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PROJECT WORK AS A VEHICLE FOR INFORMATION LITERACY EDUCATION IN DISADVANTAGED SCHOOLS

An Ethnographic Field Study Of Grade Seven Project Work In A Primary School In Cape Town

by

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Dedicated to:

Mike, Danielle and Ben

- and to Dominic

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ABSTRACT

This is a qualitative interpretive case study of project work (independent enquiry learning, also labeled topic work or theme work) in a disadvantaged South African primary school. The underlying problem was to examine the potential role of project work in the teaching of information literacy in "information poor" environments.

Information literacy is recognised as a crucial outcome in the documentation of Curriculum 2005, the new South African curriculum now being phased in. An *Information Skills Learning Programme* has been developed and placed in the Learning Area *Language, Literacy and Communication*. Moreover, information skills have been a compulsory subject in the Western Cape Education Department's Interim Curriculum since 1995.

Both the WCED interim curriculum and Curriculum 2005 stress continuous formative assessment via projects and portfolios. Information skills are inherent in good project work, which, internationally, is seen as the ideal context for the integrated learning of these skills. However, information literacy education internationally assumes access to a wide variety of learning resources, such as school libraries, which cannot be assumed in South African schools.

The paucity of research within disadvantaged environments as well as the nature of the construct of information literacy explains the choice of methodology - exploratory ethnographic field study. An ex-House of Representatives primary school, within a historically coloured township on the Cape Flats, Cape Town, which regularly undertakes project work, was chosen. The Grade Seven class was selected as Curriculum 2005 was due

to be phased in at that level in 1998. The questions framing the study aimed at finding out how projects were conducted within the school, what resources were used, how teachers managed them, and how information literate teachers were.

Ethnographic participant observation offered the most sensitive instrument to describe, analyse and interpret the social reality of the school with regard to project work and information literacy. The researcher spent the third quarter of 1997 taking part in school activities, observing and recording two Grade Seven projects and other classes and conducting a series of in-depth interviews with learners and teachers - both structured and open-ended. Data gathering and categorisation was an iterative process as strands of meaning were traced.

The study found that much of the project work paid only lip service to the notion of independent enquiry learning. Several gaps were uncovered - for example between what teachers believe and say and what they do. The exploration of these gaps led to its central finding - that teachers' *beliefs* and their *scripts* - which serve to make sense of their world - filter pedagogical concepts as they are introduced into the school.

The study makes recommendations for the implementation of information literacy education in the case study school and others like it. These include assertions as to the kind of teacher education and support needed, the need for reading interventions in the school and the need for a structured approach to the teaching of information literacy. It concludes with a comment on the value of ethnography in exploring the denseness and ambiguity of the social life of the school.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the research study

Information literacy - the skills of information problem solving (American Association of School Librarians, 1995: 20) - is widely accepted as a crucial outcome of education for the global information society of the 21st century when "obtaining and organising information will become the dominant life activity for most people" (Armitage, 1988: 184).

It is a construct that has emerged from the developed world and is recognised in the school curricula of these countries. But there is a growing awareness in South Africa that, if the gap between developed and underdeveloped countries and sectors is not to increase, then access to information and the ability to exploit it has to be provided more equitably. The demands of information technology are the impetus behind the rise of the concept information literacy but it refers to more than the ability to use technology. In his letter prefacing the South African position paper *The Information Society and the Developing World: a South African Perspective* at the Information Society and Development Conference in 1996, Deputy President Thabo Mbeki expresses a common view that physical access to technology has to be accompanied by intellectual skills, saying that: "The ability to use information effectively is now the single most important factor in deciding the competitiveness of countries" (National Information Technology Forum, 1996).

"Access" thus refers both to the availability of physical facilities - such as books, computers and communications networks - and to the intellectual attributes and skills needed to find and exploit relevant information (American Association of School Librarians & Association for

Educational Communications and Technology, 1988: 6).

There has been comment that changes in South African education towards outcomes-based models might indicate a more favourable climate for the kind of lifelong learning implied by the concept information literacy (for example Karlsson, Nassimbeni, & Karelse, 1996: 13). Outcomes-based education emphasises process and skills - what learners can do - rather than rote memorisation of subject content (South Africa. Department of Education, 1997c: 11). It then must imply a move away from transmission modes of teaching towards learner-centred approaches. One such approach, which is often linked to information literacy education, is resource-based learning in which the learner actively constructs his or her own learning through interacting with a variety of information resources. However South African schools lack the facilities assumed in much of the international writing on resource-based learning and information literacy education. A recent national audit of 27864 schools revealed, for example, that 69% have no learning resources apart from textbooks (South Africa. Department of National Education, 1997d). The challenge for information literacy education in South Africa is to design programmes which use the insights of international research but which are feasible within disadvantaged schools.

1.1.1 Curriculum 2005: a new climate for information literacy education

It is true that South Africa's new curriculum, Curriculum 2005, being phased in from 1998, both implicitly and explicitly recognises information literacy. Its ethos, as spelled out in its documentation, values lifelong learning, independent learning, higher-level thinking processes and social responsibility - all characteristic of the learning environment in which information literacy education thrives (American Association of School Librarians & Association for Educational Communications and Technology, 1998). The content and structuring of

Curriculum 2005 make explicit its recognition of information literacy as an essential outcome.

The ability "to collect, analyse, organise and critically evaluate information" is listed as one of the eight "critical cross-field outcomes" (South Africa. Department of Education, 1997a: 16). Moreover, the development of information skills is identified as a "specific outcome" of the learning area Language, Literacy and Communication. This outcome specifies that, "Learners access, process and use information from a variety of sources and situations" (South Africa. Department of Education, 1997b: 23). This learning outcome gives rise to a structured information skills learning programme - clearly based on the *Core Teaching Programme for Information Skills: grade 1 to standard 10,* published by the old Department of National Education in 1994 (South Africa, Department of National Education, 1994). The preamble to the learning area Language, Literacy and Communication lists various "literacies", such as media literacy and computer literacy, needed to make sense of the world (South Africa, Department of Education, 1997b: 25). This perhaps explains the placing of information literacy education within this learning area. The information skills learning programme is envisaged as both a discrete programme and an "across the curriculum" integrated one.

The Western Cape Education Department was one of the few provinces to accept the Department of National Education's *Core Teaching Programme for Information Skills* as a compulsory subject in its interim curriculum in the junior and senior primary phases from 1997. Its *Interim Policy Document for the Senior Primary Phase* (Western Cape Education Department, 1995), still in force, allocates one period a week to information skills. However it also states that information skills should be an "integrated part of a teaching and learning approach in which, for example, continuous assessment plays a fundamental part" (p. 2). Significantly it states that the absence of a school library should not preclude information

literacy education. In pointing out that "information resources can be found among the people and in the environment of any community" (1995: 2), it seems to be following the example of the Namibian *Basic Information Science* programme (Tötemeyer, 1995, 11; Marais, 1996: 56). The Namibian initiative suggests that the thinking processes of information literacy can be developed in under-resourced environments through the use of community resources such as local leaders, clinics, churches, bibles and even textbooks. Eisenberg, one of the leading exponents of information literacy in the United States of America, supports this view. In response to a question about the applicability of the Big Six model (a framework for teaching information skills which has received wide recognition in the United States of America), he replies:

> The Big Six is applicable in any situation and actually, in underresourced situations students still need to solve information problems. You can teach the Big Six to students who must use textbooks and take tests. They still have a need to define the problem, decide on the best information source - textbook, notes, other people - use the information - engage and extract - and organize and present, and evaluate (Eisenberg, 1997).

The shift in South African education to continuous assessment, evident in both national and provincial policy documents, is significant in fostering an environment for information literacy. Curriculum 2005 encourages projects and portfolios of work (South Africa. Department of Education, 1997a: 19). These tasks provide the context for the development of information skills. It is through undertaking real assignments that students gain insight into the information process and learn to apply and generalise skills.

1.1.2 Conceptual analysis of information literacy

There is some debate about the ambiguity and awkwardness of the term information literacy (Snavely & Cooper, 1997: 9) and some doubt over its acceptance outside the field of information science (Behrens, 1994: 320). However at least at school level, there is evidence

of wide recognition among educators, as will be seen in the next section. Bruce offers Doyle's 1992 concise definition of information literacy: "the ability to access, evaluate and use information from a variety of sources" (Bruce, 1995: 68). The value of this definition is that it includes what might be seen as the two faces of information literacy - the subjective intellectual processes and the knowledge of the outer world of information. The construct does have its own knowledge base - the complex networks of the information society - but current thinking puts great emphasis on the cognitive processes of information-handling. This might be attributed to evidence that mere access to the resources of the information age, such as the Internet, does not necessarily lead to more effective learning (Arnold & Jayne, 1998; Johnson & Visser, 1998).

Behrens provides a useful historical analysis of the concept of information literacy in which she shows how definitions have expanded since the late 1970s when it first emerged (1994). The early definitions saw it as retrieval skills - needed to cope with a huge increase in information - caused to a large extent by the rise of new communication technologies. The explosion of technologies of the 1980s brought an heightened awareness that information literacy was not computer literacy. The field of user studies in library and information science threw light on the needs of users of systems. There was awareness of the need to educate people in the use of information in problem solving and decision-making. In addition, there was a growing awareness among librarians that information literacy encompassed more than library skills. The library was only one possible resource and not an especially popular one - as shown in several studies of information users (Kuhlthau, 1988). The adoption of information literacy by librarians in the United States as a primary mission in the late 1980s can be linked to their concern that the current calls for educational reform in the United States were ignoring the role of libraries. Definitions began to emphasise information literacy as process skills needed for

education in the information age. These approaches accepted that traditional library skills courses were ineffective and that information skills needed to be immersed in the curriculum.

The definition most often quoted is that provided by the American Library Association in 1989, which sees information literacy as a set of attributes - knowledge, skills and attitudes:

> To be information literate an individual must recognise when information is needed and have the ability to locate, evaluate and use effectively the information needed. Ultimately information literate people are those who have learned how to learn. They know how to learn because they know how knowledge is organised, how to find information, and how to use information in such a way that others can learn from them, they are people prepared for lifelong learning, because they can always find information needed for any task or decision (American Library Association Presidential Committee on Information Literacy, 1989: 1).

The 1990s have continued to emphasise information literacy as learning - in response to the growing amount of research showing that information literacy involves both expertise in the use of complex information systems and high-level problem-solving skills. Recent perspectives see information literacy as learning how to learn and link it to such concepts as resource-based learning and constructivist learning (American Association of School Librarians & Association for Educational Communications and Technology, 1998). The problem with this approach is that the construct might lose its own identity. As Snavely and Cooper point out, the challenge for proponents of information literacy is the need to convince educators that the construct is more than the old bibliographic instruction and, at the same time, to differentiate it from education and learning in general (1997: 9).

One solution is to see information literacy as a functional literacy needed to cope with the demands of the information society. This view portrays it as an umbrella term, covering other literacies such as, what might be called, "traditional" literacy (the ability to read and write), media literacy, visual literacy and computer literacy. Another solution is to avoid definitions.

Recent writing has followed the example of the American Library Association in preferring to describe key characteristics or attributes of information literate people rather that trying to define such a broad construct. Bruce gives a profile of information literate people as having seven attributes:

1. They engage in independent, self-directed learning
2. They implement information processes - that is, they have mastered general information processes and specific
3. They use a variety of information technologies and systems
4. They have internalised values that promote information use. They value obtaining relevant and new information, for example. They like to know how to exploit systems effectively
5. They have a sound knowledge of the world of information.
6. They approach information critically
7. They have their own personal information styles (Bruce, 1995: 69).

The strength of this approach is that it allows for the complexity of the construct - in that it includes the ability to analyse a need as an information need, the ability to strategise and control the information-seeking process and the ability to make meaning from the information encountered. As will be discussed in the following chapter, research shows that, in information literate people, these abilities are interdependent. As they find, interact with and reflect on information, information literate people adjust their thinking and adapt their strategies (McGregor, 1993).

1.1.3 Information literacy education

Information literacy education or information skills instruction refers to programmes designed to teach information literacy. Terminology varies, with some programmes opting for terms such as "research skills" or "study skills", arguing that these might be better understood by teachers (Tabberer, 1987; Eisenberg & Brown, 1992: 106). Information literacy education is grounded in two areas of research: information-seeking behaviour and information sources and systems. Models have been built of the information-seeking process. The skills it demands as

well as those demanded by information systems have been analysed. The result is remarkably similar learning programmes in the education systems of countries such as the United States of America (If we had information standards, what would they be?, 1994), Australia (Australian School Library Association & Australian Library and Information Association, 1993) and New Zealand (Chalmers & Slyfield, 1993). These programmes agree that students need to learn about the information search process, which involves the following phases or areas of competency:

- defining the information need
- locating and accessing the information to meet the need
- evaluating and selecting it
- using and organising it
- communicating the outcome
- evaluating the information search process and outcome.

The South African *Core Teaching Programme for Information Skills* labels these phases "domains", thus signalling that the information search is not a linear process (South Africa. Department of National Education, 1994). The summary of the attributes of information literacy given above makes it clear that the process demands high-level thinking and problem-solving skills.

1.1.3.1 Integration of information literacy education

A survey of contemporary information skills programmes in countries such as the United States and Australia reveals a two-pronged approach. Detailed learning programmes, which list skills, outcomes and assessment criteria, have been developed. Tabberer points out that the value of these programmes is that they serve as frameworks for curriculum planning (1987: 197).

However, although they formally systematise information skills according to the developmental needs of learners, current thinking is that they need to be integrated into learning across the curriculum.

There seems to be consensus that stand-alone or "separatist" skills courses, like the old South African book education programmes, taught in weekly library classes, are ineffective (Wray, 1985: 10). The skills learned in such a narrow context are not generalised and transferred to other situations (Olën, 1993: 75). Moreover, information skills learning requires "information content" (Olën, 1993: 77). Wray warns, however, that one of the risks in the integrated approach is that many skills will not be taught. There is a need for the skills to be systematically introduced and developed, which implies the need for school-wide planning (1985:11). The literature reveals some questioning of the "received wisdom" that underlies much of the writing about how best to teach information skills. It is agreed that more research is needed (Pratt, 1991; Eisenberg & Brown, 1992; Todd, 1995b).

The belief that information skills should be "integrated" into classroom practice raises questions central to the research study. These questions relate to the capacity of South African schools to undertake such an approach. Much of the writing on information literacy education, even that within South Africa (for example Metcalfe, 1994; Borman, 1995: 3), takes for granted that a prerequisite for such education is access to a wide range of learning resources. Such access allows learner-centred pedagogical approaches such as resource-based-learning. However, classrooms in South Africa are teacher- and textbook-centred (Kallaway, 1990: 235) and access to resources via school libraries cannot be assumed (Overduin and De Wit, 1986; Stopart, 1995; South Africa. Department of Education, 1997d).

The context of most of the research in good practice in information literacy education has been pupils' undertaking research assignments given by classroom and subject teachers. There are suggestions that a solution to the problem of developing information skills in traditional "chalk-and-talk" environments is to use the assignments set by teachers and which have information skills inherent in them (Irving, 1991; Bruce, 1995: 75). The argument is that, even within traditional classrooms, children are expected to undertake so-called independent assignments. Research in the United Kingdom estimates that primary school children spend between 20% to 50% of their week on project work (Long, 1988: 174). No such figures are available for South African schools but project work is commonly undertaken in Cape Town schools - at least in the ex-House of Assembly and ex-House of Representatives schools. Wray argues convincingly that projects provide an ideal vehicle for the development of information literacy:

> Project work would seem to be an ideal context in which this interest and motivation can be harnessed by the teacher for the development of a range of skills. It would also seem to be valuable because it provides a meaningful context in which a variety of skills can be developed and practised. In project work pupils are not being asked to use their information skills simply because the teacher has decided it is good for them, but because it helps them achieve the purpose they themselves have identified, acquiring, manipulating, and presenting information they are interested in. The question has to be raised: where else in the curriculum, apart from some kind of investigative work, can children be given practice in these skills, skills, which it will be argued later, are vital for effective operation in the modern world? (Wray, 1985: 5).

Olën's comprehensive survey of research in the area warns, however, that it cannot be assumed that projects and so-called research assignments develop information literacy (1993: 75). Much depends on the classroom and subject teachers who design them. Avann suggests that an emphasis on products rather than processes means that teachers have failed to define the skills needed for project work (1985: 3).

1.1.4 Project method

Terms such as project work, topic work and thematic work all refer to an approach to learning which actively involves children in the planning, executing, presenting and evaluating of a learning experience (Tann, 1988c: 5). Project-based learning has a long history and is common in all sectors of education. Recent stress on lifelong learning, competencies, and demonstrable outcomes in education systems throughout the world has increased the use of experience-based enquiry approaches such as project- and portfolio-based learning (Henry, 1994: 7).

Kerry and Eggleston's survey of teaching practices for the Schools' Council in the United Kingdom concludes that the project method in primary classrooms has five characteristics:

1 Work is usually interdisciplinary.
2 Active learning is encouraged. There are visits arranged and children learn from a range of reference materials rather than the teacher or textbook telling them what is important.
3 Learning is likely to be in pairs or in groups, rather than in individual or whole class contexts.
4 End-products in the form of presentations or displays are typical.
5 The implicit role for the teacher is that of facilitator rather than instructor (Kerry & Eggleston, 1988: 18).

The roots of topic work lie in the child-centred educational theories of Jean Jacques Rousseau, John Dewey and Jerome Bruner and in views of knowledge that refuse to see it in terms of compartmentalised subjects (Kerry & Eggleston, 1988: 21). The project approach is an approach to learning rather than a classroom technique. It is process-oriented, believing that exploration and active involvement, as learners define and discover their own knowledge, lead to effective learning (Tann, 1988c: 5). Supporters of the method claim that children benefit from working collaboratively on common topics that are of interest to them (Leith, 1981: 55). Projects allow children to learn "how to learn" through tasks which are meaningful to them and thus motivating (Tann, 1988b: 33).

The conviction that projects allow children "to develop their own methods of seeking, organising and recording knowledge" (Leith, 1981: 55) explains their potential for information literacy education. A project is a field of enquiry where information seeking and handling is crucial to the learners' understanding and knowledge (Thomson & Meek, 1986: 98). Kuhlthau's generic model of the information process, developed through longitudinal studies of the information-seeking behaviour of American high-school pupils depicts it in terms of the constructivist learning theories of John Dewey, Jerome Bruner, Lev Vygotsky and George Kelly (1988; 1989b). An information search is a learning process involving a quest for meaning in which searchers move through levels of information need in order to satisfy an area of uncertainty (Kuhlthau, 1988: 258). Other research confirms her analysis of the phases and related skills of the information search process (for example Long, 1988: 169; Todd, 1995a: 26).

The list of curriculum objectives achieved only or mainly by project work, drawn up by the ORACLE project in the United Kingdom in the late 1970s, uncovers the common ground it shares with research in information science. The ORACLE study - a wide-ranging investigation of teaching practices within British schools - identifies 47 learning outcomes, specific to project work (Leith, 1981: 59). They are grouped under the following eight headings:

1 Personal choice of subject
2 Planning of the project
3 Selection of sources relevant to the project
4 Extraction of relevant information from the sources
5 Organisation of information relevant to the project
6 Selection of appropriate ways of expressing information and ideas
7 Self-evaluation of the project
8 Self-motivation to carry out and complete the project in accordance with the plans made.

This analysis of the project process is virtually identical to that of the information search

process by information scientists such as Kuhlthau (1993b), as will be shown in Chapter Two (2.2.3.1). Indeed, much of the current writing on information literacy education echoes this language. The wide-spread recognition in the United Kingdom of the common ground is evidenced by the number of books written on the teaching of information skills via project work (for example Avann, 1985; Wray, 1985). Conversely, comments in several of the books on project work suggest that their authors take for granted that project skills are information skills (for example Kerry & Eggleston, 1988: 37).

Several writers have commented that too little is known about "what children do" when doing projects (Kuhlthau, 1988; Long, 1988: 174; Moore & St George, 1991; Eisenberg and Brown, 1992: 103). Research seems to have been conducted exclusively in what are, by South African standards, advantaged schools in countries such as the United States of America, the United Kingdom, Australia and New Zealand. The research that lies within the tradition of library and information science will be discussed in the following chapter. There are two themes within the educational research literature on project work of interest to information literacy education: the studies of pupils that focus on the skills demanded at the various phases of project work; and the studies of teachers' approaches and attitudes to project work.

Tann's collection of research studies of project work in the United Kingdom is noteworthy since it includes research in both traditions - education and library and information science (1988). Her own study of project work in 40 London classrooms is useful as it results in a framework of seven criteria for the study of project work. These will be returned to in Chapter Three (3.2) and Chapter Four (4.4). The emphasis in much of the research in project work is on identifying the skills it requires. A common finding is that a gap exists between the theory of project work and its classroom implementation. Several studies find that projects often fail to

teach the skills central to their purpose (Tann, 1988c: 12; Olën, 1993: 80). Kerry and Eggleston refer to a perception that project work is nothing more than "fact-grubbing from reference books" (1988: 37). They warn that such perceptions corrupt the underlying philosophy of project work - genuine discovery and building of new knowledge. Teachers have been criticised in several studies - for ignoring the complexity of the tasks involved, for not encouraging problem solving and for not assessing the learning outcomes of project work (Tann, 1988b: 25; Olën, 1993: 80; Kerry & Eggleston, 1994: 192). Wray suggests that these problems have two causes: teachers have not been trained to teach the skills demanded by project work and they, themselves, lack these skills (1985: 4).

Evidence as to the appropriateness of project work for primary school children is relevant to this study as some Cape Town schools begin project work as early as Grade Four. Kuhlthau, quoting Piaget's theories, contends that children younger than twelve are unable to think abstractly, generalise and form hypotheses (1993b: vi). Others (for example Tann, 1988: 10) insist that, if actively engaged, junior primary children are able to undertake such thinking. Galton surveys Vygotskean research (1996: 46) that has shown the value of collaborative group work in providing a kind of cognitive "scaffolding" for the development of children's thinking.

1.2 Research framework: educational change and empowerment

The above discussion makes it clear that information literacy education both assumes and lobbies for a certain kind of education environment - one of "empowerment". Robinson warns against the liturgical and ritualistic use of this term (1994: 12). It is used here to indicate that information literacy education aims at individuals' being in control of their own lives by developing competencies necessary to participate effectively in the social, economic and political realities of the 21st century. In Paulo Freire's terminology, the education implied by

information literacy is liberating rather than domesticating or passivising (Giroux, 1989: 69; Robinson, 1994: 12). It is the antithesis of the "culture of silence" characteristic of the South African schools of the past (Kallaway, 1990; Esau, 1994).

Esau's biographical discussion and description of his action research project in a Cape Town primary school are evidence of the obstacles to change when teachers, however "progressive" they are and however they **intend** to teach, teach as they were taught as children (1994). Changes in education depend not only on what teachers do but also on what they think and assume (Fullan, 1991: 117). There is evidence that educational reforms fail if they do not work with teachers, building on their experience, thinking and their daily working problems (Hargreaves, 1989: 30). The belief that the realities of the worlds within schools are subjectively constructed by the people in them suggests a constructivist and interpretive philosopical framework for this study. This framework is appropriate as current writing shows the construct of information literacy to be constructivist. The survey of research in the next chapter concludes that information is a subjective, constructive process (2.2).

A social constructivist philosophy, which accepts the need to take into account the political and economic contexts and to understand the subjective realities within schools, infuses this dissertation. Methodology and philosophical framework are closely intertwined and so these issues will be taken up again in Chapter Three. And they are returned to often in the course of the analysis and interpretation of the data.

1.3 Research problem

The above discussion serves to give the background to the research study described in this dissertation. It has made four key points, which underlie the problem it sets out to explore:

- Curriculum 2005, both explicitly and implicitly, accepts the need for information literacy education - thus following the example of education systems in countries like the United States of America, the United Kingdom, New Zealand and Australia.
- Curriculum 2005 encourages shifts to project work in all schools.
- Project work internationally is seen as a vehicle for information literacy education.
- There is no guarantee that project work in itself develops information literacy. International research has found, for example, that projects are often in Tann's words "bland and vacuous" (1988c: 12).

There is another point, crucial to the research study. One of the challenges of living in the information society comes from the exposure to large amounts of often-conflicting information, in different formats and from different sources. All definitions of information literacy include a reference to learning how to extract, assess and assimilate information from a "variety of sources". The international empirical studies in the field, which will be discussed in Chapter Two, are undertaken in well-resourced environments, which are able to provide this variety. As mentioned above, it is well-documented that most South African schools are inadequately resourced (South Africa. Department of Education, 1997d). They lack the facilities that are assumed in the education systems of the developed world to be necessary to information literacy education and, indeed, to project work. This explains the need for an exploratory and descriptive study to find out more about how projects are experienced at present in South African schools and what children are learning in doing them. The hope is that the study might, in addition, provide data in which theoretical and explanatory insights can be grounded.

The problem that this research study investigates is the potential role of primary school projects - in which pupils explore topics in open-ended independent assignments - in information

literacy education in a typically disadvantaged South African school. The problem implies an in-depth study of one school but also one with a wide lens - to capture the information milieu within the school as well as the information-seeking and information-handling behaviours of children and teachers as projects are undertaken. The desired outcome is thus insight into what support teachers and pupils need to ensure that project work is an effective vehicle for information literacy.

The word "exploratory" is carefully chosen. It implies that there is a paucity of relevant research. The Namibian *Basic Information Science* programme, referred to above, which Tötemeyer praises as more realistic than the earlier "elitist" Media User Education prevalent in white schools before independence (1995: 11), seems to be based on no empirical work or pilot study. Most of the South African research in the field is of tangential interest as it is library-focused. Zinn's study (1997) is an exception and it is a valuable resource for this study. However, it describes an intervention - a project that she set up and conducted in a Cape Town high school. There is a need for naturalistic research that takes a broad lens to explore the situation within a school and that, though informed by previous research, is open-ended. In exploratory research, flexibility in design is required as problems to be followed up are only revealed in the course of on-site participant observation (Marshall & Rossman, 1995: 79, 105; Hart, 1999: 80).

An in-depth exploratory study often serves to inform wider follow-up and confirmatory studies. The study within one school described in this dissertation did generate a follow-up study of the other 14 schools in its circuit (Hart, 1998). This second-phase more quantitative study, however, does not fall within the parameters of this Masters Degree study, although there are occasional references to it.

1.3.1 Research methodology

The research problem explains the choice of an open-ended qualitative methodology rather than a testing of hypotheses and quantitative measurements. Chapter Three provides a lengthy discussion of the research problem and questions and the methodological issues. It is enough to say here that the study is an ethnographic field study of project work within one class in a primary school on the Cape Flats - Galant Primary School. Participants, the school and its surrounding townships have all been given pseudonyms - in accordance with an undertaking made when access to the school was being negotiated.

