Apprenticeship reinvented: Cognition, discourse and implications for academic literacy

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ABSTRACT
Among educational theorists and applied linguists sharing a common concern with the learning and teaching of literacy, there exist divergent understandings of the term ‘apprenticeship’. The more widespread and influential understanding is more precisely classified as ‘cognitive apprenticeship’, denoting a theory of learning that originated in North America in the late 1980s and which emphasises cognitive engagement and authenticity in learning tasks. Its application was intended to be in the first instance classroom-based but with strong links to the needs of the workplace; more recently, cognitive apprenticeship has been associated with the learning theory constructivism, and has been seen as especially applicable to vocational training. An alternative – and more recent – formulation is what might be termed ‘discourse apprenticeship’, closely associated with the work of ‘Sydney School’ linguists. The scope of the latter is not confined to the classroom: the focus falls on the deconstruction of systems of education, in this case in Australia, demonstrating how the ‘apprenticing’ of learners to differing stages of specialisation in the discourses of curriculum subjects relates to the demand in stratified industrial societies for stratified employee competencies. These two formulations, however, despite their sharp differences in political orientation, can be seen to share points of contact that suggest a new trajectory in Australian literacy studies. It is concluded that drawing on both perspectives within a critical framework offers a fruitful avenue for the development of academic literacy in English as a Second Language (ESL).

Introduction
Apprenticeship, a model for skills and knowledge acquisition that in recent times has attracted renewed attention, has been the object of differing views in scholarly contributions on the teaching and learning of literacy. A contribution entitled ‘An agenda for literacy for adult second language learners’ (Murray 1998), for example, has expressed enthusiasm for an apprenticeship framework for literacy development:
we [language educators] have the responsibility to help them [learners] explore the advantages and disadvantages of becoming members of different literacy communities and then providing for their apprenticeship in their chosen literacies. (Murray 1998: 46–47)

Enthusiasm for an apprenticeship approach to literacy development has not been limited to ESL educators but is widespread in educational settings and is present, too, in the specific domain of academic literacy education (for example, Hodson 1998, who focuses on scientific disciplines). Conversely, however, a contribution entitled ‘Engaging with the challenges of interdiscursivity in academic writing’ (Candlin and Plum 1999) has cast doubt on the validity of an apprenticeship model for academic literacy development, citing empirical evidence from university contexts (‘the post-modern and fragmented world of the academy’ – Candlin and Plum 1999: 195) that suggests the model does not apply, and expressing the conviction that ‘apprenticeship to a discipline is considerably more nebulous than apprenticeship to a trade’ (Candlin and Plum 1999: 213). The differing views on apprenticeship cited here have a problematical resonance in the particularly Australian context since they are expressed by scholars with the capacity to influence Australian literacy studies, and particularly in the area of ESL: Murray is current Executive Director of the [Australian] National Centre for English Language Teaching and Research (NCELTR), based at Macquarie University, a position previously held by Candlin, NCELTR’s founding Executive Director, who is currently a Macquarie linguistics research professor.

In the light of such differences in standpoint on an ‘apprenticeship approach’ to literacy development, of close relevance to the Australian ESL context, this article sets out, first, to clarify what it is that is signified by the term apprenticeship as it occurs in current literature in the fields of education and applied linguistics/TESOL, and, second, with non-English-speaking background students at Australia universities particularly in mind, to sketch the potential relevance of a reformulated apprenticeship approach to the teaching and learning of academic literacy. The first definitional aim proves to be a necessarily critical endeavour: while the term apprenticeship has a dominant current usage, it also has an alternative usage, with each usage occurring in a discrete body of literature and reflecting different sets of assumptions and different political orientations, which necessitates accounts of apprenticeship as two distinct but related theoretical formulations. By far the more widely cited and influential is ‘cognitive apprenticeship’, based on the work of American cognitive and educational theorists, which is the model to which the differing views cited above refer. An alternative – and
more recent – formulation is what might be termed ‘discourse apprenticeship’, associated with the work of Sydney School linguists.

Drawing on both perspectives, the article concludes by sketching the potential applicability of an apprenticeship approach to the teaching and learning of academic literacy.

**Cognitive apprenticeship**

In the late 1980s, at a number of North American research centres, institutes and university departments working in the fields of cognition and learning, concerns were expressed that current approaches in education were inefficient and a new perspective on the educational process was needed. The inefficiency, held to exist not only in America but in western industrialised societies more generally, was seen to lie in too great a separation between knowledge acquired at school and knowledge required beyond school walls. The new perspective, advocated in a series of three key publications aiming to redraw the educational landscape for the 1990s (Brown, Collins and Duguid 1989; Collins, Brown and Newman 1989; Lave and Wenger 1991), was embodied in the cognitive apprenticeship model.

