Characterising Literacy in the middle years

2.1 What does the literature say about the Contexts and Meanings of Literacy:

Public Policy context:

Accountability measures of literacy, standards frameworks, longitudinal studies and much public debate over the past decade in western countries indicate that to be a literate person is a fundamental qualification for employment and civic activity. Poor literacy levels correlate with dependence on the state. Literacy, in this context, most frequently is considered a basic skill enabling a person to make sense of and achieve success in the school curriculum for, it is now expected, thirteen years (NSW).

Psychological context:

Literacy is characterised as an individual trait. Degrees of success in literacy have often been referred to in relation to innate ability. Methods for learning literacy range from decoding and skill mastery to immersion and personal response practices. Literacy is usually framed as reading print. Literacy is often viewed as a relatively finite attribute learned usually in the early years of school.

Economic context:

Literacy is viewed as fundamental to both the life opportunities of the individual and the health of society and the economy. Literacy is sometimes characterised in a minimalist sense in this context, ie the ability to spell accurately but, increasingly, is seen to extend beyond the 'basics' to encompass a more socially functional orientation evident in the definition of "Reading Literacy" of the OECD's PISA longitudinal assessment study of 15 year-olds:

"Reading literacy is understanding, using and reflecting on written texts, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society."[1]

Social/cultural/political context:

Literacy is frequently characterised in this context as a social practice in which the 'reader' engages actively with meanings/knowledge and in so doing engages in culture building. The position of the reader in relation to the text (visual, written, sound, tactile etc) is a political one in which degrees of influence between the reader and the knowledge in the text are negotiated in the process of making meaning. According to this view there is no end to learning literacy as each person's engagement with new social processes, contexts and practices present new literacies. Class, gender, urban/rural and remote settings, ethnicity are all factors which impact on positioning in relation to literacy.

Literacy "refers to a socially powerful process, which can be used in different ways - some perhaps more beneficial to a society, some to only some persons in it."[2]

Institutional context:
In schooling the talk of literacy reflects a conglomeration of the varying meanings noted above. Always accepted as a 'basic' for primary schooling, eclectic strategies for teaching literacy draw upon a range of definitions of what literacy is. In the secondary school concepts of Language across the Curriculum, all teachers as teachers of literacy etc., have been less universally accepted. At times literacy learning in the disciplines of secondary school has been translated as requiring the kind of personal response which teachers of English might apply to reading texts. It is only in recent years and foremost in Australia that specialist disciplines have begun to apply the understanding that each field of knowledge requires its distinct literacy. Recently the term 'multiliteracies' coined by the New London Group[3] has emphasised the kinds of practices necessary to engage simultaneously with blended oral, print, visual and multimedia communications. This framework is beginning to influence curriculum and pedagogical arrangements in Australia.

It is consistently noted across western English-speaking countries that literacy development slows in the middle years of school.

Key findings regarding literacy achievement by Victorian middle years students show (as summarised in *Continuity of Literacy Development Years 5-8* (1999):[4]

- "there is consistent growth in reading achievement until Year 5. Rowe suggests that this growth coincides with the period during which students are being explicitly taught basic literacy skills,
- those students who are in the lowest 10% of reading achievement make minimal progress between Year 4 and Year 9,
- there is an actual decline in the levels of reading achievement for a substantial proportion of students during Years 7 and 8."

In *Mapping Literacy Achievement* (1997)[5] the following aspects of discrepancies amongst groups were noted:

- boys as a group achieved significantly lower scores than girls as a group, in both reading and writing,
- children from low socio-economic backgrounds scored lower than those from medium and high socio-economic groups and this gap widened from years 3 to 5,
- children from language backgrounds other than English met the benchmark standards for reading and writing less often than those form English-speaking backgrounds,
- a very low percentage of children identified within a special indigenous sample met benchmark standards for reading and writing.

The literacy of the adult population indicates outcomes of national schooling processes. At the OECD Conference on the *Policy Implications of the International Adult Literacy Survey* the following summary of literacy outcomes in Australia was made:
"Overall, around 45% of Australian adults aged 16-65 score at the lowest two of five levels of literacy performance. The distribution of literacy skills in Australia seems more similar to that in some continental European countries than to other English-speaking countries in the survey. For example, Canada, New Zealand, the United Kingdom and the United States, there are higher than average numbers of adults both at the lowest and at the highest levels of literacy, but relatively fewer in the mid-range: this is symptomatic of relatively polarised societies. But Australia has a somewhat more even distribution, most resembling that of Switzerland, with more adults at medium literacy (36-38%) ... than in other English-speaking countries. It has fewer very low literates than the United States or the United Kingdom, and fewer high literates than the US or Canada."[6]

2.2 What does the literature say about High Expectations for Literacy in the Middle Years?

The OECD, in its 1997 report on Adult Literacy [7] reports:
"In successful schools, teachers project the belief that *all* students can master the curriculum."

Citing the US *National Educational Longitudinal Study* 1988 regarding eighth grade students it is noted that
1. Large differences exist between schools in their mean level of reading achievement - more than one full standard deviation at every level of socio-economic status,
2. The extent of parental engagement in school activities is related to parents' socio-economic status,
3. Schools with high levels of parental engagement have higher levels of achievement.

