Successful School Subject Literacies within the
Context of Disadvantage

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Research into literacy and school subject performance focuses
overwhelmingly on identifying and addressing risk factors associated
with under-achievement. Strenuous efforts are devoted to diagnosing
the "causes" of literacy failure that is pattered by ethnicity, social
class, gender and other variables. This paper explores the possibility
that equal or even greater insights into and potential benefit for
school attainment may be achieved by investigating instances of
successful school literacies practices within contexts officially
designated as "disadvantaged". It is a preliminary report which deals
with six case studies comprising triads built around successful
students in English, Science, Physics, Home Economics, Mathematics and
Economics at a secondary school in Brisbane. Each of the triads
consists of a student identified by their teacher as highly competent
in the literacy of a given subject, one of their teachers and one of
the students" caregivers. Interviews with all triad members, classroom
observations and journal-keeping by students are the main data
collection techniques employed. The aim of the study is to develop
contextualised theories to explain phenomena of success in
disadvantaged settings and to identify social and pedagogical factors
associated with success. This paper will report the findings of the
present study, and comment on how they compare with those international
studies of scholastic success in contexts of disadvantage.

Literacy as social practice

At a theoretical level this study is informed by several key ideas
 derived from recent studies of literacy as social practice. Until
 comparatively recently, educationists tended to think of literacy - or,
 more typically, of reading-writing - as either a skill or as a tool or
 technology. As a skill, "literacy" denoted the ability to encode and
 decode print. As a technology, literacy was construed (in the West) as
 alphabetic print. Hence, to be literate was widely seen in terms of
 having at least a minimal facility with print technology.
Within these conceptual parameters people could be seen as having
 either more or less of "it" (i.e., literacy/facility-skill with print),
 or as being more or less able to use "it" more effectively. The
 (highly) literate person was one who possessed mastery and fluency.

The low literate or illiterate person was one who lacked control of or skill with print.

Conceived in these terms, literacy could further be seen as being employed and demonstrated within diverse domains: in business, work, religion, leisure and academic study, among others. To all intents and purposes, however, literacy was conceptualised as comprising one and the same "thing" - for everyone. Objective variations in literacy were seen as existing around uses to which this unitary phenomenon was put, and degrees of facility or competence in using it. From an educational standpoint, students were taught to read and write, from whence they could proceed to employ their literacy in the study of subjects (or disciplines).

During the past two decades, however, the study of literacy from a

social perspective has emphasised the enormous variety of literacies that exist. Rather than being seen as a universal or singular phenomenon with a diverse range of uses and domains of application, literacy is now widely seen as "many". What were previously viewed as different uses of the same thing are now seen as comprising different literacies. As Street (1984) puts it, "Literacy is a shorthand for the social practices and conceptions of reading and writing" (p.1). As social practice in its own right, and as an integral component of larger social practices, reading-writing takes many forms.

There are two points to be made here.

(i)First, from an ontological standpoint, literacy/language must be conceptualised as social practice; not as a technology or as a skill that somehow is incorporated within social practice. When human beings speak, visualise, read and write they are involved in practices of giving, taking and making meanings. These are necessarily social: as Wittgenstein argues (1953) there can be no such thing as a private language - in his technical sense of "private language". Meaning is inescapably social: both as (generic) phenomenon and in particular instances. Moreover, in making, transmitting, and sharing meanings humans are necessarily engaged in practice - in forms of social activity. There is "work" to be done, or being done, whenever and wherever meanings are in operation.

(ii)Language and literacy "acts" are generally embedded within larger social practices of which they comprise a necessary integral component. In writing this paper, for example, the literate act is housed within a larger set of social practices, including the social practices of participating in an academic conference, doing research, demonstrating accountability for funding research, etc., which are, in turn, part of a still larger social practice of functioning as academics.

These points can, perhaps, best be clarified by reference to James Gee's distinction between Discourse (with an upper case "D") and discourse (with a little "d"). Discourses, with a capital "D" (Gee, 1990, 1992) are ways of

thinking-believing-acting-interacting-speaking-listening-valuing-reading
-writing at appropriate times and places with appropriate objects so as
to signal membership in (to be "in synch with") a particular social
group. They are saying(writing)-doing-being-valuing-believing
combinations. What we are (our identities) as individuals and members
of groupings is a function of the Discourses we participate in. There
are many Discourses, ranging from (certain sorts of African-Americans,
boardroom executives, feminists, doctors, physicists, academics,
students, parents, street gang members, and so on (cf. Gee & Lankshear,
1995).

Lower case "discourses" are the language bits of Discourses. They are
connected stretches of language that make sense: like stories, essays,
reports, conversations, arguments, recipes, different types of forms
and so on. The form and substance of discourses will vary to a greater
or lesser extent from Discourse to Discourse.

Hence, the accountant qua accountant reads and writes in very different
ways from the priest qua priest; the scientist from the preschool
teacher; the graffiti writer from the computer programmer, and so on.
Their respective purposes, activities, roles, and identities -
including the multiple beliefs, values, theories, aspirations, etc.,
they hold to - vary: as do their conceptions and practices of reading
and writing, and the (kinds of) texts and literate artifacts they
create and exchange.

Indeed, as Gee's work also makes clear, matters are even more complex
than this. His example of linguistics as Discourse, and of being a
linguist demonstrates this added complexity. The larger Discourse of
linguistics contains many sub-Discourses, different socially accepted

ways of being a linguist. But the master Discourse [of Linguistics] is
not just a sum of its parts [i.e., its sub-Discourses, such as
sociolinguistics, Chomskyist linguistics, Hallidayan linguistics,
etc.]; it is something over and above them. Every act of speaking,
writing and behaving a linguist does as a linguist is meaningful only
against the background of the whole social institution of linguistics,
and that institution is made up of concrete things like people, books
and buildings; abstract things like bodies of knowledge, values, norms
and beliefs; mixtures of concrete and abstract things like
universities, journals and publishers; as well as a shared history and
stories. (Gee, 1990, p. 143; bold added).

Hence, the cost accountant qua cost accountant may read and write very
differently from the tax accountant; the liberation theology priest
from more conservative priests; and the theoretical scientist from the
laboratory or applied scientist. And within theoretical science,
literacies may vary considerably as theoretical paradigms and the sorts
of problems that are framed for investigation vary.

The construction of school subject literacy

This has significance for our present concern with school subject

literacies, and the significance is complex. When we speak here of "school subject literacies" we have in mind the idea that different school subjects will be associated with more or less different/distinctive literacies: what is read and written, how it is read and written, and why it is read and written will vary to a greater or lesser degree. It is worth looking at this in a little detail, in relation to school subjects and school subject literacies. This can be done by reference to Economics, one of the school subjects addressed in our study.

