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Curriculum Literacies: expanding domains of assessment

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ABSTRACT *In this paper we explore the literacy-curriculum interface reconceptualising this relationship in terms of curriculum literacies. The reconceptualisation is an outcome of a major Australian research study that examined the literacy demands of curriculum in senior schooling. The study was multidisciplinary, multi-theoretical in nature, involving a team of international researchers with expertise in literacy and in curriculum. The paper argues the need for exploring the coherence of literacy demands that students encounter in managing their learning in different contexts and disciplines and the need to incorporate these demands explicitly in instruction and assessment. Our conclusion is that the reconceptualisation of curriculum literacies challenges current constructs of assessment and calls for the domains of assessment to be expanded to include curriculum knowledge, and epistemological domains that take account of diverse ways of working with and in semiotic systems. Student success across the years of schooling hinges on their increasing control of this combination of knowledges and ability to use these productively.*

Introduction

The focus of this paper is the intersection of literacy, curriculum and classroom practice and their current and ideal impact on student learning and assessment. The conclusions are based on the findings from a two-year study funded by the Australian Commonwealth Government through the Australian Children's Literacy National Projects Programme. For the general purposes of the study, literacy was defined to include reading, writing, listening, speaking, viewing and critical thinking. The study was conducted in the final two years of senior schooling, the years beyond the compulsory years of schooling in Australia. Student participants taking subjects drawn from three main streams—arts-humanities, maths-science, and technological-vocational education—were followed for several days on repeated occasions over two years and their view of classroom engagements and interactions videotaped. This methodology of *student-cam* was central to the research design, allowing attention to focus on the enacted (as distinct from the official) curriculum as seen through the eyes of the student. Some 220 hours of authentic classroom practice in over 100 different subject classes—hence the multidisciplinary dimen-

sion—were video-taped. These data allowed analyses of the interaction of literacy, curriculum and classroom practice to occur. The subjects that students were taking included recently-introduced opportunities in the senior school years for studies that have direct relevance for students in terms of vocational applications and outcomes, recognising the changing nature of the student population due to greater participation in these post-compulsory years of schooling, and the increasing multicultural basis of the Australian population—changes echoed in most nations in the world.

A team of literacy, curriculum, learning and assessment experts from the United States of America, the United Kingdom, and Australia, analysed video data to examine the literacy-curriculum relationship from a range of theoretical and methodological perspectives, hence, the multi-theoretical dimension to our study. The experts were provided with segments of videotape to analyse from their own theoretical perspectives, as well as relevant curriculum and assessment policy documents and written materials used and produced in the lessons. The video segments were chosen to follow a student through all their subjects over a consecutive three-day period, or a mix of subjects from more than one occasion, or a subject across the two years of senior schooling. Each expert was presented with video data that might include their own subject specialisation, if relevant, but also outside their normal area of focus. The full analyses, with descriptions of the different theoretical frameworks, are reported in *Literacy and the Curriculum: success in senior secondary schooling* (Cumming & Wyatt-Smith, 2001).

While the study focused on literacy demands of the curriculum, the interactions with assessment were also a focus. The study was conducted in two Australian states: New South Wales, with a combination of external examinations and school-based assessment for the Higher School Certificate (HSC), and Queensland, with a predominantly school-based system of assessment, including the use of cumulative assessment during the post-compulsory years of study. These two states represent the extremes of the continuum of internal and external balances in assessment systems operating in Australia at the present, and, more generally, internationally.

The focus was primarily on the assessment that teachers engage in as part of their classroom practice in senior schooling. The study did not investigate the literacy demands that students encountered as they sat final examinations, either as part of the HSC in New South Wales or as any school scheduled examinations in Queensland. We did, however, witness classroom rehearsals for such examinations.

Literacy is now identified and accepted as a major determinant of success in education at all levels and for personal, social and work outcomes. The literacy demands of assessment can provide a filter for or enabler of student success in all areas. The study provides enlightenment on these demands and their interactions with individual curriculum, as well as the ways these curricula are enacted in the classroom and in assessments. This paper summarises key outcomes in this regard and recommends changes in practice to enable performance for all students.

