1. Why is language significant?

The drive to incorporate new electronic media into teaching and learning has affected educational practices across all continents in recent years and we are still gauging the most effective ways in which to use them. In this special edition we focus on one aspect of the new media – the role of language. We do this because we believe that language occupies a central role in the teaching-learning process. Although there is now a considerable body of research which takes this view (see, for example, Christie, 2002; Christie and Martin, 1997; Coffin, 2005, 2006a; Kumpalainen and Wray 2001; Lemke, 1998; Mercer, 1995, 2000; Unsworth, 2000; Wells, 1994) we are aware that, to date, there have been relatively few investigations into the role of language in new technologically based (or enhanced) pedagogies such as laptop learning, web page reading and text based electronic conferencing.

In this special issue we have therefore taken the opportunity to reflect on the way in which these environments have the potential to influence language use – both in relation to how they require quite complex changes in teachers’ and students’ language and literacy practices and specifically in relation to how the technologies can support and enhance students’ development of the specialized ‘academic’ literacies required by schools and universities. In particular, these articles pose the following questions.

- What is the relationship between language and teaching-learning in the new electronic environments?
- Are old pedagogic practices being reproduced in ‘new technological skins’?
- Can new communications media support critical approaches to literacy?
- What impact does access to multimodal resources (via computers) have on students’ language use and literacy practices?
- How do new web-based reading practices affect adult learners?
- Does text-based conferencing improve students’ ability to argue?

Finally, a third way in which language is implicated in this special issue is the way it influences researchers’ theoretical frameworks and analytical tools. By drawing on language focused methods to explore the questions above, the studies represented in this special issue extend the more well established body of research concerning newly emerging electronic environments where many researchers work within cognitive (often language free) models (Andriessen et al., 2003; Badre, 2002; Cooper, 1999; Tolmie and Boyle, 2000).
2. Research Settings
The authors in this volume focus on language use to provide insights into a range of contemporary educational technologies each with their own distinct pedagogical purposes. The studies span three continents and involve diverse age groups. All are based on detailed analysis of empirical, naturalistic data collected across the different environments.

2.1 School age students: (1) text based conferencing (ii) multimodal writing
Two of the papers explore uses of computers with school age students. Love and Simpson investigate the use of computer conferencing to develop critical literacy. They report on work in Australian primary schools promoting a text based conference discussion between children in different schools, and on a project in one large secondary school where 180 students interacted online within small discussion groups. The primary school project was organized by specialists in the New South Wales Department of Education and Training who controlled the selection of material for discussion, and the sequencing and pacing of that discussion. The prompts posted to the schools provided opportunities for exploration of the texts, inter-school debates, and negotiation over positions on the texts. The secondary school project was moderated by English teachers from within the school who collectively selected the text and designed the prompts. These were sequenced to encourage affective and ethically orientated critique. The authors compare and evaluate the success of text based conferencing in promoting critical literacy across the two environments.

School age students in two different sites are also the focus for Ware and Warschauer’s research in the United States. They look at two projects aimed at bridging the gap between in-school and out-of-school literacy practices involving computers. Their first site is an after-school centre and they focus on two bilingual girls creating multimodal ‘storytelling’ texts. The creation of these stories provides opportunities for informal mentoring which could not easily be recreated within a classroom setting. The second project is classroom-based and relies on all the students being supplied with laptops and being encouraged to use multimodal resources in innovative ways in different curriculum areas. Ware and Warschauer give examples from science, English and mathematics where individuals and groups are developing new literacy practices as they carry out their core academic work. They argue that encouraging young people to develop hybrid literacy practices is one way of bridging the divide between home and school.

2.2 University students: (1) text based conferencing (ii) web-based literacy support
A second pair of papers deals with learning and language practices in higher education in the United Kingdom. Using data from a distance taught master’s course, Coffin, Painter and Hewings examine asynchronous computer-supported discussions as a site for educational dialogues, in particular argumentation. They contend that argumentation has a central role in developing critical approaches to knowledge and that practices are emerging in asynchronous conferencing environments which differ from those previously described in face-to-face settings and academic essays. Their findings focus on the
influence of the technology on students’ participation in argumentation and the implications for teaching strategies adopted by academics overseeing such exchanges.

Goodfellow reports on an academic literacies support resource for United Kingdom and international postgraduate students studying online. Like the three previous papers he highlights the significance of developing a critical perspective, but discusses the preconceptions around literacy as a generic communication skill and the way in which this can influence student engagement with a pedagogic resource which seeks to contextualize literacy practices, in this case online literacy practices. He suggests that the current rhetoric around generic and transferable sets of communications skills downgrades the significance of writing as integral to reflection and learning. Rather, faced with a heavy workload to assimilate the core curriculum, students focus only on resources which they judge to be of immediate benefit in completing assessment focused work.