Paraphrasing Gee, we can say that the larger Discourse of Economics contains many sub-Discourses, different socially accepted ways of being an economist. There are, for example, such variants as classical/neo classical economics, political economy, Keynesian economics, Friedmanite economics (monetarism) and so on. Behind all these variants, and making them recognisable as ways of being economists and of "doing" Economics, is the social institution of economics. The social institution of economics includes, of course, school/classroom-based study of Economics as a subject. As a school subject, Economics may be seen as the first formal stage of apprenticeship to the Discourse of being an economist: of thinking about economic issues and problems in some of the ways "proper" economists do; of being introduced to elements and versions of economic theory; etc. There are, of course, many facets of Economics and being economists that the study of Economics as a school subject does not (necessarily) include. Indeed, much - if not most - of what students do and be in respect of school-based study of Economics, is confined to conceptions and practices of reading and writing (about) economics. That is, to a large extent, engaging in Economics as a school subject will be very much a matter of engaging in a literacy practice: in some construction or other of Economics as a bounded set of reading and writing activities.

It is the fact that those Discourses and social institutions represented (and, to that extent, prioritised and legitimated) within school curricula are constituted largely - if not exhaustively - as school subject literacies that underlies and defines the focus of our research. Among the main functions of school identified by sociologists, selection for scarce social places and opportunities ranks high. Whatever else schools must do in societies like our own, they must differentiate between students, selecting some for higher status and rewards and others for lower status and rewards, and do this in a way that appears legitimate and that, in turn, can help serve to

legitimate the principle and reality of social stratification, as well as extant hierarchies. To date, the principle means of measuring student performance and selecting accordingly has been on the basis of students" written work. Hence, it is both appropriate and important to investigate the constitution of school subjects as literacies, and to understand the conditions under which school subject literacies are practised successfully.

Other insights from the study of literacy as social practice assume relevance at this point. The first of these concerns the fact that literacies are constructed within sites of social practice. They are not transcendent or given. They are, precisely, social constructions. We are interested in knowing how particular school subject literacies are constructed on particular sites and what forms they take. Something of the variety among school subject literacies and the significance of this variety is evinced by a New Zealand classroom ethnography (Jones, 1986, 1991).

Alison Jones studied two "ability streams" of students at the same school grade level. One was a low-to-middle stream class comprised almost entirely of students from Pacific Island migrant working class families: 5M. The other was a top stream comprised overwhelmingly of students from white middle class (especially professional and business) families: 5S. Jones observed closely these students in their classrooms during two years, the second being the year of their first national certification exam - School Certificate.

Both groups believed strongly that school success was the route to good life chances, and that success in academic exams involves a combination of ability and hard work. Both groups wanted to succeed in School Certificate and both expressed commitment to working hard.   Indeed, Jones found that both groups did work hard. What she also found, however, was that the two groups had very different views of the work to be done, and that these corresponded to very different views of how to operate language within learning.

The 5M students drew on discursive experiences which emphasised, among other things, strong deference to authority. The saw the teacher as the authority on school knowledge. As a result, they worked from a view of academic and exam-oriented literacy that amounted to getting the teacher's knowledge down as notes to be learned up later. These students made sure their notes were always up to date, neat, and typically ornately illustrated. They spent much time putting together their "notes".

This conception of academic literacy had some interesting - and unfortunate - features. Firstly, it contributed to the production of a distinctive pedagogy in 5M classrooms. Jones shows how the respective beliefs and values of 5M students and teachers interacted to produce culturally this particular pedagogy and its consequences. Basically, the pedagogy consisted of the teacher dictating notes. 5M students saw this as the teacher's proper role: imparting knowledge. If she departed from this role - e.g., by involving the class in discussion, comment, questioning, etc. - the class would "play up". The teacher would have to come back to dictating in order to restore control and get students "on (some acceptable) task". On the other hand, whenever the class did get briefly into question-based pedagogy, the teacher would typically simply ignore wrong or inappropriate answers offered (seriously) by the students, and revert to giving the right answers herself, or putting her own words into students' mouths - seemingly as the only way she could see of making up for the massive gaps evident in these students' curricular knowledge.

The dictation literacy-pedagogy was, of course, compatible with
students involving themselves in inappropriate activities during class
time. So long as someone was taking notes, that could be borrowed and
written up later, other students could read or daydream as they wished,
or catch up on other notes! Moreover, students often took notes down

inaccurately. In the first place, it seems that much curricular
knowledge was far from their previous experience (as evident in a
student suggesting with full seriousness and sincerity that they shut
the windows to keep germs out). They often had little notion of what
was being spoken about (e.g., in Economics and Science). In addition,
however, they had no apparent idea that claims advanced as
knowledge/information should be checked for accuracy and sense against
recognised authoritative sources. Yet this is an essential aspect of
enacting the appropriate "saying/writing-believing-valuing-doing"
combinations involved in academic-exam literacy specifically, and
academic Discourse generally.
In almost exact contrast, the 5S students would punish the teacher if
she dictated notes at any length. Also, they would challenge her if
they thought her information or point of view might be mistaken. 5S
saw the teacher as just one of the resources available to them for the
purpose of getting the knowledge they needed. Moreover, they knew the
knowledge required for scholastic success (particularly in "prestige"
subjects) goes far beyond merely absorbing and repeating information,
but includes also developing and defending viewpoints via structured
argument, taking detached positions, analysing and synthesising
information from diverse sources and perspectives, displaying flair,
and so on. Consequently, for them hard work involved very different
language and literacy practices from those of 5M. They insisted on
classroom language being a medium of discussion, debate, and the
development and rehearsal of views and positions. They would question,
probe and challenge, and remain on task in this mode.
The 5M students almost universally failed School Certificate, while 5S
passed. This is part of a well known pattern. Moreover, to the extent
that students like those in 5M secure passes in competitive exams at
all, they are very often in low status subject areas. Within prestige
subjects particularly, like English and the sciences, exam success is
tied closely to abilities, attitudes, and dispositions that go far
beyond the mere recall and reproduction of information. Scholastic
achievement draws heavily on discursive practices and associated
language uses which emphasise developing positions and viewpoints by
argument and debate; amassing evidence in support of one's position;
demonstrating flair in arguing a point of view; manipulating and
relating abstract ideas; and assuming detached standpoints when matters
of objectivity or hypothesis arise.
Jones' study provides a clear indication of the range of constructions
of literacies within classroom settings and in the context of studying
school subjects. In understanding the dynamics involved in the social
construction of varying school (subject) literacies it is important to

observe the operation of two competing tendencies: two "moments" in a truly dialectical process. The tendency toward normalising or standardising school subject literacies, represented by state and national syllabi, common examinations and assessment procedures, national statements and profiles, etc., comprises one "moment". In other words, these elements tend toward constituting a standard or "normal" range of reading and writing practices in the name of studying (or "doing") particular school subjects. That is precisely the point of syllabi and common assessment mechanisms: to ensure that as far as possible students are receiving and benefiting equally from an equal education. This tendency is "met" by what might be called the "local" tendency to subvert normalisation or standardisation, inherent in differential teacher worldviews, knowledges, values and commitments, as well as by localised differences present in student backgrounds, community values, parental experience, and so on.