Key Issues in Enacted Curriculum, Literacy and Assessment

The Plurality of 'Curriculum Literacies' and Student Flexibility

Traditionally, cross-curricular literacy has been treated as a generic skill with minor adaptation for different subject areas. We found this singular conception of literacy to be inadequate to describe the literacy events encountered by students. Kress's (2001) call for teachers to examine the epistemological 'take' of each subject, focusing on how modes of representation and communication occur and interact, was endorsed in different ways by many of the other experts, some referring to the epistemological slant of a subject and the assumptions that are made about knowledge, as well as about the roles of teacher and student in learning and assessment. This moves the conceptualisation of literacy from a broad, generic concept to a concern with subject-specific literacies that are dynamic, contextualised and complex.

Cumming (2001), Elkins (2001), Lemke (2001) and Street (2001) also noted, from quite differing theoretical viewpoints, that successful negotiation of the final years of secondary curriculum required students to coordinate multi-literacies simultaneously and at an advanced level. For example, referring to a Senior Chemistry class, Elkins (2001) commented that the teacher's written equations on the blackboard represent a text that is 'not complete or fully explicit, and the students need to be able to follow the teacher's talk to understand the material' (p. 132). For a Senior English class, Street (2001) identified that 'the genre in which [the student] is engaged appears to be a complex mix of spoken and written, note-taking and discursive writing, text reading, talk and writing' (p. 151). Winograd (2001) made a similar point when he concluded that students needed to read, write, listen and speak at what he described as 'a fairly sophisticated level' in order to be successful (p. 91). From data collected in Mathematics lessons, Cumming (2001) showed that students must first be focused and attending, and then engage in 'comprehending and integrating visual, oral and written literacy demands' (p. 161).

Similarly, Lemke's analysis (2001) showed how literacy demands turn on the number of different channels of communication and specialised genres that the student must manage, sometimes simultaneously, as well as the demands of 'integrating verbal, chemical-symbolic and mathematical meaning systems across genres that depend as much on visual layout as on linguistic syntax or vocabulary meanings for their sense' (p. 175). The point is that the student's achievement, whether in the scientific, English or any other curriculum, similarly turns on the ability to co-ordinate among the various literacies. So, for effective learning to occur, the student must be able to make sense multiply, simultaneously, and inter-operably, by using what Lemke (2001) describes as 'an integrated and genuinely multimedia literacy, as well as a multi-semiotic one and a multi-genre one' (p. 177).

Our recurrent theme is that to be successful, students need to be able to identify and engage with these curriculum literacies within each subject, not just for learning, but also for successful negotiation of assessment within each subject. These are what we term '*curriculum literacies*', using 'curriculum' deliberately as a noun in order to demonstrate that this represents the interface between a specific curriculum and its

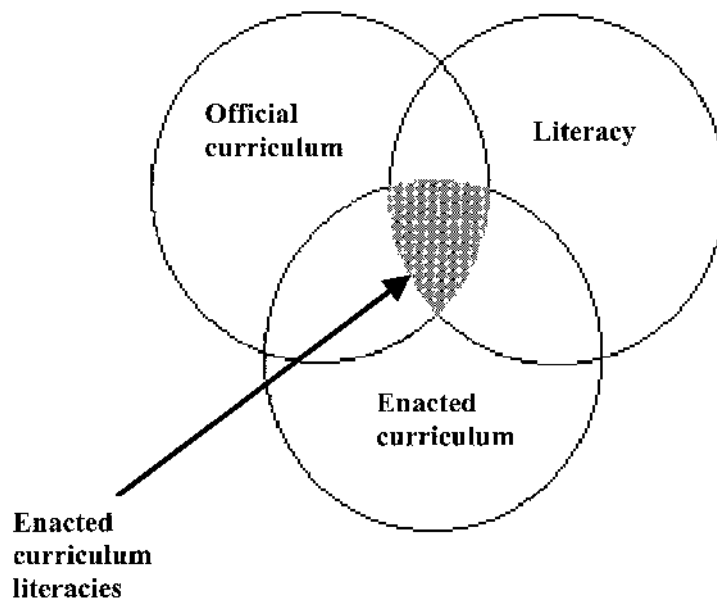


FIG. 1. Enacted curriculum literacies.

literacies, rather than literacies related to curriculum in a generic sense, or a single literacy that can be spread homogeneously across all curriculum. This conception can be extended to encompass curriculum literacies of assessment and across all years of schooling. Figure 1 demonstrates what we believe to be the actual focus of student learning and assessment in schooling, taking account of the complex ways in which literacy demands in teaching and learning often vary within and across subjects, from class to class, and from day to day, as must student responses to these demands.