In the view of these early exponents of cognitive apprenticeship, the principal fault with ‘formal schooling’ as it had developed in industrialised societies since the 19th century was its overriding concern with factual and conceptual knowledge at the expense of knowledge that could be applied. This entailed, in the classroom context, the treatment of skills and knowledge as ‘abstracted from their uses in the world’ (Collins et al 1989: 453–454). Classroom procedures, in the view of Brown et al (1989: 34), were thus lent the hollow character of ‘ersatz activities’: school learning ‘remains hermetically sealed within the self-confirming culture of the school [and] success within this culture often has little bearing on performance elsewhere’. The view of knowledge as ‘theoretically independent’ of its domains of use was, nonetheless, it was argued, being challenged by ‘the understanding of learning and cognition that is emerging from research’ (Brown et al 1989: 32). An example of the research referred to here was the ethnographic work of Lave (then in progress, cited in Collins et al 1989: 455) on ‘traditional’ – or pre-industrial – tailoring apprenticeships in the west African state of Liberia. There is an irony here that should perhaps not escape notice: an educational model for an advanced industrial society was being sought in a Third World pre-industrial economy – of a region first plundered by the First World for slaves in the 18th century, then reinvented in the 19th century as an independent state for the repatriation of freed
slaves whose presence was then seen to be posing awkward social problems for the slave-owning communities of the American south.

Two aspects of Lave’s work were identified as being of special interest. First, the sequencing of learning activities in Liberian tailoring apprenticeships: observation of the master’s executing of the target process, attempts to execute the process with coaching from the master, and increasingly independent practice during which the master’s coaching diminishes. From a teaching point of view, Collins et al (1989: 455) represent this threefold sequence as modelling, coaching (central to which is scaffolding) and fading. Second, the centrality of the specific social context in which the learning took place: the apprentice is ‘embedded in a subculture’, as constituted by the community of participants in the target skills (Collins et al 1989: 456).

Early exponents of cognitive apprenticeship were, nonetheless, aware that the relevance of ‘traditional’ apprenticeship models to the educational practices of advanced industrial democracies was necessarily attenuated. In the former, the process of carrying out target skills is ‘external’ or ‘physical’ and hence readily observable; in the latter, in such knowledge domains demarcated in schools as mathematics, reading or writing, the processes were ‘internal’ or ‘cognitive’ and hence hidden. Accordingly, ‘[a]pplying apprenticeship methods to largely cognitive skills requires the externalization of processes that are usually carried out internally’ (Collins et al 1989: 457). The externalisation of cognitive processes in an apprenticeship approach to acquiring a cognitive skill such as writing could, for example, take the form of having student writers interrogate themselves at the planning stage with staged metacognitive prompts or ‘procedural cues’: ‘a better idea is …’, ‘a whole new way of looking at this topic is …’, ‘I think this isn’t really necessary because …’, ‘I could develop this idea by adding …’, ‘I can tie this together by …’ and so on. Alternatively, or in addition, teachers could model the writing process by playing the role of a writer engaged in composing while ‘thinking aloud’, in this way making a window into the writer’s otherwise invisible cognitive processing (Collins et al 1989: 465–469).

Cognition, and the metacognitive shaping of its processes, is thus central to the cognitive apprenticeship model.

In making a case for cognitive apprenticeship as a model of learning, the main contribution of Collins et al (1989) was to outline how it might be practically implemented; the main contribution of the other two key publications, Brown et al (1989) and Lave and Wenger (1991), was of a more theoretical character. Accordingly, Collins et al (1989: 476–491) went on to set out a ‘framework for designing learning environments’ made up of the four dimensions: content, methods, sequence and sociology. The content
dimension encompasses not only domain knowledge but also heuristic and learning strategies; the methods dimension includes the threefold sequence modelling, coaching and fading, referred to earlier, and further elements to develop autonomous problem-solving capacities to sustain the learner as the teacher role ‘fades’; the sequence dimension advocates attention to global before local skills, overarched by a movement towards increasing complexity and diversity; and the sociology dimension emphasises the centrality of situated or contextualised learning, of intrinsic learner motivation, and of a socially interactive learning environment involving cooperation and competition between learners.