In the case of the divergent subject literacies constructed in the 5M and 5S classrooms respectively, the elements comprising the "local" tendency were very strong. In the first place, the cultural commitments of the Pacific Island groups represented in 5M emphasise

respect for and deference to authority as personified in elders generally and, in particular, elders occupying high status social roles - like teachers. In addition, the 5M teachers exemplified a set of principles and commitments that further exacerbated the tendency toward constructing subject literacies for "low ability" students which feature student dependence on the teacher's words and on a generally passive learning style. These teachers wanted the best for 5M and saw the only means available, given time constraints and examination demands, as "banking" knowledge into students (cf. Freire, 1970). In some cases, the same teachers who played an active role in constructing an active and critical pedagogy and literacy with 5S students were instrumental in constructing an entirely different school subject literacy with 5M students. In so doing, these teachers, together with the other 5M teachers, unwittingly affirmed and reinforced student dependence on "teacher words" and rote learning, and effectively "voted against" the pursuit of literacies marked by understanding, argumentation, abstraction, and taking up positions. 5M teachers and students were very much caught in a logic of being between a rock and a hard place.

The divergent subject literacies constructed and operated within 5S and 5M classrooms respectively reflect and contribute to the ongoing process of creating and legitimating social and cultural stratification among different groups within the one complex society. A growing array of studies point in their own way to the nature and role of different constructions of school literacies as a central medium generating social, political, and economic inequality (cf. Heath, 1983; Gee, 1990, 1993; Edelsky, 1991; Searle, 1984, 1993; Hirshon, 1982; Shor, 1980; Gowen, 1992; Hull, 1993; Delgado-Gaitan, 1990; Delgado-Gaitan & Trueba, 1992; Anderson & Irvine, 1993; Luke, 1988; Green, 1990; Kantor, Green

et al, 1992; Baker & Freebody, 1989).

Two further points need to be made here. The first concerns "success",
or what constitutes "successful practice" of school subject literacies.
The second concerns "educational disadvantage". In many situations
these points become related in classroom practice.

The point about "success" parallels the point just made about the
construction of school subject literacies within a dialectic of
normalising and differentiating tendencies. Within contexts of
objective educational disadvantage, where "failure" rates by official
criteria and standards are high, and where "self-esteem" levels may -
subsequently - be (perceived as being) low, teachers and others
involved in the educational enterprise often frame "success" in terms
they deem appropriate to their own settings. These terms may be very
different from those of "official" statements and measurement schedules
(see Levett & Lankshear 1990 for a detailed account of local
constructions of "success" within a secondary school with a high
proportion of ethnic minority students who were objectively
disadvantaged in educational terms. The local construction of
"success" was very different from "official" views, as embedded in
moderated national examinations). This being so, it is important in a
study like ours to look closely at how "success" is defined and
operationalised - with particular emphasis on teacher constructions.

The matter of educational disadvantage with specific regard to literacy
can, once again, be made most clearly by reference to a distinction
employed by Gee, between primary Discourse and secondary Discourses.

Humans encounter and develop their primary Discourse through
"face-to-face communication with intimates" (Gee, 1990, p.7), or what
sociologists call primary socialisation. Primary Discourse is grounded
in oral language, our primary - first - use of language. Through the
process of enculturation among intimates we learn to "use language,
behaviour, values, and beliefs to give a ... shape to [our] experience"
(Gee 1990). Although each person encounters just one primary
Discourse, primary Discourses and language uses vary across

socio-cultural groups distinguished by race, ethnicity, social class,
and so on. Thus the particular shape given to experience within
primary Discourse varies socio-culturally.

Secondary Discourses are developed "in association with and by having
access to and practice with ... secondary institutions" beyond the
family or primary socialising unit: e.g., schools, churches,
workplaces, clubs, bureaucracies and professional associations (Gee,
1990, p.8). Secondary institutions require us to communicate with
non-intimates in ways and for purposes beyond those of our face-to-face
world.   Secondary uses of language are those developed and employed
within our multiple secondary Discourses.   Secondary uses of language
include classroom talk, filling forms, interviewing, writing letters,
inputting data, running stock inventories, writing policy, translating,
and so on.

One potent source of educational disadvantage which is increasingly

subject to research concerns the mismatch between the primary and
secondary Discourses and discourses of certain groups and individuals
and the "mainstream" or "official" Discourses and discourses of school.
From this perspective it can be argued that 5S have control of the
"official/mainstream" school subject literacies and 5M do not, and that
this is very much a result of different discursive histories operating
across the different social groups in question.

The modes of speaking, writing, and thinking required for successful
practice of school subject literacies defined in "official" terms
generally come easily - or, at least, much more easily - to students
from social groupings represented in 5S than to those in 5M. Growing
evidence from studies across a range of disciplines indicates that the
primary Discourses, cultural capitals, and family resources of students
like those in 5S position them advantageously to master the dominant
literacy of writing exams, and to enjoy maximum opportunities to learn
in classroom settings those "meta level competencies" tested in
scholastic exams (compare Wells, 1985; Emmitt & Pollock, 1991; Gee,
1990, 1991; Nash, 1993).

The underlying factor here is that dominant social and cultural groups
have been able to establish their language, and their knowledge
priorities, learning styles, pedagogical preferences, etc., as the
"official examinable culture" of school. Their notions of important
and useful knowledge, their ways of representing truth, their ways of
arguing and establishing correctness, and their logics, grammars and
language are established as the institutional norms by which academic
and scholastic success is defined and assessed (Luke, 1993; Heath,
1983). This is not necessarily a conscious process, far less a
conspiracy. It is simply what tends to happen, with the result that
the Discourses and discourses of dominant groups become those which
dominate education, and become established as major legitimate routes
to securing social goods (like wealth and status). As a result,
educational success is patterned along distinct lines of prior
discursive experience associated with membership of particular social
groups.

Factors associated with success in the context of disadvantage

A literature search revealed only a small number of studies focussing
on the factors which promote the success of students from disadvantaged
backgrounds. The factors or influences discussed in these studies can
be grouped into three categories: environmental or institutional,
interpersonal and intrapersonal (Van Tassel-Baska (1989).

Environmental or institutional factors
Environmental or institutional factors include the school and the
classroom, the family system and religious affiliation. Durkin (1984)
reviewed the literature related to "schools that work" or are

successful in teaching poor minority children to read and described the

attributes of successful schools as: having strong leaders, good
programs and high expectations of student success. In some schools
support programs based on a deficit model of disadvantage have been
established. Blake (1985) found that support programs in themselves
were insufficient to affect students' chances of success, that rather
"positive environmental qualities" of the institution were vital.
Family systems and religious affiliations were investigated by Ginsburg
and Hanson (1985) in an exploration of the influence of values on the
educational success of disadvantaged students. Values of parents and
students and their peers were considered. The findings were that
belief in personal responsibility for success, religious conviction and
parental involvement and expectations were highly significant factors
influencing success in the face of disadvantage. A main conclusion was
that parental involvement with students and their schooling was
critical and that parents have been an under-utilised resource in
education.