Ethnography values the way people interpret and make sense of their worlds (Hitchcock & Hughes, 1989: 28). Teachers' and pupils' perceptions and understandings are part of the reality that the interpretive study of the school tries to understand (Maxwell, 1996: 17). Kuhlthau suggests that qualitative methods can explore the inner cognitive and affective dimensions of information use from the perspective of the information users (1993b: xx). The work of data gathering in the ethnographic study comprised experiencing (watching and listening inside the classroom, the staff room, the offices and corridors), enquiring (interviewing teachers and pupils), and examining (for example the learning materials in use). The literature contains several suggestions that such research is needed. For example, Long (1988: 175) and Eisenberg and Brown (1992) point to the need for case studies of school practice.

1.4 Significance and limitations of the proposed study

The motivation that underpins the exploratory and descriptive study is the need to understand more fully the situation in schools that are going to be embarking on information literacy education in the next few years. The research purpose is significant as it explores the

embedding of information literacy education in existing project work. It hopes that by talking the language of teachers, it will break through the barriers that surround much previous information skills research from within the field of school librarianship.

The timing of the project is significant. The new curriculum is not yet finalised; learning programmes are being developed; textbooks are being written. The *Core Teaching Programme for Information Skills* has been introduced into Western Cape primary schools from 1997 (Western Cape Education Department, 1995). If future information skills programmes are to succeed, they have to gain the understanding and support of subject teachers. This explains the urgent need to research the existing styles of teaching and attitudes of teachers.

The choice of methodology, ethnography, might well be considered significant as South African research in the field of library and information science is dominated by positivism (Dick, 1993). Ethnography, however, has a solid tradition in educational research, as will be shown in Chapter Three.

The exploratory nature of the study is fundamental to it but could also be viewed as one of its limitations. The choice of one site is made necessary by the limited resources of a Masters Degree study. Multi-site case studies would probably have been preferable. The debate over the generalisability of case study findings will be returned to in Chapter Three (3.3.3; 3.4).

It is hoped, however, that this limited study will provide information useful for the design of information skills programmes in the Western Cape, for the planning of in-service training courses for primary school teachers and for the education and training of teacher-librarians at the University of the Western Cape.

1.5 Outline of chapters

The dissertation is structured as follows:

Chapter One sketches the background to the study by exploring the constructs of information literacy, information literacy education and project work. It places the study within a philosophical framework - critical ethnography - and provides the motivation for the study in terms of Curriculum 2005 and international trends.

Chapter Two discusses the educational legitimacy of information literacy by exploring its roots in research in information science and cognitive learning theory. This exploration involves surveying the literature of information literacy with an emphasis on empirical studies.

Chapter Three is devoted to an in-depth discussion of the research methodology and philosophy. This is considered essential as ethnography is unusual in South African research in library and information science. It aims at placing the study within one strand of educational research - classroom ethnography. The discussion serves to lead into the empirical study.

Chapter Four presents the description and preliminary analysis of the ethnographic field study.

Chapter Five gives interpretation. It traces patterns and connections among the data categories and suggests theoretical explanations.

Chapter Six expands on the issue of information literacy. It highlights the findings significant for information literacy education in disadvantaged schools.

The final chapter makes some recommendations for the implementation of information literacy education in South African schools.

CHAPTER TWO

THE EDUCATIONAL LEGITIMACY OF INFORMATION LITERACY EDUCATION

2.1 Introduction

The aim is this chapter is to provide a theoretical framework for the research project by tracing the roots of information literacy in library and information science and by surveying current relevant research within schools. In doing this, it should establish the educational legitimacy of the construct of information literacy. It is after all a construct from outside the traditional boundaries of education and there is still some doubt over how wide its acceptance is outside the field of library and information science (Behrens, 1994; Snavely & Cooper,1997). Yet the successful implementation of information literacy education will depend on educationists' commitment to it. Tribe's survey of the short lives of several schemes of core skills introduced into British schools in the last twenty years serves as a warning to those who promote information skills as merely systems retrieval skills. His paper shows that what he calls "society-driven" (Tribe, 1996: 17) utilitarian skills, promoted by interest groups in industry or business, fail in school systems that value holistic development and critical questioning. Information literacy has to be recognised as more than a set of computer or information retrieval skills if it is make a real impact on the quality of education in South Africa. Kuhlthau (1993b: 14) warns that effective practice must be built on a sound theoretical foundation. The review of research and theory in this chapter is thus necessary for two reasons. Firstly, it forms the theoretical framework for information literacy education, the central focus of the Masters thesis. Secondly, it informs the empirical study of project work within the case study school, described in Chapters Four, Five and Six .

The chapter has three foci. The first explores the legitimacy of the construct of information

literacy by tracing its theoretical roots in information science research. The second examines more closely the work of the American academic, Carol Kuhlthau, which forms a bridge between information science and current approaches to information literacy education. The third surveys existing information literacy research in schools. This survey follows Hopkins's example who, in his survey of English research in 1985, explicitly chooses a particular lens to filter his discussion - namely the user-centred process approach to information literacy (1985: 7). This perspective assumes that information skills are analytic higher level skills, not mere retrieval skills. The choice of this lens means that what Hopkins calls the studies of instrumental aspects of library use are of only "tangential" interest (1985: 7). However, there are some surveys of library use in South African schools (for example Fredericks, 1993) which require closer examination just because some tentative conclusions about information literacy might well be inferred from their findings. Moreover, it has to be stated that the context of many of the cognitive studies of information, chosen for discussion below, is project work being undertaken in the school library. The focus of these studies, however, is on the user of information, rather than on the measurement of the use of the library.

The writing on information literacy has several threads. One comprises reviews and syntheses of the literature. Included here are conceptual analyses of the construct information literacy (for example Behrens, 1994). The second important thread has already been referred to in Chapter One, namely the manuals of practice and practical articles written for librarians and other educators. These are often based on remarkably similar models (for example Marland, 1981; Wray, 1985; American Association of School Librarians & Association for Educational Communications and Technology, 1998). There is comment that much of this writing is based on practical experience, observation and intuition rather than on rigorous research (Eisenberg & Brown, 1992: 104; Todd, 1995a: 25). This chapter concentrates, therefore, on the third thread,

the empirical studies within schools. There are three groups of studies here:

- studies of the information-seeking behaviour of students
- case studies of information literacy education within schools
- studies of teachers' attitudes towards information literacy.

Three American PhD studies by Kuhlthau (1983), McGregor (1993) and Pitts (1994) are highlighted because they are of central importance for information literacy education in that they provide a solid research base for the design of effective interventions and programmes. They extend current research in learning theory into information science, claiming that "much remains to be discovered about the information-handling skills of young people" (Pitts, 1994: 5). The three doctoral studies are qualitative case studies, which give in-depth views of aspects of information literacy. All three defend, in some depth, their choice of qualitative methods, agreeing that they are essential for filling the gaps that quantitative studies leave, for opening problems for exploration and for developing grounded theory. They are better able than quantitative methods to reveal complex cognitive processes and their insistence on natural surroundings allows a more holistic approach (Pitts, 1994: 46). As stated just above, almost all these studies take place within schools with school libraries - indeed discussion of choice of research site frequently specifies the existence of a school library and librarian. As suggested in Chapter One, the research problem posed in this dissertation - centring on information literacy education in disadvantaged schools - explains the need for an exploratory naturalistic approach. Chapter Three will return to this theme.

2.2 Information literacy: theoretical foundations

The previous chapter justified the identification of information literacy as an essential cross-curricular outcome of school education in South Africa, in terms of its being a functional literacy

for the information age. This literacy has been described in Chapter One as a set of attributes, which include knowledge of the complex information systems of the information society and the technical and navigational skills these systems demand (1.1.2). The attributes also imply high-level cognitive problem solving. Henri and Dillon point out that information literacy is more about "thinking, choosing, comparing and presenting information" (1992: 106) than about handling and consulting resources. McGregor's PhD study (1993), to be discussed in more detail below (2.2.3.2), documents the cognitive processes needed by students as they undertake an information search for school projects. She bases her analysis on the widely accepted hierarchy of cognitive processes, first identified in the 1950s by the cognitive psychologist Benjamin Bloom. McGregor's work is situated within the tradition of cognitive information retrieval research and owes much to the groundbreaking work of Carol Kuhlthau. Kuhlthau's work has four strengths in terms of the purposes of this dissertation. It uses theory from both information science and learning psychology; it is grounded in empirical research; it has a holistic approach; and it breaks down the barriers between research conducted in tertiary and secondary education. Current writing on information literacy acknowledges the value of her studies for both theory and professional practice (for example Eisenberg & Brown, 1992: 104; Ingwersen, 1996: 13). Perhaps the most important outcome of her work is the shift towards a process approach to information skills instruction. This insists that information education should develop "transferable cognitive skills that should increase students' effective use of information in general as well as their use of specific libraries and resources" (Eisenberg & Brown, 1992: 104). This is the essential difference between information literacy education and the traditional source-based library instruction as epitomised by the old South African book education and media studies curricula. The ineffectiveness of these old programmes has been commented on (Beswick & Beswick, 1981; Overduin & De Wit, 1987: 178). They perhaps failed because they did not teach what has come to be known as "the information search

process" and the problem-solving strategies it demands. Henri and Dillon express concern, however, that educators and librarians have not yet grasped the shifts in thinking needed for lifelong learning in the information age: 'Our belief is that a notion of information literacy that does not incorporate cognitive skills is both impoverished and misleading" (1992: 108). They go on to analyse information literacy in terms of the concept of critical thinking. They describe this as both a frame of mind and as a number of specific mental operations, including the ability to differentiate between verifiable facts and value claims, detect bias, identify unstated assumptions and recognise fallacies in a line of argument (1992: 109).

There is some debate in education over whether such thinking processes can be taught as generic skills in stand-alone study-skills-type courses (Bruer, 1993: 51). As pointed out in the previous chapter (1.1.3.1), the consensus within information literacy writing seems to be that information skills are best learned within the context of school subjects (for example Tabberer, 1987: 58; Turner, 1991: 14; Eisenberg & Brown, 1992: 105). The implication for information literacy research is that information literacy cannot be studied in isolation. Its attributes can only be revealed and evaluated within the framework of information users seeking and using information in the course of completing school assignments and other learning tasks - in the various subjects across the curriculum. Thus most of the research discussed later in this chapter attempts to analyse aspects of information literacy as students complete essays and projects.

2.2.1 Information as process and effect

An attempt to explore the theory underpinning information literacy cannot avoid the concept "information". It is a concept notoriously difficult to define, having, according to Krikelas, 29 related concepts (1983: 6). Losee claims that each discipline focuses on problems specific to it and so defines information in terms of its own focus (1997). He provides a useful survey of the

various approaches and there is no need to explore them in detail. The intention here is rather to show that the construct of information literacy exists within a philosophical tradition. There seem to be two broad perspectives among the different definitions of information: the view of information as "thing" and the constructivist human-centred view of information as "effect" and "process" (Morris, 1994: 21; Todd, 1995a: 23; Losee, 1997: 257). Information literacy belongs in the second camp. This regards information as a creation of the mind in order to make meaning out of a potentially bewildering vast amount of data. Pitts defines information as something that "transforms" existing knowledge structures by triggering a process of reflection and restructuring. She dismisses the "thing" approach as naive:

> A naive understanding would be that information consists of discrete, separate pieces of data, each of which has little effect on the other. A more expert view would be that information is organized into conceptual frameworks that contain categorized ideas, with the categories interrelated and useful for different purposes (1994: 66).

Wheatley, an organisations expert, links the recognition of the dynamic nature of information to recent scientific research and argues that the view of information as "thing" is false and stultifying:

> The nub of the problem is that we've treated information as a "thing", as an inert entity to disseminate. Things are stable; they have dimensions and volume. You can get your hands around a thing. You can move it, track it, pass it back and forth. ...This "thing" view of information arose from several decades of information theory that treated information as a quantity, as "bits" to be transmitted and received. Information was a commodity to transfer from one place to another. The content, meaning and purpose of information was ignored; they were not part of the theoretical construct (1992: 102).

Fundamental to information literacy is a mind-set that sees problems, decisions and learning in terms of information. This is not a question, however, of "getting the right answer". Kulthau is critical of the slowness of library and information science in grasping the significance of new approaches to information:

> On the whole user studies, which make up the largest single body of research in librarianship, have been constrained by a narrow view of information use. Information is viewed as a thing or product to be given out, the right answer and the right source, rather than for learning and changing constructs (1993b: 3).

Ingwersen agrees that the mainstream of information retrieval research has, indeed, presupposed what he calls "static" information, just because its chief focus has been experimental research in the design of systems (Ingwersen, 1996: 11). However, there is also a user-oriented tradition within information science which understands information as the "result of human interpretation of data sources during communication and information interaction" (Ingwersen, 1996: 13). This tradition studies the cognitive space of information users and their information-seeking behaviour. Although researchers working within this cognitive paradigm use different terminology, a common view of information can be discerned - as pointed out in Dervin and Nilan's review article (1986). This sees information as inseparable from its user. Information fills gaps; it transforms the cognitive structures of its users; it restores conceptual congruity. Information is, thus, what is useful and meaningful to the seeker. The seeker and user of information is viewed as actively constructing meaning and sense in response to his or her needs. Any information processing (whether by the user of information or its originator) is mediated by the processor's world view - the concepts, categories, knowledge structures, schemata built up through experience and education (Ingwersen & Willett, 1995: 161; Ingwersen, 1996: 12).

Already in 1977, Dervin points to the implications of shifts in assumptions about the nature of information. The traditional view of information as "objective" - serving to describe reality and reduce uncertainty and existing independently of human activity - implies a decisioning model of information-processing behaviour. This assumes that people, responding to a state of uncertainty, search a store of information and compare alternatives to make a decision which

then reduces the uncertainty. The cognitive school questions the dominance of this model. Information often leads to increased uncertainty and does not always lead to decision-making. Once, what Dervin calls, "subjective" information is recognised in that information is also ideas, the structures or pictures imputed to reality by people, then attention must be paid to a far wider range of information behaviours. She contends that the true focus of information science is the study of how the individual moves between objective and subjective information (1977). In a later article, Dervin points out that, once the view of information changes from something "out there" to be retrieved to a construct of the user, then the information-seeking process has to be viewed differently. "Seeking" becomes rather "sense-making" (Dervin & Dewdney, 1986: 507). Both Morris (1994) and Todd (1995a) agree that shifts in definition of information must have implications for the design of information systems and for the design of user support and education.

The emphasis in information literacy writing on the cognitive processes of the information user supports Todd's statement that information literacy of necessity belongs to the "information as meaning-making" school (1995a: 24). Current writing on information literacy echoes Wheatley's warning on the dangers of treating information as a commodity, which was quoted just above. There is consensus, for example, that the physical access to vast reserves of information, provided by the Internet, has to be accompanied by education in intellectual and conceptual information skills (for example Kuhlthau, 1996; Arnold & Jayne, 1998; Johnson & Visser, 1998). The definitions of information literacy, given in the previous chapter (1.1.2) show that it is concerned with the meaning and purpose of information. Indeed, as mentioned in the previous section, it is this concern which distinguishes it from librarians' traditional user education or library skills courses (Behrens, 1994: 313). If information is seen as "something", separate from people, then research will focus on its storage, its delivery and on the design of

efficient retrieval systems. The emphasis in user education will be on orientation to and training in these systems and their related technologies. However, if information is, as well, seen as a personal constructive process, the subjective aspect cannot be ignored either in systems design or in user education. As Todd contends, information literacy is "all about": "Understanding where people are at, what their learning needs and goals are, and the cognitive and physical processes by which they can move from their initial state of knowledge to their goal" (1995a: 24).

Information literacy education does include instruction in the use of sources and systems - what Todd calls "the things of information" (1995a: 24). But he insists that effective information literacy education has also to teach the information skills of how to analyse, synthesise, organise, present and evaluate information. Turner calls the emergence of the link between information skills and thinking skills "the most positive and exciting development to date in the profession [of school librarianship]" (1991: 14). Indeed, the literature since the late 1980s reflects these shifts in thinking with new interest in the role of the library and its information resources in learning and in underlying problem-solving processes. The preference in recent literature throughout the world for terms such as "information problem solving" perhaps is evidence of this shift (for example American Association of School Librarians, 1995; Moore, 1998). It seems to indicate a general wish to highlight the high-level cognitive processes implied by information literacy.

2.2.2 Cognitive information science

As mentioned above, the construct of information literacy emerged from research in information science - specifically the branch of that discipline which studies information retrieval. Allen (1991: 3) traces the origins of the cognitive paradigm in information science back to 1977 when,

at the International Workshop on the Cognitive Viewpoint, the conceptual systems of information users were identified as a legitimate focus of information science research. De Mey's paper on the relevance of cognitive psychology to information science is recognised as seminal to the development of the cognitive school (Allen, 1991: 3; Kuhlthau, 1993b: 5). Since then, a solid empirical foundation has been built (Ingwersen, 1996: 4). The consolidation of the cognitive approach is evidenced in the reviews of user studies research in the Annual Review of Information Science and Tehnology in 1986 and 1990. The shift towards cognitive studies, noted in the 1986 review by Dervin and Nilan (1986), is confirmed in Hewins' review four years later (1990: 164). Hewins points out that what had been labelled "alternative" in 1986, by 1990 was in the mainstream of user studies. By 1990, cognitive information retrieval studies, which focus on the information needs and behaviours of individuals, had taken over from the traditional studies of system recall and precision and from the "demographic studies" which attempt to identify the information needs of population subgroups, such as chemists or social scientists (Hewins, 1990: 146).

According to Reneker, the cognitive school differs from traditional information science in six ways:

- Information is seen as subjective not objective. It involves cognitive processes.
- Information users are assumed to be purposive and self-controlling not passive recipients
- Information behaviour is investigated in a range of situations not just in the narrow use of an information system;
- Information retrieval is not isolated from its social contexts
- The significance of the internal cognitions underneath external behaviours is recognised.
- There is a focus on individuals rather than on groups (1993: 489).

In his survey of cognitive research in information science since 1985, Allen finds three main foci: knowledge studies; studies of cognitive processes; and studies of cognitive styles (1991: 6). The knowledge studies support the significance for information seeking of users' knowledge and

cognitive models (called also frames, scripts, schemata and mental representations), of their practical knowledge of the information system, of their awareness of and feelings about the so-called information problem, and of their domain or subject field knowledge. Studies of cognitive processes examine the role of thinking, imagining, remembering and problem solving in the information search. Studies of cognitive styles look at how people's preferences for particular styles of learning, thinking and solving problems affect their use of information systems.

It is worth noting that the kind of research problems posed by the cognitive school lend themselves to inductive qualitative methods rather than the experimental methods of mainstream information science or the large scale demographic surveys of information needs, characteristic of the field of user studies. Much of the research in the cognitive tradition consists of in-depth case studies of relatively small groups of participants. Unstructured narrative accounts and open-ended interviews often provide the data. This approach has perhaps led to the criticism that, despite the large number of research studies which have resulted in large amounts of data, there is still no generally accepted framework of theory. Such theory, it is claimed, should be informing the design of more user-friendly systems and also user education. Reneker (1993) queries the discrepancy between the large amount of research done (over 1000 studies from 1982 to 1992, she calculates) and the lack of real understanding of the processes that drive information seeking and the variables that influence it. She claims that research has done little more than identify the variables relevant in information searching.

Ingwersen suggests that the problem might be rather that so-called mainstream "system-driven" information science "seems to float in splendid isolation" (1996: 13), ignoring the insights provided by cognitive information retrieval research. He contends that the cognitive paradigm

does indeed offer a global theoretical framework. The aim in his article in 1996 is to overcome the "mutual ignorance" (Ingwersen, 1996: 13) between the two traditions by building a model which amalgamates theories from each - although still within a cognitive framework. This model allows for the complex interactions among the three components of a system: the user, what he calls "the information objects" and the IR (information retrieval) system setting. He is at pains to point out that both the IR system setting and the information objects are subject to cognitive acts of information processing - just as information seekers are (Ingwersen, 1996: 9).

The large number of comprehensive models from the cognitive school since the 1970s lends support to Ingwersen's viewpoint.

2.2.3 Research in information-seeking behaviour

Taylor was one of the first to examine more closely the cognitive processes underlying information needs. His seminal study of question negotiation in libraries - developed from inductive qualitative studies of 20 university students - describes the information search as non-linear, adaptive and dynamic (1968: 179). The resulting model depicts a hierarchy of different levels of need which individuals experience in a search for information. People begin with a "visceral" need for information, often unconscious and often only a vague sort of dissatisfaction. This need will change in form, quality and concreteness as information is engaged with. The expression of the need, at first ambiguous and vague, will become more and more focused. Although the search includes many discrete information searches - what he calls "micro-events" - there is an underlying problem-solving and sense-making drive. Taylor's approach - open-ended interviews of a small group of students over a three-week period and in a naturalistic setting - clearly foreshadows the cognitive studies of the 1980s.

The subject of Taylor's model is the information seeker. However later models - typified by the ASK (Anomalous State of Knowledge) model (Belkin, Oddy & Brooks, 1982a; 1982b) - widen Taylor's focus. The ASK model depicts the interaction between the informational content of a wide range of information sources - channelled into a system through people's cognitive processes - and the cognitive processes of the information seeker. The seeker chooses to undertake a search for information out of a sense of gap in knowledge - a lack of congruity. The ASK model sees the information search thus as a drive for congruity. The common view of information as process means that common in all the various models is a refusal to use what Kuhlthau calls a "snapshot" approach to study discrete examples of information searching (1993b: 12). The cognitive school contends that the search process is more complex than the mere receiving of discrete bits of information stored in books, libraries and databases. Its models depict it as a drawn-out process, which evolves over time and which involves adjustments and much rethinking along the way. There is a sequence (not necessarily linear, however) of phases of cognitive behaviours and each calls for different cognitive processes (Allen, 1991: 14). Underlying the various processes and behaviours is what Allen's survey of the various models summarises as a problem-solving activity (1991). The user of information is seen as purposive, in control and looking for meaning to make sense of his or her world. Dervin's series of research studies over 13 years, in which she refines her sense-making conceptual framework, has clearly been influential (Dervin, 1977; Dervin & Dewdney, 1986; Dervin & Nilan, 1986) Information seeking occurs when individuals find themselves unable to progress through a particular situation without forming some kind of new "sense" about something. At one level, this framework seems to argue for the uniqueness of each need and situation; yet there is a belief in a kind of generic and constructivist information process, starting with an information need and proceeding through phases of information-seeking behaviour (Dervin & Dewdney, 1986: 507).

As mentioned above, the cognitive school has been criticised for failing to provide applications for professional practice (Reneker, 1993) - for example, for librarians and information workers whose job it is to provide support and education for information systems users. The insights of information science, it is argued, should be changing the education and practice of reference librarians who act as intermediaries in the information search. User education in schools and universities persists, these critics say, in the old source-based approach (for example Morris, 1994: 21). There is also concern at how little the new approaches have impacted on school and university curricula (Tabberer, 1987: 192).

In recent years, however, there has been a strong movement to integrate the constructivist sense-making school of thought into learning across the curriculum. The construct of information literacy is one outcome of this movement. The pioneer in this area is Carol Kulthau who, since her PhD study in 1983, has undertaken a series of longitudinal studies which build on cognitive information retrieval research but which extend it significantly. Her ISP model, to be discussed in the next section, provides a conceptual framework for information literacy education. Her work explicitly sets out to link theory and practice - and to explore the application of information theory in the school setting. The value of her work is widely acknowledged and warrants a more detailed discussion. Much of the research to be surveyed later in this chapter is grounded in her thinking - as is the research study reported on in this dissertation.

2.2.3.1 Kuhlthau's ISP (Information Search Process) model

Kuhlthau's ISP model evolved out of her doctoral research study of the information-seeking behaviour of 24 high-school students (1983) and the longitudinal study over some years which followed these students into college (1988). She used a variety of qualitative case study methodologies - interviews, content analysis of journals, logs and observations - to delve into the

information seeking process from the seeker's point of view. She subsequently tested the resulting model in extensive confirmatory research with a larger group of high-school students (Kuhlthau, 1989) and with different groups of users in different settings (Kuhltau, 1989b). In addition, several other researchers have confirmed its validity (for example McGregor, 1993; Todd, 1993; Garland, 1995).

Her studies of high school and college students, begun in the early 1980s and continuing over a number of years, explicitly tested the application of information theory to school assignments (1983; 1988; 1989a). She set out to explore in the school environment the notion of information seeking as a sense-making process. Her original group of students consisted of gifted students, chosen on the basis of the quality of past assignments. In her choice of gifted students, she reasoned that analysis of the behaviour of academically successful and articulate students would provide useful insights. Kuhlthau's qualitative methodology was based on the belief that inductive and holistic approaches were appropriate to the study of the cognitive and affective domains in information searching. Thus her reliance on logs and diaries attempted to overcome the difficulties of researching what are hidden mental processes. Her sample in her larger 1989 study was a more diverse range of students and turned to quantitative analysis of questionnaire completed at three key points in school research assignments. It validated her model although she could draw no conclusion about the 40 students identified as low-achievers because of high levels of absenteeism among these students (1989a, 21; 1993b: 57).

The end product of her empirical studies is a complex model of the information search process of students undertaking assignments, essays and projects. The model depicts the information search in terms of six phases and in terms of three domains - feelings, thoughts and actions. The six phases are:

- task initiation
- topic selection
- pre-focus exploration
- focus formulation
- search closure
- evaluation.

The information search process involves a series of choices made through a complex interplay of factors within the three domains. Her interest in how students feel and how these feelings impact on the process is of particular importance. The model confirms the dynamic nature of an information search as a search for "focus" or meaning. It goes through a series of levels of understanding which are not only dependent on the information encountered but also on the individual's perspective, background and knowledge. In keeping with her educational purpose, her model is as much prescriptive as descriptive. It includes successful strategies and actions at each phase - so making explicit her intention that it be used as a framework for the management of and teaching of research assignments.

The particular significance of Kuhlthau's model for information literacy education is its merging of information and learning theory. She is an information scientist working within and accepted by the cognitive paradigm (Ingwersen, 1996: 13). Yet she finds information science inadequate to explain her empirical studies so "borrows" from cognitive learning theorists such as John Dewey, George Kelly, Jerome Bruner and Lev Vygotsky (Kuhlthau, 1993b: 14). The parallels she finds between information science and cognitive constructivist learning theory add resonance to her work and provide the theoretical framework needed by information literacy education.

A glance at constructivist learning texts confirms the common ground. As shown in the following quotations from Brooks and Brooks (1993), the language used by constructivists

echoes that of the writers who see information literacy as learning to "make meaning":

> Traditionally learning has been thought to be a "mimetic" activity, a process that involves students repeating, or miming, newly presented information in reports or on quizzes and tests. Constructivist teaching practices, on the other hand, help learners to internalize and reshape, or transform new information. Transformation occurs through the creation of new understandings that result from the emergence of new cognitive structures (p.15).