The official curriculum is the nature of the teaching and learning engagement with subject content and frameworks that authorities at the system, and even school, level believe are appropriate for students and that will be implemented. The enacted curriculum, as others have noted, is what occurs in the classroom as the curriculum framework is interpreted by the classroom teacher in interaction with a cohort of students in a geographical and institutional context. As our study showed, this interpretation occurs within a literacy-bound environment, depending on oral, written and tacit discourses, but predominantly, in shaping the enactment of the curriculum, within an essentially oral literate environment. Overall student academic success in meeting expected appropriate demonstrations of performance will depend very much on how well the student can manage to understand, participate in and respond to the created intersection of the curriculum-literate environment.

Responding appropriately makes heavy demands on students not least because of the apparent lack of attention given to making the demands of curriculum literacies explicit, in the many modes the previous authors have noted, resulting in students needing to learn how to manage such demands 'on the job'. Some students of course

learn to respond more successfully than others. The observation from the classroom practice was that students were expected to 'cue' themselves into the thinking-reading-writing-speaking-listening-viewing demands of the classroom, and combine various semiotic systems and resources without explicit instruction in how to manage such combinations and 'switch' among them, as classroom activity required.

Key insights into the dynamic nature and complexity of curriculum literacies were drawn mainly from observations of the apparent processes of teaching and learning in the classroom. The study indicated that students' abilities to manage classroom pacing by 'cueing' and 'switching' were critical factors affecting students' incremental learning as well as their successful completion of assigned tasks. A further, and major, flexibility that students need to develop is in responding appropriately, not only to the curriculum literacies as they are enacted in the classroom, but also to the literacies as they are enacted in assessment. This goes beyond the differences, even conflict, between formal and informal language and knowledge structures other researchers have noted in some disciplines (e.g. Macdonald & Brooker, 1997; Zuzovsky, 1997). Street (2001), commenting on these differences from a 'social literacies' viewpoint, highlighted 'the strange contrast between the overt literacy demands of the curriculum—concerned with formal writing for assessment and the acquisition of different genres ... for mixed and partial forms where writing, reading and oral language interweave to construct distinctive genres' (p. 151). From the video data and classroom materials such as student work and assessment tasks, he noted that various literary genres referred to in the Senior English syllabus, including 'the novel, the sonnet, the one-act play and the short story' (Street, 2001, p. 152), are complete, holistic forms based on known conventions into which the writer inserts their particular text. The classroom activity, where the student is trying to cope with the actual literacy demands of the classroom, is 'a more hybrid form' (Street, 2001, p. 152) where written, spoken and visual genres can and do routinely co-exist and combine, even competing for student attention. We return to more specific discussion of the assessment focuses in classrooms, and 'assessment-curriculum-literacies', later.

Control of Learning and Assessment

A dimension of classroom teaching and learning that emerged from analysis of the classroom literacy events and appeared a major determinant in shaping the curriculum and curriculum assessment literacies was the nature of control in the classroom. By this we do not mean control of student physical behaviour but of the nature of the learning intended by the teacher in the enacted curriculum, and more specifically, the control of appropriate thinking for a subject and teacher. Students need to learn to negotiate this as an aspect of curriculum literacies. It has most import for curriculum literacy assessment, if students are to be seen as successful learners. A recurring finding by our analysts was the relationship between the literacy demands made on students and what Cambourne (2001) referred to as 'the power and ubiquity of the teacher' (p. 79). Several analysts spotlighted the authority of the teacher over the learning agenda, with the learners being allocated a strikingly

subordinate position from which challenges to the learning agenda were not expected, and on the rare occasions when they did occur, they were not well received. While critical thinking and problem-solving skills are regarded today as essential learning goals in all curricula, our study showed that these were tightly bounded in classroom practice, offering students only limited opportunity to see knowledge as socially constructed (Indiana Study Group, 2001).

