Capturing students’ experiences of the enacted curriculum: The concept of curriculum literacies

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Introduction

A recently completed two-year research study, entitled The Literacy-Curriculum Interface¹, examined the literacy demands of the curriculum in the senior years of schooling (years 11 and 12). The study was undertaken in response to a Federal government brief, which requested that the research should:

consider the inclusiveness of the curriculum requirements of the post-compulsory years, and the adequacy of these in the preparation for the workplace, vocational training and tertiary education.

In designing the study, we defined literacy initially to include reading, writing, listening, speaking, viewing and critical thinking, as defined in the Australian Language and Literacy Policy (1991). From the outset we deliberately chose a multi-theoretical approach in the understanding that a range of different theoretical perspectives and methodologies could act as multiple lenses through which to examine curricular literacy demands in ways not possible through the application of a single perspective. Our approach was also cross-disciplinary. That is, we explored all curriculum areas with subjects taken from three main strands: arts/humanities; maths/science; and technological/vocational education. In so framing the study, we included subjects from traditional academic orientations as well as those related to general/vocational preparation. This inclusive approach to theories and curriculum was in keeping with our interest in exploring barriers to success for students, especially socio-cultural, cognitive and linguistic barriers.

The three study phases

The study involved three phases. Phase One consisted of comprehensive analyses of syllabus guidelines and policy documents for subjects in post-compulsory schooling in New South Wales and Queensland. This analysis was undertaken to allow consideration of the literacy demands and

¹ The study was funded by the Commonwealth Department of Employment, Education, Training and Youth Affairs through the Children’s Literacy National Projects Programme. The full title of the Final Report of the study is The Literacy-Curriculum Interface: The Literacy Demands of the Curriculum in Post-compulsory Schooling. An Executive Summary with the same title has also been produced. For further information on publications associated with the project, including the monograph containing the chapters of the invited experts, please contact:

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expectations of the official curriculum, that is, the curriculum designed at the official level for delivery by teachers in schools. While most focus in the project was on the curriculum as experienced by students, that is, the enacted curriculum, the official curriculum was understood as the framework that directs the work of schools and teachers.

Phase Two of the study involved a survey of the reported literacy practices of students in post-compulsory education. Respondents to the survey were drawn from a representative sample of schools across the State, Catholic and Independent school systems in New South Wales and Queensland. Approximately 1500 questionnaires were completed. This aspect of the study went beyond the post-compulsory years. At the request of several schools, year 9 and 10 students were included with the year 11 and 12 students. The survey explored reading, writing, listening, speaking and viewing, for in-school and out-of-school leisure, study, and work activities. Information was also collected on various background variables for the students, such as languages spoken at home. Outcomes for Phase Two of the study are not reported in this paper.

Phase Three comprised two parts: data collection and expert analyses. The major source of data was video-recordings of the literacy-learning environment as experienced by a sample of focus students from four schools—two from Queensland and two from New South Wales—with representation of metropolitan and rural sites in each State. The students were selected to represent those studying the three strands of curriculum previously mentioned. In video-recording, the focus student in each class was not the object of the video but, in effect, provided a lens for capturing the literacy demands of the enacted curriculum. We called this approach ‘studentcam’—an endeavour to provide an eye on the classroom, and the literacy demands and expectations placed on students, from the perspective of a student. Essentially, we sought to record the classroom from the point of view of the focus student. This included his/her interactions with the teacher, fellow students and a range of materials, as these occurred during the course of a lesson. Students were tracked and videotaped for three consecutive days for each of two different episodes of schooling. In addition to the video data, artefacts of various types relating to the curriculum, instruction and assessment for the students were also collected. These data provide records of authentic practices in the post-compulsory years.

The second component of Phase Three was the analyses of the data, where the multi-theoretical and multi-disciplinary philosophy of the research was most important. Four-hour segments of video data were compiled for further intensive analyses from the raw video sources. These segments, it must be stressed, followed the everyday lives of students in post-compulsory classrooms, not just significant or critical events. For example, the segments represented either one day in the life of a student, or consecutive days for a student in a selection of subjects, comparisons of subject expectations across sectors and States, comparisons across years 11 and 12 and so on. The video data, along with a range of artefacts such as syllabus documents, copies of student work, textbook pages, etc. were then the focus of analysis by a group of fifteen national and international researchers. The researchers operated from a variety of theoretical perspectives, with expertise either in literacy education or in education in a specific discipline area and concerns with literacy issues. The researchers were invited to participate in the project by providing an expert lens on a segment of data consisting of three to four hours of videotape and the written artefacts associated with the video.