Later in the report it is suggested:
"An important structural feature of a schooling system which likely contributes to the relationship between literacy skills and social background concerns the manner in which students are assigned to schools, classrooms and instructional groups. When students from less advantaged backgrounds are segregated they are less likely to attain high literacy levels."[8]

McGaw [9] in his recommendations for reforming the Higher School Certificate concludes
"Inequity results when low expectations set unnecessary limits on students' potential achievements. Evidence is presented in this report that students of different social background, but the same levels of educational attainment in the junior secondary years, are enrolled in different HSC courses."

The Minister for Education in NSW, in the White Paper *Securing the Future* affirms:
" Equity is not achieved by watering down the curriculum."[10]

The NSW Disadvantaged Schools Program Working Paper, *Raising Expectations: Achieving quality education for all* '[11] provides an outline of issues concerned with expectations and an account of research in this area, especially related to low socio-economic communities. This document speaks of the pervasive impact of deficit theories - contributing to compensatory approaches - and some cognitive learning theories - assigning students to developmental stages - which continue to lower expectations for some groups of students.
"Teachers in an urban secondary school in a low socio-economic area find that many of their students have literacy skills below that which enable them to engage fully in the required content in various subject areas. Believing that they are under [school and system] pressure to ensure that students cover the content of their subject area, they adopt teaching practices, which are intended to circumvent students' literacy difficulties. ...these lowered expectations of students' ability to construct their own written notes on the topic result in at least two restrictions on students' learning: first, they are denied the opportunity to clarify their understanding of the topic through writing; secondly, they are denied the opportunity to improve their writing skills through independent practice." [12]

Macken-Horarick comments following her junior secondary study:
"Faced with such a wide gap between the registers in which learners operate outside school and those which they need to control for successful academic achievement, many [teachers] conflate educational learning with everyday learning and thereby reduce the options which they expect their students to take up in school learning. This strands students."[13]

Further to raising expectations Arnold[14] is cited:

"'Holding high expectations for all' is a phrase used so loosely in education circles that its crucial meanings and implications are frequently distorted. Sometimes the phrase refers to little more than abstractly "raising standards", without enabling students to meet them. This procedure is akin to raising the crossbar for a high jumper without heeding the athlete's need to develop the technique and determination to clear the new height."

Hill, discussing the *Victorian Quality Schools Project's* value-added findings notes between-schools differences being larger than have been typically found in the international literature. He then emphasises the 'class effect' over the 'school effect' of potential impact on learning outcomes noting the

"very substantial differences in the progress made by students in different classes within the same school... it is at the level of the classroom that learning takes place.. and there can be very substantial differences in the progress made by students in different classes within the same school"[15]

Earlier beliefs that schools tend to be equally effective or ineffective for all students within the one school are not supported by the Victorian project. In primary schools English, girls make greater progress than boys, high ses students make greater progress than low ses and classes with a high proportion of NESB students make less progress than those with a lower proportion. At the secondary level the significant factors are socio-economic, socio-educational and gender. [16]

In 1995 he concludes that

"...schools and especially teachers do make a difference and ...it is not so much what students bring with them but what they experience on a day-to-day basis in classrooms that really matters....The empirical evidence suggests that variation due to differences in student background and ability is considerably less important than variation associated with school and class membership."[17]

Hill and Crevola (1999) argue that the literature on school effectiveness supports "just three factors" which make noticeable differences for learning outcomes:

1. High expectations of student achievement,
2. Engaged learning time, and
3. Structured teaching focused on the learning needs of students.[18]

Cairney et al (1994) [19] found, comparing expectations between primary and secondary schools that:

"the literacy demands of secondary schools were in many cases less demanding than those in primary school."

The researchers suggest that this may partially explain the 'flattening' of student literacy growth in the junior secondary years and the 'boredom' so often attributed to middle years students.

In the UK, Barber lists as the highest priority for action in the middle years "Expect the impossible" in order to "make their heads spin". Barber believes that expectations have been too low in order to protect students' self-esteem. England will introduce "world class" tests available for schools and students to take whenever they believe they are ready. These tests will be " benchmarked against the highest performing 10% of pupils aged 9, 13 and 16 anywhere on the planet."[20]

Expectations in literacy are more complex than would initially be apparent. Ann Cranny-Francis[21] discusses the question of validated institutional texts in comparison to students' own cultural meanings and the ways in which students' views/voices can be devalued. It is important for students to be taught - and expected to be able to understand - that

"for any text in a particular time and place there will be one or more readings which are institutionally approved or validated...in the institution of education this means using an approved methodology to activate meanings which accord with the discursive practice of the institution - thus some readings will be rejected as 'misreadings', partial readings or simply as wrong."

When students in the study to which Cranny-Francis refers responded to a text with an interpretation which did not comply with conventional liberal understandings of what it means to be disabled, their response was rejected as inappropriate. She further suggests that

"Such readings may well represent future directions for the institution. Other readings will be produced by students whose own discursive positioning is very different from that assumed by the approved reading (s), and again may indicate necessary developments for the institution; that is, they may constitute meanings which the institution itself must learn to validate. Other readings again may be symptomatic of the failure of the institution to make accessible to students the genres and discourses which its main purpose is to teach."[22]

This study affirms the earlier point that high expectations related to standards must match with a belief in the duty to explicitly induct students into the nature of the knowledge legitimised by those standards and expectations whilst giving validation to multiple ways of knowing.

Furthermore, it is argued that to induct students into the dominant ways of knowing is insufficient and that for true citizenship to follow, a further step of apprenticing students in the means to critically analyse how and why texts are or are not legitimised is truly educational. High expectations must include this critical capacity as essential and possible for all students.

