongong: IGI Global.
- Mitchell, C. & Weber S. (1999). *Reinventing Ourselves As Teachers: Beyond Nostalgia*. London: Falmer.
- Redecker, C. (2008). *Fostering Innovation with Web 2.0*. Available from <http://www.checkpoint-elearning.com/article/6115.html>.
- Rheingold, H. (1993). *The virtual community*. London: Secker & Warburg.
- Weber, S.; Mitchell, C. & Dziewirz, S (2008). *The Image and Identity Research Collective (IIRC)* Available from <http://iirc.mcgill.ca/>.
- Wells, G. (2001). *Indagación dialógica. Hacia una teoría y una práctica socioculturales de la educación*. Barcelona: Paidós.
- Williams, K. (2000). Self directed learning in the visual arts. In Herrmann, A. & Kulski, M.M. (Eds). *Flexible Futures in Tertiary Teaching*. Proceedings of the 9th Annual Teaching Learning Forum, 2-4 February 2000. Perth: Curtin University of Technology. Available from <http://lsn.curtin.edu.au/tlf/tlf2000/williams.html>.