Intrapersonal characteristics
Intrapersonal characteristics were explored by Wells and Schwartz
(1989) in a study of 60 "successful" subjects from disadvantaged
backgrounds. They concluded that paths to success were very varied but
that people from disadvantaged backgrounds shared similar personality
traits and experiences, whereas those from advantaged backgrounds have
more diverse characteristics. In agreement with Ginsburg and Hanson
(1985) Wells and Schwartz reported that the success of subjects from
disadvantaged backgrounds was related to values associated with
personal responsibility for success and religious conviction.
Other intrapersonal influences described in the literature were a high
need for achievement, expectancy of success, determination, a strong
inner sense of self and of how to handle problems, the ability to
postpone gratification and to maintain control over emotions and the
ability to be socially responsive in appropriate ways.

Interpersonal influences
The most significant of interpersonal influences was considered to be
the relationship of parents to the child and to his or her education
(Durkin 1984, Goldberg 1990). In a case study of a highly successful
poor Afro-American, Goldberg reported that the subject believed
strongly that the relationship between school and family was "at the
heart of a poor child's success or lack of it" (p.41). Taylor (1991)
also considered parental involvement in early schooling to be critical,
along with early childhood education, successful early peer
relationships and culturally compatible classrooms. In many cases the
"significant other" in the child's life was not a biological parent but
a member of the extended family, for example a grandparent.
Relatively little research has been done on the influence of teachers
in classrooms. Rist (1970) and Durkin (1984) reported on the influence
of positive teacher expectations on a child's chances of success.
Similarly Pedersen, Faucher and Eaton (1978) claimed from case studies
of three adults that the teacher was more significant for school

achievement and vocational success than such variables as gender, home stability, completeness of family and geographic mobility.

Several writers reject the deficit model of disadvantage and focus on the advantages that disadvantage can provide. Moses (1985) described the "creative manipulation of the environment of disadvantage" and pointed out how many children "achieve a significant sense of accomplishment and fulfilment because of their inventions, which were necessitated by economic need" (p.338). Impoverishment itself can be seen as a motivator, inspiring some to achieve in order to escape its limitations. In addition family relationships are often very strong, with material advantage never having the chance to become a cementing

factor. Family members are valued more for themselves and what they are able to accomplish.

Blake (1985) saw disadvantaged students as bringing new perspectives to traditional academic material and Van Tassel-Baska (1989) cited a study by Csikszentmihalyi and Beattie (1979) which demonstrated that the difference between successful and unsuccessful poor immigrants was "the interpretation they rendered to poverty" (p.23). As also reported by Moses (1985) in the context of education, successful immigrants were highly motivated by their adverse circumstances.

Important influences on the chances of success of students from disadvantaged backgrounds have thus been identified in the literature. The relationship of parents or 'significant others' to the child and their schooling is widely agreed to be the most influential factor and attention is drawn to the lack of use of parents as a resource in education.

This study

In the account that follows we try to accommodate and build upon these theoretical insights, paying special attention to the construction of school subject literacies and notions of "successful practice" within one secondary school. In addition, we address aspects of educational disadvantage, although our inquiry and findings here are strictly limited and merit considerable further development.

During the past two decades literacy scholars, in the US and the UK particularly, have made considerable advances in understanding the disjunctions that occur for many students between the literacies of their homes and communities and those of their classrooms (Delgado-Gaitan, 1990; Edelsky, 1991; Gee, 1990, 1991; Graff, 1979, 1982; Heath, 1982, 1983; Street, 1984). Moreover, the significance of this disjunction for educational underachievement patterned by social class and ethnicity, is becoming increasingly clear (Hunter & Harman, 1979; Lankshear, 1990; Lankshear & Lawler, 1989).

These advances in (mainly) overseas knowledge have generated a sense of urgency among Australian educationists and policymakers about the need to generate good research into home and community literacies, and to harness this research to developing classroom pedagogies and to

improving the preparation of language and literacy educators (Australia's Language, 1991; Christie, 1991). While some large and potentially very important studies of the interface been literacy and educational disadvantage are currently underway in Queensland (e.g., Freebody, in progress), there are important gaps in understanding that need to be addressed by smaller and closely focused studies. These gaps are in two main areas.

Firstly, studies of the school-community literacy interface tend to focus on, at most, two of the three "agencies" involved in the equation: students, parents and teachers. Delgado-Gaitan's important work (1990), for example, emphasises teachers and parents at the expense of the students themselves. Moll's (1992) work leaves the same gap. Heath's landmark ethnography (1983) made teachers aware of home literacies, but failed to make parents/caregivers aware of school literacies. And Meyers' (1992) excellent investigations of the literacies of disadvantaged students leave teachers and parents out of the picture.

Secondly, local research into literacy and disadvantage focuses overwhelmingly on underachievement (Freebody, 1993; Bull and Anstey, 1992). Strong efforts are being made to diagnose "causes" of literacy failure that is patterned by ethnicity, social class, and other variables of disadvantage. Diverse reasons and causes have been advanced for patterned underachievement, ranging from deficit models to theories of structured discrimination. Pedagogical implications intended to mitigate the factors at work in the patterning of

underachievement have been suggested accordingly. Unfortunately, to date there has been no comparable effort to complement this research by addressing cases of school literacy success on the part of objectively disadvantaged students. Given current emphases on investigating higher performers and best practices in other areas - e.g. economic production - in the hope of providing exemplars for others to learn from, it is timely to introduce this focus to the study of literacy and disadvantage.

This study will investigate socio-cultural and pedagogical factors associated with instances of successful practice of school subject literacies at senior secondary levels, within contexts officially designated as "disadvantaged". It differs from previous studies in that it involves case studies of successful school subject literacies using triads consisting of successful students in a variety of subjects, one or more of their primary caregivers and one of their teachers. This papers forms a preliminary analysis of the data. In particular, it aims to consider evidence from the data on some contextual factors related to success, the construction of subject literacy in the various subjects and the practices employed to achieve literacy.

Design

Participants

The school

A large secondary school on the southern outskirts of Brisbane was
selected for this study. This school has a significant ethnic/racial
mix and a high representation of low-socioeconomic students. It is
classified by the State Department of Education as a disadvantaged
school. Two of the investigators had prior contact with the school in
form of research consultancies.

The students, teachers and caregivers

Six teachers from the school volunteered to join the study. They
represented the subjects areas of Catering, Economics, English,
Mathematics, Physics and General Science. Each teacher nominated one
student from their class whom they considered as highly successful in
literacy in their subject area. Students were chosen from Grades 10,
11 and 12. Care was taken in selecting an overall sample with wide
representation of gender and ethnic background. The students were
accepted into the program only after at least one of their primary
caregivers agreed to participate in the project as well. Hence, six
triads were formed consisting of the student, teacher and one of the
caregivers. Table 1 summarises the background information about all
the participants.