Christie's analysis (2001) regarding student coercion to accept a consensus position on moral issues is of vital concern, especially when read in conjunction with her statements that 'no other discipline that I am aware of makes quite the claims that does (subject) English for the development of independence and individuality' (p. 103); and that 'schools look for, and actually reward, attitudes that are "mainstream", not controversial ... while they endorse ways of using language in English which frequently remain poorly articulated and taught' (p. 103).

The research findings indicated that despite the apparent diversity of student experiences, in many cases, teaching followed traditional and transmissive formats—the apparent assumption being that knowledge was 'ready-made' (Wilson, 2001)—to be received by students and then returned for credit. In such a pedagogy of compliance, there were few opportunities for students to engage in critical thinking. This finding occurred across curricular offerings and for teachers from school and vocational or work backgrounds. The powerful though unstated expectations seemed to be that in their class learning and assessments, students would be compliant, reproducing only the appropriate and authorised critical response to issues of critique, evaluation, and even moral stance. It is worth emphasising that the absence of opportunities for students to interrogate knowledge and develop critical thinking skills occurred across curricular offerings, but especially in English where freedom of thought and critique may be presupposed to be strongest. Therefore, as we discuss in the Conclusions, educational practice in the future needs to revisit the embedded values taught and expected of students and which are critical to demonstrating success in educational assessment.

Curriculum Literacies, Metalanguage and Assessment

Making literacy demands and learning expectations explicit is important for all students (Reid, 2001), and especially for those who tend to form what Davies (2001) describes as 'part of the backdrop to the talk and action in the classroom, rather than part of the action' (p. 62). In our study, we perceived assumptions that students could develop an understanding of the metalanguage of a subject without explicit instruction. The gap for assessment tasks appeared even greater.

Cumming (2001) noted that 'the English lesson is notably different from the Mathematics lesson in lack of use of discipline-specific terminology' (p. 162), while Gerot (2001) found that, in two different English subjects, both the teacher and students tended to 'fall back on the obvious, (like spelling) and the everyday (like "formal", "obscure" and "flow") in the absence of an explicit and revealing way to analyse and discuss text' (p. 53). She concluded that 'while the teachers were able

to name the tasks expected of the students, they were limited in their ability to articulate the means for doing the tasks (p. 46).

The study confirmed that a key role of day-to-day teacher assessment is to check how all students manage the pacing and cognitive demands of curriculum delivery, as well as the metalanguage of the subject. The study showed clearly that curricular learning may be facilitated by explicit and sustained use of the metalanguage of the subject, with literacy demands decreasing in relation to student control of required subject-specific language (Cumming, 2001; Wilson, 2001). Students appeared to benefit from teachers' consistent use of and explicit instruction in the appropriate language of a subject, when it occurred. Therefore we believe that teacher's daily formative assessment for curriculum-literacy purposes should monitor student understandings of specific terminology, check fluency and assist students in the ways of gaining such fluency. Specific assessment considerations could include the extent to which students demonstrate increasing control of:

- subject terminology and specific vocabulary;
- symbolic codes and other representational forms;
- relationships between common everyday language and subject specific terminology;
- the language of the processes of the subject such as scientific or mathematical processes;
- the match between the language of instruction and the language of formal assessment requirements;
- the literacies of the classroom including the social interactions within which curricular learning is to occur.

Our study also highlighted the benefits of feedback that is timely, responsive, and constructive, and that models good literacy practice, especially when feedback is written. The teacher, however, need not be the sole source of feedback, and the study showed instances where students themselves provided quality feedback in one-to-one and small group learning situations. Students need to develop the critical knowledge and cognitive processes that will enable them to do this. The teacher's role is vital in modelling how improvement strategies are applied and judgements of quality derived.