Connell discusses the way masculinity, organised around social power in terms of access to higher education, entry to professions, command of communication is being delivered to boys who are academic successes.

[23] "The reaction of the 'failed' is likely to be a claim to other sources of power, even other definitions of masculinity. Sporting prowess, physical aggression, sexual conquest may do."

Alloway and Gilbert considering gendered contexts and expectations suggest:

"Whereas much of a girl's social learning has introduced her to performances of submission, passivity and courtesy, much of boys' learning has been different. His experiences through sport and leisure have introduced him to performances of activity and larrikin individualism, and to masculinities that are embodied in competitive, aggressive and homophobic ways...this can be particularly at odds with school practices that have come to be associated with literature...personalised expression"[24]

Pallotta-Chiarolli recalls working in a school where

"a group of Italian boys were constantly disrupting one female teacher's class. When asking the boys about this, it appeared that..the teacher always emphasised their ethnicity and them as a group in negative ways; they responded with resistance and disruption, "giving her what she expects anyway."

van Kraayenoord et al in their study of literacy and numeracy for students with disabilities noted that there were many factors that influence what students with disabilities could achieve. Many were not able to achieve the same outcomes as their peers, however several were achieving at the same level or higher.

"Factors such as attendance in regular schools and early application of assistive, adaptive or augmentative devices, communication skills, and health and medical problems appear to have made the difference.."[25]

In a recent study of literacy teaching and learning in remote Aboriginal communities it was noted[26]

"Much of the curriculum for post-primary students reflected a junior or mid-primary stance without sufficient account taken of students' age or interests. The teaching emphasis was mostly on the mechanics of literacy. Little time was spent on interpretation, appreciation or critique of skills necessary to conceptual or vocational development or to ideas that might be important in the lives of young people moving towards adulthood."

A Study derived from an approach designed by Brian Gray for indigenous students *Scaffolding Literacy* based on the establishment of high expectations, use of carefully scaffolded age-appropriate texts and tactics of questioning which differ substantially from standard teaching practice has produced impressive literacy improvement for students from remote areas.[27]

Findings in common from the three Australian Case Studies which form part of *the Bilingual Interface Project* are summarised by McKay:[28] These studies were undertaken in schools with bilingual students and programs in urban Western Australia (Oliver & Rochelcoste) and Queensland (McKay) and remote Northern Territory (Lowell & Garrutju).

"Case study students have a cultural and linguistic identity with their ethnic community.
Students are attaining very different levels of achievement in the school curriculum and in English after 6 years of schooling... The performance level of Aboriginal students in the Northern Territory is below average... The migrant students are mainly at average levels. In English most, if not all, have not achieved the level of their English-speaking peers though all began school in the first year.
Students living where English is a minority language and those studying in full bilingual programs are more likely to use L1 for thinking... There is an immediate need for increased resourcing for ESL in Aboriginal programs, as well as immediate attention to professional development of both bilingual and mainstream teachers...All schools were found to be lacking in the integration of L1 culture into school curriculum."

Cairney and Ruge in their study comparing home and school literacy found convergence between expectations for literacy in home and school in the context of homework. Beyond this aspect of 'school' literacy at home, they found significant differences between literacy practices and events and home and school. These were:

- the major purposes for literacy use in different contexts,
- the extent to which literacy activities remained with the child's control,
- the relevance and difficulty of literacy activities,
- dominant 'view of text' at home and at school.[29]

With regard to Gifted students, Tomlinson[30] argues that in the American context middle years rhetoric and practices contain conflicts in purpose between the achievement of equity and excellence.

" It is essential to understand that middle school need not and cannot effectively be an "either/or" proposition, rather it must be a "both/and" institution. It need not be eager to serve either the disaffected preadolescent or the academically turned on child...it need not pose a dichotomy of tracking or no grouping...we need both static and flexible groups...Middle school need not establish a belief that we must emphasise either academics or self-concept...middle school cannot serve its gifted youngsters adequately if it operates on an either/or basis with competence and excellence...It would be to the advantage of education in general to have gifted education and middle school education join forces in making a case for economic support to enable both equity and excellence to be eagerly pursued in middle schools."

In Queensland, the *New Basics* [31] curriculum reform project trial is based on three hypotheses regarding Equity:

1. "That a socially supportive, student-centred classroom is necessary but not sufficient to improve the outcomes of the most at-risk students,
2. That a basic skills orientation to knowledge of how the coding system works is necessary but not sufficient to improve the outcomes of the most at-risk students,
3. That intellectual engagement with higher-order thinking, relevant engagement with high-stakes discourses and knowledges, critical thinking and critical literacy are necessary and sufficient to improve the outcomes of *all* students, including the gifted and academically excellent."

Luke[32] reminds us of Basil Bernstein's "message systems" emphasising that expectations crucially rely on the alignment of curriculum, pedagogy, assessment and reporting.

2.3 What does the literature say about the Needs of Adolescent Learners?

Much of the literature focused on the needs of adolescents argues their need for 'voice' for 'participation' for 'higher order thinking', 'relevance' and 'relationships'.

Wilson's study[33] of students' views about curriculum affirms the importance of student voice as a fundamental precept of participation. He argues that students theorise about curriculum and that these ideas should be negotiated at the classroom and school levels in the planning, teaching and learning and evaluation processes.

This requires providing
"time and opportunity to understand and develop ideas, the opportunity to discuss and test ideas with others and access to arenas in which these ideas can be expressed."