Instruments

Interviews

There were four types of interviews used in this study: structured,
semi-structured, and unstructured individual interviews, and
semi-structured group interviews (Cohen & Mannion, 1985). All
interviews were conducted at the school during lunch breaks. Some
parent interviews were conducted outside school. Interviews were audio
taped and later transcribed. In general, interviews lasted
approximately 45 minutes.

Questionnaires

Three questionnaires were used for collecting background information
about the different participants in the triads, one each for students,
teachers, and caregivers respectively.

Diaries

Students were asked to keep a daily journal of any experience they had
that was related to literacy in the subject area. They were provided
with a portable tape recorder and a blank tape for each week of the
study. They were asked to talk into the tape recorder at least once a
day to record comments from parents/guardians, teachers or friends
about performance in the subjects at school, and feelings toward school
work, teachers actions and parents comments. Diaries were collected
weekly and transcribed. Diary entries were often used in unstructured

interviews with students as a starting point for discussion.

Classroom observations
A non-intrusive and non-structured classroom observation was conducted
 in each of the six classes.

Procedures

A letter was sent to the school explaining the aims of the project and
inviting teachers to volunteer. A meeting between the participating
teachers and the research team was then held. In this meeting the
details of the project were discussed. Special attention was given to
the selection of the students for the study. Teachers were asked to
nominate a highly successful student in their subject area. No other
criteria were given. The participating students were nominated by
their teachers and approved by the school principal. Just before the
data collection was organised a meeting of the research team and the
students was held. The aims of the project were discussed and the
requirements for data collection agreed to. This was followed by
individual interviews with each person of the triad. Student diaries
lasted four weeks. Tapes were collected on Friday of every week and
were transcribed forthwith. During the four weeks one classroom
observation was conducted. During the second week a second individual
interview was conducted with each student and in the third week they
participated in a group interview with the researchers. The final
individual interviews with the students were delayed because of exams
and holidays. These were conducted about two months after the end of
the study.

Results
Aspects of motivation

In the group interview, we asked students about the role of ability in
 determining success in a school subject. They all agreed that interest
 and hard work determine success, whereas ability makes the task a
 little easier. We then asked what factors motivate success in a
 subject area. Not all students were motivated by the same drives. For
 example, Brian remembered wanting to be a chef from a very early age.
 His choice of pursuing courses in Catering was, in one sense,
 determined by his interest and desire to get a job in that field. He
 was aware that hard work and motivation contributed to his success in
 Catering. As Brian put it, "everybody can do it if they put their
 heads to it." Renata chose Economics because she has always liked
 social sciences as they allow one to understand the world.   She is
 aware of the need for school subjects for getting ahead in life and is
 keen herself about going to university, but her primary motivation was
 intrinsic interest in Economics. Her secondary goal in life was to

make lots of money. Interestingly she did not make a direct connection
between her choice of subject and this aim in life! A similar pattern
occurred with Scott. He had chosen Mathematics because it is related
to his chosen career in architecture. Scott never talked in terms of
an intrinsic interest in Mathematics. He expressed, rather, that his
strongest motivation for wanting to succeed in Mathematics was due to
the desire for career satisfaction as an architect. His secondary
motivator was to make lots of money (similar to Renata's). Yet he did
not connect the job to the making of money directly. Rather, he viewed
the job as providing enough money to make investments in a franchise in
order to make "lots of money". He was also motivated by the fear of
failure. The feeling of not understanding something left him with a
dread of failing the exam.   Marta's success in English seems also to
have been partly conditioned by her personal interest in it. She also
noted that it would be useful for her chosen field of psychology. She
also tried to relate the subject matter of English to her life and
found that this made her understanding of both much easier. Coming
from a non-English speaking background, she considered learning a
second language as a challenge.   Finally, both Helen and Ann regarded
their science subjects as vehicles for university entry and, hence,
better jobs. Neither really showed any genuine interest in the
subject.

It should be highlighted that the careers these students aspired to
were outside their normal experience. When asked if they knew anyone
in their family who was good in that area, or had encouraged them to do
well, most could only identify their parents and teachers. No one knew
a person in the chosen career. The following exchange with Scott is
indicative:

Interviewer:[Do your parents] encourage you to [go to university]?
Scott:Yes. They want me to go right through. The same with my
[younger] sister. But my sister, ... she does gymnastics. She sort
of, more want to ..... she does not want to have a degree or anything.
I think she just wants to live like a normal person, she reckons ...
like have a normal job and that.
Interviewer:Normal, meaning ...?
Scott:Not having, like, a degree or anything.

This section of interview transcript illustrates how alienated students
were from the world of higher education and professional careers.
This was not the only case of such alienation. In the group interview,
students were asked to imagine what the life of a professional person
in their subject area (eg. a scientist , mathematician or an economist)
would be like.   Ann offered, "a scientist is someone who is always
doing experiments." When asked what it takes to be good at doing
experiments, she replied, "reading instructions." Scott described
mathematics as getting "harder and harder" from high school to
university. He continued, "every couple of years they find something
more that you've got to learn." Marta identified the difference
between a writer and a student of English as "they [writers] build

their character up as they learn new things." In all these comments
there was no attempt to describe professionals as inventers of
knowledge. The agency in knowledge construction was always in the
third person.
Student ideas of success and achievement were usually qualified.
Although achievement was valued, maximising achievement by extending
one's ability was not evident. Often ambition was not at the top of
the list. Marta, for example, was satisfied getting an Overall
Position (OP level) in the top ten. Failing that, she would return the
next semester and try again. Self assessment by these students was
often reserved. Many were surprised and excited that they had been
chosen for the project. They were aware of the selection criteria.

When asked if she received the best marks in the subject, Marta
remarked, "I do not know about the best mark, but I get good marks, at
least". When asked about the theory part of Catering and why some
students found it difficult, Brian observed that, "they are just lazy."
If they did the work they would succeed in it. He attributed his high
achievement in the subject to hard work rather than ability or manner
of understanding. In conclusion, although some students were motivated
to achieve in their subject by their own personal interest, all six saw
education as a pathway to better jobs.
Another aspect of motivation for this group of students was the role
of the home. Five of the six came from two parent families. Ann came
from a single parent family where the father had made an extra effort
to provide a feeling of security and continuity in the family. With
the exception of one triad, they were working class families with an
income of at least $20,000. Most of these parents had left school
before graduating from high school. They often felt inadequate to
provide academic assistance to their children. However, they were all
rather closely involved in the education of their children. All six
students talked about the encouragement and approval their parents gave
them and of parents monitoring their progress. Scott, for example,
indicated that his parents wanted him to do his best. Even in subjects
and or specific exams in which he did not achieve well, they were not
disappointed, if they were satisfied that he had tried his hardest.
Renata discussed her parents checking on her assignments and taking her
to library, but noted, "they do not push!" Marta's parents took
education very seriously. They often discussed her career plans with
her. They broached the possibility of Marta going back to her country
of origin to work. But she said they are not pushy about it. Brian's
mother indicated that, although she was not particularly happy with her
son's choice of a non-traditional male career, she was happy as long as
her children were doing their best in whatever area they chose. Ann's
father left school after Year 9 and had a variety of jobs. He wrote on
the questionnaire, "very early in my working life I realised the
advantages of academic achievement." He has strongly encouraged and
supported his children in their education and it seemed likely that
some of Ann's motivation stemmed from acceptance of her father's

values. In conclusion, although the families of these students
included very few with university education, the parents believed in
and valued education as a vehicle for getting ahead in life.
Interestingly, they did not push it. Even in cases in which they
claimed no knowledge of the subject matter, they kept up-to-date with
their child's performance at school.