We found that many students appeared not to have a clear understanding of expected performance standards and to be working 'in the dark' as to the nature of a quality performance. More work is needed in making the implicit, framed as it is by the curriculum literacies, more explicit. Our analyses highlighted that educators need to ensure that guidelines for assessment requirements are written in student-friendly terms while maintaining the metalanguage of the subject. However, the provision of guidelines of itself is a necessary though not sufficient condition for securing student understanding of expectations or improvement in performance.

The interpretation of assessment expectations forms a component of curriculum literacies with which students need planned and systematic teacher instruction. While the different assessment regimes of the two Australian states heavily

influenced the discourses of teaching, a common finding in both states was the degree to which expectations needed to be made more accessible.

Overall, the important role for the teacher is to assist students explicitly to know the metalanguage of specific curriculum and of assessment expectations. Moreover, teachers should assist students to understand those expectations so that they can use such knowledge to self-assess and monitor learning over time.

Assessment-curriculum-literacies

While we cannot comment on the assessment-curriculum-literacy demands and student responses for summative external or internal examinations, with the classrooms studied, in the two diverse assessment regimes, there was a marked prominence given to assessment talk and written assessment paraphernalia across the curriculum, including that used for assessable assignments and examination preparation. Gerot (2001) observed that much of the studied English classroom activity she analysed was directed to rehearsal for the examination. Specifically, she reported that 'one of the most striking features of the English classes viewed ... was the extent to which curriculum, pedagogy and evaluation alike were driven from top to bottom by the impending Higher School Certificate (HSC) exam' (p. 47). She claimed that 'it is no exaggeration to claim that the English lessons viewed ... were rehearsals for the HSC' (p. 47). Her recommendation was that time be

re-allocated such that students actually rehearse writing, under supervision, without having to produce an assessment piece. This should follow the teacher's demonstration; without explicit direction it remains just another test of what students can already do, more or less well, not an attempt to teach students what they need to know. (p. 58)

Also clear in the study was the use of an oral discourse or assessment 'talk' as a motivational tool. Referring to the Queensland context, Davies (2001) reported that the focus student 'read [the Health and Physical Education] class discussion as relevant to the exam question, even though the explicit instructions [as given in class were]... to research in a broader way' (p. 70). According to Davies, 'this suggests the kind of "cue consciousness" associated with success in exams' (p. 70). In a related demonstration of such 'cue-consciousness', Crawford *et al.* (2001) made the point that in in-class examination-rehearsals, while the teacher took up positions including monitor of the test practice, time keeper, and record keeper, students assumed the related and authorised roles as test takers, scorers and reporters of 'marks'. Interestingly, such assessment routines seemed to play a key role in maintaining the authority relations between teacher and student, and more specifically, they strengthened the teacher-student relationship as an unequal partnership.

Similarly, Winograd (2001) reported 'the teacher tries to motivate the students to write longer answers to their literature exercises by saying that all of this is practice for answering questions on the examination' (p. 91). He drew two conclusions: first, that 'the message is that the purpose of school is getting prepared for more school' (p. 91); and second, that 'while it may be true, it certainly lowers our chances of

making schools a place that is explicitly linked to the outside world' (p. 91). Cambourne (2001) also identified the motivational use of assessment talk and the apparent value attached to 'memorising factual information' (p. 81) as the critical element in preparation for examinations.

A consistent finding of the study was that student engagement seemed to be triggered and maintained by opportunities to 'do' activities, discussed later, and ask authentic questions rather than by teacher talk about assessment routines, and requirements. This is not to suggest that students should not be informed about assessment. It is, however, to assert that the primary purpose of much of the observed assessment curriculum literacy presented through assessment talk across classrooms was to maintain their authority structures and those of school education and curriculum in general. When this occurred, the talk had little observable value in furthering students' discipline knowledge, skills and cognitive processes. The talk, therefore, even though focused publicly on assessment matters, did little to enhance students' prospects of knowledge integration and assessment success.