In the USA, Stanley Powgrow quotes the 1997 US Department of Education study showing that only 5.4% students in high poverty schools are achieving mastery of literacy basic skills by year 6.
In his view:
"the biggest learning problem after the third grade is that students do not understand how to deal with ideas, generalisations, or abstractions. This becomes a problem in grades 4-8 because the curriculum becomes more complex and requires more advanced forms of thinking. Teachers sometimes refer to such students (incorrectly) as concrete thinkers."[34]

He suggests that such a sense of understanding is developed through
"extensive and intensive conversations about ideas with adults...where a child is pushed to explain things and justify his or her decisions."

Barber offers "Teach thinking" as a key area for action in the UK for middle years students basing his recommendation on the work of Carol McGuinness[35] who recommends:

- the quality of thinking is given high priority,
- a vocabulary is developed, shared by pupils and teachers which enables thinking to be discussed,
- the thought processes behind an activity...are made explicit,
- emphasis is given to the transferability of thinking skills from one domain to another.

Information and communications technologies are seen as powerful towards this end.[36]

In the *Classroom Discourse Project*, Cormack et al found that students in the middle years most productively demonstrated their knowledge and skill when teachers:
"asked questions that privileged students' meanings, avoided questions that required students to guess the teacher's meaning, asked questions that required students to show they understood valued knowledge, asked questions that assisted students to show they understood valued knowledge and (sometimes) did not ask questions at all and listened in as students talked and worked."[37]

This study also showed that teacher control and direction of talk was important to the literacy outcomes of classroom talk. The teaching/learning cycle at the stage of building field knowledge was crucial to subsequent success for students in negotiating this knowledge collaboratively through talk and preparing its written construction.

Gender differentials for adolescents were discussed by Rowe (2000)[38] presenting findings from the *Victorian Certificate of Education Data Project* which studied 270,000 year 12 students' achievements in 53 subjects argues that the evidence suggests strongly that single-sex environments for both boys and girls deliver advantages.

"The reasons...are complex but understandings are emerging from the research evidence suggesting that co-educational settings are limited in their capacity to accommodate the large differences in cognitive, social and developmental growth rates of girls and boys between the ages of 12 and 16. In contrast, this evidence suggests that during these key adolescent years, single-sex settings better accommodate the specific developmental needs of these students."

The *Desert Schools* project focusing on schooling for remote Aboriginal communities shows how meeting the needs of young people reflects the diversity, in Australia, of roles expected during teenage years:

"The idea of education being synonymous with formal schooling restricts options for the timing and location of learning provision. This is of particular concern in relation to irregular attendance and marginal participation and also in terms of defining desirable and achievable learning outcomes. This is particularly relevant to irregular attenders, young adults with family and community responsibilities and male initiates who have withdrawn from schooling. Young males, especially, need opportunities to recommence their education following initiation into manhood, in an environment separate from children's school facilities, as do young women who are married or caring for children or old people."[39]

"Students spoke English most freely with teachers when engaged in collaborative activities with a shared purpose and where an equal relationship was established. This was observed most frequently outside the classroom, on excursions and in recreation activities, or in very small group classroom work on matters of immediate student interest."[40]

The *Koorie Literacy Links Project* (commenced 1998) and *Koorie Open door Education (KODE) Middle Years Link Project* (commenced 1999) are components of a Victorian initiative[41], exploring the use of technology to improve literacy results for indigenous students. These projects aim at connecting both practitioners and students across sites to share effective literacy programs. The KODE project aims to give years 7-9 students in separate schools access to one another via technology. "The outcomes from the initial links have been excellent."

The *Bilingual Interface Project* summarises the influence of age on language learning for bilingual people citing Collier[42]:

1. Before puberty, it does not matter for overall long-term academic achievement when one is initially exposed to (or receives instruction in) the second language, as long as L1 cognitive development is continued through age 12...
2. When children's L1 development is discontinued before it is completed, they may experience negative cognitive effects in L2 development; conversely, children who have reached full cognitive development in two languages enjoy cognitive advantages over monolinguals.
3. At the beginning stages of second language acquisition, adults and adolescents with solid L1 development master basic interpersonal skills faster than children. After 2-3 years of exposure, however, children achieve higher L2 proficiency in basic interpersonal skills, with adults and adolescents typically retaining an accent.
4. Older children (ages 8-12) who have had several years of L1 schooling are the most efficient acquirers of L2 language. Adolescents with solid L1 schooling are equally efficient acquirers of L2 school language, except for pronunciation.

A Canadian study is cited regarding the length of time it takes for grades 5-7 students to reach the level of academic achievement of native speakers of English:[43]

"...there was a gap of several years, on average, between the attainment of peer-appropriate fluency in L2 and the attainment of grade norms in academic aspects of L2. Conversational aspects of proficiency reached peer-appropriate levels usually within about two years of exposure to L2 but a period of five to seven years was required on average, for immigrant students to attain grade norms in academic aspects of English."

The report notes that this work has been strongly criticised as based on a deficit model, placing the responsibility for lack of achievement at the door of the students instead of looking for causes of failure elsewhere.[44]

The role of electronic technological literacy in adolescents' lives must be acknowledged. Spender cites a study undertaken by advertising agency McCann Erikson into relevant means for 'speaking to' adolescents - *Out of the real*. Adolescents were experienced in video-game technology which they learned to use by jumping in and playing around. Spender suggests that these games are "intellectually demanding; that they make you think, assess, react, decide and act."[45] She further outlines a McGraw Hill study into the ways in which readers use a textbook on-line. It was found in this study that 'reading' becomes 'authoring' on-line. Reading is not undertaken in a linear fashion. The reader leaps around the text grabbing the bits relevant to her/his needs. These interactive electronic learning experiences are instructive regarding adolescent students' expectations for greater democratic and participatory potential in learning.