Construction of literacy

The data suggest that literacy is constructed differently in the
 different subjects. Furthermore, different sets of students and
 teachers tend to develop this construction along various lines.
Marta's English teacher viewed literacy as involving two components,
 composition and comprehension. A highly literate person in English was
 one who could "compose with very deliberate control over what we might
 call the textual features of a piece of written text." Of similar
 importance was the ability "to comprehend with subtlety and
 sensitivity." This included "the ability to read between the lines,
 so to speak," and "to understand features such as symbolism or
 metaphorical language." Control over textual features involved
 traditional skills such as grammar, spelling, punctuation and so on.
 In the process of writing, the teacher stressed the importance of
 planning. Even from short plans a student could produce a coherent and
 sustained piece of writing. Yet, the teacher also valued the student
 finding her/his own voice as a measure of mature literacy.

 Marta also valued finding her own voice. She valued spontaneity in
  writing and was less bound by conventional criteria than by her own
  will, wishes and desires. Her uncompromising style was carefree and
  creative. Her description of her writing process revealed a clear
  sense of audience. In school work, the audience was the teacher. She
  paid close attention to his view of the genre, as Marta put it, "what
  is to go in and not to go in." She took seriously her teacher's
  comments on her essays. She was conscious of the role of the various
  segments of essays. Hence, with the exception of the stress on
  planning there did not seem to be great incongruence between the
  student and the teacher's views of literacy in English.
 Renata's Economics teacher viewed literacy as involving understand of
  jargon. It involved the use of language to express opinion on the
  subject. Literacy involved the ability to apply academic concepts to
  the real world. Understanding involved higher-order skills such as
  organisation, analysis and synthesis. The teacher valued research
  skills in the acquisition of knowledge. He attempted, in his teaching,
  to stress process along with content.
 For Renata, literacy was the skills one used for clear communication.
  She stressed the importance of accuracy in spelling, grammar and
  punctuation. She attempted to observe the conventions and rules for
  academic work. Tidiness and being logical and systematic in

development of ideas were important. In writing, Renata often was
conscious of her audience. Her audience was an uninformed person who
needed detailed and careful explanation. She stressed the use of
diagrams and graphs where appropriate. Renata's conception of literacy
was at variance with her teacher's in that she did not stress the
higher-order skills of organising, analysis and synthesis.

Brian's Catering teacher saw literacy as manifested in the choice of
more complicated and unfamiliar recipes to carry out and in the
modification of a recipe. A literate person sought new knowledge with
confidence. This was achieved by asking for more explanation from the
teacher or external readings. Language literacy and numeracy were
important prerequisites, but not sufficient, for Catering literacy.
There was a need for visualisation of the final product, not merely
following recipe instructions.

Brian's view of literacy was quite different from the teacher's. To
him, a successful student was one who can do the work that is required
of him. Literally following recipes was the procedure for success.
The motivation was getting good marks. Hence, the game was knowing
what the teacher wanted and trying to achieve it through hard work.
Understanding, according to Brian, was the same as memorising. When
asked about modifying recipes, he said that he had often done that at
home to try it out. If it worked, he would bring it to class. Even if
he did not get good marks, Brian would still be pleased with his
achievement. Hence, while the teacher viewed literacy as being able to
be more creative, Brian interpreted it as the ability to follow recipes
and learn the materials presented.

Scott's teacher interpreted literacy in Mathematics as the ability to
read word problems, understand what they were asking for, and being
able to abstract the mathematical situation out of them. Being good in
a subject was not the same as being literate in it. Literacy in
mathematics involved more than following procedures. It involved being
able to understand them. Mathematical ability involved the application
of procedures and concepts to new situations. Literate students
attempted challenging and novel problems. Scott's teacher
differentiated between numeracy and literacy in mathematics. He used
the term numeracy to denote low-level numerical skills required in
day-to-day living such as calculating percentages and understanding
graphs. While literacy included the ability to be critical about the
meaning of and to provide reasons for mathematical assertions, the
teacher also acknowledged the importance of familiarity with the

standard terminology of mathematics as part of mathematical literacy.
Mathematical symbols were a shorthand system to read and write
mathematics.

Scott also aimed at full understanding. Understanding to him was the
ability of being "able to do it." He was not perfectly clear about
what he meant by understanding. However, he noted a difference between
lower and abstract mathematics. In lower mathematics, "you do it until
you understand it." In higher mathematics "you need to understand it

in order to do it". Higher mathematics was more than simply knowing
which formula to use. Like his teacher, Scott saw understanding as the
ability to use mathematics in novel situations. The role of
demonstrating mathematical assertions was simply to reduce the memory
load of formulas. Similarly, definitions were not as important as
solving problems. Moreover, mathematical knowledge was very
hierarchical. To be successful in higher mathematics, one needed to
have done well in primary school.

Ann's science teacher played down the difference between science
literacy and general literacy. Science literacy involved, "using
language written or spoken in order to receive information, process it
and re-transmit information, the basis of communication." The only
difference was that science used some technical language. This
language was optional to science. He asserts, "I think that science
can be written without using a language of its own...you can just pick
another word out of the English language and not use the one that is
really put aside by science for describing that situation." The
teacher was aware of the unequal access to power that exclusive
scientific language could lead to. This de-stressing of the technical
language of science was intended to increase its accessibility for
students. As examples of using science in everyday life, the teacher
used examples such as understanding how to operate a VCR and
"understanding little bits about the technology bases type accidents."
Science literacy was narrowly defined and did not include the
development of a critical awareness of the nature of science and its
limitations and its role in society.