> In order to understand, students must search for meaning. In order to search for meaning, students must have the opportunity to form and ask questions (p. 54).

> Analyzing, interpreting, predicting, and synthesizing are mental activities that require students to make connections, delve deeply into texts and contexts, and create new understandings (p. 105).

What led Kuhlthau to turn to cognitive psychology was her finding that all her subjects experienced anxiety and confusion in the early stages of a research assignment until they formulated their own personal focus on the information they were encountering. There seemed to be a critical phase in information seeking in which the searcher constructed personal meaning - an "angle" in the information he or she was engaging with. The finding of a personal focus led to a lessening of the anxiety of the early searching phases and a growing confidence. Once the focus was found - described by her subjects in varying metaphors such as "thread" and "story" (1988) - then the information already encountered was revisited in a more focused way.

In her PhD study, to explain her findings, she turned to personal construct theory developed from the 1950s by the English cognitive psychologist, George Kelly (Kuhlthau, 1983: 76). According to Kelly, personal constructs are built out of a person's experience in order to interpret and anticipate future events. They are like templates placed over information to act as frames of reference in the task of making sense of the world. According to Kelly, reality does not reveal itself directly but is rather subject to a variety of different constructions or alternative interpretations. This does not imply that one construction is as good as another. Different ways

of construing an event are compared in terms of their relative predictive utility. All constructions are continually revised and replaced by more useful ones. Kelly describes five phases of construction:

- confusion and doubt from the new experience
- mounting confusion and threat as inconsistent and apparently incompatible information is encountered
- a tentative hypothesis which gives a direction to follow
- testing and assessing in which the outcome so far is evaluated
- the reconstructing in which the new construct is assimilated (Kuhlthau, 1993b: 21).

What Kulthau found to be the crux of the information search process - the forming of a personal focus - is, in Kelly's terms, the forming of a "hypothesis". This is the turning point, as the resulting sense of personal discovery gives direction to further searching and assimilating. It is, what McQuade calls, "laying claim" to information (1990: 48). The diaries of Kulthau's subjects confirm the sense of a turning point and a surge of confidence. It allows the searcher to move beyond the doubt and uncertainty of the first two phases. This sense of ownership of information is crucial to good learning. Several of Kuhlthau's subjects admitted that, even as they handed in an assignment, they knew that they had failed to come to terms with the topic. Too hasty a "closure" in the search process explains this sense of failure.

Kuhlthau incorporates Kelly's concept of "mood" into her model to explain how uncertainty pushes the process. This is the stance or attitude, which determines the approach to the task or problem (Kuhlthau, 1983: 90). A mood can be habitual to a searcher's way of doing things or a product of the particular phase. Shifts in emotion reveal a distinction between two moods in hypothesis construction - invitational and indicative. The indicative mood is focused, prescriptive and predicts closure. The invitational mood is more open-ended in that the searcher tries out a tentative conclusion but is open to reconstruction later. Kuhlthau's findings reveal the significance of changes in mood as the search proceeds. At the beginning when it is a question

of exploring the broad topic, an invitational mood is appropriate as the searcher considers the topic and comes to terms with information in the field. In the choice of a topic in the next phase, a more indicative mood is needed as it prompts a decision - the choice of a narrower focus. Then as the focus is pursued, a change to invitational mood allows the searcher freedom and flexibility. Keeping the search open and exploratory at the beginning prevents premature closure - a common problem among Kuhlthau's subjects.

The need for insight into the process as a process is clear. Effective information searching requires reflection. The knowledge, for example, that uncertainty and confusion are a natural part of the process might prevent the feelings of inadequacy that many students feel at the beginning of an assignment. These feelings might well stem from the disparity between teachers' and pupils' expectations that information searching is a simple linear process and the complexity of the real experience. Kuhlthau contends that teachers and librarians underestimate this complexity. The initial searching for information is seen as demanding nothing more than mechanistic so-called lower-order skills. One of her central concerns is, moreover, the conflict between the user's natural process of information use and the traditional patterns of information provided by information systems. She contends that traditional systems assume a user who has clearly defined questions, problems and topics. The reality is rather a user in a state of confusion and uncertainty as he or she is confronted with new, unfamiliar information:

> The certainty and order assumption projects the notion that the singular task of information seeking is to gather and collect rather than that of reflecting and interpreting within a constructive process of learning. These models or expectations do not match the actual experience of the user as a learner in the information search process (Kuhlthau, 1996).

Indeed her model throws light on many of the problems reported in other studies. For example, Tabberer's case studies of English school children undertaking assignments uncover the need for far more support at the beginning, when students need to explore a topic until they find a sense

of personal meaning (1987). He found that many of his subjects could not relate information to what they needed. They were thus unable to choose or reject information in a systematic, strategic way. They resorted to wholesale copying from materials just in case it was useful. The end-result was unfocused bland work with no originality. Garland's study of 387 students of all ability levels in a school in Michigan, USA, also uncovered much uncertainty and confusion in the early stages of an assignment (1995). She confirms that, once a focus is found, students do experience a surge of confidence and makes certain recommendations as to how to support students through this phase.

Kuhlthau's model belongs to the sense-making school of information science but aims at more explicitly providing insight to be applied in the support and education of information users - crucial, she believes for education in the 21st century (1989a: 19). Her major contribution has been her use of cognitive psychology to enrich the tradition of information retrieval research. The influence of Kuhlthau with regard to her use of constructivist learning theory is clearly seen in recent writing. As mentioned in the previous chapter, there is widespread recognition that information skills are not special skills requiring special curricula. The most recent policy statement of the American Association for School Librarians contends that information literacy education is fundamentally education in learning:

> Contemporary learning theory describes the student as an active and engaged information user and underscores the importance of students' developing information expertise. Cognitive psychologists define learning itself as the active building of knowledge through dynamic interaction with information and experience. Theorists in the information field contend that the information search process mirrors this description of the learning process: students actively seek to construct meaning from the sources they encounter and to create products that shape and communicate the meaning effectively. Core elements in both learning and information theory thus converge to suggest that developing expertise in accessing, evaluating, and using information is in fact the authentic learning that modern education seeks to promote (American Association for School Librarians & Association for Educational Communications and Technology, 1998: 2).

The outcome of Kulthau's research is new theory, which offers insights for the practice of educators and information professionals. According to Eisenberg and Brown, its value lies in its grounding in "empirically derived models of cognition" and its verification in real settings (1992: 104). Her research has been accompanied by articles and books in which she spells out the implications and applications of her theories for information literacy education (for example 1989a; 1993b; 1994). Information literacy education as a construct can, in a very real sense, thus be seen as an outcome of her work. Her work represents a major contribution to what Moore and St George (1991:161) call the "naive" literature of school librarianship which, as was stated above, traditionally relies on practical experience and anecdotal evidence rather than rigorous research (Eisenberg & Brown, 1992: 104). Since the late 1980s, several researchers have followed her example and have conducted studies within schools investigating aspects of information literacy using the insights of cognitive psychology. These are case studies set within the naturalistic setting of students undertaking projects and use similar data-gathering methodologies.

2.2.3.2 Research in information-seeking behaviour of school pupils

McGregor's PhD study used Kulthau's model as a frame to explore the cognitive processes involved in writing research papers (1993). The end result of her study is another model, which identifies the thinking processes during information use and their interrelationships (1994: 4). Her qualitative study of two classes of Canadian Grade 11 gifted students analysed their information seeking and writing behaviour in terms of the widely accepted taxonomy of learning first identified by Benjamin Bloom in the 1950s. She showed that each of Kuhlthau's phases calls for all levels of Bloom's taxonomy - knowledge, comprehension, application, analysis, synthesis and evaluation. The proviso here is that much depends on the topic or question given. She found that an evaluative or analytical information problem leads to a more focused approach

and high-level thinking. She found, moreover, that the processes were at an intuitive level as students themselves were unaware that searching requires high-level thinking skills. They (and their teachers) associated the information search with so-called "external" skills - the competencies needed for using libraries and computer systems. They saw the later phases of research - the writing up - as involving the more complex internal processes.

McGregor's major contribution is her finding that successful information searching involves thinking for two purposes. She labels these as "external" and "internal" thinking skills (1993: 164). Information literate people need to know **about** information - its sources, systems and value. They need, also, insight into and control of the information search as a process with various phases - each demanding its own specific skills and strategies. In addition they need to know how to use and assimilate the information they find in these systems. The external skills referred to by McGregor are those needed for the information search process and its execution. These include the knowledge of (and skills in using) the complex information sources and systems of the information age and the ability to exploit these in the process of information seeking. The internal thinking skills are those needed to analyse and interpret the information itself. The two thinking strategies are interdependent. The information found and interpreted will affect the on-going search process. And the control of the search process has been found to be crucial to the assimilation of information. Thus information literate people are able to conceptualise and contextualise their information needs and the information they gather as they work their way through the process. Here McGregor's thinking comes close to the concept of metacognition, which was first formulated by cognitive psychologists in the early 1980s. It is "the ability to think about thinking, to be consciously aware of oneself as a problem solver, and to monitor and control one's mental processing" (Bruer, 1993: 67). Cognitive psychologists believe that it is crucial to deep-level learning.

Pitts's PhD study of 26 American high school students working on a marine biology videotape project (1994) was framed by Kulthau's and McGregor's studies, although it eventually took a slightly wider view as new grounded theory emerged. She set out to identify the factors which impact on the decisions students make as they seek and use information in project work. Her central finding is that the learning experience of a project involves a complex interaction of skills and understandings in four areas:

- subject-matter
- life-skills
- information-seeking and use
- production (Pitts, 1994: xii).

Like McGregor, she found that students (and teachers) were not used to thinking **about** the process of information seeking and did not see the links between it and the other areas. She confirmed Kulhthau's findings that establishing the information need is crucial to effective project work (p. 218) and that teachers underestimate the complexity of this early stage. She found a gap between the demands of the task and the understandings of the students. In exploring the gap, her lens widened to interview the teachers and librarian and she found another gap - between the expectations of the teachers and the experience of the students. She found evidence that students' prior knowledge - the personal understandings and mental models they had constructed previously - were significant factors in their choices. Like Kulthau, she looked to the learning theories of the cognitive psychologist Vygotsky to draw conclusions about mediation, "the control and support (provided by an adult or more expert peer) which is gradually withdrawn as a student increasingly masters a given task" (p. 67). Her recommendation is that educators should adopt a more holistic approach in recognising the interaction between the various strands of learning in a research assignment.

There are studies in other countries similar to the three doctoral studies discussed here in their

use of cognitive psychology. Moore and St George's exploratory study of 26 New Zealand Grade Six primary school children (1991) investigated the gaps between the demands of an independent research project and the metacognitive abilities of 11 year old children. Moore and St George used thinking-aloud techniques to gather data, arguing that, with children, this produces more reliable "cognitive-process data" than interviewing. They focused on how the children formulated questions and chose keywords to interrogate the library catalogue once they had been given a topic by their teacher. They found that the children struggled to come to terms with the broadness of the topic given "do a project on birds". They claim that teachers assume too often that pupils have the necessary cognitive skills for the strategising required. Very few of the students were able to "plan, monitor, and regulate cognitive strategies as well as evaluate the information found" (p. 168). Their work thus confirms McGregor's thesis that information literacy involves both thinking about the search process and thinking about the information being found.

Both Moore and St George's and Pitts'studies emphasise the significance of students' existing mental models. Gordon's participant observation study of 15 Grade Seven average-ability students in an international school in Germany took as its premise the cognitive psychologist Ausubel's belief that the most important variable in learning is prior knowledge (Gordon, 1996: 28). Ausubel distinguishes between receptive learning - dominant in the rote learning of the traditional classroom - and meaningful discovery learning in which the learner confronts new information. Deep level meaningful learning is constructed when learners understand new knowledge and are able to add it to their existing knowledge base. Project work can provide the opportunity for this learning as it encourages discovery learning. The project in Gordon's study required the students to write a paper showing how mathematics is used in the real world. Students chose from a list of well-defined topics drawn up by their teacher. Students were, it

was thought, well prepared with preliminary sessions being given by Gordon, the librarian, which aimed at leading the students through the process of a project. Lessons were given on keywords for searching, note-taking techniques, surveys of likely sources and, so on. Despite this support and mediation - and despite the existence of a well-stocked library - there was general confusion: "It was as though the chaos of the shelves demonstrated the state of mental confusion (Gordon, 1996: 29).

Gordon's conclusion - from observation and in-depth interviewing throughout the project - is that her students defined research as "finding the right answer". It was seen as a progression from question to answer and the answer was believed to be on the shelf (1996: 29). Like Moore and St George's subjects, Gordon's pupils could not generate search terms and were unable to link their need to the information they came across in information sources. Gordon describes their situation in terms of Belkin's ASK model, referred to above (2.2.3). They were in an "anomalous state of knowledge", looking for meaning but lacking the knowledge base to articulate a search. Support with vocabulary and keywords did not help as a conceptual network was lacking which might have helped them to recognise useful information and relate it what they knew already. Interviews with the teacher revealed a gap between the lip service paid to the value of discovery learning and the classroom reality where "authoritarian top-down learning" was the norm. The students' confusion and anxiety was the result of their lack of practice in the mode of learning required by project work. They were used to being passive receptors of knowledge. Gordon's observation that some students did make a breakthrough, in which, after a painful process of exploration, they came to terms with their topic through building a personal angle on it, supports Kulthau's ISP model. These students experienced a surge in confidence and were, at the end, positive about the learning experience of the project. The other students were negative with some dismissing it as a waste of time. They preferred, as

Gordon phrases it, the "walled fortress of the classroom" where information is monitored by their teacher (p. 33). It is clear that these students had picked up from their teacher that the project was not "real" learning. Gordon's conclusion is that the disparity between classroom learning and project work parallels the discrepancy between receptive and discovery learning. She contends that children need mediation that explicitly focuses on the differences.

The focus of the research discussed so far is the information-seeking behaviour of pupils. Its aim is to explore the cognitive processes of students as they undertake independent projects. Each study draws from its findings applications and recommendations as to the mediation, support and education needed by students. It has been suggested above (2.2; 2.2.3) that it is from this kind of research that the constructs of information literacy and information literacy education have emerged.

2.3 Research in information literacy education

The studies discussed so far have had a rather narrow focus - the information-seeking behaviour of people in need of information. It has already been suggested that information literacy, as a construct, arose from the recognition that there is a kind of generic information process demanding certain knowledge, skills and attitudes. Information literacy refers to the ability to negotiate and control this process. It involves a set of attributes needed for the global economy of the information age. Information literate people have insight into the information search process and are in control of it. Information literacy education refers to programmes aimed at teaching information literacy.

There is a strand of research that widens the focus of the user studies, discussed already. It recognises that school-wide information factors are critical to fostering information literacy

(Moore, 1998: 2). These are studies of information literacy programmes within schools (though it should be borne in mind that they do not all use this term). Three approaches can be identified in these studies, each with a different purpose:

1 Exploratory descriptive studies of current practices within school. These go into schools with a wide lens looking at project work, teaching styles, use of resources, learning materials, policy statements, and, so on. Some of these hope to find examples of good practice to be used as models.
2 Action research studies or interventions, often rooted in the findings of the first category. These are innovative information literacy projects set up by researchers within schools. They can, in many ways, be seen as in-service training for teachers within the school as they support and monitor teachers as they implement the projects.
3 Evaluative studies of information literacy initiatives.

As will be revealed in the survey that follows, there is a great deal of overlap among these studies. Together, they build a theory base for information literacy education, test theory and improve practice (Todd, 1995a: 25).

In the 1980s and the early 1990s, the British Library supported a series of research studies in the United Kingdom, which examined current approaches to information literacy education. They use varying terminology and operate within different frameworks. Some are more explicitly library focused than others (for example Heather, 1984; Heeks & Kinnell, 1992). Others take a broader view and link information skills to such concepts as study skills, research skills, and resource-based learning (for example Thomson & Meek, 1986; Tabberer, 1987). But they reflect recognition that changes in education, such as the new GCSE, imply a need for information literacy (Pain-Lewins, Kinnell & Stevenson, 1989; Howard, 1991). In their

emphasis on understanding, meaning, and knowledge, there is consensus among these reports that information skills cannot be viewed as mechanistic retrieval skills. The studies aim at identifying and evaluating information skills programmes - with some expressing the hope that analysis of good practice might lead to the spread of such programmes. There is recognition that initiatives which come from library and information science will fail if they do not receive the support of teachers - especially in the United Kingdom where very few schools have qualified librarians (Irving, 1991: 22). The broader lens of these studies means that they include investigations of teachers' behaviours and attitudes and also analysis of the curriculum and teaching materials. They all agree that teachers need education in information literacy. The survey in this section is dominated by these British studies although it includes, as well, studies from the United States of America, Australia, New Zealand and South Africa.

Hopkins' exploration of the integration of information skills into three new Schools Council curriculum initiatives involved fieldwork in several schools, secondary and primary, across the United Kingdom (1985). It aimed at moving beyond anecdotal and personal accounts. The study had three premises: that teachers' attitudes were crucial to information literacy education; that the "enquiry" approach of the new curriculum initiatives implied sophisticated information skills; and that most teachers were familiar with the aims and approaches of project work, since it was a concept widely accepted since the 1960s. The study adopted Marland's model of the information process (1981), which is similar to the ISP model, and viewed information skills as evaluative and intellectual rather than instrumental skills (Hopkins, 1985: 19). Each field study had its own focus. The primary maths field study in seven schools involved the identification of classroom incidents when information handling was problematic. The emphasis in the second and third study was on teachers' perceptions of the place of information skills in two new curriculum projects - in secondary history and primary maths. Overall, their study confirms the

crucial role of information skills in effective learning. It is through "generic information-handling skills that the pupil develops ownership over an area of knowledge specified and sequenced by the curriculum and facilitated by the teacher" (Hopkins, 1985: 91). Hopkins draws two conclusions with regard to pupils: they need a stronger framework if they are to cope with the enquiry-based approach to learning and their writing abilities are lacking. Hopkins suggests that they should have different ways to communicate their achievements. As for the teachers, the study finds, firstly, that they need collaborative networks to support those struggling to change their teaching styles and, secondly, that many teachers have only a superficial understanding of the underlying purpose of the new initiatives. These teachers were concerned with materials and keeping the children busy. The more effective teachers were able to interpret the curriculum more flexibly and modify it as needed. In support of his findings, Hopkins cites Fullan's work in teacher education: "The most fundamental breakthrough occurs when people can cognitively understand the underlying conception and rationale with respect to "why this works better" (Fullan in Hopkins, 1985: 90). Hopkins recommends that new initiatives should be accompanied by supportive in-service training that fosters this type of reflection.

Long's report (1988) on his year-long study of current practice in topic and project work within 34 schools in one Local Education Authority in the United Kingdom echoes Hopkins' point. His data came from observation of children working and talking, from tape recording group discussions and from analysis of the children's research notebooks and their final reports. The year's study included case studies of good practice and also an action research project in which he undertook a project within his own class. The action research was a result of his observation that projects often degenerate into a "rather uncritical quest for information amid a heavy reliance upon limited resources" (Long, 1988: 169). Record keeping was rare in the case study

classrooms, even in the schools that had spent time developing whole-school policies on project work. His premise was that the purpose of project work is to develop skills that should be transferable from one topic to another. The aim in his own action research project was to analyse what skills are needed for project work and to develop a structured way of recording and assessing them. The result is a useful table of skills consisting of four sections: pupil's attitudes, his/her practical/problem solving, reference skills and organisation of material. Each section lists more specific skills and there is room for teachers to record the level of achievement of the pupil (Long, 1988: 181).

Thomson and Meek's case study of project work - seen as an integral part of resource-based learning - at the Margaret Dane Comprehensive School in the United Kingdom is of interest in that it, itself, represents a form of in-service training (1986). It built on an investigation conducted by staff within the school into the needs of their sixth form class who were judged to be struggling to adapt to the independent learning expected at this level. The school felt that the students had not been prepared well for the transition and that "study skills", "skills related to planning and organisation of work, research techniques, use of the library, essay writing, discussion and problem solving needed for independent learning" (Thomson and Meek, 1986: 7) should be integrated into the curriculum in more junior classes. Thomson and Meek were called in to conduct a number of evaluative case studies within the school documenting the attempts of certain teachers to embed information skills instruction in their teaching. Early on, it was recognised that the librarian had a central role to play in the shift to the resource-based learning envisaged - both as a manager of the resources and a mediator in their exploitation. The central finding of the study is that the introduction of a study skills or information skills programme has to make explicit its assumptions about learning. The success of the projects undertaken by the various classes at Margaret Dane School was found to vary tremendously and to depend on the

teaching or learning climate of the classroom. The motivation of students was found to depend on teachers' attitudes. As in Gordon's study discussed above, they lost interest if they sensed that project work was regarded as second-rate learning. Quick and easy access to information resources was also found to be important in maintaining the enthusiasm of the students as well as the personality of the librarian (Thomson & Meek, 1986: 108). The overall conclusion is that teachers cannot simply adjust their teaching styles to resource-based learning. In-depth examination of their pedagogy is required. Their observations lead Meek and Thomson to propose that information skills be defined in terms of "skilled behaviour" in respect of **understanding** as a result of successful interaction with a source of information. The implication is that successful information literacy education cannot be conducted in isolation - skills have to be taught within the context of their operation.

Tabberer's research project, conducted for the National Foundation for Educational Research (NFER) and supported by the British Library, also highlights the role of teachers in information literacy programmes (1987). The collaboration of the two bodies is significant as the study forms part of a series of studies by the NFER into the value of "study skills" programmes. Tabberer points out that a meeting of educationists, called in 1980 by the British Library Research and Development Department and the School's Council, chose the term "information skills" to denote the overlapping concerns in "library and user education, resource management, study skills, educational technology and reading and language development, at all levels of schooling" (Tabberer, 1987: 1). The study had two phases: an enquiry into current practice and the "teacher group" programme (p. 7). The first identified and assessed information skills programmes. It explored a range of practices in the selected schools, primarily through interviews with teachers. There was also some limited observation of formal information skills classes and of the information-seeking behaviour of

pupils. The aims of this first phase were to summarise current practice, give some detailed descriptions, indicate the main problems being experienced and make some recommendations as how to overcome these problems. The second phase was grounded in the first. Here the research team worked with small groups of teachers on special projects within their classrooms. The aim was to support teachers to research their own practices and their own pupils. It was hoped that this might lead to substantive change. On the whole, Tabberer's report supports the findings of the other reports already discussed. He agrees that children find projects difficult and that assignments have to be carefully planned to lead pupils towards coping with independent research projects. He distinguishes between problems to do with classroom management - managing resources and time - and those to do with pedagogy. He suggests that teachers are anxious over a perceived loss of control as their role shifts from director to facilitator. Of particular value in Tabberer's report is the chapter in which he identifies constraints to information skills innovations. He includes the following: teachers' territorialism, lack of time to plan, teachers' attitudes, lack of resources, lack of status of librarians, the school's management approach and ethos, the school's history of innovation, the image and timing of the innovation, lack of skills to carry out the innovation and lack of clarity over what the innovation is (Tabberer, 1987: 143).

Howard follows Tabberer's example in identifying information literacy education as an innovation within the context of the educational changes facing British schooling (1991). The significance of her study for South African information literacy initiatives is its exploration of the place of information skills in the new national curriculum in the United Kingdom. Much of what she says is applicable to Curriculum 2005. For example, she shows how the UK GCSE provides a better climate for information skills education in its assessment methods, its emphasis on skills and its learner-centred approaches. The first step in Howard's study was a nation-wide

survey of Local Education Authorities and GCSE examination boards to find out what provision was being made for information skills instruction. Her explanation for the low response rate reveals some interesting parallels with South African schooling in the late 1990s:

> At the present time LEAs, SLs (School Library Services) and schools are busy grappling with the implications of the national curriculum, Local Management of Schools (LMS), open enrolment and governor involvement (Howard, 1991: 3).

The second step involved case studies or what Howard calls "cameos" of whole-school approaches to information skills. One of the foci of these cameos was the classroom level learning strategies of pupils. The third phase examined examples of school-based in-service education and training in the hope of identifying model programmes.

With regard to the learning needs of students, Howard echoes many of the above findings. For example she, too, finds that students need "clear guidance on how to prepare for and research for assignments, together with explicit marking or assessment criteria" (1991: 82). She recommends, moreover, that students should be encouraged to reflect on their own processes of learning. Her broader findings are that a scheme or model, such as that provided by Marland (1981), gives a useful framework for information literacy education and that it should be introduced at primary school level.

Todd claims that his research in an Australian high school in 1992 provides empirical support for the benefits of the integration of information skills in subject teaching across the curriculum. He has written several papers on his intervention - an information skills programme embedded in a science module (1993; 1995a; 1995b). He worked with the librarian and teachers in one school to compare the academic ability, mastery of science content and skills, and information skills of two groups of Grade Seven students. One was taught collaboratively by the science teacher and the librarian and undertook a series of learning activities designed to teach them the

phases and strategies of the information process. The control group underwent the traditional textbook-based teaching. The pre- and post- testing led Todd to conclude that the experimental group performed better on all three fronts (1995b: 135). His study echoes Kuhlthau's work in its highlighting of the crucial early stages of project work when students need to be able to define their needs and to formulate pertinent questions. Like Gordon, he explores the applications of Ausubel's cognitive theories and suggests a number of strategies, such as brainstorming and concept mapping, to help monitor their current understandings and construct new meanings (1993). As do Henri and Dillon (1992), Todd links information literacy to critical thinking - necessary to formulate the questions which target the information gap and which provide the mental framework for students to clarify, sort, synthesise and interpret information (1993: 91). The value of his research is that it is one of the few projects that explicitly aims at testing what Pratt calls the "conventional wisdom" (1991) that integrated programmes work better than stand-alone study-skills-type courses. Overall, Todd concludes that an integrated and a process approach to information literacy contributes to better learning - of the science content and of information literacy. However he warns that many more studies are needed before a solid knowledge base can be established (Todd, 1995b: 138).

One such study might be Kulthau's in which she reports on a longitudinal study between 1990 and 1993 in a junior high school near New York City (1993a). The qualitative study was grounded in a preliminary survey of schools that had earlier taken part in workshops on information literacy education and that were attempting to implement the process, integrated approach. The survey had found that some of the schools had not succeeded in implementing the programme citing "lack of time, confusion of roles and poorly designed assignments" (Kuhlthau, 1993a: 14). The follow-up case study of one seemingly successful programme aimed at identifying the factors that made it effective. Kuhlthau gathered data from several

overlapping methods - questionnaires, focus interviews, learning materials, interviews with pupils and teachers and completed assignments. Her study identifies ten critical elements for success. Among them are:

- a well-established and well-staffed school library, used to playing an active role in the learning programme
- a team approach to teaching in which staff respect one another's knowledge and competence
- recognition by all concerned that the process approach is different from previous approaches in that information seeking is a creative process rather than a mechanistic exercise
- careful planning of the curriculum units and their learning activities - with on-going support of students throughout the phases of the process
- special emphasis on the early stages of the process to guide students in initiation, exploration and focus formulation
- students' engagement
- mini-lessons taught as need arose rather than planning beforehand extensive, artificial lessons
- collaborative learning environment with "everyone on task" and students of different ability levels working side by side (Kulthau, 1993a: 16).