Three findings from the analyses are of special interest and provide the focus of the following discussion. These are:

- the demands on students to coordinate and integrate multiple literacies, sometimes at a fast rate;
- the concept of curriculum literacies, understood as essentially hybrid in nature; and
- ‘switching’ among literacies, both within and across subjects, with the need for ‘switching’ tending to remain implicit.
Each of these findings will now be discussed in turn.²

The challenge to coordinate and integrate literacies

Traditional definitions that construe literacy as primarily reading and writing do not match the observed literacy environment of schooling in the post-compulsory years, in which students are typically expected to coordinate multiple literacies simultaneously, drawing on listening, viewing, reading, writing, speaking and critical thinking (in order of apparent frequency) in complex and interrelated ways. The data from the research study show that students are expected to use the various literacy modes of reading, writing, speaking, listening, viewing and critical thinking in dynamically networked ways, thereby engaging in multiple literacies in the course of a lesson and of a day.

As an illustrative instance of this, Brian Cambourne described how, in a Legal Studies class, the student:

- listens to her teacher’s and peers’ oral language, uses oral language to respond to comments and questions from her teachers, uses oral language to acquire and convey information pertinent to the lesson, reads the written language on the worksheet and from the textbook, ... writes responses in the appropriate spaces on the worksheet, ... skim-reads the textbook, ... views the pictures and diagrams associated with the material she reads, ... [and] appears to be composing silently just prior to engaging in writing.

In reflecting on the dynamic interplay of literacy demands on the student, Cambourne concluded that

- if related behaviours in other subjects occur at even one-tenth the rate they occur in [the studied] segment, the sheer number of literacy-related behaviours in which [the student] engages during the course of an academic year begin to take on astronomical proportions.

In Jay Lemke’s analyses of data from Physics, Chemistry and Mathematics B classes, he also commented on the rate of literacy demands, stating:

- the maximal literacy demands of the curriculum are experienced by students in the classroom when a rapidly paced lesson relies on the close integration of a maximum number of individually sophisticated general-academic and discipline-specific literacies.

According to Lemke, the data showed how the student was expected to interpret several systems of signs; deal with several material channels that carry symbolically coded information to and from him; and combine various kinds of what Lemke described as ‘culturally normative meaning-making practices’ at a rapid rate. By way of example, Lemke described how:

- just for starters, one such student had to interpret a stream of rapid verbal English from his teacher; the writing and layout information on an overhead transparency; writing, layout, diagrams, chemical symbols and mathematical formulas in the open textbook in front of him; the display on his hand-held calculator; more writing, layout, diagrams, symbolic notations, and Mathematics in his personal notebook; observations of gestures and blackboard

² In this paper all quotations are drawn from the analyses of the commissioned experts. These analyses have been compiled in a monograph to be published in book form, *Literacy-curriculum Connections: Implications for Theory and Practice* (Cumming & Wyatt-Smith, in press). Readers are advised to contact Ms Stephanie Gunn for more details.
diagrams and writing by the teacher; observations of the actions and speech of other students, including their manipulation of demonstration apparatus, and the running by-play commentary of his next-set neighbour. In fact, he had quite often to integrate and program most of these either simultaneously or within a span of a few minutes. There is no way he could have kept up with the content development and conceptual flow of these lessons without integrating at least a few of these different literacy modes almost constantly.

For readers who may think that such demands appear easy, Lemke advised them to remember that for the student,

many of the words are new or unfamiliar, the meanings being made are about strange matters of which he has no personal experience, the diagrams and graphs and formulas may bear only an outline of resemblance to any he has seen before, the problems are difficult for his current level of mastery, the subject matter is abstract, and the problems of mutual coordination and calibration of all of these channels and literacies and activities very substantial indeed.

In making these observations, Lemke also made clear that while he understood the rate of literacy demands to be under the control of the teacher, his claim concerning the high demand rate should not be construed as criticism of teaching practice: ‘I know the pressure teachers are under to cover an overstuffed syllabus before an unforgiving examination; leeway in pacing may be minimal. It is the curriculum that is often at fault.’ Further, Lemke indicated that the rate of such demands is not always constant and can vary across the school day: ‘Fortunately for most students the literacy demands of full classroom participation vary widely during the course of a single lesson and from one class to another.’ He went on to say that those occasions when the literacy demands exceed the capacity of most students may not be harmful ‘if not sustained too long’. Under these limited time conditions, such moments may be helpful and work to ‘stretch those capacities’.