Contemporaneously, in Brown et al (1989) and Lave and Wenger (1991), the emergent cognitive apprenticeship model’s theoretical underpinnings were elaborated. Brown et al (1989: 33) conceptualised the process of learning as ‘a process of enculturation’ into the ‘webs of belief [and] activities’ of a ‘domain’ which is constituted by ‘communities of practitioners’; similarly, Lave and Wenger (1991: 33–37) characterised learning as a process of ‘legitimate peripheral participation’ in the activities of skilled practitioners, in the course of which learners move along a centripetal pathway from ‘peripheral’ to ‘full participation’ in ‘communities of practice’. What emerges from these latter more theorising publications, notwithstanding certain differences in emphasis, is a view of learning in which an overarching concept is ‘situated learning’.3 Learning, in this view, as in traditional craft apprenticeships, needs to be situated in activity and in a social context. One reflex of this concern for ‘situatedness’ is a concern for authenticity. As Brown et al (1989: 34) reason, since learning is a process of enculturation into a domain and the activities of a domain are framed by its culture, learning requires engagement in ‘authentic’ activities, defined as ‘the ordinary practices of the culture’. Another reflex is a concern for a ‘flattening’ of hierarchical relations between teachers and learners. As Lave and Wenger (1991: 92–94) reason, since the aim of learning is participation in communities of practice, ‘an understanding that mastery resides not in the master but in the community of practice of which the master is part’ entails ‘a decentered view of master-apprentice relations’. A further reflex is an epistemological shift away from the view of knowledge assumed by behaviourist approaches to learning and towards a more subjective and relativist view, where knowledge is seen as socioculturally constructed rather than an objective given – a view of learning that was also evolving as constructivism, which will receive further mention below.

Progressive ideas in education are generally much in evidence in the literature on cognitive apprenticeship. The 20th-century American
pragmatist philosopher and educational innovator, Dewey, is frequently mentioned as a theoretical forebear; the work of the Russian cognitive psychologist Vygotsky, particularly his ‘zone of proximal development’ which theorises the cognitive space in which learning takes place, is credited as underpinning the notions of ‘scaffolding’ and ‘legitimate peripheral participation’; and the work of the French structuralist sociologist Bourdieu, most specifically his ‘theory of practice’ and its related notion of ‘habitus’, informs the sociocultural perspective on processes of learning (see especially Collins et al 1989 and Lave and Wenger 1991; see also Palinscar 1989 and Wineburg 1989, who take Brown et al 1989 to task for paying inadequate tribute to their sources, Dewey and Vygotsky in particular). More broadly, the theoretical influence of North American ‘writing-as-process’ approaches of the 1970s, grounded in cognitive psychology, is clearly evident (see Grabe and Kaplan 1996: 89ff). None of the above ideas will be unfamiliar for those working in language and literacy education; what distinguishes cognitive apprenticeship is the way in which the ideas are configured, in their sequencing and weighting, and in the particular emphasis given to cognition.

Relationships with trends in language teaching

Theoretical trends in cognitive apprenticeship, as outlined in the previous section, have also been influential in the theoretical evolution of communicative approaches in language learning and teaching. They have a resonance in Candlin’s (1984: 131) critique of syllabus types that ‘place a premium on the specification of content … premised upon a prepackaging of knowledge seen-as-items’ in favour of alternative syllabus types ‘oriented to the learner [and] facilitating exploration’. There are resonances too in the learner-centred curriculum (for example, Nunan 1988), the process-oriented syllabus, and particularly in task-based, experiential approaches in communicative language learning (for example, Nunan 1989; Legutke and Thomas 1991). There are also parallels in the shift in the communicative approach away from a behaviourist view of learning towards a cognitive, problem-solving orientation. And in communicative approaches to language learning, there has been a similar drift towards a sociocultural orientation, which, notably in the context of English for Specific Purposes, is reflected in the current interest in specific ‘literacies’ or ‘socioliteracies’ (for example, Gee 1992; Street 1993; Johns 1997). Here, the object of study has become not so much language and language-related practices but, following Swales (1990), ‘discourse communities’ as constituted by a membership engaged in similar discursive practices, using language for particular purposes and in particular ways. Examples given of such ‘discourse communities’, whether
stamp collectors in Hong Kong (Swales 1990: 27) or musicians sharing a passion for double-reed wind instruments (Johns 1997: 55), seem to correspond closely with instances of particular ‘communities of practice’ in the literature on cognitive apprenticeship, such as the Alcoholics Anonymous meetings invoked by Lave and Wenger (1991: 105–106). There are, however, limits to the links between ‘apprenticeship learning’ and recent trends in language and literacy education, as the discussion that follows will suggest.