These factors clearly have to be considered carefully as they imply an environment perhaps not common in South African schools. Zinn's study within a school in Cape Town is therefore of great interest (1997). Her Masters Degree study follows Todd's approach in that one of her aims was to empower her own practice as a teacher-librarian in a disadvantaged ex-House of Representatives high school (1997). She places her study within the paradigm of emancipatory action research, although the site for her study was not her own school. Her study documents her intervention over two months in three projects. The intervention consisted of a series of information skills lessons built into the process of the project work. Zinn took on what would be the role of the librarian in the international studies already discussed - for example Moore and St George's (1991) and Gordon's (1996). She thus designed and ran the intervention - and, in addition, acted as a consultant to the teachers and as the information manager. Her data were gathered from preparatory talks, questionnaires, assessment of pupils' work, diary entries, oral feedback and participant observations. The significance of the study is that it explores

information literacy education in what might be regarded as a disadvantaged high school, lacking the resources of the schools in the international studies. The school did have, however, a library (though under-resourced) and a teacher-librarian (whose role in the intervention is not clear). Zinn concludes that the shortage of resources at a disadvantaged school need not prevent effective information skills instruction within the context of project work - as long as the following four conditions prevail:

- Students have access to a public library.
- There are some information sources at home.
- Teachers are resourceful, exhibiting information literacy traits.
- There is an augmented idea of what constitutes a resource so that it is not limited to books (Zinn, 1997: 207).

It is perhaps surprising that, in this list of provisos, Zinn makes no mention of her own role in the intervention. The existence of a teacher or librarian, a staff member given specific responsibility for information literacy education and the management of learning resources, is often cited as crucial to information literacy education in international studies. Local support for this view is evidenced in Borman's investigation into Western Cape teachers in which he found strong support for the need for teacher-librarians or resource-specialists (1995: 96). Chalmers and Slyfield focus on this issue in their introduction to their report of a major survey of school library services in New Zealand, where only 21% of primary schools have a librarian (1993: 11). They contend that the shortage of school librarians in New Zealand means that pre- and in-service training of teachers has to prioritise information skills, especially as more and more schools are introducing resource-based learning.

Moore's recent report of a government-funded study of four primary schools in New Zealand makes interesting reading especially as Moore is a teacher-trainer, not an information literacy specialist or librarian. Her fundamental premise is that teachers are the key to effective information literacy programmes - especially in primary schools "where libraries are typically

staffed by enthusiastic, but unqualified, people with little time or administrative support for implementing development programmes" (1998: 3). She might include Zinn's four provisos, listed just above, under the heading "supportive information environment" - which Moore agrees is crucial. Moore warns, however, that the need for resources within a school and a community should not be lightly dismissed (1998: 39). Her opening statement is that, although information skills are an essential element of the New Zealand national curriculum, little is known of how teachers interpret this concept and how they implement it in their classrooms. However, the study also accepts that the context within which teachers work cannot be ignored. So one of its main aims was to explore the information climate within each school - defined in terms of:

- recognition of information skills in policy
- procedures and practice
- support in meeting professional development and information needs
- teachers' perception of information and its use in resource-based learning (Moore, 1998: iii).

It is interesting to note how Moore echoes the concerns expressed by the British studies of the 1980s. As they do, she assumes the common ground shared by the construct of information literacy education and those of resource-based learning, enquiry learning, independent learning and lifelong learning. Surveys, interviews and questionnaires were used to explore the information climate within each of the four New Zealand schools. In common with several of the British studies, Moore's study then moved into a second phase - what she calls, "action research" projects aimed at supporting the professional development of the teachers at the schools. Moore's findings with regard to the teachers are remarkably similar to those of the 1980s studies. She found that teachers lacked understanding of the process of information handling and that only a minority of teachers used any kind of framework for the teaching of skills. This finding is surprising since New Zealand's school curriculum has explicitly recognised the importance of these skills since the 1980s (Chalmers & Slyfield, 1993). Moore's

teachers recognised that resource-based learning should develop information skills and also that their pupils were finding such open-ended learning difficult. Yet they did not translate this concern into analysis of the skills needed and coherent planning. The chapter detailing Moore's in-service training workshops is especially useful as it documents "workshop/learning outcome connections" in each school (1998: 35). The teachers learned to apply the Vygotskyean concept of expert scaffolding in their teaching of skills - providing less and less support and teaching them in a variety of settings. (The workshops themselves performed a similar function in the education of the teachers). Much emphasis was placed on the need for teachers to make thinking processes "public" - and the need to plan information problem-solving activities rather than mere information gathering (Moore, 1998: 45). Moore's overall conclusion is that information literacy education embedded in subject teaching does impact positively on classroom learning. However, she warns that her study is limited to four schools and that more studies are needed to evaluate the long-term benefits.

One shift in emphasis that might point to changes since the 1980s is Moore's concern with information technology. She echoes other warnings (American Association of School Librarians & Association for Educational Communications and Technology, 1998; Johnson and Visser, 1998) that the rise of the Internet in the 1990s makes the need for information literacy even more crucial. She expresses concern that, although the teachers in her study showed awareness of the importance of information technology, few ever used it. Perhaps another shift in awareness is revealed in her comments on the specific needs of Maori and Pacific Island children. Here, it is not a question of the quantity of resources in schools - the school with a high proportion of Maori children was the best resourced in her study. It is rather that the culture of these children was not represented in these resources, so impacting, Moore claims, on their intellectual access to information. The gap between their experiences at home and those at

school meant that they struggled to find meaning in their learning materials and to link information, encountered at school, to their prior learning. Another concern arises from her evidence that the teachers at the poorest school in her study were less information literate than the others. She calls for more research, admitting that the smallness of her study does not allow simplistic generalisations. However, Moore concludes her report with a warning that "success in teaching information problem solving is critical to ensuring that an information poor underclass does not develop" (1998: 97).

Moore's study looked at the school-wide context of information literacy education, yet its main conclusion, like that of many of the other studies discussed, is that "staff perceptions seemed to be critical to implementation of information problem solving across the curriculum" (1998: ix). There are a few studies that accept this as a starting premise and focus on teachers' perceptions, believing them to be the key to information literacy education in schools.

2.4 Research in teachers' information literacy

Several of the studies surveyed above have commented that effective information literacy education requires a commitment by teachers to certain kinds of learning, perhaps best summarised by the term "constructivist" (Kuhlthau, 1993b: 11). Within the literature of school librarianship, there are calls for research into the attitudes and beliefs that underlie teachers' behaviours. These perhaps reflect a wish to move beyond measures of use towards research that supports the contribution of library programmes to learning and teaching. For example, Bell and Totten (1992: 84), in their summary of research into teachers' attitudes to school librarians, call for more study into "how teacher personality factors, subject matter specialisation, educational philosophy, and instructional practices employed might affect the relationship of the library media center to the instructional program". This implies a need for qualitative research that goes

beneath the surface of library use and recognises the importance of the subjective meanings that underlie behaviour.

The studies by Phillips (1988) in Australia and Meyer and Newton (1992) in Canada recognise that changing from a teacher-centred textbook approach is a major challenge for most teachers. These studies look at teachers' assumptions about teaching and learning and then at the significance of these for resource-based learning. They, thus, go beyond what teachers do or think is "a good thing". Their small-scale qualitative studies – relying on in-depth semi-structured interviews and observation - are able to probe the "framework of personal constructs... based on his or her knowledge of the world" (Phillips, 1988: 12). They also provide methodological insights to those wishing to explore the receptivity of South African teachers to information education.

Phillips places her study within the research paradigm of phenomenology, which contends that a person's behaviour can only be understood within the frame of his or her personal constructs making up his or her world view (1988: 12). Teaching styles thus reflect the beliefs that teachers hold about learning and about the fundamental aims of education. Phillips claims that successful implementation of information skills programmes depends on exploring "beyond the surface of the curriculum" (p. 14) - that is the implicit beliefs and assumptions of teachers. Her Master of Education study used in-depth interviewing of five high school teachers to explore their use of resources and the library. Her interview data confirms the link between use of resources and beliefs about teaching and learning. One teacher, for example, described his role in project work in the library as helping his pupils find "the right answer". Another said, "It's bad enough trying to get them to understand the basic text". Another, who used the library resources heavily, said, "I cannot get up in front of a class and just dictate to them all the

knowledge".

Meyer and Newton's study took place within four Canadian schools in the same system (1992). Each had a well-stocked resource centre, staffed by a full-time school librarian. Against the backdrop of a new curriculum encouraging a shift to resource-based teaching, their study set out to explore teachers' experiences in introducing new approaches. The study comprised in-depth semistructured interviews with teachers, principals and librarians and participant observation of teachers and pupils working on assignments in the school libraries. The interviews, which explored teachers' beliefs about the innovation, its accompanying materials and teaching methods, were coded to identify patterns. A summary chart or matrix of verbatim statements was created. Of interest were the gaps found between interview data and observation - with some teachers expressing the belief that they were used to resource-based teaching when they clearly lacked a deep understanding of this pedagogy (Meyer & Newton, 1992: 17). The researchers uncovered anxiety among the teachers as they were expected to change with little support from the system. The overall conclusion is that a move from traditional transmission teaching methods to resource-based teaching requires strong leadership, on-going professional development and increased allocation of funds from authorities.

The suggestion in the previous chapter that the culture of teaching prevalent within a school is crucial to the development of a whole school policy on information literacy education has been supported in many of the studies discussed above. Given the context of information literacy research - school librarianship - it can be argued that the studies of teachers' use of resources and libraries should be included in this discussion, especially as many of these studies link use of library to teaching styles and to educational change (for example Daniels, 1982; Heather, 1984; Fredericks, 1993; Job, 1993). It was stated earlier that the library-focused studies that measure,

what Hopkins (1985: 7) calls, "instrumental" use of the school library, fall outside the scope of this discussion. It is difficult to draw conclusions about information literacy from these studies especially as so few teachers in this country have access to school libraries. However, some of the South African studies that fall within this category do hold useful information for this research study, especially those which provide insight into Western Cape teachers' assumptions about learning.

Fredericks' doctoral survey of 21 ex-House of Representatives high schools in Cape Town examines the school library in South Africa within the political and economic context - pointing out that educational policy cannot be isolated from broader issues (1995: 19). Fredericks found that 51% of the teachers in his study claimed to have made no shift in thinking about the school library in the previous five years, when, he claims, the "clamour for change" of the People's Education movement should have opened their eyes to the value of the school library in the provision of empowering education (1993: 277). Borman's larger study, commissioned by the Western Cape Education Department, surveyed 2975 teachers within a sample of 185 schools (though not those working in the ex-Department of Education and Training schools) (1995: 29). It has a broader perspective than Fredericks' study - assessing educators' views on a proposed scheme of teachers' resource centres by identifying their information needs and preferences. Borman sets his investigation within the context of information literacy education and resource-based learning - claiming that communication and information skills are the most valuable assets acquired during a school career (1995: 2). Of significance here is Borman's finding that Western Cape teachers, even when they have access to resources, often do not use them. He speculates that there is a lack of understanding among Western Cape teachers of resource-based and independent learning - and/or a lack of support and training (1995: 52).

Research that evaluates the information skills of student teachers is clearly relevant to this study. Olën's longitudinal studies of the use of media by 603 Gauteng student teachers led her to call for the integration of information skills into teacher-training curricula - especially necessary, she implies, in a country, where three-quarters of trainee teachers have had a disadvantaged school education (1996: 98). Studies in other countries suggest that the problem is not confined to South African teacher training. Both O'Hanlon's study of teacher trainers in Ohio, USA, (1987) and Hallein's brief survey of research in Australian teacher training (1988) found that information skills - defined by O'Hanlon as higher-level critical thinking skills - are neglected. In motivating their study of an investigation into information skills in a training college in the United Kingdom, Best, Abbot and Taylor lend support to Olën's point about the influence of teachers' past experiences:

> Our own experience suggested that the way most teachers teach is strongly influenced by the way they themselves were taught, both at school and at college, and thus by their conception of the way people learn. To help future pupils from drowning we thought it necessary to go upstream to the college and see what sort of swimming lessons their future teachers are getting! (Best, Abbot & Taylor, 1990: 7).

2.5 Conclusion

The aim in this chapter, as stated at its beginning, has been to establish the educational credibility of the construct of information literacy education. Its acceptance in the South African curriculum and its implementation in classrooms cannot depend only on arguments as to international practice and the demands of the global information age. In this chapter, it has been shown to have roots in cognitive information science and cognitive learning theory - and to be crucial to an education of empowerment.

This chapter serves to frame the study within Galant Primary School by exploring current theory and existing research. With the exception of the theses, few of the studies that have been discussed spend much time defending their methodologies. Most adopt a case study approach.

Some warn that the smallness of their sample might limit the generalisability of their findings. However, there is also a belief that small scale but in-depth qualitative studies are necessary to provide rich insights into the problems they research. These assume a naturalistic perspective in their views that truth is context-bound and has multiple manifestations (Pitts, 1994: 86). However the approach in the preceding discussion has been to highlight common concerns and insights, thus supporting Kerry and Eggleston's view of case study that, "the general is held to be inherent in the particular" (1988: 5). Naturalistic case study relies on the informed reader to construct his or her meaning and to apply insights from one study to other contexts. It is through comparing a large number of case studies that a solid knowledge base can be built.

The purpose in the following chapter is to look more closely at the methodological issues and to begin to focus more closely on the empirical study of Galant Primary School.

CHAPTER THREE

RESEARCH FRAMEWORK AND METHODOLOGY

3.1 Theoretical framework

3.1.1 Introduction: implications of research problem for research design

The choice of qualitative approaches in this dissertation is to a large extent dictated by the research problem, which itself was shaped by wide reading of the research into information literacy. The research problem identified in the first chapter, the conceptual analysis in Chapter Two and the survey of existing research that followed, point to the need for an exploratory, qualitative and interpretive study. The literature survey has shown how little research has been undertaken in countries other than the USA and Australia. The research projects discussed were carried out in contexts very different from that of South African schools (less than a third of which have, for example, any sort of school library) (South Africa. Department of Education, 1997d). Moreover the nature of the construct of information literacy means that there is no consensus as to instruments to measure it (Eisenberg & Brown, 1992) - perhaps because its very nature does not lend itself to quantitative measurement. Some of the most interesting studies (for example Kuhlthau, 1993b; McGregor, 1993) focus on the subjective realities and perspectives of information users and find them to be crucial to information literacy. Others (for example Phillips, 1988) uncover the significance of teachers' subjective assumptions and beliefs for information literacy education. Information literacy education is shown in some of these studies to be inextricably intertwined with attitudes towards learning and teaching. The model of information literacy, built in preceding chapters, relies on a constructivist approach to learning and information. It cannot be assumed that teachers, responsible for the implementation of information literacy programmes, share this approach. This points to the need for any exploratory research in South Africa, which might aim at

contributing towards new programmes such as information literacy education, to adopt a qualitative approach. Here it is implied that the value of the qualitative approach lies in its interest in the ways in which people interpret and make sense of their worlds (Hitchcock & Hughes, 1989: 28). As Bradley puts it: "[Qualitative] assumptions posit an empirical reality that is complex, intertwined, best understood as a contextual whole, and inseparable from the individuals - including the researchers - who know that reality (1993: 431).

Qualitative studies offer insights for theory building in that they define issues for further investigation by opening up problems at the early stages of their formulation (Kulthau 1993b: xx). The qualitative approach, by working within naturalistic settings, can bridge gaps between theory and practice (Harvey & Myers, 1995) and suggest new approaches to old problems (Sutton, 1993: 428). Perhaps this is why it has been found to have more impact on policy-makers than other methods (Nassimbeni, 1988: 172). In educational research, it explores the gaps between policy and implementation, between education reform and the means to achieve it and those between what people say and what they do or believe they are doing (LeCompte, Preissle & Tesch, 1993: 197; Atkinson & Hammersley, 1994: 253).

One approach sees qualitative data gathering as a forerunner of wider surveys which gather, it is sometimes implied, "real" quantitative data. Similarly, qualitative data from open-ended questions is often used in survey research to enrich and illustrate findings. This view, perhaps common in post-positivist circles (Guba & Lincoln, 1994: 109), sees qualitative work merely as a data-gathering methodology. Another view sees the qualitative approach rather as a fundamentally different paradigm with a different world view from the positivism it identifies with quantitative methodologies and surveys (Stake, 1980). So-called "pure" constructivism sees lived reality to be constructed by people - and so its main interest lies in

exploring inductively social phenomena that relate to this construction. This understanding calls for different tools from statistical analysis as will be seen below.

The qualitative approach implies research into single cases or a few cases. This stems both from the logistical difficulties (in terms of time, access and expense, for example) in applying its long-term data-gathering techniques and from its fundamental world view. This view claims that in-depth understanding of one case can be as valuable for theory building as more traditional experimental and survey designs. These issues will be returned to below in the discussion of the field study of Galant Primary School as "case study" (3.3.3) and in the discussion of the "validity" of qualitative research (3.4).

3.1.2 Social constructivism and critical ethnography

The introductory section has already suggested that theoretical paradigms, of necessity, inform and guide research in that they influence what kind of research problems are chosen for research and how these problems are investigated. Paradigms are based on assumptions about three fundamental areas: the nature of reality; the relationship between the "knower" and what can be known; and the nature of research enquiry. These three areas are intertwined and interdependent - as beliefs about reality must affect beliefs about knowledge, and vice-versa (Guba & Lincoln, 1994: 108). Thus it is clear that fundamental differences over what is reality and knowledge will affect methods of enquiry and also evaluation criteria.

The study of Galant Primary School is, in Stake's rather daunting terms, a "naturalistic, holistic, ethnographic, phenomenological case study" (1994: 242). It thus blends the following approaches:

- It values subjective interpretation - while also giving objective description.

- It explores the empirical world of the school in its natural on-going character, respecting the "richness, density and ambiguity of social life" (Sutton, 1993: 416).
- It explores how phenomena are viewed from varying perspectives within the culture of the school.
- It aims at an "empathetic representation" (Stake, 1994: 242) of the school.

This approach implies "a participative immersion" (Sutton, 1993: 416) in the environment under study and stems from its philosophical framework - interpretivist constructivism (Schwandt, 1994: 118).

This implies that it aims at understanding the world of lived experience of the chosen school from the point of view of those who live in it. It sees this world within the school to be constructed by its social actors not as an objective reality. Its world view thus differs from that of positivism in which reality is seen as "out there" waiting for scientific methods to describe and define it (Dick, 1993: 55). Whereas positivist research sees participants as products of the external world, constructivists see participants as creating their own realities in an attempt to make their world intelligible to themselves and to others (Dick, 1993: 56). The study of Galant Primary assumes that the teachers and learners at the school have constructed their own meaning out of events and phenomena - through the complex processes of social interaction involving history, language and action (Schwandt, 1994: 118). The task of the study is to describe, analyse and interpret their constructions - in the hope that the insights and knowledge gained might contribute to the development of information literacy programmes in South African schools.

In his survey of what he sees as three methodological approaches in library and information

science, Dick differentiates constructivism from critical theory because it does not aim at "transformation of the world" and because its world view is relativist. (1993: 56). It is true that constructivist research in library and information science concentrates on studies of information user behaviour - aiming at understanding the inner cognitive world of the user (for example Kuhlthau, 1988). The survey of research in Chapters One and Two reveals that there is little attempt to link findings to social criticism. However, consideration of the wider field of qualitative research and qualitative educational research reveals that the divisions are not as distinct as Dick claims (LeCompte & Preissle, 1992; Denzin & Lincoln, 1994). It is possible to be both a constructivist and a supporter of critical social theory as shown in Quantz's summary of the development of critical ethnography (1992: 447). Not all constructivists limit themselves to studies of individual minds and cognitive processes. Schwandt, in his discussion of social constructivism, says: "knowledge is one of the many coordinated activities of individuals and as such is subject to the same processes that characterise any human interaction (eg communication, negotiation, conflict, rhetoric)" (1994: 128). Feminists and neo-Marxists have had, according to Schwandt, an impact on constructivism so that so-called "social constructivism" blends phenomenological interpretive perspectives with critical perspectives, which have concern for the lived reality of participants' lives. Critical ethnography, directly linked to social constructivism, "seeks to illuminate how the distribution of power ... affects society and culture" and to identify "contradictions between actual and perceived conditions of material life" (LeCompte, Preissle & Tesch, 1993: 26).

The social world, constructed by the teachers and learners at Galant Primary School, and the ethnographic account of it, given in this dissertation, have to be interpreted and given meaning within a social and historical context. The lived experience of people takes place

within a social context. This context shapes their understanding of this lived experience (Sutton, 1993: 414). No one, including the researcher, can escape the "bonds of subjectivism and historical embeddedness" (Sutton, 1993: 414). Ethnography that ignores the significance of history - the history of the material and the history of the interpretation - might in Quantz's words "become a romantic display of the exotic lifestyles of the marginal, a voyeuristic travelog through the subcultures of society" (1992: 461). He warns that, without the critical perspective, ethnographic writing, even if claiming to be on the side of "the underdog", does little to address the subordinate status of the study participants. Implied here is the need for researcher reflexivity. The researcher, herself, is situated within a set of social, economic and political relationships - recognition of which is signalled by the use of the personal pronoun "I" in qualitative writing rather than the impersonal "the researcher" (Bassey, 1996: 43). The power of the participant observation of ethnography is that it recognises these relationships - often neglected in the positivistic paradigm (Dick, 1993: 55). This will be returned to below in the discussion of participant observation (3.3.4).

The research problem to be investigated was formulated in Chapter One as an enquiry into information literacy education in "disadvantaged" schools. The term "disadvantaged" signals that the philosophical stance of the research has some roots in critical social theory - theory that has conscious political intentions oriented toward emancipatory and democratic goals (Quantz, 1992: 449). The research project recognises the significance of the South African political economy in, for example, its recognition of the historical inequalities existing in South African schooling. The researcher believes that socio-economic contexts cannot be ignored and is committed to the transformation of schools. These beliefs formed the overarching frame, which became more solid as the field study progressed. The relationship between research paradigm - the assumptions that underlie a research project - and the

research process is subtle. Quantz is critical of researchers who claim to "find" a theory to explain their data (1992: 459). Data, he points out, can never be obtained outside of theory. Like Wolcott (1994), he dismisses the term data "gathering" in favour of terms such as data "production" or "construction" as these latter terms allow for the formative aspects of theory. In saying that data are "constructed" rather than "gathered", Wolcott signals one of the features of the participant observation of ethnography - its recognition that the account itself is a construction. So-called "pure" description is, he says, always "theory laden" (1994:16) as it is filtered through the researcher's own perceptions as to, for example, which data are important and which can be discarded. However, critical ethnographers have been criticised on several counts: for providing the answers before they go into the field; for imposing their constructs on those they study; for failing to ground their theorising about schools in empirical research; and for abandoning rigorous participant observation in favour of condensed fieldwork and unstructured interviews (LeCompte & Preissle, 1992: 852; Atkinson & Hammersley, 1994: 253). As LeCompte, Preissle and Tesch warn, too much preoccupation with philosophical underpinnings can restrict the vision of investigation rather than enhance it (1993: 327).

I thus went into Galant Primary School distrustful of theoretical positioning or what Wolcott himself calls "theoretical posturing" (1992). In the end, however, Quantz's example of how an ethnographer belatedly turned to critical theory as a grounding theory - to give meaning to his data as he wrote his account - proved useful (1992: 458). The value of the perspective of critical social theory in giving meaning to the data from the case study school became clear only towards the end of the field study as I began to interpret the data and analysis I had been accumulating. This will be returned to in Chapters Five and Six where the socially constructed world of Galant Primary School is interpreted and the implications of this

constructed world for information literacy education are explored.

The above discussion explains the tentative choice of the label of *critical ethnography* as the theoretical framework for the study. However, Wolcott's doubts over what he perceives to be the misuse of the word "ethnography" by educational researchers led me to prefer his suggested term "ethnographic field study". He points out that ethnography, with its anthropological origins, to purists must imply cultural interpretations (1992: 28). Both Wolcott (1992: 36) and Stake (1994: 236) point out similar ambiguities in the use of the term "case study". A case study need not imply the naturalistic participant observation of ethnography hence my preference for the term "field study" in later chapters.

3.2 Research questions

As stated in the first chapter, the central problem of the study is:

> *How can project work be used as a vehicle for information literacy in a disadvantaged Cape Town primary school?*

This problem can be broken down into research questions which guided the study:

- *How do pupils in under-resourced primary schools at present experience project work? What is their information-seeking behaviour? What are they learning?*
- *How do teachers in such schools manage project work?*
- *How do teachers perceive project work in relation to the curriculum?*
- *What are their perceptions of information literacy?*
- *Do they possess the attributes of information literacy?*

These questions served to frame the study and were informed by the reading of existing research. Existing research also served to lend some structuring to classroom observation and to interviewing. For example, Tann's list of seven criteria for the study of project work,

already mentioned in the first chapter (1.1.4) and to be returned to in Chapter Four (4.4), framed the observation of the project work (1988b: 21). However, the study of Galant does not serve as a mere step towards a wider study or towards theoretical generalisation. The ethnographic case study approach values the uniqueness of the school. Its key task is to unpack the meanings of the reality constructed within this one school. As Sutton says, "Each setting is unique until shown to be otherwise" (1993: 422).

3.3 Methodology

The theoretical framework of the study, described above, emphasises contextuality, aims at understanding, rather than causally explaining, the lived reality of a socially constructed world, and recognises that there might be "plural" versions of a social reality (Sutton, 1993: 412). This framework, as well as the research problem identified in Chapter One, explains the choice of its ethnographic methodology.

3.3.1 Classroom ethnography

The study leans heavily on the strong tradition of classroom ethnography. Since the 1970s the classroom has been the focus of attention not only of educationists but also of psychologists and sociologists. Burgess identifies three strands of classroom research: systematic observation, stressing quantification; socio-linguistic studies, employing discourse analysis; and ethnography, emphasising participant observation (1985a: 2). Delamont and Hamilton's survey of educational research in the United Kingdom and the United States in the 1970s and 1980s concludes that classroom ethnography "is booming" (1984: 23). LeCompte, Preissle and Tesch's later survey would agree. They point out that educational ethnography fuses methods from a variety of research traditions and that it has described educational settings, evaluated programmes and generated theory (1993: 8).