Curriculum literacies

Our study has identified that singular definitions of literacy across the curriculum, or even literacy and curriculum, are not helpful. Through our findings concerning the complex variations of literacy demands that occur within and across subjects, we have identified the need to define curriculum literacies. We use ‘curriculum’ deliberately as a noun, rather than the adjectival ‘curricular’, in order to demonstrate that this conjunction represents the interface between a specific curriculum and its literacies, rather than literacies related to curriculum in a generic sense, or a single literacy that can be spread homogeneously across all curriculum. By way of example, we advocate the use of the term ‘Science literacies’ to describe the science-literacy interface, and more specifically, perhaps, ‘Physics literacies’, ‘English literacies’ or ‘Food Technology literacies’.

Several of the invited researchers took up the issue of variation in literacy demands both within and across subjects. Of special interest were their insights into the considerable differences between the literacy demands of different subjects and how the mix of communicative practices varied from one lesson to another. Gunther Kress, for example, wrote that ‘representation and communication “literacy/literacies” have a very different form, in different subjects and classrooms. “Literacy” is not one thing, evenly spread across curricular areas. It varies with the kinds of disciplinary practices and form of knowledge which are at issue in a school subject.’ According to Kress, English, Drama, Art and Film/TV are ‘quite different in their use of literacy … and are also distinct in their engagement with their part of the world, and in their representation and communication of that … and are different mixes of use, of value, [and] of function of
literacy and of other modes’. Castanheira et al. similarly pointed out how ‘what students learned in English class was not literacy in some abstract sense, but a situated view of literate practices that differed in kind, as well as form, from those in Mathematics and Hospitality classes’. Brian Street also took up this line of argument, stating how ‘the economics lesson appears strikingly different from the English lesson in its discursive character’.

‘Switching’

Another key finding was that in the main, students were shown to have to work out for themselves the language and literacy demands of their different subjects. They also had to learn that in moving from one subject to another, they were required to pick up what linguistic skills and knowledge and what discourses were appropriate in each case. Additionally, the data showed that students had to cue themselves into how to manage such ‘switching’, with the demands of and need for switching tending to remain implicit in classroom practice. Such complex abilities and knowledge remain implicit, even in relevant English syllabus documents, which address the subject’s own needs without reference to other subjects and to such issues as switching, appropriateness and discourse.

In Frances Christie’s analyses of lessons in English, Biological Science, Agricultural Science and the Certificate in Rural Skills, she showed how the data brought to light ‘a remarkable series of shifts in language and literacy use and in the use of associated semiotic or meaning-making systems’. According to Christie, this series of shifts ‘reveals a great deal of the nature of language and literacy across the four discipline areas, and hence a great deal of the requirements for language and literacy learning’. She commented on the shifts as follows:

In looking at the eight teaching-learning episodes of which I was given data, I was struck by the marked differences in the discourses depending upon: the school content or discipline, the actual physical locations in which the episodes occurred, and the ways in which other semiotic systems apart from language were involved in the construction of the teaching-learning activity. All these matters had profound consequences for the nature of the teaching and learning of language and literacy involved.

Christie arranged the subjects in what she proposed as ‘a kind of cline’ for observing different discourses and for characterising the shifts. An extended quotation is used at this point to show the arrangement of the subjects within the cline:

At the one end is the rural science activity: because it is most practically based, it makes no use of [written language] and only some use of oral language, but the primary activity is fence-making. At the opposite ‘far end’ of the cline lies English which is the least practical, and which makes least use of resources other than talk. Indeed, the English episode depends heavily on teacher-student talk, and employs no other semiotic systems, such as pictures, still or video, but it does have use of some written language on the blackboard. In the Rural Science activity, oral language use is very much ancilliary to the activity of fence-making; in the English activity, language—mostly oral, to some extent written—constitutes the activity. The two are very different.

The Agricultural Science and Biology episodes lie between these two extremes. They make considerable use of teacher–student talk, and they also employ written texts, either for reading or as aspects of the writing tasks the students are to use; the Agricultural Science episode makes use of illustrations
accompanying the written notes, and it also makes use of a real horse to
demonstrate a number of matters; the Biology lesson employs a video, bringing
accompanying voice-over. In both cases, while language, oral and [written], is
very important, it is not fully constitutive of the activity, for language is
variously used in association with other meaning-making activities.