Since the cognitive apprenticeship model was first proposed in the late 1980s as a solution to perceived inefficiencies in existing western educational processes, it seems not to have been soon welcomed into the institutions of formal schooling – as was the original intention of its early exponents, whose exemplary accounts of the potential of apprenticeships made repeated reference to such school subject domains as reading, writing and mathematics. A search of the literature suggests that while there was some uptake, the application of the model was somewhat delayed and also localised, even within North America. Concerning reading, for example, developed accounts of an apprenticeship-style approach to reading appeared in print at the turn of the millennium – a decade after the cognitive apprenticeship model was first aired – and these accounts relate particularly to the San Francisco Bay area (see, for example, Greenleaf et al 2001; Jordan, Jensen and Greenleaf 2001). Though the instructional framework of the ‘reading apprenticeship’ model there advocated differs in format from the earlier framework proposed by Collins et al (1989), the links with the original cognitive apprenticeship formulation, and through it to its various lines of theoretical descent, are explicitly acknowledged and readily apparent. ‘At the heart of the Reading Apprenticeship classroom’, write Jordan et al (2001: 7), ‘is metacognition, the process of thinking about thinking’. Using the reading apprenticeship approach, a model teacher is represented as one who ‘often thinks aloud in class about her reading processes’ and encourages students to ‘[n]otice what’s going on in your head’; students keep reading logs, inside the front cover of which are ‘a list of metacognitive sentence starters, which scaffold the metacognitive processes by giving a starting place for surfacing what’s going on in their heads’ (Jordan et al 2001: 7). More recently, the application of a cognitive apprenticeship approach to improving literacy has been strongly advocated elsewhere on the North American subcontinent: a recent Canadian case study of adult learners of reading and writing in Eastern Ontario (Taylor et al 2003) has generated findings that ‘point to the importance of cognitive apprenticeship as a cornerstone in a theory of social literacy’.
The model seems, however, to have attracted neither delayed nor localised but immediate and national attention in the context of North American vocational and technical education, thus (ironically in view of the effort expended in its elaboration as a model for the acquisition of cognitive skills) maintaining an association between the term 'apprenticeship' and training for trades (see, for example, National Council on Vocational Education 1991; the views expressed on behalf of the New York-based Institute on Education and the Economy in Berryman 1991; and the many accounts such as Liu 1998, relating to computer and multimedia training). In this vocational education context, as in other education contexts, the cognitive apprenticeship model of learning has been closely associated with an evolving learning theory, constructivism, at the core of which lies the concept that learners construct knowledge from experience in a context in which the target knowledge has a use.

Constructivism is said to be an approach to learning whose goal is to ‘develop self-directed yet interdependent learners who can access and use a wide range of cognitive structures in order to transfer learning to contexts they have yet to encounter’, thus assuring a more effective transfer of learning ‘from school to work settings’ (Kerka 1997: 3–4). It is presented as a corrective to behaviourism and ‘the old instructional model of transmitting to students a discrete and well-established set of skills and knowledge’, and as a reasoned response to an ‘uncertain environment of change’ brought about by the ‘rapid development in occupational, educational, and computer technologies’ – an environment in which ‘the student’s ability to construct viable knowledge and to adapt is paramount’ (Doolittle 1999: 4). Apprenticeship, through its association with constructivism and training for employment, links itself to multiskillning and the provision of a more flexible labour force to sustain advanced western industrialised economies through a period of technological and organisational change.

In recent literature on vocational education, perhaps more markedly than in the literature on apprenticeship and constructivism more generally, there is an overriding concern for cognition, the inner workings of the trainee mind, and the nurturing of efficient mental models to mould trainees as adaptive problem-solvers. Cognitive constructivism, a trend in constructivism which lays special emphasis on ‘the ability of individuals to construct similar, if not identical, mental models based on similar or identical experiences’, is particularly held to support ‘the career and technical education requirement of students learning a core set of historically reliable knowledge and skills’ (Doolittle 1999: 11). There is a sense here that conformity is a highly valued
learning outcome, as in behaviourist perspectives, except that, for cognitive constructivism, it is a conformity of attitudes and mental processing whereas, for behaviourism, it is a conformity in terms of observable behaviour. This does not sit well with current approaches to (non-vocational education) language learning and literacy, both in North America and elsewhere, particularly in cross-cultural classrooms in which mind-moulding needs to be tempered by cross-cultural relativism. At a more abstract epistemological level, too, there is a discontinuity between constructivism and apprenticeship on the one hand and the broad church of communicative approaches to language learning on the other. In the former, perhaps as a corollary of the problematical association referred to immediately above between apprenticeship and conformity in cognitive processing, a critical perspective is underdeveloped (an exception is Atkinson 1997); in the latter, however, critical approaches to literacy have been ascendant through the 1990s (see, for example, Brown 1999; Pennycook 2001) and have been applied specifically in the area of academic literacy development (for example, Benesch 2001).

Having considered at some length the American-based cognitive apprenticeship model of learning, which is the most widely understood referent of the term ‘apprenticeship’ in the current literature on education, the discussion now turns to consider an alternative Australian-based usage of the term, here referred to as discourse apprenticeship.