The question of relevant or 'real-life' learning arises frequently in the literature. Some of the issues raised in the previous section about expectations are critical in considering the meaning of relevant in such a way that 'relevant' does not translate to "stranded". At the same time, 'relevant' can be defined by highly challenging literacy programs supporting students to act in their own - individual and group - interests through scaffolding their preparation for active citizenship in the community. Martin describes two such programs with middle years students at Lakemba and Dulwich Hill Public Schools in Sydney.[46]

Tomlinson, concerned about the 'dumbing down' potential of middle school particularly for gifted students in the US suggests

" the learning profiles of young adolescents often change rapidly as they develop. There simply is no single learning template for the general middle school class. If middle school students differ in readiness, interest, and learning profiles, and if a good middle school attempts to meet each students where he or she is and foster continual growth, a one-size-fits-all model of instruction makes little sense....differentiated instruction makes better sense."[47]

The *New Basics* draft proposal cites the work of Sizer's Coalition of Essential Schools in the USA

"behaviour problems and increased drop-out rates can be traced to the degree to which they most at-risk students consider schooling, classroom teaching and assessment activities to be irrelevant, of no real-world value and as fundamentally unmotivating."[48]

Based on classroom lessons observed and student work assessed in 600 lessons in years 6, 9 and 11 in four KLAs through the ongoing *School Reform Longitudinal Study* (1998-2001) in Queensland, preliminary findings suggest that efforts for improvement in the middle years should focus on

- "analytical depth
- intellectual challenge and rigour
- critical thinking
- critical literacy and higher order analysis
- dialogue
- greater connectedness to - student cultural backgrounds, knowledges, problem-based learning, worlds of work, citizenship and community life."

This study derives from and expands on the methodology of Newmann and Whelage in USA at the University of Wisconsin Center on the Organisation of Restructuring of Schools. Newmann focused on the incidence of higher order thinking, depth of knowledge and understanding, substantive conversation and connectedness of lessons to the real world and found that equally effective for both mainstream and non-mainstream target groups of students were:

"high levels of authentic pedagogy - specifically intellectual engagement and connectedness - enhance student achievement on both conventional measures (standardised tests) and alternative measures"[49]

2.4 What does the literature say about Explicit and Systematic Teaching?

The *Language and Social Power* project[50], upper primary, and the *Write it Right* project[51], junior secondary, of the Disadvantaged Schools Program were instrumental in developing and refining the teaching/learning cycle for explicit and systematic teaching which has brought to the surface for teachers and students the components of cultural and situational context and their relationship with the field (subject matter), tenor (relationships between reader/writer) and the mode (the channel of communication). The process of deconstruction of text in its context, joint construction and independent construction leading to critical analysis was developed in collaborative practice between teachers, researchers and teacher-consultants during the 1990s in inner-Sydney.

Martin comments on this model:

"...all stages in the pedagogy make use of explicit knowledge about different types of text...this knowledge becomes part of the experience shared by teachers and students. Making this knowledge explicit and sharing it among members of the class helps put students on an equal footing as far as literacy development is concerned; it helps demystify the hidden curriculum of writing. Explicit shared knowledge also gives teachers and students a language for talking about texts...this removes responses to writing from the realm of subjective reaction and places them within an objective framework."[52]

To engage in such learning students require a language for talking about language; an explicit way of describing the elements of context and text and names for the tools of analysis and the stages of the learning process. Such explicitness allows the dynamic of discourse concerned with the field and with the pedagogy to become visible for the students.

The *NSW English K-6 Syllabus* supports this approach:

"At school, students will be developing the ability to discuss language structures and features in an explicit way, using a shared knowledge for talking about language."[53]

The Victorian *Successful Interventions Secondary Literacy Research Project* in its preliminary reporting suggests that secondary teachers

"want to know more about language acquisition for middle years students, about language structures and features and how this knowledge relates to the literacy achievements of their students. They want to know about strategies students need to read for understanding and to write effectively for he range of contexts and purposes in secondary school classes."[54]

The *Schoolwise* Program offered from Macquarie University and combined with "a social and school survival element" provided by the Rev. Bill Crews, Director of the Exodus Foundation provides a

"strong, systematic, skills-based literacy program ...of individualised, non-categorical, remedial literacy programs [including] word-attack skills, sight word recognition, spelling...for years 6 and 7 students identified as being at risk of becoming seriously disaffected from school as a result of their low literacy levels."[55] The rate of gain in literacy skills is claimed to be seven times faster than in a regular class.

The benefits to students with disabilities, of the use of technologies for learning, have been seen to have made a real difference in ensuring equitable access to literacy and numeracy programs. These include auditory amplification or assistive listening devices, devices to provide visual representation of material, augmentative and alternative communication devices, special pencil grips, tilt chairs, height adjustable desks, slope boards and photocopiers to enlarge text. It was important, however, that teachers have access to technical support and training.[56]

Wayne Martino's study of *Boys and Literacy* is instructive. He offers ways in which the construction of masculinity can be directly addressed as an object of study in the classroom.

