Abstract
One of the recommended principles for classroom practice from the Digital Rhetorics Project is “teachers first”, emphasising the need to prioritise the needs of teachers in learning new technologies and understanding their relationship to literacy education (Lankshear, Green, & Snyder, 2000), p.121). While most of my pre-service English Education students use digital technologies for their own purposes and understand the benefits of doing so, it is not always straightforward as to how technology can be effectively utilised in their classroom and for what purposes. This paper reports on work conducted with pre-service English Education teachers in an elective unit that focuses upon digital technologies in secondary classrooms. Using Green’s 3D model of literacy as a way of understanding the complex interrelationships between the cultural, critical and operational aspects of literacy, the students experiment with digital technologies such as mobile phones, wikis and blogs.

Pre-service English teachers and ICTs
Working with pre-service teachers is exciting and challenging. In this paper I describe some work that I have done with pre-service secondary English teachers in an elective unit some of them choose to do as part of their studies. This unit, Language and New Technology, focuses on pedagogy and digital technologies and their impact upon English and English teaching. In 2005, almost half of the English Method students took this elective unit.

While most of my pre-service English Education students use at least some digital technologies for their own purposes and understand the benefits of doing so, it is not always straightforward as to how technology can be effectively utilised in their classroom and for what purposes teachers might employ it. In addition to this, the students tend to choose the unit either because they have a great interest in new technology and highly developed skills or because they feel that this is an area that they are lacking in and hope that the unit will give them more skills! So, there is a huge variation in skill level, expectations, confidence and understanding of new technologies at the beginning of the semester, even though all students have completed the same English teaching major and similar Literature and linguistics units before taking this particular unit. My experience working with these pre-service teachers supports...
Manuel & Brindley's (2005) findings, in that many of the trainee teachers I work with are inspired to become secondary English teachers to fulfill their dream, because of their passion for the subject or their love of English. Our course is based upon a socio-cultural understanding of literacy practices, so the students come to the elective unit with an understanding that new technologies are changing literacy practices and an expectation that they will be incorporating these technologies into their teaching. The shared assumption of a socio-cultural approach to literacy has made it very easy to work with the 3D model. (For an excellent discussion of the history and implications of a socio-cultural approach to literacy, see (Lankshear, 1999)

In the first years of teaching this unit, I struggled with the variation in operating skill level amongst the students and could not seem to find the right level to pitch the unit. Should I focus on a "hands on how to" approach with a theoretical base or focus on classroom studies of new technology usage? I have solved this problem through using Green’s Cultural, Critical, Operational framework (also know as the 3D Model of literacy—See (Durrant & Green, 2001; Green, 1999; Lanksheer et al., 2000) as a framing device for the unit in conjunction with the adoption of a reflective practice approach (see (Schön, 1983) for both the students and myself. In adopting the 3D model as the basis for the unit, I have utilised it in my own planning, the students’ assignment work as well as being the departure and return point for linking other theory such as an examination of Multiliteracies (See for example (Cope & Kalantzis, 2001; Cope, Kalantzis, & Varnava-Skoura, 2002; Kalantzis, Cope, & New London Group., 2000; Luke, 1997) and studies of digital learning (such as (Beavis, 2001; Nixon, 2001; Sefton-Green, 2001). In this paper I will discuss how we used the 3D model of literacy and why this model is a useful framework for pre-service teachers, teacher educators and practicing classroom teachers to adopt and use as part of everyday teaching practice.

**Teachers first**

One of the recommended principles for guiding the effective integration of new technologies into classroom-based literacy education from the Digital Rhetorics Project is the principle of “teachers first”, emphasising the prioritisation of the needs of teachers in learning new technologies and understanding their relationship to literacy education (Lanksheer et al., 1997). Lanksheer, Snyder and Green (2000) state that the notion of teachers first is "so obvious it is difficult to understand how education systems can be left to create patterns of fragility and discontinuity by projecting teachers into situations for which they have not been appropriately prepared" (p.121). They see part of the answer "is that insufficient heed has been paid to a socio-cultural perspective on literacy, technology and learning. It is almost as if teaching is widely seen as something that involves
just becoming proficient with a few techniques, and that these can be applied to all manner of classroom conditions—including the rapid, mass introduction of new technologies" p. 121. Even though the Digital Rhetorics Project Report was published in 1997, almost 10 years ago, it seems to me that the need for teachers first still stands. Although many teachers may be much more conversant with operating the technologies, and interesting work is being developed at different sites, not enough opportunities exist for teachers to increase both their operational skill level and their understanding of the possibilities the technology holds to facilitate all English and Literacy teachers to integrate new technologies into their classrooms in a meaningful way.

There are several aspects of the "Teachers First" principle that apply to my students. As mentioned earlier, the pre-service teachers in my unit have huge variation in skill—the majority of students in the unit would be under 30, many in early twenties, yet some have few skills—due to other interests—lack of interest—rather than lack of access (as at the least they have had good access whilst enrolled at the university for the previous 2-3 years). All of the students run mobile phones, but some students do little more in the way of new communication than having the mobile, and several admitted (albeit sheepishly) to only using their mobiles for phone conversations, as they are not very skilled at sending text messages. It is often assumed, however, that all young people have sophisticated computer skills—that they are competent users of a broad range of new technologies. I would suggest that with some of my students that they have been constructing their identities as English and Literature teachers as "literary types", and for them this means loving literature and books rather than engaging with digital technologies to the extent we would imagine. However when young student teachers go into schools for practicum, it is often assumed that they are competent with new technologies because of their youth and there is an expectation that they will be able to successfully utilise new technologies in their classroom practice.