**Discourse apprenticeship**

Like exponents of cognitive apprenticeship, those using the term ‘apprenticeship’ in the sense here termed discourse apprenticeship see as their purpose the correction of perceived imperfections in education systems of western societies. The nature of the intended ‘correction’, however, is distinct for adherents of each of the two theoretical formulations. From the cognitive apprenticeship perspective, the correction lies in the direction of redefining educational outcomes so as to better match employer needs and hence to better sustain the economy. From the discourse apprenticeship perspective, the correction lies in the direction of reforming access to education so as to erode social stratification and promote social change. Allied to these differing overarching rationales are differing perceptions of what the term ‘apprenticeship’ signifies. For the adherents of the American-based cognitive formulation, ‘apprenticeship’ refers to an innovative model of essentially classroom-based learning that holds the potential to reinvigorate western educational systems; for the adherents of the Australian-based discourse formulation, ‘apprenticeship’ refers to a longer-term process of
in institutionally-shaped knowledge transmission that has long been prevalent in and defining of western educational systems, and one that is in need of challenge.

Discourse apprenticeship, as a characterisation of the process of knowledge transmission on which western educational systems are based, draws heavily on the work of Bernstein (see Christie and Martin 1997, particularly the chapters by Christie, Rose and Veel), and more specifically on Bernstein’s model of relations between social, economic and education systems in western industrial societies. Following this model, it is argued that the 20th century has shown evidence of a relationship between ‘the stratified production systems of Western economies’ and ‘the highly stratified outcomes of their education systems’ (Rose 1997: 40; see also Veel 1997: 177). It is further argued that while this relationship might have been suited to the labour needs of Fordist economies, which are reliant on a stratified workforce made up of process workers at the minimally-trained extreme and research scientists at the maximally-trained extreme, the continued survival of stratification in education systems is dysfunctional in the ‘emerging post-Fordist economies’ of the late 20th century which are reliant on a more flexible and multiskilled workforce (Rose 1997: 40). The means by which the stratification of educational outcomes survives is the continued hegemony in the institutional fabric of schooling of an educational approach premised on ‘the ordering of discourse’ (see Veel 1997: 191), wherein pedagogical subjects are apprenticed to the discourse of a specialised field at differing orders of complexity depending on their stages of advancement through that field’s school curriculum. This analysis has a close affinity with the views on discourse and schooling expressed by Foucault in the early 1980s (cited in Fairclough 1992: 51):

any system of education is a political way of maintaining or modifying the appropriation of discourses, along with the knowledges and powers which they carry.

It is interesting that a similar analysis, though with markedly dissimilar conclusions, occurs in the discourse of cognitive apprenticeship and constructivism.

Discourse apprenticeship, differentially implemented for different groups of pedagogical subjects, is seen not only as the lynchpin of stratified educational outcomes but also as a determinant of social stratification, and thus as an educational practice in need of reform. In the writings of Sydney School linguists working in the field of pedagogic discourse, to which discourse apprenticeship owes its origins, the influence of social theory with
an orientation to socialist outcomes is very evident. The research agenda of those working with this perspective on apprenticeship appears to be responsive, at least in part, to a vestigial strain of New Left politics and via these to sentiments such as those expressed by Marx in 1845, shortly before the publication of the Communist Manifesto: ‘philosophers have only interpreted the world, in various ways; the point, however, is to change it’ (Marx cited in Tucker 1972: 109 – original emphasis).

The interpretation of the world arrived at by Sydney School educational linguists, one which stresses a ‘potential for change’ (Rose 1997: 40) that far exceeds the scope envisaged by the adherents of cognitive apprenticeship, is informed by the systemic functional model of language set out by Michael Halliday and more precisely by Australian-based genre theory and Sydney School approaches to discourse analysis, both operating within the framework of Hallidayan linguistics. The essential argument is that, in the process of formal education from early years of schooling through to postgraduate study, learners are gradually familiarised with texts of increasing complexity such that ‘stages of apprenticeship’ (Rose 1997: 42) into the discourse of fields of study are discernible. The increasingly complex grammatical features of pedagogical texts at these successive stages, characterised for example by a movement across the stages towards increased lexical density and nominalisation, ‘lead students away from the kinds of meanings which are related to the here-and-now towards the abstract, technical and “transcendental” kinds of meaning we expect of adult, educated discourse’ (Veel 1997: 188). In the process of apprenticeship to scientific discourse, Veel (1997: 177–182) identifies a hierarchy of texts embodying a hierarchy of forms of scientific explanation: sequential, causal, factorial and theoretical. Similarly, in apprenticeship to historical discourse, Coffin (1997: 202–227) identifies a hierarchy made up of three stages: chronicling the past, explaining the past and arguing about the past. Each of these stages of apprenticeship into a specialised discourse relates to a stage of specialisation within the discourse, and the stages of specialisation in turn relate to the demand in stratified industrial societies for stratified employee competencies. Students of science who leave formal education having become familiar with the form of scientific discourse available at the lowest reaches of the hierarchy are suitable for employment in manual occupations, possibly as factory-floor process workers; those who achieve familiarity with the highest forms are prepared for such occupations as research scientist (see Rose 1997: 41, 70–71). And those students of history who achieve the highest stage of historical specialisation have covered ‘the preparatory ground for society’s future bureaucrats, lawyers and politicians’ (Coffin 1997: 226).
In the discourse in which the writing on discourse apprenticeship is embedded, the ‘challenge genre’ (seen by Coffin 1997 as characteristic of the highest stage of specialisation in history) has a powerful presence. An extended quotation from Veel (1997: 191) in concluding tenor is illustrative:

Apprenticeship into scientific discourse redounds with many other types of apprenticeship into Western culture; and this means its established patterns and hierarchies are almost impossible to break. Like most other social processes it has evolved over time and it is extraordinarily resistant to sudden change. This is not to say we ought not to attempt to reorder the way scientific knowledge is construed for school students if we feel it needs reordering, simply that we should not underestimate the task.

The process of ‘apprenticeship into scientific discourse’ institutionalised in western schooling is here characterised as a force for conservatism, and one that needs to be reconfigured. However, Veel (1997: 190) also concedes that:

Our account of the language of school science reveals that there are recognizable syndromes of language features, and that these features work to produce a kind of knowledge path along which ideal pedagogical subjects will move into fully fledged scientific discourse … a desirable one to tread for it gives students access to adult forms of scientific discourse and to power … [W]hatsoever one’s view of the appropriateness of this knowledge path in social and political terms, it does make some sense in developmental terms.

Discourse apprenticeship, in other words, in one sense ‘works’: it serves developmental ends. This may explain why it is so endemic in (western) systems of education.

In a subsequent volume in the same series, tellingly entitled *Pedagogy and the shaping of consciousness* (Christie 1999b), many of the contributors to the earlier volume *Genre and institutions* (Christie and Martin 1997) have taken the discussion of apprenticeship, as they have framed it, further. Here, linguistic analyses in the systemic functional tradition generate research evidence largely from Australian school contexts that concurs with Bernstein’s theory of the interrelationship of curriculum processes and social stratification. The concluding comments of the contribution on the school English curriculum are illustrative: ‘[t]he interests of the state are involved in pedagogic practices that leave the national language not well understood’, Christie (1999a: 181) writes, ‘for where people are not aware how language works to construct the various positions available to them, they are less likely to challenge those positions’. The contribution on the school mathematics curriculum, in
turn, sees the incidence of ‘word problems’ in the curriculum – held to be suitable for less able students – as in part a reflection of ‘the impact of economic rationalism on curriculum planners’ (Veel 1999: 208).

The Sydney School use of the term ‘apprenticeship’ thus connotes a range of meanings not considered by the adherents of cognitive apprenticeship – meanings that relate apprenticeship to text, genre and discourse. Discourse apprenticeship, rather than being a theory of learning from the bottom-up perspective of how learning is approached and done (by learners), is in terms of its theoretical origins primarily an element of a critique of processes in education from the top-down perspective of how knowledge is packaged and delivered (to learners).

The ‘teaching–learning cycle’ in Australian genre-based language learning

There is nonetheless an apprenticeship-type model that is central to the (Australian) genre-based approach to language learning. The model, which does indeed represent a theory of learning from the bottom-up perspective of how learning is done, is named the ‘teaching–learning cycle’ (for example, Hammond et al 1992: 17; Feez 1998: 27ff) or simply ‘curriculum model’ (for example, Martin 1999: 127ff). Here, the language-learning focus falls on genres, or text types, the topics they address, the language features they display, the communicative skills and strategies with which they are associated, and their communicative purposes. The model is closely associated with Sydney School linguists and, more broadly, with Australian applied linguists working in the field of language teaching and especially those working within Australia’s Adult Migrant English Program.

The process of language learning in this genre-based/text-based approach is represented pedagogically as a sequence of scaffolded developmental steps, each of which addresses different aspects of language and language use, towards knowledge of a particular text type. More concretely, the text-based approach is implemented through a ‘cycle of teaching and learning activities … which the teacher and learner go through so that students gradually gain independent control of a particular text-type’ (Feez 1998: 28). These stages have a resonance with the modelling, coaching and fading of cognitive apprenticeship, being similarly premised on Vygotskian scaffolding and, more broadly, with constructivist approaches to learning. There are direct parallels in terms of ‘collaboration’ between learners and teachers, and in the role of the teacher as ‘similar to that of an expert supporting an apprentice’ (Feez 1998: 26; Feez 2002: 56). It needs to be noted that the word ‘apprenticeship’ occurs here in the context of a simile in
which the comparator/referent appears to be the ‘traditional’ craft/trade apprentice, rather than the referents of more recent usage. The teaching–learning cycle can, nonetheless, be seen as a form of apprenticeship, even though the term apprenticeship, either in its ‘cognitive’ or ‘discourse’ uses as outlined earlier in this article, is generally not used to refer to it (a notable exception is Woodward-Kron 1999).