Delamont and Hamilton (1984) summarise what they perceive to be the advantages of classroom ethnography over systematic observation - in which classroom behaviour is analysed and quantified according to pre-conceived categories. They examine several systematic classroom studies and reviews of these studies and find them wanting. Their critique is a useful introduction to the discussion of ethnography as the weaknesses that they expose highlight the strengths of ethnography. Some of their points are:

- Classroom studies need to be sensitive to context. Social and historical context is crucial in the interpretation of classroom data, yet is often ignored in systematic observation.
- Pre-specified coding systems look only at overt behaviour and ignore the intentions and complex negotiations that underlie classroom behaviour.
- Pre-specified coding captures only what is measurable. Its often crude techniques obscure the very qualitative features it claims to value.
- If codes are pre-specified, it is difficult to generate new insights. Reality is "frozen" and research becomes circular and tautological. Researchers thus find what they expect to find (Delamont & Hamilton, 1984: 10, 14).

While allowing that different research purposes call for different methods, Delamont and Hamilton contrast the closed approach of systematic classroom observation with the open-endedness of the participant observation techniques of ethnography (1984: 18). The mix of long-term observation, structured and unstructured interviewing, together with its holistic approach and refusal to control or eliminate variables, make ethnography a powerful tool for classroom research.

3.3.2 Ethnographic field study

Atkinson and Hammersley, after pointing out that ethnography is to some a philosophical paradigm and to others just a methodology, list four attributes all necessary to ethnography:

- an emphasis on exploring the nature of particular social phenomena rather than setting out to test hypotheses about them
- a tendency to work primarily with "unstructured" data, that is, data that have not been coded at the point of data collection in terms of a closed set of analytic categories
- investigation of a small number of cases, perhaps just one case, in detail
- analysis of data that involves explicit interpretation of the meanings and

> functions of human actions, the product of which mainly takes the form of verbal descriptions and explanations, with quantification and statistical analysis playing a subordinate role at most (Atkinson & Hammersley, 1994: 248).

This last point reveals the theoretical assumptions of the qualitative and interpretive paradigm. As LeCompte, Preissle and Tesch put it, "Ethnography emphasises the discovery of shared beliefs, practices, artefacts, folk knowledge, and behaviors, as well as highlights the social mechanisms that facilitate these processes" (1993: 141). It is this emphasis that makes it appropriate to the research problem of this dissertation

LeCompte, Preissle and Tesch provide a complex analysis of the purpose and value of ethnography in the building of theory (1993: 141). They distinguish three categories of theory: substantive; middle-range or what Burgess (1985a:11) calls "formal" theory; and grand theory. They claim that ethnography is a powerful tool in building the first two categories - substantive and middle-range theory. Substantive theories are interrelated propositions or concepts, that create explanations for the phenomena found in specific populations and settings. Ethnography, they point out, has been a useful tool in developing substantive theory to explain learning and teaching in school settings. Middle-range or formal theory is more abstracted from specific populations and settings in that it addresses general areas of human experience. It depends on comparative studies.

There is some comment that educational field study has not generated in a systematic way enough middle-range theory (Atkinson & Delamont, 1985; LeCompte, Preissle & Tesch, 1993: 135). However, LeCompte, Preissle and Tesch point out that many educational ethnographers use middle-range theory to maintain a conceptual focus throughout the research process, to refine substantive theory and to examine potentially negative cases

(1993: 135).

3.3.3 Ethnography as case study

By definition ethnography is case study (LeCompte, Preissle & Tesch, 1993: 32). Kerry and Eggleston's definition of case study is simple: "Put at its most basic, it consists of an observer sitting in on a situation and describing as accurately and objectively as possible precisely what occurs"(1988: 4).

It has already been pointed out that there are ambiguities in the use of the term "case study" which led to the preference in this study for the term "field study". Stake points out that case study does not necessarily have the qualitative naturalistic connotations intended here (Stake, 1994: 236). A case study, for example, in some research could imply an experimental design.

Many of the studies, reported on in the previous chapter, are case studies of the information-seeking behaviour of small numbers of people within one or a few schools. Section 3.3.1 has already indicated that case study has what Kerry and Eggleston call a "respectable pedigree" in educational research methodology (1988: 4). The qualitative perspective argues that the knowledge gained from the study of a single site can, under certain conditions, be as valuable as, or more valuable than, the study of a large number of cases or subjects. (The arguments both in support of and against this view will be returned to in Section 3.4). The constructivist perspective, explicit and implicit in qualitative writing, lays much emphasis on the role of the reader of case study in constructing meaning from the individual case study and transferring these understandings to other settings. As long as the methods are explained in detail and conceptual frameworks are made clear, then generalisations can be made (Kerry & Eggleston, 1988: 5; Marshall & Rossman, 1995: 147). Paradoxically, the emphasis on the particular and

the unique in ethnography, which leads to the reader building his/her own sense and meaning, can be a more powerful tool in building knowledge than the wide sampling of, for example, survey research. In describing how a reader learns and constructs meaning from the particular case, Stake says: "Generalisation can be an unconscious process. In private and personal ways, ideas are structured, highlighted, subordinated, connected, embedded in contexts, embedded with illustration, laced with flavor and doubt" (1994: 240).

He goes on to say that "people find in certain case reports certain insights into the human condition, even while they are aware of the atypicality of the case" (p. 241). Sutton makes a similar point when he claims that the re-creation of a particular setting in a narrative case study calls upon its reader to reflect on his or her own tacit experience and knowledge (1993: 425).

Delamont and Hamilton, talking specifically of classroom studies, point out that, in the anthropological research tradition, which pioneered field study, the development of generally applicable statements is not a statistical task. They claim that case studies can offer transferable insights that do not depend on statistics:

> Despite their diversity, individual classrooms share many characteristics. Through the detailed study of one particular context it is still possible to clarify relationships, pinpoint critical processes and identify common phenomena. Later, abstracted summaries and general concepts can be formulated, which can, on further investigation, be found to be germane to a wider variety of settings (1984: 19).

Case study builds a view of a particular world within one site but one from which readers in other worlds can learn. Many of the case studies discussed in Chapter Two aimed at improving practice. Innovations were designed based on the insights gained through case study (for example, Moore, 1998). As mentioned earlier, case study has been found to have greater influence on policy than other approaches (Nassimbeni, 1988: 172). Marshall and

Rossman label the strength of case study as "bridge building". As long as the conceptual framework is well developed, case study builds bridges between theories and between practice and theory (1995: 144).

The case study approach - in its intensive study of project work within one class in one school - is crucial to the aims of the research problem of this dissertation, which sets out to explore the construct of project work as a vehicle for information literacy in a context different from that of existing international research. Its purpose is to add to existing research by exploring the climate or culture within a school - regarded as fairly typical of Western Cape schools - and then its implications for information literacy education. This purpose calls for a holistic methodology, which acknowledges the need to explore relationships among the attributes of a case but also the need to retain its unitary nature (Nassimbeni, 1988: 172). The qualitative case study looks at more than just cause/effect relationships; it sees a case as situational and influenced by happenings of many kinds (Stake, 1994: 239). Holistic case study looks at the coincidence of events, "seeing some purposive, some situational, many of them interrelated" (Stake, 1994: 239). Above all, as discussed above, ethnographic fieldwork is interested in the perspectives of the participants and how these are constructed. Its case study methodology rests on the need to understand "complex interactions, tacit processes, and often hidden beliefs and values" (Marshall & Rossman, 1995: 9).

There is some concern in the literature that the large numbers of isolated case studies in educational research have led to a flood of descriptive data with little follow-up formal or middle-range theory development (for example Atkinson & Delamont, 1985: 39; Woods, 1985: 55). This explains the calls for more cumulative, corrective and comparative studies. There is a need for collaboration and the building of data repositories. These would facilitate,

what Woods calls, "phase two" studies which build theory from the descriptive case studies already existing (1985: 60). Atkinson and Delamont criticise the lack of theoretical rigour in many case studies in the field of educational evaluation (1985: 33). They (themselves experts in ethnographic educational research) point to "extravagant" claims made after only seven days' fieldwork. They blame inadequate methods and a lack of methodological self-awareness. They, moreover, criticise Stake's emphasis on the "tacit, the experiential and the private" (Atkinson & Delamont, 1985: 41) in the arguments which he made in 1980 for the concept of "naturalistic generalisation" in case study work (Stake, 1980). They argue that the point of case study is to investigate and then illustrate and display "formal concepts" or "generic problems" (Atkinson & Delamont, 1985: 40). They object to crude distinctions drawn between qualitative and quantitative traditions and point out that if case studies do not aim at generalisation through, for example, comparative analysis then they are doomed to remain "isolated one-off affairs" (p. 39). Their point is that cases can only be compared if their research procedures follow accepted norms and are carefully recorded. They believe that it is by close analysis of a case and then by comparing cases that formal theory and knowledge is built - and that this formal theory building must be the aim of research. Atkinson and Delamont's concern is that current emphasis on "demotic naturalism and democratic ethos" (1985: 34) is leading to a methodological "cop-out" among case study researchers who, in the wish to be accessible to their case study subjects, neglect the demands of proper methodology. Their concern is thus to defend case study as rigorous research methodology.

Central to the issue of generalisation is that of sampling - or, in the context of case study, choice of site and choice of subjects within that site. Research in the social sciences allows that statistical methods (for example random sampling) are not always useful to its research

purposes. Case study sites, for example, can be chosen purposively, using criteria relevant to the boundaries of the problem. These criteria are always conceptual (concepts embedded in the research questions) and often logistical (for example accessibility to the researcher) (LeCompte, Preissle & Tesch, 1993: 59). LeCompte, Preissle and Tesch provide a useful table of case selection strategies. They identify six forms of selection, all first demanding the identification of key attributes relevant to the research problem. The six are: extreme or deviant cases perhaps problematic to existing theory; typical cases which might confirm theory found in earlier work; unique cases which have some dimension which set them apart; reputational cases, recommended by experts; ideal-typical cases which represent the best or most desirable example of the phenomenon under study; and comparable cases which explicitly set out to replicate studies by comparing sites considered to share relevant attributes (1993: 70).

Perhaps to answer Atkinson and Delamont's criticism (1985) of his concept of "naturalistic generalisation", referred to above, Stake later identifies three categories of case study - intrinsic, instrumental and collective (1994: 237). Each is appropriate to specific research purposes, though he points out that the categories are not watertight. In an intrinsic case study, research is undertaken into a case because one wants better understanding of this particular case - not because it illustrates a particular trait or problem but because it is of interest in itself. The initial aim in an intrinsic case study is not theory building (although Stake concedes that this kind of research might well have a research agenda that might not be apparent in the written product). His second category, instrumental case study, does aim to build or to refine theory as a case is chosen for its potential to provide insight into an issue. The case might be examined in depth, its contexts and daily activities examined closely - but the underlying purpose is to further understanding of this issue.

3.3.3.1 Choice of Galant Primary School as case study site

The study of Galant Primary School is, in Stake's terms, an instrumental case study as the case, Galant Primary, is examined to illuminate a larger issue (Marshall & Rossman, 1995; 7). Information literacy education theory, as discussed in previous chapters, frames the study. The school was chosen for its potential to give insight into this theory, to test it and, if necessary, to generate new theory. It thus hopes to contribute to the knowledge base of information literacy education research (Todd, 1995a: 25).

Galant Primary was "purposively" selected as the site for the in-depth case study for the following reasons:

- It is an ex-House of Representatives school. The ex-House of Representatives (coloured) schools make up about 73% of Western Cape schools.
- It is a disadvantaged under-resourced school. It has no functioning library or full-time librarian, for example - factors assumed necessary to information literacy education in the research surveyed in earlier chapters.
- It serves a disadvantaged community, called Paradys in this dissertation. Paradys is known to be one of the poorest areas on the edge of the historically coloured township, Hillside (also not its real name). Hillside, like many of the townships on the Cape Flats, has high levels of poverty, crime and unemployment.
- In our preliminary discussions, the principal assured me that projects are routinely undertaken in the school. Indeed, she told me that they suit her "kind of children". She told me that a departmental subject advisor (in information skills) had conducted a day-long workshop on project work at the school in the first quarter and that one or two of the weekly staff enrichment sessions had been devoted to the topic.
- An important factor was the school's geographic position, close to my place of work,

the University of the Western Cape. Two other schools had been identified as suitable and had been approached but Galant was the first to give access.

- A major factor was the quick acceptance by the principal of my request. Western Cape schools had been in a state of turmoil for the past two years (see Appendix B) and I was relieved to get access so easily.

The choice of Grade Seven stems from:

- the prevalence of project work in this phase
- the introduction in 1997 of the *Core Teaching Programme for Information* Skills in the senior primary phase
- the promised introduction of Curriculum 2005 into Grade Seven in 1998
- my past experience of teaching information skills at this level.

3.3.4 Participant observation

Participant observation is the central data collection technique of ethnography and is often used as a synonym for it (LeCompte, Preissle & Tesch, 1993: 23, 196; Atkinson & Hammersley, 1994: 248). Participant observation implies that observers live as much as possible with the individuals they are researching, trying to blend in and taking part in their daily activities. Participant observation is a continuum with the two extremes of complete observer and complete participator at each end (Bailey, 1996: 8). Within one study, there is often a constant shifting between the two stances of participation and observation (LeCompte, Preissle & Tesch, 1993: 196). It is also true that different studies call for different behaviours. The constant awareness of the relationship between participation and observation is essential to researcher reflexivity - an attribute crucial to fieldwork (Delamont, 1992: 64, 144). This awareness is in keeping with one of the central tenets of the qualitative

ethos - that observation, even so-called non-participant, can never **not** have an impact on the participants of a study.

There is much discussion in the literature about the ethics of participant observation (for example Punch, 1994: 83). There are three contemporary trends in qualitative research which have alerted ethnographers to the fact that the role of the researcher - however "native" she might believe she goes - is inevitably based on relationships of control and hierarchy (LeCompte, Preissle & Tesch, 1993: 147; Atkinson & Hammersley, 1994: 252). These three trends are:

- social constructivism which blends social critical theory and constructivism (already discussed in section 3.1.2)
- hermeneutics, the concern for interpreting the meanings which participants give to the reality around them
- post-structuralism which questions the long-accepted premises of "objective" social science research.

My position at Galant Primary can be classified in Atkinson and Hammersley's terms as "marginal native" (1994: 249). I existed on the fringe of class and staff-room activities. I watched, listened and interacted with teachers and learners constantly - to understand how they make sense of their world. The intention was to observe project work in its natural social setting not to conduct action or evaluative research. I did not intervene actively in the work I observed and made no explicitly evaluative comments. It is true, however, that, scattered throughout the field notes, are comments from the teachers at Galant Primary which reveal that they sometimes interpret simple questions (or just my expressed interest in an aspect of their work) as suggestions or as evaluative feedback. This can be explained by the

constructivist view of reality, which accepts that participants are actively and constantly constructing and making sense of their social world. It follows that simple questions from researchers lead them, at the very least, to clarify their thinking - and sometimes even to shift it (Pope, 1993: 23).

Relations between the teachers and myself changed as the fieldwork progressed. Analysis in Chapters Four and Five will reveal how teachers became freer with their comments and were willing to come back to things they had said at the beginning of the study. In my first meeting with the Grade Seven teachers, as will be reported in Chapter Four, it was made clear to me that I, the researcher, was being interviewed. I had come into the school announced and vouched for by the principal; I had been introduced as a university lecturer; in addition I was white and English speaking.

The fact of my "whiteness" or the "*researcher as stranger*" was an early data category in my field notes as Mr Olifant, in the first week, asked me to talk to his class about apartheid from the "white person's point of view". Delamont, in her discussion of fieldwork relationships, provides a quotation from an ethnography of an American school:

> The teachers had many reasons to distrust me: I was white, they were black; I was an observer, they the observed. Both role differentials have a history of abuse. What was ultimately of relevance, however, was that we were all women, all working single parents, all struggling daily with the ups and downs of working with small children (1992: 123).

If, as Adelman (1985: 38) admits, class, regional antagonisms (north-country/southerner) and perceived institutional status (higher-education/school) are factors in the position of the observer in the United Kingdom, it has to be assumed that my race, language and background must have been an issue in my acceptance among the coloured Afrikaans-speaking primary school teachers at Galant Primary School. One of my first strategies was to distance myself

from Ms James, the principal, thus signalling that I was not reporting back to her. It was perhaps my willingness to listen that gained the acceptance of the teachers at Galant Primary. It seems that they had expected me to come in with advice and comment. As commented on in later chapters, there was some surprise at the beginning of the field study at Galant Primary over my interest in their school. One teacher said in the first few days, "*Have they told you the truth about our school?*". Perhaps it is this sense of alienation and of neglect that made the teachers at Galant willing to talk for hours at a time. Field notes of teachers' remarks made at the end of the field study at a warm farewell meeting reveal how differently I had come to be viewed by then as compared to our first meeting.

One of the risks in ethnography, as Delamont warns (1992: 34), is that the researcher can over-identify with participants thus losing his or her research perspective. Adelman comments that the initial suspicion, arising from his being a southerner in a north-country school, lessened as he became accepted within the school but that the remaining residue of "differentness" did enable him to retain a certain distance necessary for fieldwork (1985: 38). Certainly my English accent in speaking Afrikaans turned out to be a surprising asset in two ways: I seemed to become invisible as people assumed that I did not understand Afrikaans well; and it often served to break the ice as the children, especially, found it funny.

Another strand of discussion in the literature of participant observation deals with the issue of researcher honesty and disclosure (for example Burgess, 1985b; Delamont, 1992: 67; Punch, 1994), with many researchers recognising that ethnography, with its long-term and progressive data collection techniques, must involve some lies or half-truths. There were several ethical challenges in the course of the study at Galant Primary. The most significant of these, perhaps, is that, from the beginning, in order to gain access and acceptance and

knowing that many teachers dislike being observed in class and that they often get their classes to "perform" for visitors (Burgess, 1985b: 143), I described my research interest rather vaguely as "information literacy and the new curriculum". This, although not a lie, hid, perhaps, the full truth that the focus was inevitably to be on the teachers' classroom techniques. In my defence, it has to be said that the need for this sharp focus only became apparent once the project work observation was under way. It soon became clear that questions arising from this observation could only be answered through close analysis of teachers' teaching styles and, then, of their beliefs about learning and teaching. This conforms to the nature of ethnographic field study in which the early wide angle of the researcher "zooms" in and progressively focuses on classroom features found to be salient (Delamont & Hamilton, 1984: 19). A second ethical issue is the problem of disclosing my full findings to the principal and her staff. Such disclosure would be in keeping with the ethos of critical theory which insists that participants be given access to researchers' analysis as part of the research process to avoid any exploitation (Quantz, 1992). However some of the findings involve sensitive relations of power within Galant Primary. Some of the data were obtained only through assuring teachers that the interviews were confidential and that they would remain anonymous. In presenting findings to such a small community it is hard to see how anonymity could be maintained. Punch's recommendation to academics is comforting. He suggests that they be pragmatic and recognise the consequences for the subjects and for themselves when weighing up the pros and cons of total openness:

> I base this position on the view that subjects should not be harmed but also the pragmatic perspective that some dissimulation is intrinsic to social life and, therefore, also to fieldwork. ... The crux of the matter is that some deception, passive or active, enables you to get at data not obtainable by other means (Punch, 1994: 91).

The task of participant observation is to try to answer the following sets of questions posed by LeCompte, Preissle and Tesch (1993: 199):

- *Who* is in the group?
- *What* is happening here? What are the people in the group doing and saying to one another? What behaviours are repetitive? What is the content of their conversations, stories?
- *Where* is the group located? What resources are evident?
- *When* does the group meet and interact? How /often long are the meetings?
- *How* are the identified elements connected or interrelated, either from the participants' point of view or from the researcher's perspective? How is stability maintained? How is power conceptualised and distributed?
- *Why* does the group operate as it does? What meanings do participants attribute to what they do? What is their history? What symbols, traditions, values and world views can be found in the group?

No study can hope to answer fully all these questions. The goal must be to answer the questions relevant to the topic as defined in the purposes of the study (LeCompte, Preissle & Tesch, 1993: 200).

3.3.5 Data construction and analysis

Wolcott (1992: 19) summarises the work of data gathering in a qualitative study as *experiencing* (watching and listening), *enquiring* (interviewing), and *examining* (studying materials prepared by others). The data in the study of Galant Primary School were generated from field notes and recordings of classes (mostly Grade Seven but not exclusively) and of meetings, from interviews, both semi-structured and informal, with teachers and Grade Seven pupils, and from analysis of learning materials such as textbooks and worksheets. (Samples of the coding of field notes and interview transcriptions are provided in Appendices D and E).

The diary of my visits to the school throughout the third school term of 1997 is included in Appendix C. From July 16 until August 8 1997, I sat at the back of the Grade Seven class for

most of the school day observing (taking field notes and tape-recording) the science and history projects - and some of their other lessons. From the first day, field notes were analysed and coded as part of the process of building data categories, as will be discussed just below. The observation of the science project involved close observation of one group of learners; whereas that of the history project had a wider focus. This early observation included constant informal talks (in classrooms, corridors, the staff room, the principal's office) with pupils and teachers. It also included observation of the daily staff meetings, one evening parents' meeting, and a staff enrichment session. From time to time I was asked to look after a class whose teacher was absent. After the completion of the projects, I spent until August 25 within the school interviewing the Grade Seven teachers, some key informants and undertaking further observation.

Key informants are people who possess knowledge pertinent to particular questions (LeCompte, Preissle & Tesch, 1993: 166). At Galant Primary, they included the principal, the remedial teacher, the "librarian", a Grade One teacher, and a Grade Four teacher. Their status as key informants evolved in the course of the study. For example, observation and interviewing data soon made it clear that the teaching of reading was a key issue in the enquiry - which led to time being spent with Ms Gold in the Grade One classroom. Ethnographers warn that inconsistencies and alternative views should always be followed up. This explains the choice of Mr Barry, the Grade Four teacher, for lengthy interviewing. Early on in the field study he approached me with negative comments about project work - while his colleagues, the Grade Seven teachers, to whom he appeared closely allied in staff meetings, were still articulating solidly positive views about the status of project work within the school. Mr Barry's comments seemed to hold clues to an understanding of the puzzling contradictions I was observing in the Grade Seven classroom. The time spent in his

classroom and the two interviews with him, as will be seen in Chapters Five and Six, did indeed throw light on the classroom observations of the Grade Seven projects.

The more formal interviews usually took place in the office allocated to me. The first interview (see Appendix E) with the teachers can be classed as semi-structured as it consists of a prepared list of questions, many derived from the preceding observation of the project work and others from the research literature. It included some closed questions but aimed, on the whole, at open-ended exploration of the issues. Follow-up interviews in this period picked up on specific issues arising from interviews, informal talks and from classroom observations. I then spent three weeks away from the school while the pupils were writing what the teachers call "controlled tests". In this time I coded and analysed the interview transcriptions and field notes and visited the school three times to deliver the transcriptions to the informants for them to check them for accuracy. I returned to the school on September 15 for the last week of the quarter. Here again I observed and interviewed - returning to themes revealed in the analysis of the field notes and the interview transcriptions. After the completion of the field study, I visited the school three times to clarify certain points with individual teachers.

In qualitative research, questions are generated in the course of the field study. However the initial questions are informed by knowledge of existing theory and research and by the purpose of the investigative study (Maxwell, 1996: 130). Thus, Kuhlthau's model of the information process (1993b: 33), Long's profile of information skills in project work piloted in his year-long case study (1988: 181) and Tann's case study of project work in London schools (1988b: 21) - all of which were discussed in Chapter Two - framed the analysis of the field notes generated in the observation of the project work at Galant Primary. As will be

seen in the following chapter (4.4), Tann's seven "criteria" for project work provided a particularly useful framework for the early classroom observation. The qualitative studies of teachers' subjective frameworks of understanding of learning and teaching by Phillips (1988) and Meyer and Newton (1992), which were referred to in Chapter Two (2.4), offered useful methodological guidance for the interviews with teachers.

In ethnography, data are gathered and coded into categories. Thus data gathering and analysis are interconnected activities. The process is "iterative" (Bradley, 1993: 444) and progressive in the sense that the categories emerge from the gathering but also guide the gathering (Miles & Huberman, 1994: 62). In this way understanding is progressively built. Concepts arise from field notes and they are checked and re-checked against other data. Categories are noted, "saturated" (Woods, 1985: 51) and "interrogated" (Delamont, 1992: 155). Patterns and disparities are identified. The strength of ethnography is its insistence on careful checking, revisiting, exploring and confirming of tentative data categories and concepts as part of the research process. In this way it has the sensitivity and flexibility needed for "profound penetration of the subject matter" (Dooley, 1995: 269). The use of cross-method triangulation ensures internal validity - that is, that a "true" picture is built of the case. Field note observations are taken up in interviews, for example; interview data are confirmed through observation; disparities and contradictions are explored. Hopefully, through this analysis, substantive theory comes into being, which can give plausible meaning - linking the revealed concepts into an integrated framework (Woods, 1985: 51).

Analysis of the transcripts and field notes at Galant Primary was ongoing and progressive to arrive at codes that grouped data around common topics and concepts, the so-called data categories. Field notes of observations and informal interviews were "typed-up" and

examined from the first day. Codes were used from the "start list" of broad categories and then also from fresh codes grounded in the data. More formal interviews were transcribed and coded in a similar process in the course of the study. At the beginning of the field study, my focus was wide and within three weeks I had built up over 200 data categories - listed in Appendix F. These were sifted for overlap and relevance in the course of the field study and many were not used in the final writing-up. (There is recognition in the ethnographic literature of the "waste" of data which ethnography entails). Transcriptions and field notes were returned to frequently as later ones brought different insights. The data were retained "whole" in their context as well as de-contextualised and broken up into categories. Each code thus became a separate "document" (on index cards) but connected to its original "home". The qualitative perspective insists on the need to retain the context of these first order constructs in order to avoid the distortion of social reality it associates with positivist methods (Sutton, 1993: 419). I made the decision, early on, not to investigate the use of computer software such as Ethnograph to aid analysis because I felt that I - as a part-time researcher - just did not have the time to learn how to use these packages effectively. In this decision, I was supported by Reneker's comment on the time needed to learn how to use such packages:

> I devoted substantially more time to building the files and learning how to use the software than I had anticipated, and one may question whether the hours devoted to these tasks might have been better spent in reading and rereading the textual data (1993: 504).

The data-gathering process described here is clearly more than "gathering" - hence Wolcott's use of the word data-"construction". The discussion of the participant observation of ethnography (4.3.4) has put forward the kind of questions that guided the data-construction. Thus ethnography is interested in such themes as context, situation, how people view their situation, patterns in behaviour, and, so on. Nassimbeni provides useful guidelines for

categorisation saying that categories should reflect the purpose of the research study, include conceptual definitions, be exhaustive, be mutually exhaustive, be independent, and derive from a single classification scheme (1988: 247).