While Ann described science as, "just a subject that you do at school,"
she also felt it "gives you bits of knowledge about everyday life."
She saw learning science as memorising information, particularly the
meanings of words and she rarely mentioned understanding. The source
of almost all her learning was the textbook, and when this failed, she
sought answers from her father or teacher. She did not value
discussion, saying, "because if you do that, then you're just talking
about, you know you're not learning all the other stuff."   Her view of
science literacy closely reflected that of her teacher. This view was
a narrow one, amounting to a view of science as technical knowledge.
Ann's teacher praised her use of the textbook, attributing her success
to this and her strong motivation. As he put it, "Ann has just
discovered how to use the textbook. She's one of the few people that
has learnt how to teach themselves." He did not appear to provide
students with experiences of extended writing, discussion of science
issues or independent research and gave students few experiences of
science beyond the classroom. It is not surprising that Ann's view of
science was similarly limited.

Helen's Physics teacher saw Physics literacy as requiring a combination
of a "good brain that works" and high motivation. To be truly literate
in Physics meant to be good at mathematics. A literate Physics student
went beyond the teacher's explanations to ask, "what if this happens or
what if that happens." A successful student listened closely to
teacher explanations, and made them his/her own by challenging prior

conceptions and entering into serious classroom discussions with the
teacher. As students and teacher "argued backwards and forwards" the
new concepts become more familiar and began to "belong to the student
as their own intellectual property." One mark of a student that is

recognised as being literate in Physics was for other students to
regularly ask for their help and advice about how to do problems. Only
after attempting understanding from reading the text and trying
problems, did a literate student ask questions of the teacher.
Helen's conception of Physics literacy was that concepts needed to be
understood. This was achieved by two methods, doing experiments and
solving problems. Experiments helped Helen to understand the concepts
explained in the text book and by the teacher. The bottom line for
being literate in Physics was to understand how to solve the problems,
as these were the basis for understanding the concepts of Physics. To
do the problems, required good mathematical skills and knowledge.
Helen's view on being literate in Physics did not differ from her
teacher's.
Do teachers construct their views of subject literacies and practices
according to their perceptions of the type of students they teach? In
this study there was evidence of this in three out of six triads.
Ann's Science teacher tried to minimise his use of the technical
language of science. He became aware of "the narrow vocabulary that
the kids come with" and saw coping with the technical language of
science as perhaps beyond their language capabilities or at least as a
barrier to their understanding of science concepts. Whilst in one
sense he may have been successful in making science more accessible to
them, in another sense he may have limited their access to formal
science that is valued in higher education and science related careers.
 Similarly, Renata's Economics teacher was conscious of the "basic
literacy shortfall" of her students, referring to the students' limited
vocabulary as a barrier to "getting through to the level of analysis".
She has adapted her teaching style to this, using a more "traditional"
approach than she would like to. On the other hand Marta's English
teacher modified his earlier traditional approach to a more progressive
one to meet the needs of his students. He implied that these
progressive practices did not form "good teaching in literature" but
they were more suitable for this school.

Developing literacy

The practices of the students, teachers and parents to develop
literacies varied across students and subject areas. However, it was
possible to identify three types of practices that most students got
involved in, and most teachers identified as relevant, to literacy in
their area. This was not to say that all participants followed similar
practices in developing literacy. Within the general broad categories,
there were significant variations in how that practice was actualised.

Seeking understanding

The teachers and students identified some basic skills such as reading
and writing, knowledge of rules and technical terms as essential
components of literacy that they desired. However, in all cases there
were attempts to go beyond these basic skills, towards understanding.
As discussed above, not all students and their teachers viewed
understanding in the same way. However, in all cases there was an
attempt to develop a deeper knowledge of the area studied.

Scott identified a struggle to reach understanding of the higher more
abstract concepts of Mathematics. His conception of understanding was
not well articulated. However, lack of understanding manifested itself
to Scott as lack of ability to do the more difficult exercises, and led
to severe anxiety. Scott was quite determined to reach this
understanding which he perceived as a prerequisite for getting good
marks. Many of his practices aimed at this. Similar views were
expressed by Helen. Understanding in Physics was measured by the
ability to solve unfamiliar problems. Doing experiments helped Physics
students understand the concepts explained in the book or by the
teacher. Scott dismissed the possibility of doing concrete
demonstrations of mathematical ideas because the equipment was too
expensive.

Brian's work in Catering demonstrated attempts at understanding as
well. To him, understanding was a prerequisite for remembering.
Later, he asserts that remembering and understanding are the same
thing. He noted that he could remember things that were important to
him. This is why motivation was very important in performance.
According to Brian, understanding and remembering in a subject such as
Catering were only achieved through effort and did not depend on
ability or prior learning.

Renata identified seeking understanding as a valuable aim in studying
Economics. She identified certain essential communications skills for
learning economic concepts. However there were situations in which she
could not answer the teacher's questions. This was a sign of lack of
understanding. When this happened Renata acted immediately to improve
her understanding by asking questions and reading more. Economics,
according to Renata, enabled one to understand the social life around
us. Hence, understanding of its concepts was essential.

In discussing her literacy in English, Marta demonstrated a sound
meta-language for her subject literacy. For example, she was aware of
the different components of writing that facilitated effective
communication. She revealed a good understanding of the different
parts of an essay. She was aware of the difference between description
and evaluation. She understood the rules of effective writing, but was
also able to reject them for the sake of creativity.

Ann did not seem to differentiate between understanding and memorising.
Her view of learning was to repeat the content over and over again.
She often asked a sibling to test her on her knowledge. If she used
metacognition at all to aide in memorising that was not clear from the
interviews.

Practices

The students employed a variety of techniques to achieve high results in their subject areas. These variations were due to differences in their aims, interests, confidence, teachers' views and so on. In seeking deeper understanding, most students demonstrated considerable effort. All students were quite conscientious about their school work and motivated to do well. Renata engaged in multiple readings of the material in order to make sense of it. She engaged in practices such as taking notes and summarising. As mentioned above, Ann spent considerable time going over the material "over and over again." Scott attempted to do his homework day by day as soon as he got home, "while the information was fresh in my mind." He was very conscientious about not falling behind in content. Brian was self-motivated to do considerable outside searches for recipes. He attempted to give the teacher a draft of his assignment for comments. To achieve literacy in Physics, Helen felt that she needed to do 2 to 4 hours of homework each week. To prepare for an exam, 3 to 4 hours were necessary. She attempted all assigned homework problems and asked for teacher help the next day if necessary. She believed it was important to listen attentively to teacher explanations and write down good lecture notes. These notes were rewritten neatly into an exercise book each night along with problems to be done as homework. To be literate in Physics, for Helen, meant also doing experiments. This involved several steps: using equipment effectively, collecting good data, analysing and interpreting that data. To be literate at doing experiments, meant that she needed to read the experiment description prior to the experiment and understand what she would be doing. It also meant measuring things properly, recording data neatly and accurately, and drawing correct graphs. Marta often searched for, and employed exemplars of the genre of writing she was engaged in. In her writing Renata made use of quite a variety of drafts to reach the final version. She also used the read-to-self-aloud method of studying to increase understanding. Hence, all students made considerable effort to achieve well in the subject.