The model is theoretically linked to the discourse apprenticeship formulation, sharing as it does a common theoretical base in systemic functional linguistics, but it has its own scope: the focus of the teaching–learning cycle falls on a variety of instances of genre, particular text types, across a variety of registers which collectively are linked by their common relevance to a chosen topic of study (for example, ‘employment in Australia’ – Feez 1998: 113). That the focus does not fall on discourse, as constituted across multiple discursively interconnected genres in a common register, represents a limitation for the teaching and learning of academic literacy. A further weakness, especially among learner groups of non-English-speaking backgrounds destined for study in English-medium tertiary institutions where ‘criticality’ is highly valued, is the limited scope the model provides for the development of a critical approach to literacy. The teaching–learning cycle model could be given a more explicitly critical orientation, perhaps more obviously with some text types than others (for example, news reports – see Cope 2002), an orientation the model has tended to understate (cf Martin 1999: 128–130).

Conclusion: From divergence to convergence?

Despite the very different implications of the two perspectives on apprenticeship reviewed here, cognitive apprenticeship and discourse apprenticeship, there are significant points of contact between the two, and between these points of contact there exists a community – though clearly dysfunctional – of intersecting ideas. This community of ideas has not, however, been explored: the insular nature of the discourse communities clustered around each formulation seems necessarily to preclude it. In the literature on cognitive apprenticeship, no mention is made of the literature on discourse apprenticeship. The reverse, with isolated exceptions (for example, Woodward-Kron 1999) is also true. At present, it seems, the discontinuities between those who share common albeit contested ground in apprenticeship as a model for skills and knowledge acquisition serve to undermine the potential for an interdiscursive perspective. This is not altogether surprising, perhaps, in view of the stark differences in political position that have been exposed in the course of this present discussion.
Acting on the points of contact that do exist, however, seems to hold the potential to suggest a new trajectory in Australian literacy studies, perhaps most evidently in the area of developing ESL literacy abilities in academic disciplines.

The trajectory that is suggested might most transparently be described as a discourse apprenticeship approach to ESL academic literacy – a choice of descriptive label that appropriately records a debt to the view of apprenticeship formulated by linguists of the Sydney School, referred to here as the discourse apprenticeship formulation. A process that is central to the Sydney School discourse apprenticeship formulation, as has been outlined in this article, offers itself as an overarching organising principle for ESL academic literacy curriculum design: the process of learner engagement with a sequence of texts in a progression towards increasing complexity, delineating a knowledge path from everyday ‘commonsense’ meanings to ‘uncommonsense’ meanings as embodied in specialist discourse. In adopting this process as an organising principle for an ESL academic literacy curriculum, however, some reformulation is necessary. In the Sydney School formulation, the process of apprenticeship to specialised discourse is seen to apply to (Australian) school-age learners, predominantly native speakers of English, and is a process that occurs incrementally over the number of years that make up State-legislated compulsory schooling; it is also seen as a socially divisive process in that it entrenches differential access to opportunity. In a reformulated model of discourse apprenticeship recontextualised for ESL learners of academic literacy (though what is being advocated would also seem relevant to native-speaker academic literacy), the process would necessarily need to be condensed so as to span weeks and months rather than years – a condensed process that is arguably more likely to be effective among adult learners intrinsically motivated by immediate academic literacy needs as distinct from stereotypically more subject school-age learners in compulsory formal schooling, and one that is likely to be experienced as socially enabling. In such a discourse apprenticeship approach to ESL academic literacy, the selection and sequencing of texts would represent a fundamental project in that it generates what may be termed the curriculum’s ‘materials framework’.

For a corresponding methods framework, specifying the means by which learners may effectively engage with the sequence of selected texts that make up the curriculum’s core materials, procedural guidelines are suggested in several of the principles and procedures associated with the other two educational models discussed in this article, the American-developed cognitive apprenticeship formulation and the Australian
text-based teaching and learning cycle. Perhaps the key contribution from the cognitive apprenticeship formulation is the principle of ‘situated learning’, in which learning is ‘situated’ in two dimensions: activity and context. The ‘learning by doing’ emphasis of the activity dimension (shared by task-based, project-based and process-based approaches to learning) would in an ESL academic literacy program involve learners in activities similar to those that characterise their programs of academic study. The related concern for authenticity (similarly shared by a number of other approaches to learning) would apply not only to learning tasks and learner engagement with those tasks but also crucially to learning materials – meaning, for example, that if a postgraduate ESL student of academic literacy is to be taught how to write a literature review, there would ideally exist a need in the student to review the contributions of others in a particular area of academic enquiry, and published literature reviews in the field should be available for class study as exemplary texts. The context dimension is similarly applicable to ESL academic literacy programs: in a physical sense, the environment and facilities of a university campus self-evidently offer an optimal setting and, in a social sense, engagement in authentic academic tasks and with authentic academic texts, with the modelling/coaching/fading support of a teacher as mentor, entails engagement with the concerns and conventions of an English-medium community of academic practitioners. This article has previously noted that a number of the individual elements of the cognitive apprenticeship formulation, some of which are reiterated immediately above, are not themselves new; what is valuable, however, is their synthesis into a coherent model of experiential learning, one that is made more accessible through the metaphor of apprenticeship.