The process of analysing into categories and connecting categories is informed by theory and also by the creative "leap of the imagination" of the conceptualising researcher (Woods, 1985: 52; Sutton, 1993: 419). The imaginative work, referred to here, is what Wolcott (1994) classifies as interpretation. Wolcott sees the analysing of data to be data "processing"; whereas interpretation demands that the researcher go beyond the data to transform it into theory.

3.3.6 Data analysis and interpretation

Wolcott defines the three phases or roles of ethnography as:

- *description*, which addresses the question, "What is going on here?". Data consist of observations made by the researcher and/or reported to the researcher by others.

- *analysis*, which addresses the identification of essential features and the systematic description of interrelationships among them - in short how things work....[It] might also address questions of why a system is not working or how it might work better.

- *interpretation*, which addresses questions of meanings and contexts such as, "How [sic] does it all mean?" and "What is to made of it all?" (1994: 12).

Not all writers follow his distinction between "analysis" and "interpretation". Many combine the two concepts, seeing the interpretative process as a further refinement or expansion of early analysis. Description and first stage analysis in qualitative studies use verbal concepts or data categories as organisational devices - derived from the heuristic processes described above. To transform these into theory or to give them, what Sutton (1993: 419) calls, "meaningful shape" requires interpretation. And this in turn requires some

sort of explanatory theorising. This theorising might come from existing models or it might be "freshly minted" (Sutton, 1993: 419).

In the study of Galant Primary, the interpretation involved rather a linking of theory from different models and it is hoped that this linking will contribute some fresh perspectives to the existing theory of information literacy, which proved inadequate. Sutton points out that there is no need to use just one theoretical tradition - indeed he contends that a discipline is liberated by the eclectic use of explanations from several models (1993: 420). Thus Chapters Five, Six and Seven will reveal the use of constructivist research into teachers' beliefs as well as social constructivist research, close to critical theory, into what Reynolds calls "teachers' cultural scripts" (1996: 69).

The challenge in ethnography is to turn "unruly experience into an authoritative written account" (Wolcott, 1994: 10). It is a truism of qualitative research that the hard work begins once the field study is completed and that its writing-up presents particular problems (for example Bradley, 1993: 447). The writing-up of an ethnographic study is full of technical problems, arising from its refusal to reduce the complexities of a social world into a more manageable form and from the need to demonstrate connections between the researcher's abstractions and the data. Wolcott suggests three approaches - based on his distinction, described just above, between the three phases or roles of qualitative research: description, analysis and interpretation (1994: 10). He contends that not all ethnography has to have equal amounts of these three as different audiences and purposes call for different weightings. However he stresses that the novice ethnographer should build a very solid descriptive base. Some accounts might choose to allow the reader to construct his or her own meanings from detailed description and long quotations from interviews and field notes. This is perhaps not

appropriate for a Masters Degree dissertation. A second strategy is to concentrate on analysis - building on a solid base of description. The analysis identifies key relationships and factors within the description - thus developing, what was called earlier, "substantive" theory. The third way emphasises interpretation in the search to make sense of the findings by reaching beyond what Wolcott calls the "certainties" contained in the analysis of the specific case. This is the formal or second-phase theory building mentioned earlier.

The approach in the remaining chapters of this study is to accept Wolcott's distinctions but also to conform to the demands of a Masters research project which require a balance of description, analysis and interpretation. Chapter Four gives a rich description of the project work and relevant features of the school and its teachers - "rich" thus implying that the description is bound to contain analysis. (As Wolcott points out, there is no such thing as "pure" description (1994: 13)). It moves on to explicit analysis, as it examines the connections among the data and identifies gaps and contradictions. Chapter Five consists of further analysis and by throwing its net wider, in an attempt to explain the gaps, qualifies for what Wolcott calls "interpretation". The purpose in Chapter Six is to revisit and interpret data in the light of existing information literacy education theory. It links this theory to the interpretation of Chapter Five in order to draw some conclusions about what in Chapter Two was called the "information climate" within the school (Moore, 1998). It thus narrows the focus a little to try to answer more explicitly some of the questions posed at the beginning of the study. The final chapter undertakes further interpretation by exploring the implications of the study for practice and making recommendations for further research.

3.4 Validity of ethnographic research

Implicit in much of the above account has been a defence of the qualitative approach to the

study of Galant Primary School. Thus the discussion of the debates about the generalisability of ethnographic case study touched on the issue of the validity of qualitative research as did the description of its data gathering and analysis techniques. The choice of the word "defence" here is intentional as it suggests a certain vulnerability. In academia generally (Guba & Lincoln, 1994: 116) and more specifically in the field of library and information science (Dick, 1993: 59; Sutton, 1993: 411), positivist and post-positivist approaches (which modify the dualism/objectivism of positivism by saying that objective reality can be only *partially* explained (Denzin & Lincoln, 1994: 15) still dominate. This statement is made despite the comment (for example Denzin & Lincoln, 1994: 15) that from the 1980s qualitative perspectives have gained in status. Atkinson and Hammersley claim, for example, that ethnography is enjoying an unprecedented boom (1994: 249). This "boom" is not evident in library and information science research but, as was pointed out earlier in Section 3.3.1, might well exist within the field of educational research - which indeed provided much of the insight and support for the study of Galant Primary School. There is some recognition within the field of library and information science that, at the very least, researchers should become more aware of their perhaps unquestioned assumptions about the nature of social reality and knowledge (for example Bradley, 1993; Dick, 1993; Sutton, 1993). However, it has also to be said that the way in which qualitative research is presented by even its proponents in terms of positivism (through either comparison or contrast) is evidence of the still prevailing power of positivism and post-positivism. According to Guba and Lincoln (1994: 115), this power is exercised through journal editing boards, research committees, and funding bodies which still operate under old paradigms. It is true that the specific strengths of ethnography - its long-term sensitive and flexible participant observation, for example - lay it open to "threats of unreliable measures, instrumentation shift and observer bias" (Dooley, 1995: 269). This section picks up this issue and explicitly confronts these threats.

The extreme stance - taken by relativists- would be to dismiss such concerns as irrelevant - as Wolcott does in his chapter entitled "On seeking - *and rejecting* - validity in qualitative research" (italics added) (1993: 337). This view sees the traditional measures of quality in social science research as products of the positivistic world view and as misguided attempts to reduce the social sciences to the natural sciences. These measures look for reliability (whether the techniques produce findings consistent and reproducible over a period of time) and validity (whether the techniques measure the constructs claimed in the study) (Dooley, 1995: 96). Statistical tools are used to test the reliability and validity of data and findings. These tools of course imply quantitative data. The interpretivism and naturalism of the qualitative approach to social research deny the existence of an objective underlying reality. They imply that the hidden meanings and the inner motivations of a social setting cannot be reduced to quantifiable data. This approach claims that the complexities and ambiguities of the socially constructed lived experience of participants are only distorted by attempts to constrict them to carefully chosen variables, able to be measured statistically (Sutton, 1993: 426). Pre-conceived hypotheses, constructs and measures only hinder what they consider to be the main task of research - to understand the meanings constructed by the participants.

Taken to its extreme this relativistic view is problematic for theory-building - the ultimate goal of research - and for judging quality, especially as the final account of the researcher must also be seen as a relativistic construction (Sutton, 1993: 427; Schwandt, 1994: 130; Wolcott, 1994). Less extreme views accept the pluralism and relativism of social experience but believe that it is possible to build "shared understanding" (Sutton, 1993: 424). This understanding - gained from inductive methods - is the aim of research rather then the deductive explanations of the positivistic tradition. Therefore, the issue of objectivity or researcher bias is of lower priority than "comprehending what is observed and placing it into

its own natural explanatory context" (Sutton, 1993: 424). Indeed some argue (for example Wolcott, 1993) that the engagement of participant observation applies to all research. The researcher reflexivity of ethnography only makes explicit what is concealed in other methods. These views (summarised by Nassimbeni, 1988: 179) contend that the neutral observer of scientific enquiry is only a positivist myth. Sutton, moreover, points out that investigators' preconceptions, if explicit, aid theory building as the technique of juxtaposing conflicting realities "unfreezes" thinking (1993: 425). However, the claim is not that "anything goes". How much understanding can be shared depends on the rigour of the methodology as Atkinson and Delamont (1985) warn and as Wolcott (1993) demonstrates in the chapter mentioned above. It is clear that the methodologies and assumptions of the qualitative perspective require different measures of quality.

Most discussions of validity in qualitative research refer to the constructivists Guba and Lincoln's concept of "trustworthiness" which they formulated in 1981 (Guba & Lincoln, 1994: 114). Some include their later concept of "authenticity". All stress that validity criteria need to be applied at each phase of the research study.

Trustworthiness is based on the following four criteria, each of which parallels a traditional positivist evaluative criterion: credibility, transferability, dependability and confirmability.

Credibility comes close to the quantitative concept of internal validity and refers to the need to demonstrate that statements about the constructions of the social world under study are believable as they are based on visible, systematic procedures. Factors relevant here are length of time in the field, confirmation of tentative constructions by triangulation of methods (comparing observations with interview data or with analysis of documents), searching for

negative cases, testing tentative analytic categories with other respondents within the case site (Bradley, 1993: 437). Delamont is critical of the belief among critical theorists that all findings should be confirmed and accepted by the participants of a study. She points out that participants' versions of reality need not be any more "true" than the researcher's and that the researcher's broader view of context might make his or her knowledge more "valid" (1992: 161). Sutton's warning that a researcher must "face an unstable pluralism of interpretations" among the participants of a study is applicable here. Much of the study at Galant involved the "articulation and disentangling" (Sutton, 1993: 420) of seemingly conflicting interpretations - all, in the qualitative tradition, to be accepted as equally "real".

Transferability is close to external validity and to generalisability. It refers to the applicability or transferability of findings from one context to another. The generalisability of case study has been discussed above (3.3.3). The qualitative perspective is that the task of the researcher is to identify methods, data categories and context so explicitly and thoroughly that comparisons can be made across sites by the reader (LeCompte, Preissle & Tesch, 1993: 47; Stake, 1994). If a case study is, in Stake's terms, "instrumental" in building or refining theory, theoretical generalising has to take place. Therefore, that enriched theory should serve to provide new insights into other contexts as well as theory. Atkinson and Delamont's argument that it is the rigour of case study methodology that enables formal or "generic" theory to be built has already been mentioned (3.3.3). This perhaps implies that, although one case study might not explicitly directly compare itself to another, the interpretive work involved in an instrumental ethnographic field study enables, what may be called, "indirect" generalisation to take place. The interpretation in one study adds to and modifies existing theory - which then throws new light on existing studies. This indirect generalising is undertaken by the reader of the study and sometimes by the researcher in follow-up research.

Dependability parallels the concept of reliability or replicability, clearly of little relevance to ethnography, which recognises both the changing nature and historical embeddedness of social reality. Le Compte, Preissle and Tesch (1993: 332) provide a comprehensive discussion of the factors that influence the *dependability* and *coherence* of a qualitative study. These include: researcher status, informant choices, the following-up of disparities among data, clear delineation and definitions of data categories, clear reporting of data-collection methods, the generous provision of verbatim accounts of conversations and interviews (raw data) to support interpretation, and the presence of different researchers.

Confirmability parallels the positivist notion of objectivity. The qualitative perspective here is that a shared view of a social world can be negotiated. This will include the multiple realities (including that of the researcher) existing within a site. Researcher reflexivity thus aids so-called "objectivity" so that the researcher is aware of his or her preconceptions and does not generalise too quickly (Bradley, 1993: 437).

Concerned that these criteria were too positivistic, in 1989 Guba and Lincoln produced four different criteria linked to the concept of "authenticity". Their discussion of this concept reveals the influence of critical theory. The four criteria are:

- fairness
- ontological authenticity (enlarges personal constructions)
- educative authenticity (leads to improved understanding of constructions of others)
- catalytic authenticity (stimulates to action)
- tactical authenticity (empowers action) (Guba & Lincoln, 1994: 114).

The first insists that the research processes are carried out fairly and that the end product represents as closely as possible the experiences of the people being studied. The second and third arise from the constructivist emphasis on cognitive psychology. The blending of

psychological perspectives with social issues is revealed in the last two criteria. These are in keeping with the perspectives of social constructivism, which demands that research contribute to transformation of existing social conditions.

3.5 Conclusion

The account of Galant Primary School in the following chapters does aim at transformation in that it hopes to influence practice and policy. However it is mindful of Atkinson and Hammersley's warning that the chief goal of ethnography is to produce knowledge (1994: 254). The knowledge it hopes to build has to do with "sympathetic understanding" (Sutton, 1993: 421) of the complex web of interpretations surrounding the concept of project work within the world of one school and the interconnections between these interpretations and those surrounding the construct of information literacy. Sutton (1993: 421) cites Weber:

> In the sphere of action things are rationally evident chiefly when we attain a completely clear intellectual grasp of the action-elements in their intended context of meaning. Empathetic or appreciative accuracy is attained when, through sympathetic participation, we can adequately grasp the emotional context in which the action took place.

CHAPTER FOUR

PROJECT WORK WITHIN GRADE SEVEN AT GALANT PRIMARY SCHOOL

DESCRIPTION AND PRELIMINARY ANALYSIS

4.1 Introduction

As mentioned in previous chapters, the teachers, the school, its surrounding township and the larger township in which it is placed, have all been given pseudonyms - a practice common in qualitative research.

The account in this chapter first attempts to place the school within its geographic, historical and social context. It then describes the two Grade Seven projects. The description, however, as signalled in the previous chapter, is more than a chronological seemingly "objective" account. It aims at providing what Wolcott calls a solid descriptive base for analysis and interpretation. But it acknowledges the truth of Wolcott's contention that all description is theory-laden. Its broad structure is chronological as it describes the projects in a journal-like format. However the description is not always strictly chronological as it, for example, often includes supporting data gained later on in the field study. Moreover, analysis is at times woven into the account of the projects in, for example, the way confirmatory or contradictory data from later interviews and observations are used to highlight themes and issues. Occasionally, an insight from existing research is also given. It would be tediously repetitive (and extremely lengthy) to give first a strict chronological description using only observational data and then to return to the description to highlight themes through analysis and categorisation. As described in Chapter Three, the data collection was progressive and iterative. The early classroom observation was informed by wide reading of existing research and theory (summarised in Chapters One and Two); but, within an hour of my being in the

school, the field observation and constant interaction with teachers and pupils were generating fresh data. These data - recorded in field notes - were picked up and tested in further observation of the same class or of a different class, and in formal and informal interviews with the same teacher or with another teacher. This is the methodological triangulation referred to in Chapter Three. The data, chosen for the early description of classwork, are those considered significant in, what might be called, the "hindsight" of the progressive observation and interviewing process of the field study. The third analytical section of this chapter identifies crucial themes and categories in the description of the projects and analyses the links among them. This, of necessity, begins the interpretive process, as the meaning of the connections is often understood only in the light of existing theory and research.

The literature holds some criticism of the "ethnographic present". The critics point out that the use of the present tense, with its implication that the situation somehow remains eternally the same, contradicts the ethos of ethnography. A survey of recent educational ethnography reveals that there is no uniform strategy. Even within one collection of studies there are differences - with some choosing the past tense, some the present, and still more using both (for example Kompf, Bond, Dworet & Boak, 1996). The account here follows the example of several writers who switch from past to present tense as they interweave data from participant observation and data from formal interviews. It thus follows the pattern of traditional academic writing, which might use the past tense to report on research studies (saying for example, *The study was undertaken* ...) but uses the present tense in quoting researchers' statements (for example, *Smith claims,* ...).

Another technical point involves the use of quotations from interview transcriptions. The

transcriber typed what she heard and this is what is given in the pages to follow. It has to be remembered that English is a second language to most of the teachers and that the interviews were intentionally informal. The teachers, on checking the transcripts, at times wished to make their language more correct and formal. However, I persuaded them that this was not necessary and so their words, used in the following chapters, are verbatim quotations. When they switch from English to Afrikaans in the interviews, English translations are given in square brackets. However, there are a few occasions in the pages that follow when the words of teachers and pupils spoken in class and recorded in field-notes are given only in English.

4.2 Paradys: enclave or ghetto?

Galant Primary School has about 505 pupils and seventeen teachers (including the principal, Ms James, who does no class teaching and the remedial teacher, Ms Oliver, who teaches groups of children who are sent to her by the other teachers). There are four male teachers. There is one Grade Seven class, which, in 1997, had 53 pupils. The school stands to lose staff as the national policies over teacher/pupil ratios (one teacher to 35 pupils) are implemented. The school has empty classrooms as its numbers have, in recent years, dropped. The principal attributes this to the movement of families out of Paradys to newer areas. She seems to assume that her school is the sole choice of Paradys families. To corroborate this view would entail a community survey - beyond the scope of this study. Mr Moosa, the Deputy Principal, claims that his attempts to recruit pupils from outside Paradys - for example in the informal settlement across the highway from the school - have failed because 21 children have been killed on the four-lane road in the past ten years (interview 12 August 1997: 5). He also comments that the area surrounding the school is perceived by the inhabitants of the nearby informal settlement to be gangster-ridden and dangerous (field notes 21 July 1997).

According to the principal, most visitors get lost on their first visit to Galant Primary School. The school, its name and colourful mural painted across one whole wall, is perfectly visible from the embankment of the N2 Freeway. Yet, once off the freeway, a maze of unnamed streets has to be negotiated, most of them leading to the dead-end of the railway line and the two major highways which surround Paradys, the township that the school serves. The secret is to turn away from the school to find the one narrow street that runs along the railway line to tunnel under the highway. The limited access was significant in the days of apartheid education. Paradys and its parent township, Hilltop, were established in the early 1960s when the Group Areas Act uprooted coloured people from their homes in District Six near the centre of the city. As the principal of the oldest school in the area puts it, they were "dumped" on the bushy sandy wasteland of the Cape Flats. Apartheid town planning, as several teachers reminded me, was designed to control protest. The vulnerability of the school was made clear a few weeks into my stay there when the school closed early after a flare-up of gang violence a few streets away. There was real fear among the teachers about how to get out of the area.

The school itself is in one corner of the Paradys triangle - the furthest from the centre of Hilltop and on the extreme edge of its circuit of schools. The Cape Flats railway line and two highways surround the back and sides of the school. The horizons of the children's lives are narrow. Mr Mitchell, the Grade Three teacher, claims that few of the children ever go further than Mitchells Plain, the neighbouring major shopping centre. Mr Moosa, the deputy principal, complains that his pupils know nothing about the world outside the township (interview 13 August: 22). The significance of the geography of the school became apparent as the field study progressed. At times teachers would emphasise the special closeness of the community, describing it as an enclave; at other times its more negative ghetto-like qualities

would come to the fore. The geography of the school reflects and is a factor in other less obvious forms of isolation. Paradys children are cut off from Cape Town, and even from the rest of Hilltop, by two factors other than the roads or railway line - poverty and crime. These pervade every aspect of school life and will be returned to often in the course of this account.

Ms James, the principal, sees Paradys as the poorest and most neglected part of the township Hilltop. The school is described by several teachers as an "oasis" and indeed its pretty garden and neat building contrast with the surrounding streets - with their muddy potholes, rubbish, graffiti and scavenging dogs. Over the years, the municipal authority has extended the original one-bedroom matchbox houses and the spaces behind and between the houses have been filled with shacks and lean-to rooms. A local housing official recommended to me that the official figures of 4.5 inhabitants per house be multiplied by three (personal communication 11 May 1998). The shortage of space is made vividly clear by the deputy-principal's description of how some children rush home after school to book the best spot on the bed with their school bags. Scrap is an important source of income and explains the horses tethered on whatever grassy verges exist. The principal estimates that more than 60% of the parents are unemployed and dependent on government family grants (about R400 a month for two children). Any fundraising activity is scheduled for the grant days. The sandwiches, distributed throughout the school each morning, are essential as hunger, teachers believe, causes some of the inattentiveness among their pupils. The school aims at making about R4000 a year from school fees. Many families pay off the annual fee of R20 per child rand by rand. The money is used for sports equipment and for telephone and photocopying bills. A survey of the resources of the other 14 primary schools in the circuit, some weeks after the field study of Galant Primary, highlights the significance of the poverty of Paradys for the educational programme. The three historically white schools use their fees (at each

school over R200 per child per month) to pay for computers, audio-visual equipment, library materials and several "extra" teachers - including librarians (Hart, 1998; Hart, 1999: 79).

The barriers put up by the gangs are invisible but they restrict the lives of the pupils as much as the railway lines or the freeways. Hilltop is cut up by the gangs into competing territories and it can be dangerous for outsiders to walk through the streets. Of significance for project work is the Galant staff's refusal to encourage their students to use the Hilltop public library. They claim to have asked the library authority for a mobile library to visit the school but to have been refused as the school is within a few kilometres of the library. Later interviews with teachers in the other Hilltop schools confirm the territorial power of the gangs. Only two Hilltop schools - one of them the school closest to the library - claim to be able to send their pupils to the library without fear.

Crime has a huge impact on the school culture - sapping the morale of the teachers in insidious ways. The principal's first action every morning is to go across to ask the elderly woman, who lives across from the school entrance, "*Everything OK in the night?*". Despite the presence of two security guards, in my few weeks in the school there were five burglaries - with doors the chief target. One was taken with its varnish still wet - having just been installed to replace one stolen the previous week. Each incident means hours of paperwork for the principal. Ms Oliver, the remedial teacher, admits that she does not "*care any longer*". She has had much of her special equipment, largely paid for out of her own pocket, stolen. The needlework teacher, Ms King, takes her sewing machine home with her every afternoon. The frequent thefts mean that anything of any value is locked up each day in the strong room. One result was evident in a science class when I noted that it took ten minutes from the beginning of a lesson for the overhead projector to be fetched. The fourteen

thousand rands' worth of new books, bought in 1996 by Mr Olifant for teachers with the funds allocated by government for textbooks, were, throughout the field study, still in boxes in the strongroom because he feels, "*there is no safe place for them yet*". Ms King's description of how she packed away the "library" is evidence of how the continuous struggle against crime restricts the teaching programme:

> *"Because of the burglaries we had and then I became fed-up and I said to Ms* [James] *now I am just going to pack them in these boxes and put them away. Okay we put it away and then as time went on I thought 'No man, the books can't lie there'. I took it out again, put it up in a little corner down there next to the art room. That was the library and then they* [burglars] *started coming in there. And then we moved from there to room number 17. And we are at room 17 for quite some time now, so I hope that it will be safe"* (Ms King interview 18 August 1997: 19).

It is clear that any attempt to build resources within the school for information literacy programmes would have to take into account the continual break-ins. So what they might signify as to the school's relationship with its surrounding community has to be examined carefully. The issue is complex. The principal in an early conversation blames "*outsiders in the squatter camp*" for the burglaries. It is true that the geography of the school makes it easy for thieves to get into and away from the school. However her words have be weighed against a later admission that the allocation of the two security guards by the Education Department - a unique concession in the circuit (Hart, 1998) - came after a spate of thefts when she was first appointed as principal two years earlier. Her predecessor, a male, was an authoritarian figure and she feels she was being tested. The issue of the relations of the school with its community will be returned to in Chapter Five.

4.3 Description of the Grade Seven projects: 16 July – 7 August 1997

4.3.1 Introduction to the Grade Seven projects

Ms James, the principal, has been at Galant Primary School for 23 years - ever since she qualified. She became principal in 1995. In our first conversation on the first day of the

school term, 16 July, she brought up some of the themes already referred to - themes that were to be of central significance for the study. She talked about the isolation of the school from other schools in neighbouring Hilltop, her problems in introducing a more consultative management style after her authoritarian predecessor, her positive attitudes to Curriculum 2005 and the school's lack of resources. This last subject was provoked by the lack of a fax machine. She had just learned - too late - of an important meeting to be held by the Western Cape Education Department and was irritated that the Education Department should assume that all schools had fax facilities.

I then went on to meet the three Grade Seven teachers with whom I was to work. They left their classes and sat on the teacher's side of the table in an empty classroom to "interview" me. The three consisted of Mr I Moosa, the Deputy Principal, Grade Seven Head of Department and senior mathematics teacher, Mr Olifant, the Grade Seven history, Afrikaans and art teacher and Ms Abrahams, the grade seven English and science teacher. Ms King, the Grade Seven geography and needlework teacher and teacher-librarian, was absent, having been on sick leave for some months.

The three teachers came across as a closely-knit team. Mr Moosa is a gently spoken devout man who prays, every day on the way to school, that he can teach one thing that day. He arrived at Galant Primary twelve years previously, straight out of college. He often refers to the fact that he has only a three-year college qualification and so is, by his own admission, under-qualified for his senior position. He attributes his promotion to his practical abilities. Mr Olifant sees himself as a progressive. He is proud of his political activism in the past and is described by Mr Moosa as the "*young one with ideas*". Indeed, he is the newest teacher in the school (apart from a temporary replacement teacher), having been there for six years.

Like Mr Moosa, it is his first teaching post. Ms Abrahams soon told me that she likes "*to speak out*". She was brought up in the area and as a result has great influence with the parents, according to Mr Moosa. She has been at the school for eighteen years. She spent a few months at the beginning of her career in another, what she calls, "*more affluent*" school.

The significance of the loyalty of all the staff at Galant and their lack of experience in other schools will be highlighted later in this chapter. All three of the Grade Seven teachers, in this initial interview, claimed that they would not like to teach anywhere else - citing their love of the Paradys community. Nonetheless, Mr Moosa, frequently in the course of the study, points out that his experience at Galant has prepared him for any other environment. He likes to say, perhaps with a touch of bravado, "*I've seen it all here*".

All of these teachers have other classes apart from their Grade Seven work so that they have no "free" periods. Mr Moosa, as deputy principal, has additional administrative duties. In the following few weeks, I was to observe how frequently he was called away from his classes to stand in for the principal, when she was suddenly summoned to circuit management or community meetings. This, and the absence of Ms King, meant that the Grade Seven class was left alone for two or three periods a day - every day. One of Mr Moosa's administrative duties is significant for this study. He does all the copying of teachers' learning materials because, according to the principal, the photocopying machine is so temperamental that only one person should operate it. His control of the machine, however, can be interpreted differently, as I learned later. Firstly, it is a method of controlling costs - the high cost of paper is a constant preoccupation of the principal and her deputy. Secondly, the queues of work, which build up, enable Mr Moosa to reward the teachers of whom he approves. He admits that he makes sure that these teachers get their

materials quickly (interview 12 August 1997: 18). Several teachers complained to me in the course of the study that they were resorting to having their copying done by friends in other schools or to using their own funds at commercial copy shops. Others, like Ms King, told me that they refused to use their own money and so "*did without*":

> *"Now what slows me down is I still have to write down the questions on the board, whereas if I had the money, I could have photostatted the whole lot, but I mean two sets of 55 per day, I mean that takes your pocket"* (Ms King interview 18 August 1997: 6).