Going Beyond Schooling, Curriculum Content and the Classroom

Winograd's analysis (2001), endorsed by many of the other analysts, presents a picture of the curriculum as being about 'doing school', and not about knowledge building. He recommended that 'the relationship between what is learned in schools and what is needed in real life needs to be strengthened' (p. 91), with the role of assessment being vital in such strengthening. Also emerging is a picture of students being offered relatively subservient positions in the teaching-learning relationship, with no explicit provision being made at system level for students to learn how to monitor and improve the quality of their learning. In short, there seemed few, if any, strategies for developing students as critically reflective life-long learners.

A related observation was that the pressure to fast track through curriculum delivery seemed to restrict, even severely, opportunities for students to explore the multiple meanings that they were making of what they heard, did, and saw in the classroom. There are at least two main reasons for this. The first reason concerns the sheer volume of content that teachers are expected to cover and students be assessed on, all in relatively short time lines; the second is an apparent lack of pedagogical emphasis (and therefore value) given to knowledge integration, both within and across discipline areas.

The limited provision of opportunities for students to reflect on and integrate their learning stems, at least in part, from the fact that the post-compulsory curriculum is 'chunked' into discrete subject areas. A result of the chunking is that teachers and students show little sense of coherent relationships among curriculum offerings and curriculum literacies as a whole within school. Knowledge integration across the curriculum did not seem a learning or assessment priority, with little time being given to assessing the depth of students' understanding and the transferability of requisite knowledge and skills. Similarly, how students drew on background knowledge to understand and integrate in school and outside school literacy activities

seemed outside the learning and assessment agenda. There were, however, exceptions.

A small number of classrooms in our study stood out for the apparent engagement of students in learning and equality of partnership of the student and teacher in the learning process. These classrooms were spread across traditional areas of study and newer vocational areas such as Marine Studies and Creative Textiles. We found that non-content focused instruction for the learner was vital for effective learning and successful completion of tasks, including those set for assessment. This instruction was mediated through oral classroom literacies, 'talk', but contextualised within the specific curriculum demands. It involved teacher modelling of performances expected of students, guidance on time management, and planned opportunities for collaborative learning, including 'doing', and feedback, both peer and teacher feedback. We emphasise that a focus on 'doing' does not mean only practical or 'hands on' experiences where expectations of written literate involvement are reduced to minimal standards. A focus on doing means that the purpose of the learning activity is clearly focused for the student to the extent that they engage productively with the activity and can thereby collaborate with the teacher and fellow students, to construct the learning through literacies.

The video data showed how a teacher focus on these learnings and activities of 'doing' with opportunities for targeted, immediate feedback, individually and collaboratively, generated higher levels of academic engagement, and provided a learning context conducive to substantive conversation (Wyatt-Smith, 2001). We also wish to emphasise that 'doing'—say, as it occurred in classes in Creative Textiles, Food Technology, Marine Studies or Agricultural Studies—did not occur in an absence of curriculum literacies. As teacher and student collaborated, for example, on silk screen dyeing, food preparation, snorkelling, or fence building, the teacher demonstrated, through combined talk and doing, the curriculum literacies of the area of study. It was in these types of collaborations that the scaffolding of learning was shown to be highly effective, and student motivation seemed to be highest. Further, where the teacher talked of the direct relevance of 'doing' and subject assessments to achievement in out-of-school contexts, student engagement was consistently high, with students showing an increasing willingness to take risks in learning that had previously seemed too daunting.

An important finding from our study across a diverse range of subjects was that no subject area is a 'literacy-free' zone. Many of the more vocationally-oriented subjects have been introduced initially to cater for a broader body of students, often less academically-oriented in the traditional sense [1]. In our study, teachers' comments and observations indicated that many students who choose to undertake school-developed or vocational modules with a high practical and 'hands-on' component self-report or demonstrate literacy difficulties in reading and writing. For these students, the teachers reported that they tried to avoid making such literacy demands on students and similarly, tended to avoid explicit instruction in these modes of literacy. However, the research study has shown that such 'hands-on' studies do have high literacy demands in terms of listening, speaking, and viewing, particularly of symbolic representations and in-class demonstrations. Students in the

study appeared to cope with these literacy demands when they were explicitly and systematically addressed through classroom talk and writing, including the modelling of writing processes and strategies. Certainly, the recognition that written modes of literacy are so important for life success should mean that direct instruction in these, within the contextualised meaning of the subject, should be a focus of explicit, but again, contextualised and meaningful, instruction.