The discourse apprenticeship approach to ESL academic literacy development advocated here nonetheless deviates from the cognitive apprenticeship formulation in that the principal object of study is not cognition but academic literacy and, in a more abstract sense, academic discourse. In this regard, a process that is central to the teaching–learning cycle, which, like the discourse apprenticeship analysis of school learning, is closely informed by Sydney School linguistics, makes a key contribution: the process of engagement with text, drawing on the insights of systemic functional linguistics, towards knowledge of particular examples of text genre. As the existence of contrastive rhetoric as an area of enquiry would seem to confirm (see, for example, Kaplan 1972; Grabe and Kaplan 1996: 176ff), this focus on text is especially relevant for ESL learners given possible differences between English-language texts of particular genres and corresponding genres
in the learners’ own languages. The genre knowledge that is the focus of the teaching–learning cycle nonetheless represents a necessary but in itself not sufficient element of a discourse awareness: familiarity with a target discourse would seem necessarily to depend on a familiarity with multiple discursively interconnected genres that co-occur within a register.4

In this light, for the design of a coherent program of apprenticeship into academic literacy, the procedures of the teaching–learning cycle would need to be applied to a set of discursively-related text-types, sharing similar academic register specifications, so as to familiarise ESL learners with the priorities and preoccupations of English-medium academic discourse as a co-requisite for developing an informed – rather than surface – competence in English-medium academic literacy. Concurrently, a critical disposition may be developed through posing critical questions keyed into the generic features of particular text-types – meaning, for example, that in studying examples of a research article introduction text-type (in which a statement of research aims is conventionally included), the assumptions that underlie the stated research aims could be made subject to scrutiny, as could the interests that are likely to be served by the study’s potential findings. In this way, the study of academic texts may be systematically informed by a critical dimension – as indeed is the object of study, English-medium academic discourse – and critical faculties may be exercised concurrent with the study of academic language.

Drawing on a number of principles and practices of apprenticeship models of learning, in their various formulations, this concluding discussion has sketched how a discourse apprenticeship approach to ESL academic literacy would seem to offer a promising way forward. Its principal concern is not with learner production of model academic texts displaying valued surface features of academic register (such as an impersonal style, the use of complex nominal clusters and respect for citation conventions); instead, it is directed towards engagement with the subculture of the academy that shapes academic discourse and from which academic texts emerge. An academic literacy program in which linguistic development is allied to conceptual development, centrally through informed engagement with a sequence of academic genres, holds the promise that learner outcomes may move beyond such limited gains as merely writing like an academic – to include being academic.

NOTES

1 The term ‘discourse apprenticeship’, not used by Sydney School linguists themselves, is adopted here as a descriptive label for the view of apprenticeship to have emerged in
the writings of Australian genre theorists and discourse analysts, all working within a theoretical framework of Hallidayan systemic functional linguistics and the related educational linguistics of the University of Sydney.

2 Other terms referring to essentially the same model include ‘situated learning’, ‘situated cognition’ or simply ‘apprenticeship’.

3 The term ‘situated learning’, essentially a more transparent alternative to the term ‘apprenticeship’, is used in all three key publications referred to here. Brown et al (1989) nonetheless seem to prefer the closely related term ‘situated cognition’, reflecting their view that cognition is the core process in learning; Lave and Wenger, adopting a more sociocultural perspective, see cognition as socially determined and hence secondary to ‘social practice’ which is the ‘primary generative phenomenon’ (1991: 34–35).

4 There are similarities between what is proposed here and the work of Paltridge (for example, 2002) in the area of academic literacy curriculum design. His work nonetheless seems more allied to the cognitive apprenticeship formulation and the North American New Rhetoric movement in that the focus falls primarily on learner reflection and problem-solving across a sequence of tasks rather than on learner engagement with a sequence of texts (and with tasks arising from those texts). It should also be noted that Paltridge makes a clear differentiation between the terms ‘text type’ (which he sees in terms of rhetorical mode) and ‘genre’, a distinction not made in the present discussion.

REFERENCES