The role of Mr Moosa with regard to learning materials will be returned to in Chapters Five and Six as it is clearly significant for information literacy education.

The talk in this first interview with the Grade Seven teachers centred on the school and why they were teaching there. It was a useful introduction to the socio-economics of the area and the related challenges facing the school. They capped one another's anecdotes about the school and its community - with talk of crime and gangsterism dominating. This last theme was highlighted when two young men stopped at the open door. They greeted the teachers by name and then went into the noisy class next door shouting at it to be quiet. The men were clearly known by the teachers as members of a local gang. There was a kind of pride in the way the three teachers pointed out to me in whispers how respectful they had been, asking me if I had noticed that the young man had used their names. They pointed to the gold jewellery adorning the young men and remarked that it was difficult to provide positive role models to counter their impact.

By the end of the interview, the teachers had agreed to give me free access to their classrooms - but only in a few days. They were busy preparing for a fundraising dance and a parents' meeting; and the school would not settle into its normal programme until the following week. It was agreed that I would spend most of the next few weeks in the Grade

Seven classroom - with three main foci in my observation. The first was to be observing a group of pupils at work on the science project on animals that Ms Abrahams was about to embark on. She was due to go on sick leave in three weeks time so had decided to use her English periods as well as her science to ensure that the project would be completed. Another focus would be Mr Olifant's history module, which would include a project. The third focus would be Mr Moosa's use of groups in teaching mathematics. The motivation in the last focus was the need to view the project work within the context of the whole educational programme, the wish to observe the Head of Department's teaching and also an interest in group work, so often associated with the project method.

I left the school that day looking forward to seeing three committed teachers at work. They showed an awareness of the key concepts in Curriculum 2005 with Mr Moosa saying, "*OBE* [outcomes-based education] - *we are already doing it*". However, there was already evident a certain ambiguity about change in their comments about Curriculum 2005. At times they disparaged new initiatives saying, for example, "*Bengu* [the Minister of Education] *doesn't know what it's like*" - referring to large classes, shortage of resources and also to "*our kind of children*". This last reference became familiar in the following weeks and "*our kids*" soon became a data category in my field notes.

My aim in the first week of the study was to familiarise the teachers and pupils with my presence. I spent time in the staff-room, had long conversations with Mr Moosa, the Grade Seven Head of Department, and began to sit in on and to tape record some classes. Most of the classes were revision lessons, in which teachers went over the tests, which had been written at the end of the previous term. I also attended, on the evening of 21 July, a meeting in which the school's first governing body of parents was elected. This meeting was a

significant event and provoked much staff-room discussion in the days running up to it. The recently passed South African Schools' Act stood to give parents much more say in school governance via the governing bodies and there was clearly some apprehension among the staff over the implied shift in power. In the morning staff meeting after the election, Ms James did express concern that "*young mommies*" (field notes 22 July 1997) had been chosen rather than the experienced members of the old parent/teacher school committee. In this first week, I noted some confusing contradictions in staff comments about their community. They mentioned often how close they were to their parent body, citing how much they did for the parents in, for example, termly social functions; yet they also often complained, in this first week, how little interest parents were taking in their children's achievements at the Eisteddfod.

By the end of this first week, I had become, I hoped, a familiar figure in the Grade Seven classroom. As I sat quietly at the back of the room for long periods, often as they occupied themselves without their teachers, the curiosity of the pupils over my tape recorder and microphones diminished. The Grade Seven classroom was cramped. It had 53 pupils, ranging in age from thirteen to seventeen years, crammed into low heavy double desks, which were arranged in groups of four. To reach the back of the room, it was necessary to climb over the desks. Their weight would hinder any quick rearrangement of learning groups. Who sits where seemed to have been fixed at the beginning of the year and the pupils remained in the same groupings for all their classes. The groups were single sex, although some crossing-over did take place, as will be demonstrated later. The left-hand back corner was reserved for an unstable pool of boys whom I came to label *"the lost ones"*. They seemed alienated from the day-to-day activity of the class, arriving late, if at all. Teachers seemed to ignore them as long as they caused no trouble. They did not work cohesively as a

group, preferring to drop into other groups. The room was clean but bare.

4.3.2 Ms Abrahams' science project: 21 July - 4 August

4.3.2.1 Classwork: 21 - 25 July

21 July

My first science class began with Ms Abrahams railing at the pupils for being late and arriving half-dressed after their football. In the hubbub of their settling-in, having checked my choice with Ms Abrahams, I approached a group of six girls, Charlene, Leanne, Annelise, Tanya, Poppie and Veronica - soon to become Group 8 - conveniently placed for the tape recorder and microphones. They agreed to be recorded and to meet me at breaktimes to be interviewed.

As the fieldwork progressed, I was to regret not following McGregor's example (1994: 4) who, in her study, specifically chose gifted children, able to articulate their thought processes (see 2.2.3.2). The girls in Group 8 were talkative and bright but three of them - Veronica, Poppie and Annelise - had little interest in school work and found my attempts to get them to reflect on what they were doing tedious. They were happy to talk at length about their favourite soap operas, boyfriends, my family - anything but schoolwork. Their frequent absences made the group a less than ideal choice. My strategy to cope with the frequent absences and inarticulateness of Group 8 was to include at times in the breaktime interviews with pupils from other groups - who, in any case, were very keen to be involved. However, even the more "academic" pupils, like Joy and Lavona, struggled to talk about their project work. They seemed to accept whatever teachers do in an unquestioning way and were unable to distinguish between different kinds of learning experiences. There was no evidence in their classes of teachers' engaging in any discussion about how to go about a task for

example. This, as Bertland points out in his survey of research into the development of metacognition, might have served to model the kind of reflection I was asking for (1985: 98).

Once the class was settled, Ms Abrahams went straight into allocating the topics, walking around the class with an envelope and holding it out for a pupil in each group to take out a card. Group 8 squealed with pleasure when they pulled out the card "*snail*" - explaining later that they were pleased because they knew that snails were easy to find. Although the teacher did ask if any group wanted to swop their topic, there was no real choice involved. The animals to be studied in the project were the snail, the crab, the frog, the dove, the millipede, the fish - the standard animals covered in the Grade Seven textbook.

Ms Abrahams then wrote without explanation on the board a list of headings: habitat, liggaamsverdeling [bodyparts], liggaamsvorm [bodyshape], voorbeweging [movement], asemhaling [respiration], voortplanning [reproduction]. These headings matched those in one of the two textbooks in use. She then asked the groups to choose a leader at which four of Group 8 immediately chorused, "*Charlene*!". She apparently is always chosen as "*she's a clever girl*" and "*she draws well*". The leaders went up to the teacher's desk to receive some instructions. On coming back, Charlene took ten minutes to tear up meticulously a sheet of paper into eight parts and write one of the headings on the board on to each. She then performed a slow ritual of shaking the pieces of paper up in her cupped hands and each girl took a piece of paper to find out what her work was to be.

By this time the bell had rung for the end of the period and the class broke up. Ms Abrahams then went from group to group giving out copies of two different textbooks - one for each child. When she came to Group 8 she asked them if they knew what to do and they chorused,

"*Yes miss*". Above the noise she shouted, *"Listen nicely. Each one of you has chosen a sub-division (onderafdele) - you know what your contribution must be. Take the textbook home*". She held up some pamphlets and told them that she had in her classroom posters and charts, which they could use. She encouraged them to find specimens, *"Put on your takkies and jeans and go to the frog pond. ... Bring a fish, bring a dove*". She also handed out a blank overhead transparency to each group. However, as she spoke, the children were packing away their books, talking among themselves and moving around the room. The high level of noise in the classroom meant that the teachers' instructions, especially at the beginning and end of their lessons, were often inaudible at the back of the room.

Already the nature of Ms Abrahams' project was leading me to question a standard assumption about project work - namely that project work values personal discovery and enquiry (Kerry & Eggleston, 1988: 19). There had been no communication as to purpose, end-product, outcomes, deadlines or assessment criteria. The sole instruction "*take your textbook home*" did not specify what the pupils were meant to do with it. As Ms Abrahams left the room, Annelise's voice is clearly audible on the tape: "*Dis onduidelik*" (It's unclear) and then a question from Veronica: "*Wat meen voortbeweging*? [What does locomotion mean?]". Nonetheless my field notes at the end of the lesson conclude:

> *"Group 8 will work well. They seem to co-operate well. Charlene seems to be well organised*".

22 July

My interview with them the following morning after two more science periods, however, revealed that I had been too optimistic. There was some argument over the division of work with Charlene complaining that the others always left her to do all the work. Poppie defended herself by saying that she had had looked at the textbook the night before to "*write*

it out". This perception of what she had to do explained what I had witnessed in class that day.

Ms Abrahams had come in and told the groups "*to get on with it*". Annelise and Poppie were absent and Group 8 seemed to lack purpose. Ms Abrahams sensed this and approached the group, asking fiercely:

> *"What must you do? Did you do anything at home? When are you going to do something? I want to see your textbook. Yesterday I gave out textbooks. What did you do with it? Take it out. Open it up".*

She then moved on to another group.

The next two periods were spent with children busily writing from the textbook. Nicol, one of the "*lost ones*", referred to above, came to join Group 8 and Tanya told him to do Poppie's work. Some minutes later, Ms Abrahams came across and told Tanya to take over Poppie's "Section A" (from the textbook) and Leanne to do Annelise's "Section B". Things grew more confused when, towards the end of the lesson, Poppie arrived and Nicol was ejected from Group 8. The girls wanted him to leave his notes behind but he indignantly refused.

Taking notes is a complex skill calling for several reading and writing strategies (Baldwin, 1992) - for example evaluating the material and relating it to a meaningful whole (Bertland, 1986: 98). All the Grade Seven pupils that I observed made word for word copies of sections from their textbooks. They had been given the heading of their section on the board and Ms Abrahams, as she circulated around the groups, often would point to the right page number and section. They perceived their task then to copy that section out. On my probing their purpose, Veronica said, "*We are writing*". But Charlene said, "*No, we are finding out*". Leanne added, "*It's just notes*". Another problem for Group 8 was that, with the exception of

Charlene and Leanne, the girls did this work on scraps on paper, which they would then lose in the course of the day and so the laborious copying would begin afresh in each lesson. Their methods became clearer the next day in the group interview when they said that they took notes "*just to keep in our memory*". Research has shown that rote copying can stem from a lack of or a shallow comprehension of the information (Bertland, 1986: 98). It seems that the girls were copying the sections from the textbook as a means of fixing the information in their heads - not necessarily to understand it. The issue of reading ability is clearly significant for information literacy and will be taken up again in Chapter Five (5.3.3.3).

The following instructions by Ms Abrahams to Charlene show that she is not unaware of the skills needed to take good notes:

> *"Dit begin hierso - jy moet eers die deel lees - haal die kernwoorde uit- haal een woordjie uit wat vir jou belangrik is ... die sleutelwoorde - die belangrikste punte wat jy moet voordra aan die res van jou maats - kry ' storie vir jouself- kyk na die skets* [It begins here - you must first read the section - take the core words out - take one word which is the most important for you - which you must communicate to the rest of your friends - make a story for yourself - look at the picture]" (pointing to a diagram in the textbook).

But having said this, she quickly moved on to another group. In a later interview, she expresses frustration that the children had not followed her instructions:

> *"Ja because in science the words that you used, the vetgedrukte woorde* [the highlighted words in the textbook] *now that is your keywords. And I told them that. Use your keywords, that is the most important fact. But they didn't take notice of it"* (Ms Abrahams interview 5 August 1997: 32).

However, she recognises that the children have not been taught to take notes. By Grade Seven she expects them to have picked up the skills (interview 5 August 1997: 32). Ms Abrahams, who is the Grade Seven English teacher, shows no interest in using her language classes to develop such skills.

> *"It is enough that I do it in science. I don't feel like reading about the frog in English"* (Ms Abrahams interview 5 August 1997: 28).

As the bell went at the end of the first period, Joy (from Group 1) staggered into class with an armful of charts, diagrams, pamphlets and other materials which she had fetched from Ms Abrahams' science room. She dumped them on the floor at the front. Many of these were handmade diagrams obviously made by classes in previous years. Ms Abrahams complains later that nobody took up her offer of visual aids for their presentations:

> *"These beautiful transparencies that the school bought and nobody came to ask for that. Most of the animals are on them, but nobody came. And I am not going to just give it to them. And they should have come to me say after school or whenever I am free, come and ask me you know. Nobody came to ask. So I thought well maybe they know what they are doing. Or they wanted to do it on their own. I gave them that bit of freedom, by not keeping tabs on them all the time. ... Just to see what's in them, what can I get out of them"* (Ms Abrahams interview 5 August 1997: 20).

A little later in the same lesson, perhaps realising that the class did not yet know what was expected of them, Ms Abrahams held up a large numbered diagram of a dove and demonstrated how each group should quiz the class over the body parts of their animal. Later, in a discussion of the purpose of project work, she reveals that she sees a project as oral presentation:

> *"Getting the child involved with the whole education, that is basically it.. He must go and find out... He must be proud of what they present"* (Ms Abrahams interview 5 August 1997: 14).

The fact that the groups were not expected to consolidate their notes into one document perhaps contributed to the aimlessness now evident in Group 8. Towards the end of the second period, I asked how they planned to use their notes. There was some inaudible muttering. I asked when they aimed to finish. Here again they all looked uncomfortable and were unable to answer. I took this up when I met with them at breaktime. The reply was, "*Anytime*". Then Charlene thought better of it and said, "*Maybe tomorrow. If we are alright then*". They did agree that they should find a live snail that afternoon and there was fierce

debate over where to find one.

The lack of purpose, together with the tedium of copying long perhaps half-understood passages from the textbook, might explain why the group's cohesion finally collapsed by the end of these two periods. Leanne complained repeatedly that she had the most work to do. Tanya was involved in several squabbles with people wanting to borrow her pens. The tensions culminated in the second lesson when Annelise moved out of the group to sit sulking alone. Charlene made no attempt to intervene. She went on quietly copying from the book.

An important theme was emerging in my field notes - the role of the teacher in project work. It is striking how little teacher/whole class interaction there was in Ms Abrahams' classes. She went from group to group talking to individuals, mostly explaining difficult words and keeping them to the task. She came to Group 8 at one stage and asked them how a snail moves. At their apathy she shouted:

> *"How does he move? Has he legs? With what does he move? Look in your textbook! Look in your textbook!"*

She then proceeded to demonstrate dramatically how the snail uses its muscle to move. Her dramatic and entertaining intervention here grabbed the attention of the whole class, who stopped their work and chat to watch. Throughout the whole project, it was only in glimpses like this that Ms Abrahams' skill in communicating was visible.

After the two science classes described here, there was a sudden call for the Grade Seven pupils. A bus had come for them - to take them on an outing into the city to the District Six Museum and the South African Museum. The visit, sponsored by the Western Cape Education Department, had been timetabled at the beginning of the year but everybody at the

school had forgotten about it. Ms Abrahams's later dismisses the visit as a "*waste of time*" regretting that she had not been reminded earlier then:

> *"Then they would have had some knowledge"* (Ms Abrahams interview 5 August 1997: 27).

As the class left the room, Ms Abrahams asked who was ready to present and Joy's group shouted that they were.

4.3.2.2 The presentations: Monday 25 July - 3 August

From the day of the museum visit until Monday 25 July, normal classes were abandoned so that the teachers could prepare for the fundraising dance. Joy, the leader of Group 1, later volunteered the information that her group had, on the Thursday, rehearsed their presentation in Ms Abrahams' science room. Ms Abrahams was present in the class and gave them some tips. In her later analysis of the project, Ms Abrahams wishes more groups had followed Joy's example.

The project presentations began on Monday 25 July and went through to 3 August - except for one lesson when Ms Abrahams, without any explanation, gave out worksheets on the crab which she had been given during the class visit to the Natural History Museum. No room was made for any more preparatory work to be done in class time.

All of the groups modelled their presentations on Joy's group. The pattern was established that one pupil would read from a section of the textbook while behind her/him another pupil would write the section's heading on the board. No use was made of the notes that they had spent several periods copying. In answer to my later question, Joy informed me that they had thrown away their notes. After the reading was finished, another pupil would then quiz the class asking questions based directly on what had been read. Hands would go up excitedly

and at times heated arguments arose. Most groups then produced a numbered chart of the body parts of their animal and would quiz the class on the names of each part. Only three groups had a specimen to hand around. Group 8 listed three criteria on being asked what they thought Ms Abrahams looked for in a project presentation. These were: that the group worked together, that everybody had a task, and that they kept order. This would explain the division of work - one reading, another writing on the board, another asking questions. Another quality she looked for, they believed, was maintaining class discipline:

> *"Ons moet nou vir die ander kinders se hulle moet stilbly dan moet ons nie raas nie ...hulle moet nie lag nie ... Ons moet serious wees* [We must tell the other children to keep quiet - they mustn't make a noise - they mustn't laugh. We must be serious]" (Group 8 interview 4 August 1997: 4).

The pupils' views as to what would please Ms Abrahams were quite accurate. She confirms that she allocated marks according to how the groups involved each member:

> *"...because otherwise you get the lazy ones that hide behind the one person. And they do all the talking and asking - we need children to be quiet at stages. ...Now within group A I can see that your work is worth 30% and in the same one one person can get 40% and the other person can get 60%....I didn't want them to know* [how I was going to assess the work]" (Ms Abrahams interview 5 August 1997: 21).

She kept no records of work done in the course of the project. All depended on the final presentation. Her wish to keep her assessment criteria and methods secret seems out of keeping with the ethos of continuous formative assessment, which hopes to develop in learners the ability to reflect on and assess their own work.

As the presentations progressed, she was forced to take on a more active role, often intervening to restore order or to explain concepts. The class often became unruly - clearly finding it tedious to sit and listen to pages being read inaudibly and hesitantly from the textbook. Only one group made use of the overhead projector to show a diagram they had traced from the textbook. Otherwise little use was made of the charts Ms Abrahams had

provided. Ms Abrahams' interventions to help the groups usually involved her taking up the textbook, getting the class to read aloud sections, then going back to read aloud a sentence and leaving out a word. The class would then chorus the missing word.

Only once in class did she show that she was not happy with the style of presentation when she told Eugene, *"Jy kan nie juis lees nie - jy moet die storie vertel* [you can't just read - you must tell the story]".

On August 4 in the second science lesson, it was the turn of Group 8. In the first lesson Ms Abrahams had warned them to be ready but Tanya, Annelise and Poppie were absent. Vernon had agreed to come into the group and they all had spent that first lesson again with their heads down copying out notes from the textbook and ignoring the presentation going on at the front of the class. On being told that three of the group were absent, Ms Abrahams told Charlene that was why they worked in groups - *"to stand in for one another"*. Group 8 followed the example of all the other groups with Charlene reading fast from the book and Leanne writing the headings on the board. Veronica seemed to be targeted by the class with several asking her questions and laughing at her. She resorted to giggles in reply. I waited in vain for a sight of their snail. They told me later that Mr Moosa had lost it. The presentation was over quickly. Another group followed.

This was the last of the project lessons and at the end Ms Abrahams asked for the textbooks. Only seven were handed to her so she insisted that the pupils line up for her to search them. Some weeks later she told me that most had been returned.

4.3.3 Mr Olifant's history module: 28 July - 7 August

The purpose in observing Mr Olifant's Grade Seven history classes was expressed in broader terms than in Ms Abrahams' science project. There the focus was one group's experience of doing a project, although inevitably this widened to include the teacher and the class. The fact that, from the beginning of the history module, the focus was as much on Mr Olifant as on the pupils gave more freedom to roam around the class and to engage with him as the module progressed. The perspectives gained are thus different from those of the science observations but they enrich them and serve for comparison. It is the same class being observed at more or less the same time. The history module began one week after the start of the science project and the pupils began their history project as the last science groups were presenting their work. The history project evolved out of the same Grade Seven museum visit which Ms Abrahams dismissed as a *"waste of time"*.

In his first interview, Mr Olifant labels his approach to history teaching as *"a project method"*. He then reconsiders, saying, *"It is more a module method"* (11 August 1997: 14). There is a general perception throughout the school that a module approach implies projects. Ms James, the principal, says, for example, in describing the new curriculum, *"It is projects; it is modules"*. The teachers struggle, however, to define what they mean by projects and modules. The definitions of projects include usually vague references to "themes". And on being pressed for closer definitions, they resort to defining one in terms of the other or to giving examples of what they are doing in class. Conventionally the module concept implies a self-contained unit, which explores a theme that cuts across disciplines. Mr Olifant, like Ms Abrahams, is ambivalent about the integration that a thematic approach implies:

> *"The theme work - housing, housing of the Khoisan, housing of this, housing of that - that is a bit difficult but the module system is easy because I just do the one, finish it off. ... you can't do thematical approach on everything then you confuse the kids. ...Whereas the module system, obviously it is history, it is chronological, you know it follows from*

> *one day to another and how it happened. It is a story, you can't break a story"* (Mr Olifant 11 August 1997: 22).

Indeed, it soon became evident that Mr Olifant's use of a term might be very different from that of educational theorists. In the first history class, he handed me his "module" - a series of worksheets entitled *Die Ontwikkeling van die Kaapse Binneland* [the Development of the Cape Interior], all of which were based on Chapter Ten of the Grade Seven textbook *Ons Lewende Wereld: 1985 Sillabus* (Van Niekerk, Lintvelt, Van Wyk, Stander, 1985). Again one of those discrepancies, so common at Galant, was noticeable. Mr Olifant frequently refers to his progressiveness, citing his political activism and the arguments he had with the principal over the outdated history syllabus a few years previously. Yet despite the freedom with regard to subjects and methods now possible, the content of the module diverged in no way from the textbook in use for the past twelve years.

4.3.3.1 Worksheets: 28 July 1997- 4 August

The class began with Mr Olifant's announcement: "*Ons kry 'n nuwe module* [we are getting a new module]". He then handed out some pages, which the class then set about pasting into their history exercise books, amid much squabbling over glue. After some minutes of pasting, Mr Olifant called for silence and referred to the visit to the South African Museum where they had been introduced to the exhibits of the indigenous peoples of South Africa. He asked them what they had heard there and wrote points on the board as the pupils brought them up.

The pattern for the next few history periods was group work on the worksheets. As one was completed, another was handed out, to be pasted into the history exercise books. Textbooks were given out and taken in every day. There were not enough books with the result that some children sat detached from their groups with nothing to do. Mr Olifant pointed out that

there was no point buying textbooks as the syllabus was changing. The Western Cape Education Department had recently devolved decisions as to how to spend what used to be called "textbook budgets" to the schools. Mr Olifant - following a decision by the school - had spent the 1997 budget allocation (about R14000) on books for the teachers to encourage *"more interesting, more creative, more colourful worksheets"* (interview 11 August 1997: 35). Here again, some contradiction is evident. His own worksheets cannot be described as interesting (see Appendix D). They consist of extracts copied from the textbook and the task is almost always to fill in missing words from the textbook. The pattern was that Mr Olifant moved from group to group signing the sheets as they were completed. Apparently every term these are checked by Mr Moosa, the Head of Department.

Observation of the class provoked the same questions as to reading ability as in the science project work. The reading required for the tasks was mere word recognition as no understanding of the thread of meaning running through the text was needed. The strategy employed by one group, which had only two books among them, was that Vernon would scan the relevant section in the book and pick out the sentence the wording of which matched the question. He would shout with triumph when he found it and his fellow group members would then obediently write in the missing word on their sheets. Observation of the children, hopping backwards and forwards through the textbooks, led to doubt over whether the context and significance of the isolated facts were being understood.

These doubts over their reading lead to fundamental pedagogical questions. The pupils use the worksheet sentences to study for regular tests and then an examination:

> *"Yes they learn from that* [the worksheet]. *What we do now is by Wednesday or Thursday when we are done with this, we go over all those things again and maybe have some oral exam on that. And then by Friday or the next week we will have an exam on all these things ... based on the worksheets we gave ..."* (Mr Olifant interview 11 August 1997: 27).

The test and exam questions are almost always identical to those in the daily worksheets. A week before the history module began, in a revision class, I had witnessed the dependence of his Grade Six class on the exact phrasing being repeated. There had been a chorus of outrage because Mr Olifant had, in their test, changed the wording used in their worksheets. Most of the class had not known the answer in the test because the phrase in the test had changed from "first printer in Europe" to "first printer in the western world" (field notes 21 July 1997).

Mr Olifant, however, sees his worksheets as an alternative to "chalk and talk":

> *"Board writing, that is out, we don't have to write on boards, because if you are writing on boards you are wasting time. Perhaps you* [referring to the pupil] *can take a book and page and look for the answers and those things that you know"* (Mr Olifant interview 11 August: 9).

Mr Olifant is adamant that he *"can't just give the answers"* (field notes 1 August 1997). But it is difficult to reconcile his often-expressed belief that history should be about discussion and critical thinking with the tasks in his classes. His second interview throws light on the discrepancy. Here he seems to equate hunting for and finding the right word as understanding:

> *"They will take their time and they will understand. They will find an answer. That is why there is a lot of that in the question sheets I give to them - so that they can read up and give the answer"* (Mr Olifant interview 15 September 1997: 10).

"Reading up" implies understanding. Whether the feverish hunting for the right word, prevalent in his classes, can be classed as "reading up" is doubtful. The same emphasis on closed questions - looking for the right answer - is evident in Mr Olifant's oral questioning. The existence of a gap between what he does and what he perceives he does is not unusual. Several studies in the United Kingdom have found that there is often a gap between what teachers do and what they say they do. Indeed, Gipps cites these findings as evidence of the

need for the use of more than one data-gathering technique in classroom research (Gipps, 1994: 32). Delamont makes a similar point in her comment that the outward appearance of a classroom can be misleading. Ethnographic field study has revealed that, despite seemingly "progressive" arrangement in small groups, interaction in many primary classrooms in the United Kingdom is still highly traditional (Delamont, 1987: 15).

One explanation for Mr Olifant's low-level tasks might be that he has had to compromise his ideals. He says:

> *"That is the best way I can see to get them to read, you know. ...Basically their reading is very poor"* (Mr Olifant interview 15 September 1997: 10).

It could thus be that the value of the worksheet tasks for Mr Olifant is that they bypass the poor reading abilities of his pupils. This is also a factor in his choice of a practical project a few days later. Although recognising in his interviews the benefit of project work in teaching reading skills, he says:

> *"Books and these things are not important.... They hate to read up and those things, so I don't like to do things the kids don't like. I rather give them something that is more interesting"* (Mr Olifant interview 11 August 1997: 27).

The suggestion that pupils' lack of reading abilities is a factor in Mr Olifant's choice of teaching methods is significant for information literacy education. Accessing information, understanding it, manipulating it - all depend on reading. Observation of the Grade Seven projects clearly called for further exploration of the issue of reading within the school. An account of this exploration will be given in Chapter Five (5.3.3.3).