If we go back to Green & Bigum's (1993) notion of "aliens in the classroom" and think about their notion of the teachers being the new "aliens" in the classroom (where the kids were somehow designed differently through growing up in an increasingly digital world and many teachers were alienated from this world), we can see that some of the students are alienated from digital technologies (despite being of an age where they would have grown up with these technologies). Certainly many of my cohort had recognised this in themselves and felt the expectation on their practicum, and were hoping I could prepare them for this aspect of their teaching. In addition to this, the pre-service teachers with the knowledge and understanding of the digital forms cannot always necessarily turn their user ability into a
pedagogy that works in the classroom. There are few models available for them to follow, and they report that they rarely see new technologies utilised effectively in practice when they are in schools. Students who are lucky enough to be under the tutelage of a teacher with innovative ICT teaching practices certainly benefit from the experience, but very few of the students are lucky enough to experience this. Because the students are not experiencing this in the schools, a major focus of the course is to explore possible relevant and innovative ways of using ICTs in English. Green’s 3D model of L(IT)eracy provides an effective way to understand the impact of digital technologies whilst also being useful for classroom lesson planning.

**Green’s 3D model of L(IT)eracy**

(Green, 1999) describes the 3D model of L(IT)eracy as bringing together “language, meaning and context” with “technology, practice and context” (p. 43)(Green, 1999). The writing of “L(IT)eracy” signifies the coming together of IT and literacy, and in this model he puts language learning and technology learning together. The model assumes that literacy is a situated social practice and gives a three dimensional view of literacy.

The three dimensions of the model are cultural, critical and operational, and these are represented in circular form with double arrows, indicating that there is no hierarchy and they are inter-dependent and inter-related. Green (1999) describes:

- Briefly, the operational refers to turning ‘it’ on, knowing what to do to make ‘it’ work; the cultural involves using ‘it’ to do something meaningful and effective, in particular situations and circumstances (for example, a Geography lesson, a workplace, etc.); and the critical entails recognising and acknowledging that all social practices and their meaning, systems are partial and selective and shaped by power relations. (p. 43)

Green stresses that none of the dimensions has any priority over any of the other—they are interdependent and should be addressed simultaneously in the classroom. He argues that a major challenge for curriculum planning and for classroom practice is “how to institutionalise, and naturalise, cultural-critical awareness while at the same time developing and consolidating practical skills and capacities. (Green, 1999), p.44)

The Digital Rhetorics Project found that in the majority of settings there was a focus on operational skills in the classroom(Lankshear et al., 2000)and that the cultural and critical were often neglected.
Mobile Phones, Blogs and WIKIs

After studying the 3D Model of L(IT)eracy, the students in the course and I embarked upon an informal study of mobile phone usage, where we all kept note of our mobile phone usage between classes. When we returned to class the following week, we analysed the usage in terms of the Operational, Cultural and Critical dimensions. So for instance with the Operational Dimension, we noted the skills of how to use the mobile for making a call, texting (including using T9 and caller groups), and on the more sophisticated phones, sending photos and graphics. Under the Cultural dimension we noted the changes that were occurring to culture as a result of the technology, such as meeting on the move, texting short messages rather than ringing or emailing and dating practices around the mobile phone. I was surprised to learn that we could have an agreed discussion around aspects of mobile phone usage and etiquette—for instance when one should send a text, when one should ring and how often would be seen as invasive or “coming on too strong". We also noted the potential to organise social action with mobile phones- ie: in Madrid after the bombings there was a huge march organised very quickly with mobile messages. For the Critical dimension we considered ownership of mobile technologies—the plans and patterns of ownership and the power relationships between companies and users. We also considered who had the authority and the power with this technology, and how much it cost the students—they converted their labour (in time from part time jobs) into their mobile phone bill—often to their horror when they thought about it.