'The denigration and inferiorisation of the Other, which is built into the homophobic practices of boys, also relates to the way girls are treated and positioned within such a gender system in which masculinity and femininity are defined as oppositional categories...a way for framing a critical literacy practice and for creating a climate conducive to boys' commitment to literacy"[57]

Brian Gray's *Scaffolding Literacy Project* operating since 1998 in the north of South Australia began as grade 4 indigenous students seen as 'the best readers in their grade' were reading texts expected by the end of the first year of school for most Australian students. After three school terms of involvement with the project, these students

"have begun to work comfortably close to their expected grade range. Moreover, a third of their classmates are performing independently at a similar level. And, because of the particular teaching strategies employed in the project, all of the children can engage productively with the teaching content. .. Gone is the confusion and lack of pedagogic direction as the teacher sought out activities primarily focused on entertaining students who appeared to have extremely low levels of attention capacity. Gone is the myriad of 'busy work' activity through which the teacher sought to avoid disruption. In place of this the teacher's behaviour is focused and confident....She directs questions of a kind that would have been impossible less than a year ago..."

Central to this approach have been:

- the choice to abandon a number of common assumptions about literacy practice, eg., literacy tasks are not targeted at individual competence levels,
- the teaching sequence involving attention to building a substantial level of shared knowledge,
- more explicit explanations of text to children,
- shift from behaviour management to teaching goals as foremost priority.

Video data is being gathered for this project.[58]

In California an in-depth model - *Advancement Via Individual Determination* (AVID)[59] - for ensuring more equitable outcomes selects students most at-risk, reduces class-sizes to tutorials of 7:1, focuses on intensive work 2-3 days per week "for deeper probing of material".

With regard to teaching practices for Gifted students, 'accelerative' and 'differentiated' options are suggested by Tomlinson and Willis & Mann from US studies.[60]

"Back in the days of the one-room schoolhouse, when students aged 6-16 learned together, differentiated instruction "was how they did school"." Willis and Mann illustrate a range of classroom experiences in which teachers provided opportunities for a range of participative and achievement outcomes in their classrooms. These accounts are based on the presumption of different 'abilities' in the classes.

Differentiated Instruction includes such teaching strategies as "Stations, Compacting, Agendas, Complex instruction. Orbital studies, Entry Points, Problem-based learning, Choice Boards, 4Mat."

Accelerated options suggested include: "Compacted/condensed Curricula, Advanced Classes, Combined Enrolment, Concurrent enrolment, Continuously paced instruction, Grade-skipping, Guided Independent study, Mentorships, Out-of-school Acceleration."

New Basics in Queensland is concerned with 'productive pedagogies' which it has found are used less in the middle years than in either primary school or senior high school. This is attributed to the greater incidence of 'professional learning communities', 'authentic assessment' and 'integrated curriculum conversations' in primary and senior high schools. The *School Reform Longitudinal Study* suggests that where productive pedagogy is low, intellectual quality and relevance were also low.

Productive pedagogy "identifies a repertoire of 20 classroom strategies that teachers can use to focus instruction and improve student outcomes. These strategies are clustered in four forms of classroom interaction: social support, intellectual engagement, relevance and recognition of difference."[61]

The *Digital Rhetorics* project, a two-year study of literacy, technology and learning in primary and secondary schools in NSW, Victoria and Queensland is concerned that educators are beset with confusing and conflicting advice in the rhetoric of 'high-order literacies', 'basics' and 'cultural and critical literacies'.[62]

"Teachers often adhere to 'old' notions of authority and 'truth' with which students are unfamiliar or unsympathetic. The need is for well-developed ideas of how to assess data, locate a range of information sources and views, weigh competing information/data, utilise and apply information in culturally and critically appropriate ways, structure arguments and so on.... These latter capacities remain central to the role of the teacher as a viable profession in an age when machines can make information available much more efficiently than teachers. The cultural and critical dimensions of learning in the area of literacy and technology are still best achieved by teachers."[63]

The report suggests effective pedagogical models including apprenticeship, guided participation, participatory appropriation leading to operational, cultural and critical literacies. It was found that frequently there was an over-emphasis in schools on the operational and cultural over the critical. Where pedagogies in using new technology did not work, it was generally where the technology was being "squeezed" into "doing business as usual".

"How far teachers are successful here will have a lot to do from now on with their capacities to negotiate with technologies that are much less compliant than students, as well as with students who are often more skilled than teachers at assigning roles to new technologies."[64]

2.5 What does the literature say about Subject Specific Literacy?

The OECD Adult Literacy Survey, focusing on beyond-schooling literacies categorises literacy in three domains as follows:

prose literacy:	the knowledge and skills needed to understand and use information from texts including editorials, news stories, brochures and instruction manuals.
document literacy:	the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps, tables and charts.
quantitative literacy:	knowledge and skills required to apply arithmetic operations, either alone or sequentially, to numbers embedded in printed materials, such as balancing a chequebook, figuring out a tip, completing an order form or determining the amount of interest on a loan from an advertisement.

What is clear from this framework is that 'everyday' literacy requires print, visual and multi-mediated literacies; a much broader framework than the 'common-sense' understanding of literacy.