2.3 Informal adult learning: web-based reading
Adult learners outside mainstream education are the focus of Attar’s paper. She researched inexperienced learners facing problems with developing web-based literacy in the United Kingdom. Unlike the other research reported here, Attar’s students are facing a specific difficulty which they perceive as their own deficiency in being able to access information using the World Wide Web. By applying an interdisciplinary approach to research and to working with the students, Attar both identifies the sources of some of the difficulties and suggests ways of helping inexperienced users to feel more in control. Her analysis of the difficulties hinges on the language used around computers and the metaphors that it draws on.

3. Methodologies for exploring language and learning
Methodologically, the papers in this special issue make an important contribution to educational research. The focus on language lends itself to linguistic methods of text analysis which enable researchers to provide detailed accounts of how language works to structure and shape dialogues and texts (see Coffin et. al, Love and Simpson). Linguistic or ‘discourse’ analysis has been a major research tool in much applied linguistic and educational research for several decades (see Christie, 2002; Coffin, 2001 for overviews). The main purpose of this type of analysis is to lay bare the way language works in educational contexts and to make these descriptions available to educational practitioners.

The other forms of analysis presented here, including multimodal analysis and methods developed within social and cultural theory complement the linguistically oriented ones. Multimodal analysis focusing on language in interaction with visual images and sound is significant in three of the papers (Love and Simpson, Ware and Warschauer and Attar). In Ware and Warschauer, it is used to investigate how students generate new hybrid texts as a result of integrating the verbal, visual and auditory and explores how such literacy practices can deepen engagement and learning.

Developing an understanding of language in the new technological environments requires
consideration of a wider context than just that presented by words or words interacting with images and sounds. Social and cultural theory and the notion of ‘practices’ (e.g. Lave and Wenger 1991) explicitly underlie Ware and Warschauer, Attar and Goodfellow’s papers. Rather than view literacy, including online literacy, simply as a skill to be taught, the researchers focus on the ideological nature of how, why and when we participate in literacy events. Goodfellow’s analysis, for example, concentrates on the ideological potential of on-line writing to expose aspects of context-hidden norms, and power relations. Using a case-study approach he investigates the use made of an online writing resource – which pages received most hits and at what point in the course. He gathered students’ responses to the resource through an email questionnaire survey and considered the amount of critical reflection on the communication process that they engendered. He also considers the lack of take up of a potentially useful resource by many students and questions whether this is a function of the open-endedness of the internet as a learning resource and the practices that surround its use.

Socio-cultural theories of learning complement the analysis of language and academic literacy practices in the papers by Love and Simpson and Coffin, Painter and Hewings. The studies build on earlier work in genre-based approaches to teaching-learning (Derewianka, 1990, Martin, 2000) which set their linguistic descriptions within neo-Vygotskian theories of the dialogic construction of shared knowledge (Mercer et al., 1999). This body of research is based on the premise that language description derived from detailed linguistic analysis in specific educational contexts provides teachers with important insights into the role of language in learning. Research studies show that through sharing knowledge about language form and function, and through modelling effective language use, teachers can help students to critically analyse texts as well as independently construct their own meanings (Coffin, 2006b, Donohue, 2002). In the paper by Coffin et al., the linguistic analysis expands the ‘argument genre’ framework devised originally for essays and adapts it for the analysis of text based conferencing. By classifying the conference postings in terms of stages or ‘moves’ such as claim, counter claim, evidence, personal assertion, the authors compare argumentation in conferences where the pedagogic strategies are different. They argue that teachers need to provide greater modeling of argumentation stages in order to improve the quality of argumentation.

Another analytical technique applied in the research presented in this volume is the notion of framing, derived from Bernstein’s (1996) model of pedagogical discourse. By applying this notion, Love and Simpson are able to complement their linguistic (Appraisal) analysis with an investigation of who controls the forms of reasoning privileged in the on-line environments studied, who sequences and paces the learning and who controls the success criteria. Most importantly, they are able to consider the implications of these processes both for students’ ‘inter-thinking’ (Mercer, 2000) and development of critical literacy.

In sum, the papers in this special issue provide an illustration of how ‘new technologies can reshape the educational landscape within which literacies are encountered by
learners’ (as Charles Crook in his discussion paper puts it). By giving insight into some of the most common, newly emerging language and academic literacy practices, the collection makes an important contribution to a growing body of research which recognises the relationship between language, literacy and learning but which has only recently begun to explore its role in the electronic media. Equally significantly, the special edition (particularly as crystallised in Crook’s incisive discussion of tension points in the new media) points to some of the exciting and important areas we have yet to research in the intersection of language and literacy, education and technology.

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