What emerges in this extract is the hybridity of the actual literacy demands faced by students.
Also emerging is a view of the classroom (irrespective of its structural properties) as a site where
reading, writing, oral language and viewing interweave to construct distinctive hybrid genres that
typically do not appear in official accounts of curriculum.

**Recommendations relating to curriculum literacies**

At this point, we prefer to offer a selection of recommendations relating to the concept of
curriculum literacies in the hope that what follows represents an invitation for follow-up action
derived from the study, rather than a neat conclusion. In providing this invitation, we ask readers
to consider how student achievement in negotiating the curriculum hinges on their ability to
coordinate among the various curriculum literacies. Essentially, for effective learning to occur,
students need to know how to use a range of curriculum literacies that draw variously on and
combine different channels of communication and verbal and symbolic meaning systems across
genres that depend in some cases as much on visual layout as on linguistic syntax and vocabulary
meanings related to discipline knowledge.

The following recommendations are made for teachers as they engage in educational practice
on a day-to-day basis, and for educational communities including parents and employers who
seek to improve educational opportunities for all students. We recognise the demands teachers
encounter in their daily working lives, and implementation of these recommendations is not
intended to increase such workloads. We hope that these recommendations are read as new or
reminders of known ways of thinking about effective practice for changing times.

We recommend that teachers, in their everyday practice:

- engage in considerations of what is literacy and what are curriculum literacies.
  If literacy focuses on only reading and writing, or if reading and writing are privileged over other
  forms of literacy, or if particular types of reading and writing are privileged over others, then the
demands of speaking, listening, viewing and critical thinking remain implicit.

- develop awareness of specific curriculum literacies and take responsibility for the
development of these literacies.

Our research study has identified that singular definitions of literacy across the curriculum are not
helpful and that more attention needs to be paid to curriculum literacies. These include
considerations of: 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 processes; the match
between the language of instruction and the language of assessment; the gaps between
preparatory literacy education and the actual and current reading and writing demands of the
specific subject; the literacies of the classroom and its interactions within which curricular
learning is to occur.

The findings demonstrate that curricular learning may be facilitated by explicit use of the
language of the subject. Teachers should model the appropriate language and literacy of their
subject and provide explicit instruction for student development of specific curriculum literacies.
Teachers should make explicit also the nature and purpose of this instruction in a way that
motivates students, helps to construct the nature of the subject and facilitates linkages with other
activities.
structure and scaffold learning, demonstrating how to coordinate multiple literacies simultaneously.

The research study has shown that successful negotiation of the literacy demands of the curriculum and overall success in schooling hinge on students' coordination of multiple literacies demands—a skill students appear to learn on the job if it has not been structured in earlier schooling. These demands are very high in cognitive terms and in terms of prior knowledge. The student who does not have the ability to access prior knowledge within the constraints of accessing other multiple literacies will not succeed. Teachers need to scaffold the literacies so that accessing the literacy demands and prior knowledge is achievable. As we have noted previously in comments on pacing, teachers should consider and develop ways to structure and to demonstrate how to coordinate multiple literacies simultaneously. Teachers should ensure that the demands are attainable and realistic.

assist students to know how to cue to shifting demands within and across curricular studies.

The previous recommendation for teacher practice identifies that successful students need to coordinate multiple literacies simultaneously and to shift between different literacies both within the course of a lesson and in changing lessons and teachers. Successful students are able to undertake switching apparently without instruction in the development of this strategy. Teachers should assist students to know how to cue to shifting demands by identifying changing focuses of the lesson and changing demands, and by discussion of the ways in which curriculum literacies of their areas of specialisation are similar to or different from other curricular offerings.

Finally, we suggest that the move away from notions of literacy across the curriculum, and literacy (in the singular) and curriculum, towards diverse and plural definitions of curriculum literacies, does not lead to increased ambiguity. Instead, it indicates a shift away from the profligate use of ‘literacy’ as synonymous with ‘fluency’ or a ‘knowledgeable state’ to the conceptualisation of literacies in terms of the integrating of reading, writing, listening, speaking, viewing, and critical thinking practices in recognisably appropriate subject-specific ways. In this way, the concept of curriculum literacies accommodates the development of an increased pedagogic sharpness of what is meant by the term ‘literacy’. Additionally, it provides the opportunity for definitions to be developed that are subject-specific and that allow assumptions about the nature of subject knowledge to be raised to consciousness, with identification and exploration of how variations occur across subjects.

References