Macken-Horarik provides a useful model for considering the scope required of school literacy learning. From teacher comments she suggests that, too often, the middle years are "four dead years" unrelated to what has gone before in primary school and an inadequate preparation for the academic pressure of senior school which are to come. The challenge central to educational learning she argues is

"engaging with specialised forms of knowledge, learning to take up expert roles in different disciplines and gaining control of written discourse."[65]

This model offers three domains in which learning occurs:

everyday	tacit knowledge, primarily spoken, 'common-sense knowledge'
specialised	school knowledge and occupational knowledge
reflexive	allowing reflection and questioning of the grounds and assumptions on which knowledge rests.

"It is a world of competing discourses...representing the contexts of educational learning as specialised encourages a static view of learning and a conservative view of the prevailing order. But, at the same time as it inducts students into hegemonic orders of knowledge school learning can also serve to induct students into discourses which seem to contradict these, not least because the social processes that generate schooling are themselves conflict ridden....Educational learning privileges specialised registers and genres but encompasses those of everyday and reflexive domains because it has an interface with the worlds which learners inhabit before they come to school and after they leave." [66]

The noticeable distinctions between discourses which occurs in secondary school is one of the most challenging aspects for middle years students. As *Focus on Literacy* [67] noted:

"The upper years of primary school and the early years of secondary school...are characterised by the separation of areas of knowledge into school subjects which make distinctive reading and writing demands upon students. Each subject uses specific text types with particular written, spoken and symbolic forms to present its knowledge."

Unsworth [68] describes the distinctive literacies of the Key Learning Areas considering the extensive use of grammatical metaphor in the construction of technicality in Scientific, Geographic, Mathematical and Technological discourses (subjects), the use of diagrams and other forms of graphic information as part of the text. In Historical and Social Scientific discourses he illustrates grammatical elements of abstraction rather than technicality, for example, the means by which human agency becomes absent through nominalisation. Unsworth draws heavily on the work of the *Write it Right* project for this account of subject -specific writing demands. In press is Unsworth's work on the reading demands of the Key Learning Areas being undertaken for the NSW Disadvantaged Schools Program.

Visual literacy in multimedia and electronic contexts is a critical component of reading given extensive description by Kress and van Leeuwen.[69] This description allows the grammar of visual texts to become visible for reflexive assessment of the type recommended by Macken-Horarik.

According to Lo Bianco and Freebody[70]

"the literacy practices and indeed the texts that are produced within the norms and conventions of the society's mandated literacy practices confirm some groups' norms, style and practices while marginalising others. It is important to acknowledge such issues: standardised within written language is a cultural and political choice. Once it is made and affirmed, it follows that public authorities have an obligation to guarantee to all citizens equitable access to this instrument of power, knowledge and opportunity."

Referring to the middle years they affirm the notion that

"distinctive modalities begin to operate...a separation of knowledge domains occurs...these domains bring new literacy demands that call on all foundational literacy resources: codes, modes, meanings and critical analyses."

Further they argue that middle years students need to read and write texts in which language, number and diagram are thoroughly intermixed and in which meanings conveyed depend critically on students' abilities to work simultaneously with each of these symbol systems. Wider availability of multi-modal and multi-directional computer texts intensifies this need resulting in required technological literacy.

A strategy of the *Write it Right* project was to undertake analyses of literacy as it was required in workplaces. Three areas were investigated: Scientific, Media/information and Administration. Commenting on the relationship between school specialised discourse and that of workplaces:

"secondary education can be thought of as a device for directing members of the society towards specialised economic roles. These specialisations are both horizontal - most generally between production of goods, services and information, and vertical - most generally between professional, vocational and unqualified labour. We tend to think of students specialising according to their 'ability' or interest. However from a socio-economic perspective we can see that specialisation depends more on social factors such as class, ethnicity and gender...we can say that secondary education distributes access to discursive resources in differing proportions to differing groups....Learning the language and fields of [specialised discourses] should begin systematically in junior secondary school."[71]

Carter[72], in the context of literacy pedagogical reform in UK indicates the growing interest by British teachers in the Australian-generated approaches to explicit and subject-specific literacy teaching.

"British teachers have become increasingly impressed by the precise analytical work which has enabled central, prototypical features of particular genres to be identified. It is the same explicitness of analysis which has helped both pupils and teachers to develop a critical linguistic literacy."

Hasan[73] defends the criticism that subject-specific literacy of the kind described above can be considered 'reproductionist', in other words, it may be taught without the critical dimension.

"If literacy is what education is about, and education is supposed to be truly egalitarian, and if the aim of education is to enable participation in the production of knowledge - and not just reproduction - then it follows that we would need to develop in all pupils the ability to reflect, to enquire, to analyse and to challenge...so teachers will need to sensitise pupils to not simply the overall schematic structure of the text, which is just one aspect of discursive ability; they would also be concerned to show what alternative ways there are of saying the same thing. The point is that one can never say exactly the same thing using a different wording; so in fact, the teachers will need to make pupils aware of the sorts of difference in meaning that may arise from putting it one way as opposed to another...for example, pupils would not simply note the way a text is structured, but they would also ask why it is structured in the way it is; what would change, for whom and at what price, if the structure were to be changed?"

van Leeuwen and Humphrey provide a comprehensive study of the visual literacy requirements of high school Geography[74] suggesting the need for a critical approach to 'reading' geographical visual texts as such an analysis exposes a flaw: geography "precludes relating human agency to ecological issues" rendering the discourse unable to manage satisfactory explanations allocating responsibility for ecological issues.