Conclusion

Our study shows that consideration of literacy as a factor in schooling success needs to be addressed through a conceptualisation of literacy in terms of the plural *curriculum literacies*, complex environments in which students must learn to adapt and manipulate their behaviours in order to develop curriculum domain knowledge and to demonstrate appropriate success in school. Using this framework of curriculum literacies, we found three major issues in teachers' practices. Firstly, overall, we found limited evidence of teacher modelling of curriculum literacies and curriculum-specific metalanguage for either subject-specific learning or assessment. This is an area we recommend teachers should directly address. This includes talk about how written, spoken and visual texts work including the specific technical vocabulary, about meaning structures and text structures (semantics/genre), about how sentences work (syntax/grammar), and how ideologies and discourses work in spoken, written and visual language. Such approaches are particularly beneficial when the nature and purpose of the instruction are made clear in a way that motivates students, helps to construct the nature of the subject and facilitates linkages with other activities. In effect, as students learn the language of the classroom, they become inducted into discipline knowledge, thereby learning the language of the subject within assessment tasks and of assessment tasks. More specifically, they develop knowledge about the ways in which one becomes recognised as an accomplished member within a community of knowers.

The second aspect that emerged from studying the literacy demands of the classroom was the way they were used to structure not only what is deemed appropriate to be learned, but also the valuations students are to adopt, despite the rhetoric of critical thinking that pervades educational literature. The more centrally-controlled the assessment system, the more controlling curriculum frameworks will be. Further attention is needed to be given to examination of what schooling for critical thinking is really intended to mean and, if open thought is intended, how this might be achieved and assessed.

Another major finding that emerged was the way assessment discourse did shape the learning of the classroom—the sense in which learning was rehearsal for examinations—as well as the lack of integration amongst subjects, and of discussion of subject differences, especially in terms of literacy demands, and of connectedness with the world outside schooling. Successful students in most subjects must apparently learn to shut out their other communities when they enter schoolrooms. By contrast, we did find examples where student engagement and interaction was high, and effective and purposeful learning appeared to occur. These were classes where

the learning focus was on 'doing' in a cognitive or practical sense and teachers and students worked as partners in understanding the demands, especially curriculum literacy demands of the subject. Teachers in these classes also focused on student learnings outside a focus on content. The curriculum literacies of these classrooms allowed more elaborated and meaningful student-teacher conversations of and about the curriculum demands. Educators need to examine coherence possibilities across discipline knowledges and their related literacies. There is also a need for students to engage in activities that have direct relevance to and connectedness with the world beyond the classroom.

All the analysts, regardless of their own theoretical orientations, concluded that the literacy environments of subjects, schools, and the student activity of 'doing' a subject and 'doing school' create remarkably complex demands on students. Some students succeed in negotiating these, apparently drawing on resources other than those that teachers provide. Others may spend their compulsory years in an environment that is essentially conducted in a foreign language in which they never gain sufficient proficiency. And students need to be fluent, to negotiate the even more demanding literacy-bound assessment requirements successfully.

Finally, the role and nature of the curriculum literacies that are in-built in assessment activities, and which impact upon the students' performances, should be made explicit. It is not appropriate to assess components of curriculum literacies for which explicit instruction has not occurred. Transfer of curriculum literacies from other areas of study should not be assumed and is not likely to be appropriate. Assumptions of students' curriculum literacies is not sufficient. These need to be incorporated in direct instruction.

In this discussion, we have not focused on cultural differences that students bring to schooling. However, the import of these findings in culturally diverse classrooms is self-evident. Consideration of the findings we have presented, and appreciation of the various impacts of these findings, will mean that addressing issues of inclusivity and appropriate outcomes for all students places an even higher demand on making explicit curriculum literacies and their impact on student performances across assessment contexts.

NOTE

- [1] However, students from all levels of academic achievement do enrol in vocationally-oriented subjects. In Queensland, the majority of students who complete senior schooling choose at least one vocational subject.

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