This project captured the students' interest. We compared the practices to when I went through university a mere twenty years earlier—how much difference did the phones make to lives? This was very interesting to consider, especially in terms of ability to network with friends, make spontaneous calls and visits rather than tending to pre-organise details—the down side being the actual cost of maintaining the mobile phone and the amount of labour required to finance this. We considered the “Dear John" letter as a text message, and discussed which was crueler, or did it amount to the same thing. Playing around with Green’s model analysing one technology like this gave the students a good understanding of the model and enabled them to feel confident to start thinking about the curriculum implications of the model and how they might use the model in their planning of teaching using digital technologies and in their reflective analyses of their own teaching. It also gave them a starting point for developing their own pedagogical practices with new technologies—one of the students modified this activity during practicum and worked with some middle school students in a similar way and several others wrote English classes focussing on mobile phones and language.
Blogs are on-line interactive journals. A colleague of mine, James Farmer, works in learning services and facilitates on-line learning for staff and students. James is researching the use of Blogs in educational settings and has a wonderful Blog (See http://incsub.org/blog/ Incorporated Subversion ). He also offers free blogs for school and university students—these can be set up from his site. It is easy to do, and I would highly recommend reading James' Blog. James came to class and showed us his blog, demonstrating some of the ways that he thought blogs were useful. This provided an excellent model for the students, and using his hosting, the students set up their own blogs themselves and then we explored possibilities for English teaching. Some students designed a blog to be used in the teaching of text, organising the blog around a novel and pulling together resources related to the novel with spaces for students to comment and discuss the novel. The blog was designed so that the teacher would work on the blog space and post questions to keep the discussion going. Another use that was experimented with included a blog for issues analysis. This seemed particularly appropriate as it was possible to link to electronic versions of the newspapers and other information sources. Blogs are an excellent tool for storing and recording multiple perspectives and multiple writing about one stories or issue in the news and then creating spaces for the students to connect with the stories and analyse and deconstruct them. Some students experimented with the idea of using the blog as a journal—to be shared by the group as inspiration for writing. These were some of the ideas we explored—as we began however, we realised that the possibilities unfolding were numerous and the potential of the blog as a form to be used in English teaching was powerful.

Wikis are another technology that we experimented with. We used the Wiki to write a multi-user story with interlinking threads. Wikis are similar to blogs, but usually they are collaborative. Whereas blogs tend to be more like journals and the pages tend to be organised around dates, Wiki pages are usually organised around headers (Wikiwords). Wikis are simple to use and a great tool to use for collaborative on-line tasks. We experimented using the Wiki as a creative writing tool—writing a shared school situated story. Different people wrote different sections of the story—the narrative threads running in different pages and through different aspects of the story. The final product was not one of the greatest works of fiction ever produced in the English language, but it served the purpose of showing the students some of the potential that a shared writing space might be able to provide. In all of this work, my aim is to demonstrate some possible uses in the classroom, but also to set the students thinking about the possibilities for what they might do themselves in their own classrooms when they begin to teach. Using the 3D model in both our planning of the work and evaluation of the learning
experiences helped to give us a focused way of devising and understanding the work.

The 3D model and Reflective Practice

The 3D Model of L(IT)eracy was also implemented as a tool to assist reflective practice, with myself and the pre-service teachers using it as a framing device for our teaching and our thinking about the work we did in our classes. I worked towards framing each class to have a balance of operational, cultural and critical foci, trying to ensure that I was developing the students' operational skills as well as developing the theoretical components of the course. When reflecting-on-action (Schön, 1983), I endeavoured to do so through the lens of the 3D model, trying to use it as more than a checklist to understand the complexity of the classroom moments.

The student assignments for the unit also took on a reflective practitioner approach, requiring the students to frame both their teaching and analysis of their teaching and their classroom observations with the 3D Model. For the first assignment, the students were required to make detailed notes of one class and then to apply the 3D model to their observations. They were asked to discuss "To what extent are the elements of this framework used in the class you taught/observed?" and "What changes/future activities would you plan for the students?" We also discussed whether this model was appropriate for this purpose. I was given the impression that the pre-service teachers were surprised to the extent that operational skills were either focused upon or ignored entirely. Many of the students commented that operational skills were being taught almost exclusively in the classes that they observed—or that when teachers were afraid of the technology they ignored operational skills citing that the school students know everything about the computers (which was not always the case). The second assignment required the students to use the 3D model for their planning of classes. The students generally managed to use the technologies in new and interesting ways and certainly stretched their own usage of the technologies- they constructed different kinds of virtual spaces such as blogs and wikis following either the ones we had looked at in class or their own and some of them developed resources for helping school students to evaluate and critique on-line resources. The 3D Model of L(IT)eracy provided them with a framework that helped them to plan with an awareness of the need to provide a rich environment.

Conclusions: Adopting Green’s 3D Model of L(IT)eracy

Green’s 3D model of L(IT)eracy is an extremely useful framework to use as a way of understanding the complex inter-relationships between the cultural, critical and operational aspects of literacy.
The model is simple on the surface, it is easy to remember and to explain and yet it allows for a very complex understanding of how literacy works and the inter-relationships between the various aspects of literacy in new times. The model can be successfully used to understand what is happening with literacy as well as to plan effective classroom work that ensures a multi-dimensional, balanced approach to teaching, rather than focusing on only some aspects of literacy. For me, the ability to use this model to ensure a balanced approach to L(IT)eracy teaching is invaluable, and being cognisant of the model in my preparations for and reflections on these classes has pushed the way I approach this unit. For the students, the model provided them with a clear way of understanding.

Planning—feedback received on the unit and from the students re the assessment tasks and the unit itself indicated that they too found the model useful as a way of both understanding L(IT)eracy and planning English classes that used ICTs.

Following this model ensures that a teacher extends the students in their operational skills, cultural understandings and critical approaches to the work. I think I sound like a Bill Green acolyte by now! I'm not, but I do recommend that you get out your old ALEA and English in Australia journals and give this model another look!

References


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