In *Learning to think like an historian* Coffin and Veel[75] suggest that

"a critical orientation to the language of history is not just about making students effective readers and writers of history; it is also about making them into good historians....it is knowledge such as this that allows students to read and write history better, but alas to view historical texts as socially constructed, and therefore ' problematic' in regard to their truthfulness and accuracy."

Gender issues concerned with subject-specific literacy are implied by Martino and by Pam & Rob Gilbert.

"The boys in a study I conducted clearly defined English as a soft subject which they defined in opposition to maths, Science and Sports subjects as more relevant and useful...some boys claimed that they preferred studying Maths because there were clear rules to follow. [76]

"...it is still the case that dominant forms of masculinity are primarily associated with a narrow range of school subjects....the gendered polarisation of humanities from maths/science subjects derives from the history of gender divisions in the workforce."[77]

Referring to the needs of Gifted learners in middle schooling, Tomlinson[78] considers that

"Most middle schools still adhere to a relatively traditional curricula organised by class periods and traditional subjects...as middle school writers begin to develop proposals for ways in which middle school curricula could be crafted..., those writers often support doing away with subjects arranged by disciplines...Because no single one of the proposals has "taken root" it is difficult to know the shape that they might ultimately assume."

Tomlinson cites Beane's organisation of curriculum around themes drawn from concerns of early adolescents and related to world issues. She considers Arnold's proposal that middle school curriculum places students directly in contact with the community as a genesis for learning. Students would examine issues 'in their backyard' using highly relevant problems to better understand both themselves and their world. Further, Arnold suggests a "calibrated" model similar to those found in a Boy Scout Manual, some requiring more exploratory applications and some reaching the 'Eagle Scout' level of complexity and commitment. These options, say Tomlinson, may result in fewer preadolescents needing radical accelerative options,

"finding instead a school environment with permeable membranes and articulated plans for varied learning needs."[79]

Lankshear argues that schooling is

"seriously out of touch with the discursive universe beyond its gates. In relation to new technologies, new practices and literacies are being 'invented on the streets - in workplaces, online communities, businesses, homes, recreation spaces and the like (citing Richard Smith)"[80]

The *New Basics* project in Queensland aims to generate curriculum along these latter lines:

"The fields of knowledge (KLAs) would be used to service the tasks rather than vice versa."[81]

The 'Rich tasks' focus the school's capacity on 'intellectual engagement' and 'relevant work' expecting the achievement of 10 of these tasks between years 7 and 9. The tasks are problem-based. Each is accompanied by a list of significant discourses, or fields of knowledge and practice with which students need to engage within a 3-year span of schooling. Luke argues that the rigour of the subject areas and the need for literacy in these discourses is no less important; the difference is that they are learned in the context of a problem to be solved and applied to the process and solution.

Integration of curriculum in the secondary school has certainly been a priority of US middle school reform and of the projects undertaken by the *National Middle Schooling Project* in Australia and the *National Schools Network*. Brennan et al argue:

"The integrated curriculum is a way of encouraging young people to develop a deeper and broader understanding and knowledge of themselves and their world... Rather than using a separate subject approach, the integrated curriculum introduces questions, problems and activities that will best serve as relevant learning experiences...an integrated curriculum gives multiple pathways to different disciplinary traditions and bodies of knowledge...students benefited from cohesion among staff; and teachers were able to build upon one another's' work."[82]

Critical to effective scaffolding of students' literacy learning in the subject disciplines is the use of "waves of weak and strong classification and framing" appropriate to different stages of the pedagogic cycle. Drawing on Bernstein's notions,

"'classification' refers to the nature of differentiation between contents. Where classification is strong, contents are well insulated from one another by strong boundaries. Where classification is weak, there is reduced insulation between contents, the boundaries are weak or blurred....

'frame' refers to the form of the context in which the knowledge is transmitted and received. Frame refers to the specific pedagogical relationship of teacher and taught. Frame refers to the strength of the boundary between what may be transmitted and what may not be transmitted in the pedagogical relationship. Where framing is strong, there is a sharp boundary, where framing is weak, a blurred boundary, between what may and what may not be transmitted. Thus frame refers to the degree of control teacher and pupil have over the selection, organisation, pacing and timing of the knowledge transmitted and received in the pedagogical relationship."[83]

Waves of weak and strong framing and classification characterise the 'Teaching/Learning Cycle', referred to earlier in this section, of deconstruction, joint construction and independent construction towards critical and creative orientations to discourses. It may be pertinent, however, to consider this model of framing and classification in order to make sense of the relationship between subject-specific literacy and notions of integrated fields for literacy.

David Rose[84] argues the need to ensure access to 'specialised discourses of schooling' for indigenous students:

"these discourses are realised in types of written texts and classroom interactions that become progressively more complex and abstract from early primary to senior secondary school. The sequence ensures that those learners who do not acquire them in primary years will not have access to their more complex, abstract forms in later years, and so will not be able to go on to higher education. School discourses, from early primary on, have evolved to apprentice children into decontextualised ways of meaning thus enabling them to develop an orientation to meaning that is abstracted from familiar local contexts. School discourse is, in other words, a discourse about other discourses whose contexts lie beyond the walls of the classroom....indigenous students in particular are excluded by invisible pedagogies from accessing school discourses...the child can use the adult product as a template for her own approximation, and the teacher can point out its features and take turns with the learner to demonstrate how it is produced. This is precisely how young indigenous people learn to produce both the material and semiotic products of their cultures, in joint activities with their elders who accompany the activity with commentary on the production process, drawing attention to the procedure, significant steps in it, and features of the product."

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