At times effort was not deemed to be sufficient. Students did request assistance. Very few students used research to solve their problems. Renata reported the use of multiple resources such as notes, textbooks, magazines, reference books and encyclopedias. Most other students did not hesitate to ask for help. Since most parents were not able to provide assistance, students asked their teachers. All students had a very good relationship with their teachers. Scott requested help from a variety of mathematics and science teachers on the same problem. The multiple views received increased his chances for understanding. Textbooks in some subjects, such as mathematics, were often used by students and teachers as a source of exercises and not for explanation. Scott complained that these textbooks sounded like they "were written in Chinese." Brian and Marta often used the teacher to edit/check the

material to be submitted for assessment.

Quality work
The last group of practices that can be identified are those related to
 thorough and detailed work that these students were able to produce.
 Brian and Scott were described by their teachers as very thorough in
 the conduct of their studies and in the final work produced. Brian
 took great care in structuring his notes and assignments well. He
 usually typed his notes taken in class as soon as he got home. In
 doing his assignments, he used previous marked assignments as a guide.
 He read his assignment sheet very carefully to identify the
 requirements. Similar practices were reported by Renata. Stephen's
 tidy and neat notebook gave the impression that he re-copied all his
 notes at home. Both students were described by their teachers as
 systematic and thorough in their work. Ann was similarly thorough in
 her approach to memorising science. She worked at this consistently
 throughout the semester, making lists of terms and writing extended
 answers to revision questions.
Renata paid attention to tidy presentation and emphasised the
 importance of being well organised. She tried to pretend to be another
 person, reading the material to see if it made sense. She allowed a
 long time for completing assignments.

Conclusions and Discussion

There are several observations that can be made from the above
 analysis. As the study proceeded, the concept of disadvantage turned

 out to be more problematic than first conceived. The school was chosen
 primarily because it was officially designated as disadvantaged. All
 the students rejected this label. They equated disadvantaged with
 having a bad reputation. They believed that their school's bad
 reputation had been created by a past history of severe discipline
 problems. In 1994 such problems no longer existed. Scott asserted,
 "it takes five minutes to ruin someone's name, but to get it back ...
 it takes years." Students were quick to point out the advantages of
 attending their school. They all felt that they had the opportunity to
 learn and succeed without the pressure of professional parents or a
 school hierarchy. This naturally raises the question of the difference
 between officially labelled disadvantage and experienced or perceived
 disadvantage. Moreover, there is the difference between school and
 personal disadvantage. These students came from working class
 families. They did not represent the most economically disadvantaged
 sector of society.
These problems notwithstanding, there was a real sense in which these
 students could be described as disadvantaged. This was in relation to
 their aspirations to achieve academic success and pursue professional
 careers. Student comments made it clear that they were not familiar
 with the demands of university studies or the work of professionals in

their subject areas. Students did not know, nor had much contact, with professionals working in careers related to their school subjects. Their knowledge was restricted to what they did in their school subjects. They imagined professionals as doing similar work, only involving concepts and procedures that were "harder." They had no concept of generating knowledge. This was reinforced by the fact that their teachers did not make direct connections to the kind of work they did in their school courses and the work professionals did in that area. Education, for these students, was a means to get ahead in life and join more privileged groups of society, and not to participate in the culture of their parents and peers.

Construction of school subject literacies varied from one triad to another. This variation was a function of the subject matter, its traditional role in society, and the aims and values of individual students and teachers. Student and teacher views coincided more often than not. In general, school subject literacy was seen as the ability to absorb and regenerate knowledge or as the ability to solve more difficult problems. The general aim of teachers and students was to attain an understanding of the subject matter as well as to be able to follow its procedures. Yet this understanding was short of being a generator of knowledge. Several researchers have conceptualised a differential curriculum as exhibited between elite schools, that stress higher order skills and abstract knowledge, and disadvantaged schools that stress low level skills and routine knowledge (Anyon, 1981; Willis, 1977). This was not evident in this study. This could be because of the working class family background of these particular students. However, even within this group of students, school subject literacy was seen as different from literacy needed by professional scientists, economists, writers and so on. Teachers did not explore such differences in their teaching and students remained ignorant of the implications. Hence, here too, the lack of cultural capital (Bourdieu & Passeron, 1977) is evident.

Practices that students and teachers followed to achieve literacies varied from one triad to another. However, there was a strong tendency for students to accept teachers as the authorities of knowledge and use them as a source of understanding. Few teachers and students used independent research to generate knowledge and understanding. With the inability of parents to assist, most students asked the teacher for help. Arguably, this is part of the self-image of teachers and part of the role that society expects of them. However, this was not balanced by an emphasis on self-reliance as a source of knowledge construction.

Cooper, Atweh, Baturo and Smith (1993) studied the interaction between students and teachers in mathematics classrooms in low and high socioeconomic schools, and found a clear distinction between the amount of self-reliance of students in both schools. In these six case studies there was a definite culture of reliance on the teacher for development of school literacies.

One factor perceived by students and parents as important for

development of high achievement in school was a stable and supportive family setting. All parents valued the educational achievement for their children and were directly involved in the supervision of their work. They all provided a supportive, yet non-pressuring atmosphere for academic achievement. This observation coincides with other studies reported above.

While the factors that motivated the students for success varied form one case to another, all students had a belief in their ability to succeed. They attributed their success to determination and hard work. They all aspired to professional careers and valued school as a vehicle to attain them. They had good relationships with their teachers. From the small sample used in this study, it is not possible to make claims about the role of these factors in generating successful achievement. Yet, these factors coincide with evidence from prior research and commonsense expectations.

Finally, we need to reflect on our practice, and possibly our own literacy, as researchers. We regard this study as a pilot study with the aim of developing instruments and procedures to better understand literacy in the context of disadvantaged. Upon reflection, we conclude that modifications in our research design will result in a greater density of data from which we can make more grounded generalisations about factors leading to success in school achievement within the context of a disadvantaged school. For example, the student diaries could be better structured and utilised to reach deeper understanding of how students develop their subject area literacies. The majority of diary entries were in the form of stating the amount of homework that the students had to do every day. These needed to be discussed in more detail with students in order to obtain data on specific problems they faced and how they dealt with them. Likewise, we were interested in classroom interactions between students and teachers, and observed classes in progress. However, most classes were observed only once. These observations were not discussed with the student or the teachers. We see the observational component as a potentially rich source of data that could help extend our knowledge base of what counts as literacy in various subject areas. Such data could also be better integrated with the other data collected in the study and help develop more reliability in terms of triangulation. Finally, the rush of four continuous weeks visiting the school to collect data and the time lag for transcribing recorded interviews did not always allow for substantial time to share results and obtain reactions from students, teachers, and caregivers. In follow-up studies, we hope to use alternating weeks to allow for transcribing. A longitudinal study is also planned so that we can follow students throughout their two year senior secondary school career.   One focus would be to follow the cycles of how literacy is constructed in the classroom and how the views of the teacher and students conflict and merge over time.

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