The lesson on 4 August broke the pattern of worksheet work. It involved a class discussion, some debate and a play. In the early morning staff meeting, Ms James had warned the teachers of a predicted increase in gang violence as it was the anniversary of the killing of a

local gang leader. Perhaps it was this that led Mr Olifant to focus so much on the issues of group conflict in the next two days. It began with his showing a newspaper cutting on the use by the police of Bushmen trackers to catch cattle thieves in the Northern Cape. He then introduced the topic of the conflict over land between the indigenous nomadic people and the cattle-farming Xhosa and that between the Xhosa and the white farmers. He posed the question of how such conflict could be resolved. After a lively discussion, he encouraged four boys to act out a scene between the Bushmen and the Xhosa. It ended in a fierce wrestling match on the classroom floor. The class loved it and this was the germ of the gumboot dance and play performed to an audience of Grade Six pupils and teachers on 8 August.

4.3.3.2 History project: 31 July -7 August

In the lesson on 31 July, Mr Olifant had reminded the class of the diorama in the South African Museum, depicting the lives of the San and Xhosa people. He set them the project of building a model of a village of one of the groups, using whatever they could find around the school or their homes. He wrote on the board that it was to be completed by the following Thursday (3 August 1997) and seemed to expect it to be done at home. Mr Olifant's use of the museum experience contrasts with that of Ms Abrahams. He attributes the success of his project to the fact that the visit gave his pupils knowledge to build on. He claims that this meant they were involved from the start as *"they knew everything about the project beforehand"* (interview 15 September 1997: 8).

Another factor in its success, he believes, is that its practical nature motivated the class:

> *"I think they were involved. That word is very important - 'involved' ... If you tell them something or show them something they are not involved....But it* [the model building] *involved them. They are busy, you see, they were active with this*" (Mr Olifant interview 15 September 1997: 9).

Here he refers to the purposeful activities on 6 August when the class spent most of the day finishing their models, using materials that they had found at home and also those in the art room. Very few had completed their work at home and Mr Olifant persuaded his colleagues to allow the class to use their periods. The enthusiasm of the children for the cutting, sawing, painting and building was obvious. A major outcome was, Mr Olifant claims, the feeling of pride it engendered, especially among some of the disaffected boys. Frans, for example, was one of the few to complete his model at home. His elaborate model village was awarded 100% although Mr I Moosa, an animal lover, later insisted that 1% be deducted as Frans had killed one of his pet doves to extract its liver - in order to add some realism to the miniature fireplace. The high quality of Frans's work lends support to Mr Olifant's view that the normal programme is too academic for Galant pupils - and his killing of the dove might support his view that education in values is needed:

> *"Especially our kids, the syllabus does not help our kids with their future. Because we see our kids going out there, becoming nothing.... Why don't we make something else out of them, give them more skills, practical skills as well as moral because that is what is lacking here, moral development"* (Mr Olifant interview 11 August 1997: 9).

Mr Olifant feels that the module as a whole was one of the best he has undertaken - mainly because of the models and the play. He claims to have had three criteria in assessing the models: the overall appearance, the amount of detail, and the creative colour and design. He was thus less interested in the authenticity of the models than their aesthetics and the amount of effort displayed.

4.4 Analysis of the Grade Seven projects

In Chapter Three (3.3.5), it was stated that the range of seven criteria or common variables, which Tann used in her case study of project work in London, framed the study of the two projects at Galant Primary. They reflect a broad consensus within the literature on project

work. The participant observation and the resulting written description thus specifically focused on data which have to do with these criteria:

- control over choice of topic: teacher initiated vs individual choice
- depth and breadth of content: specific school subject area vs integrated theme or child's own interest
- context of learning: individual/group/class (or a mixture of these)
- purpose and status: accumulating new knowledge vs process skills (eg research skills, information skills, and, so on). The time slot on the daily timetable and the amount of time allocated to a project often are indicators of whether it is seen as "extra" to the real learning or as a means to develop crucial learning skills.
- learning processes. The kind of learning/teaching activities (didactic vs self-discovery) and the variety of resources and their nature (primary/secondary) are significant indicators of the kind of learning.
- presentation/audience: teacher-assessed final products vs peer assessment and presentation to wider audiences
- record keeping: none vs logs kept by child, parent, teacher - making comments on a wide range of aspects (Tann, 1988b: 21).

Tann states that, whatever the differences within each criterion, all project work can be viewed in terms of these criteria. She provides a table to demonstrate how, for each criterion, a continuum of classroom practice exists. She gives examples of more conservative schools where projects - in their retention of teacher control in the choice of topics and in the learning processes - emphasise the accumulation of knowledge rather than the acquisition of process skills. But these projects are still projects - because they fundamentally accept an approach to learning that values the learner's own discovery of knowledge. She stresses that pedagogical and philosophical principles - assumptions about learning - are fundamental in any definition of project work. At one level, the Galant projects might indeed be fitted in on the more conservative side of the continuum for each criterion. However, the participant observation of the two projects at Galant Primary provides information that might rather reveal the inadequacy of such "fitting-in". From the first day of Ms Abrahams' project, questions were raised in field notes as to its credibility. Tann's first criterion, control over choice of topic, serves to illustrate the point. The topic, and sub-topics, in Ms Abrahams' project came

directly from the textbook and the syllabus. It is difficult to see how this might conform to a fundamental assumption of the project method – that project topics are alternatives to, or, extensions of the basic curriculum.

Kerry and Eggleston's distinction between project work as a philosophy and as classroom management provides a useful lens through which to view the two projects (1994: 188). They point out that, although teachers need not always explicitly articulate a philosophy, a child-centred view of education and a holistic view of knowledge are "indispensable to its [project work's] effective implementation" (p. 190). This point might answer some of the questions provoked by the observation of the projects. The most fundamental of these concerns the nature and purposes of a project.

4.4.1 Ms Abrahams' science project

Before she went on leave and the day after the end of her project, Ms Abrahams gave a long interview - from which extracts have already been used in the course of the above account. The interview protocol is included in Appendix E. The questions probe her feelings about teaching, what she sees as the purposes and advantages (if any) of project work, what skills she sees demanded by projects, how she planned for and managed the science project. Another aim was to explore how aware she is of the construct information literacy and how information literate she is. The interview reveals that she believes the project to have failed. She says:

> *"As you saw, they read from the book, that is not project work"* (Ms Abrahams interview 5 August: 12).

When asked what project work is, she replies:

> *"Having these children working on a specific theme or a specific little thing or whatever"* (Ms Abrahams interview 5 August: 12).

She sees the purpose of project work as:

> *"Getting the child involved with the whole education to do something well - go an extra mile to do something and - he must be proud of what they present - he must go and find out"* (Ms Abrahams interview 5 August 1997: 13).

Fundamentally all definitions of project work see it as an approach to learning which draws upon learners' concerns and which actively involves them in its planning (Tann, 1988c: 4). Ms Abrahams' use of the textbook is not in itself incompatible with the underlying ethos of project work. As indicated in Chapter One (1.1.1), in disadvantaged schools, the textbook might well be the sole source of information and might be used to teach information skills (Marais, 1996: 57). However, Ms Abrahams' allocation of topics and sub-topics from the textbook gave the Grade Seven children no opportunity to suggest questions or problems of interest to them. No time was set aside for discussion of the broad topic and its significance.

That Ms Abrahams' understanding of the project method is at a superficial level only is evidenced by the gap between her words quoted above "*they must go and find out*" and the reality of her classroom. The fun of the lucky dip of choosing a card from an envelope at the beginning did not disguise the fact that she, in reality, was allocating topics straight from the textbooks. The streets of Paradys are full of animals - horses, goats, dogs, and cats. Ms Abrahams herself recounts how Mark, one of the Grade Seven boys, was called out of school one day to catch a horse running wild outside (interview, 5 August 1997: 11). Another boy, Frans, keeps over a hundred pigeons. Yet she chose to keep to the standard textbook animals and to its exact sub-headings.

As the project progressed, what enthusiasm there had been at the beginning dissipated perhaps because the children realised that it just was not important. Tann points to evidence that many teachers pay only lip service to the notion of integrated child-centred learning in

projects (1988b: 25). The reality often is that projects provide a convenient method of classroom management in keeping their classes busy. Children soon lose motivation if they sense that project work is not valued as much as other work (Leith, 1981: 60; Thomson & Meek, 1986: 111; Tann, 1988b: 25; Howard, 1991: 73; Kerry & Eggleston, 1994: 192). Not interested in the topic and then not knowing what they were aiming at, Group 8 soon abandoned any attempt to work cohesively as a group. They had no idea how much the project would "count" and expected Ms Abrahams to repeat the work from the textbook:

> *"Juffrou gaan seker net vir ons een diertjie gee om oor te doen* [Miss will surely just give us one animal to do again]" (Group 8 interview 4 August 1997: 11).

Project work, it is generally accepted, entails a shift from content to process - and thus to the skills that the process requires (Eisenberg & Spitzer, 1991: 116), However Ms Abrahams seems unaware of these shifts. Her criticism that "*reading from the book is not project work*" refers to the final presentation - the end product. Similarly, she sees the purpose in terms of presentation. It appears that, if the group had given a conventional lesson on their animal with each member performing a task and with some use of charts or the overhead projector, it would have been acceptable to her. In her admission of failure, there is no recognition that not enough attention was paid to the *process* of project work. This has been found to be a common weakness of project work in primary classrooms (Long, 1988: 174). Avann (1985: 3) points out that once the shift changes to **how** children find and process information the need for the teaching of information skills becomes apparent. With her preoccupation with the product and with content, Ms Abrahams is unable to diagnose what went wrong. She blames the "*playfulness*" of the 1997 Grade Seven pupils as the same project had worked well the previous year. She regrets that she left so much to the group leaders, saying:

> *"I just thought that a good leader will keep tabs on them ... that everybody needs his own piece of work to do"* (Ms Abrahams interview 5 August: 20).

Whatever her understanding of the concept of project work, she says that she approves of it but is pessimistic over its feasibility in disadvantaged schools. Thus:

> *"A project to me, the concept of project work is good. The concept, the idea whoever put the idea there, it is a good idea"* (Ms Abrahams interview 5 August: 11).

> *"The curriculum as it is expects project work. Situations at school differ. So I think each school should adapt according to their needs and their dynamics and what works for them. It's no use taking something out of the sky and say fine across the board everybody is going to do it.... You must take the group work and start the project work, analyse it, throw away what you don't need, add to it or if you feel you want to discard the whole thing then discard it ... You are working with the raw material and only you know that person best"* (Ms Abrahams interview 5 August: 15).

Ms Abrahams' ambivalence toward project work is evident. The question is whether she "*discarded the whole thing*" - making the project a travesty, one in name only - or whether she sensibly adapted the project method to suit her circumstances.

A closer look at her teaching and her frameworks of understanding about teaching might give an answer. The choices the pupils made over how to present their work give insight into their teacher and her teaching. She, after all, did coach the first group in what she wanted. The fact that the end result was a chalk-and-talk lesson heavily reliant on quiz-like questioning and chorused answers from the textbook confirms the glimpses gained in class of Ms Abrahams' teaching. Her teaching style for the project classes was low-key with very little whole class interaction. She and her colleagues at Galant Primary are unanimous in identifying project work as group work. Her unwillingness to intervene is in keeping with her view, expressed just below, that one of the aims of projects is to teach children to take responsibility for their own work. Here also she claims that project work means less work for the teacher:

> *"You just give the project and you give the instructions to it. You've just got to monitor the children to see what they have done"* (Ms Abrahams interview 5 August 1997: 14).

> *"You got to take responsibility for your own life....So I left them basically on their own to do it* [the project]" (Ms Abrahams interview 5 August 1997: 20).

Her words might explain the lack of support provided for the pupils to learn the skills needed for the task. "*Monitoring*" implies continuous assessment yet there was no record keeping in her project. The words "*what they have done*" are telling. Her interpretation of her role is that she assesses only the final product. There was thus no room for remediation or consolidation of skills.

Ms Abrahams never expresses explicitly any doubt that what she undertook is not, fundamentally, project work. However it would be simplistic to attribute too quickly the failure of Ms Abrahams' project to a lack of understanding of what a project should be, as, in other parts of the interview, she blames a lack of resources - within the school and in the children's homes. She tells an anecdote of meeting a white child on the train carrying to school a beautiful collection of labelled insects - done, the child revealed, by the whole family. The issue of resources is of course central to the problem of introducing information skills into South African schools.

However, the question of resources might be a question of attitude. Ms Abrahams did offer a large collection of charts, transparencies and posters to the class - but for the **presentations**, not for learning in class. She dismisses the visit to the museums as "*a waste of time*" saying that the children were badly prepared.

Support for this interpretation comes from Ms Abrahams' description of a workshop which she attended at Kirstenbosch, the National Botanical Gardens, a few kilometres from the school. She first criticises the Education Department for its neglect of good in-service training:

> *"They will be sitting there and handing out all these big words ... and then we've got to do all the work".*

She then praises the approach at Kirstenbosch:

> *"Now that project - that was theme work. There is various groups but each group is a different aspect. Some did the fungus part, some did the medicine part, some did the food part. We had everything, it was good. All those life skills that you need"* Ms Abrahams interview5 August 1997: 35.

When asked if she could use the Kirstenbosch approach as a model she replies:

> *"But unfortunately they've got all the specimens - if I come here I don't have the specimens. I've got to go somewhere and find the specimens. I cannot go to the mountain and pick ...we must have money.. nobody is going to drive us"* (Ms Abrahams interview 5 August 1997: 36).

On being asked why she cannot use the University of the Western Cape Environmental Education Resource Centre quite close to the school, she says:

> *"You must know exactly what you are going to do there - you can't just take a busful of children and go to UWC"* (Ms Abrahams interview 5 August 1997: 35).

The gap between her recognition of the value of the thematic approach at Kirstenbosch and her own approach in her science project indicates that it is not just a question of availability of resources but rather a failure to see how the Kirstenbosch approach can be applied in her classroom. Her conceptions of teaching and learning are the issue. Unless teachers see **why** projects are a good idea then there is little point in discussing **how** to manage them. The Kirstenbosch workshop was, ultimately, ineffective as it did not support Ms Abrahams to reflect on how she could implement its ideas in her own classroom. Its failure supports research evidence that in-service training needs to start with the frameworks of understandings of participants and to provide follow-up support (Fullan, 1991: 316).

The suggestion here is that, although Ms Abrahams calls the Grade Seven work a project, the reality is that neither its philosophy nor its classroom execution qualifies it for that name. So, the question remains: Is good project work possible in schools like Galant? Is Ms Abrahams' approach a reasonable response to a difficult situation - a strategy, even if not explicit, to

cope with the problems of introducing new methods in unfavourable circumstances? The value of the science project for the field study is that it gives insight into how one teacher copes with the pressures to change. A danger for educational innovation is thus exposed. Ms Abrahams' defence of her failure perhaps indicates that she deep down feels that the project method is impossible. Her strategy then is to pay lip service to the concept. In other words she adapts her own teaching a little and calls the result a "project".

There are clear risks for information literacy education being built on such foundations. For example, if she (and those around her) believes that what she is doing **is** project work she might well be closed to any further exploration of the concept. A second danger is that the obvious ineffectiveness of the learning in her projects will sooner or later encourage a call to return to the "basics" - as happened in the United Kingdom after the mediocrity of much project work was exposed (Tann, 1988c: 12; Yeo, 1994: 128). Thus a possibly better approach will be discredited because teachers on the ground have not implemented it effectively.

An analysis of Mr Olifant's history module might throw more light on these complex issues.

4.4.2 Analysis of the history project

The history project was clearly more successful than Ms Abrahams' science project. It exploited the learning of the museum visit; it involved the children, including some usually alienated from the mainstream; it offered an outlet for their creativity; it developed confidence and self-esteem; it relied on materials easily found in the township. However it is impossible to assess the learning outcomes of the project as they were not spelled out. How much for example it contributed to an understanding of the lifestyle of the San or Xhosa

people cannot be evaluated. It was in many ways an adjunct to the "real" work - the worksheets. The assessment of the term's work was based on the worksheets and on the end-of-term tests based on the worksheets. Its main purpose - just as has been found the case in some studies of projects in British primary classes (Tann, 1988b: 25) - was to make a change from the worksheets, to keep the children busy and to entertain them.

Its spontaneity was in some ways why the children enjoyed it. However the lack of rigour in its planning and management might conflict with the kind of defining of outcomes, performance indicators and range criteria insisted on in Curriculum 2005 (South Africa. Department of Education, 1997b). Among the teachers at Galant, there seems to be a general feeling that outcomes-based-education will make their work easier because they will not have to give tests anymore. As one teacher put it at the Wednesday staff development session that I attended, "*We'll just tick off the work as they do it*" (field notes 21 August 1997).

Mr Olifant's views on project work are hard to unravel. Apart from the two formal interviews, there were many informal conversations in the course of the history module. Early on in the first interview, he tells of a conversation he had with a retired teacher who told him of the failure of the "thematic" approach in other countries. He implies that Galant children need structured input from their teachers:

> *"I said to her* [the retired teacher], *look the way I see it, it is not going to work for the youngsters. You can't give the youngster nothing and ask them to give something. It is like a computer. If you want information out, you must put information in"* (Mr Olifant interview 11 August 1997: 13).

His comparing a child here to a computer is symptomatic of what Paulo Freire (Robinson, 1994: 12) calls the "banking" conception of teaching, in which the teacher is the banker or controller of knowledge. The significance of his analogy is that it is incompatible with the

model of teaching advocated by the project method - as discussed in Chapters One and Two. This theme will be expanded on in Chapter Five (5.3.3). However, later in the same interview, he is positive towards projects saying that they have much to offer Galant children because they allow more practical work, which they enjoy:

> *"I think it is better. For our kids in this area it is actually better"* (Mr Olifant interview 11 August 1997: 21).

He then qualifies this approval by saying that it is rather *modules* that he likes. Projects cannot work, he says, as they demand work across subjects, which confuses the children. If projects are within one subject area and if they are practical, then he approves of them.

On being asked what the purposes of project work are he says firstly they are "*more fun*" and secondly "*it is for a mark ... that counts for the end of the year*" (interview 11 August 1997: 15). Here perhaps is another clue to his deeply held conceptions of teaching - and which might explain in part his ambivalence towards project work. If his chief interest in projects is the end-product as a means of providing marks for year-end assessment, then the reading problems referred to above will be seen as an obstacle. In this light a project cannot be viewed as a vehicle to remediate reading problems or to teach skills. He is aware of the skills traditionally associated with project work listing them as "*finding the right books, ... the right page, ...using the library or any source, ...reading properly to understand*" (interview 11 August 1997: 16). Later on, he claims to bring in books to the class so that "*they can find out information for themselves*"; yet the reality is that, in the model building, not even the textbook was referred to. The children saw the project as a building exercise, making their models pretty with paint, glitter, coloured paper and flowers. Mr Olifant's module made no attempt to teach cognitive information skills. The worksheet work relied on rote learning of content and the project ignored what he calls "*academic*" skills in favour of "*creative skills*" (interview 11 August 1997: 16). The point here is not that projects should not teach such

skills but rather that, if the process became the focus rather than the product, perhaps then he could design a module which would be enjoyable, practical, creative **and** which would teach some cognitive competencies.

In the past, the Grade Seven teachers' preoccupation with marks and with the end product might have been ascribed to official departmental assessment policies or to conservatism on the part of the principal. However, the field study shows that this would be too simplistic. The 1995 Western Cape interim curriculum recommends continuous formative assessment and suggests that 60% of the end-of-year assessment rely on projects and portfolios (Western Cape Education Department, 1995). The principal, Ms James, favours outcomes-based education, believing it to offer her pupils far more support. She seems more aware of current learning approaches and the implications of the new curriculum than her teachers. She, herself, attributes this to her recent studies at the University of the Western Cape (interview 15 August 1997: 30). Her progressiveness is confirmed by Mr Olifant's comment (interview 15 September 1997: 7) that, three years previously, she had suggested that teachers research and report on new methods. It was she who called in the information skills specialist from the Education Department to present a workshop on projects in the first term and it was she who had suggested that the weekly staff development sessions in the first term be devoted to projects. She seems knowledgeable about the management of projects and the phases through which they go - and about the skills they demand. It is significant that she sees her biggest challenge as changing teachers' attitudes to more learner-centred and open-ended methods:

> *"I think if they change their attitude towards teaching, change their methods, not teaching forty children, teaching groups of children, allowing a child to bring something extra in"* (Ms James interview 16 September 1997: 6).

Towards the end of the second interview, Mr Olifant almost casually divulges the information

that he and other Grade Seven teachers had met after the project workshop, arranged by Ms James in the first quarter, and had decided to ignore it:

> *"What we did, we come together and then we decide what is good for* [Grade] *Fours and Fives. We found that that method the school was trying* [project method] *was not going to work with our kids and then we did our own thing you see"* (Mr Olifant interview 15 September 1997: 4).

It seems that Ms James was not included in this decision. Mr Moosa, as Grade Seven Head of Department, is directly responsible for the day to day programme of Grade Seven and it is possible that Ms James - called in to watch the final play and to admire the models - is shielded from the true nature of the projects being undertaken.

Mr Olifant claims that concern over the expense of project work led to their decision. They cannot ask parents to pay for paper and photocopying. However, he himself gives out photocopied worksheets everyday - apparently paid for, at times, out of his own pocket. Mr Olifant's discussion of the purpose of the teachers' resources he has been entrusted to buy with the textbook budget calls to mind Beswick's warning (1984: 17) that the "tyranny" of the worksheet might replace that of the textbook:

> *"We are planning a resource centre, but not a library. It is for all the teachers. So the teachers can use these books only....Library is for the kids and the teachers will be in the resource centre where they can be more creative. If they want to do that subject, say housing, there is a lot of books, so they can choose. So it is not one book but five or six that they can use and they can use them more creatively. It is cheaper that way than buying for the kids you see....Now let me explain why we did that. We are going to buy a risograph* [a copier] *... Now to have a risograph obviously you need to have these nice pictures and nice books and more interesting things. So a teacher must build up a sort of a project or a module, and you must have the resources for that. So we are going to have all those things here for the teacher"* (Mr Olifant interview 11 August 1997: 33).

His words also call to mind Beswick's distinction (1984: 17) between resource-based **teaching** and resource-based **learning**. According to Beswick, in resource-based teaching, where teachers draw upon a range of materials to design worksheets, teachers retain control of the learning experience. Again Freire's construct of "teacher as banker" is pertinent. Mr Olifant's comment about the need for the sophisticated risograph copying machine is

revealing. He is not arguing that their teaching methods demand it but rather the converse. A contradiction is once more revealed. Despite his belief that he is a progressive teacher, Mr Olifant's module design, his worksheets and his questioning techniques in class give little evidence of the kind of constructivist learner-centred approaches which Curriculum 2005 advocates. His struggle to describe his teaching styles and his inability to find metaphors for learning and teaching in the two long interviews are significant here. They reflect a lack of practice in thinking **about** his job. Like Ms Abrahams, he seems unaware that teaching styles might differ according to what kind of learning is desired. This theme will be explored further in the following chapter.

4.5 Conclusion

The above account has shown that it is necessary to go beyond the reason given by Mr Olifant for the decision to ignore the project workshop - shortage of paper. Perhaps rather it comes from his belief that the project method has nothing to do with his reality. The assertion here is that, as with Ms Abrahams, it is Mr Olifant's fundamental view of teaching and learning, the lens through which he views change, which is the issue - as much as adequacy of resources. Before such an interpretation can be accepted, further exploration of how teachers "make sense of, adjust to, and create the educational environment" at Galant is called for (Pope, 1993: 22). So far the emphasis has been on investigating, in Wolcott's words, "how things work" (1994: 12). The following chapter picks up some of the themes that emerged as significant in the description and analysis of the two Grade Seven projects and explores their meaning. The perspective - in keeping with its ethnographic ethos and methodology - is that the exploration of how teachers "think" will provide the key to the understanding of the teaching processes at Galant Primary that have been described and analysed in this chapter. Pope cites Halkes and Olson to make this point:

> After all, it is the teacher's subjective school-related knowledge which determines for the most part what happens in the classroom; whether the teacher can articulate his/her knowledge or not. Instead of reducing the complexities of the teaching learning situations into a few research variables, one tries to find out how teachers cope with these complexities (Pope, 1993: 21).

The purpose in the following chapter is to engage in the process of interpreting - looking for meaning. Much of the interpreting involves what Pope, quoted here, calls the teachers' "subjective school-related knowledge". His use of the word "subjective" suggests that he is not referring to teachers' intellectual control of an objective body of knowledge. As Barnes warns, the use of the term "teachers' knowledge" can be misleading, unless the writer makes clear that knowledge is dynamic and value-laden (1992: 16). However, as Hargreaves says, such an examination implies a widening of the focus. He argues that teacher development initiatives need to build on research into individual schools' cultures of teaching:

> Teachers do not develop their strategies and styles of teaching entirely alone. Most of the problems that the teacher encounters, the issues he or she confronts, have faced many similarly placed colleagues in the past. Over the years these colleagues develop ways of doing things, along with whole networks of associated educational beliefs and values in response to the characteristic and recurrent problems and circumstances they face in their work. Teaching strategies, that is, arise not just from the demands and constraints of the immediate context, but also from cultures of teaching; from beliefs, values, habits and assumed ways of doing things among communities of teachers who have had to deal with similar demands and constraints over many years. Culture carries the community's historically generated and collectively shared solutions to its new and inexperienced membership. It forms a framework for occupational learning (Hargreaves, 1996: 320).

The interpretation of Chapter Five entails a closer examination of the webs of meaning that make up the culture of teaching and learning of Galant Primary School.

CHAPTER FIVE

WIDENING THE FOCUS: INTERPRETATION

5.1 Introduction

Running through the descriptive account in Chapter Four have been comments which speculated on what was going on inside teachers' heads - their beliefs and values. This focus grew sharper as the study progressed as it was found to be useful in giving sense to the field study observations and interviewing data. The strength of the participant observation of ethnography is its sensitivity in uncovering layers of meaning. One layer is exposed and then another. Tentative categories are tested out in other contexts, or in interviewing, or in analysis of learning materials, or in interviews with other participants. The description and analysis in the preceding chapter addressed the questions, "What is going on here?", "How do things work?", and "What is not working well here?" (Wolcott, 1994: 12). This chapter extends the analysis to ask the questions, "What does it all mean?" and "What is to be made of it all?". And the underlying question is always, "What does this mean for information literacy education?". Interpretation is the search to make sense of the findings by reaching beyond what Wolcott calls the "certainties" contained in the analysis of the specific case. To transform the analysis into theory or to give it "meaningful shape" requires interpretation (Sutton, 1993: 419).

5.2 Teachers' personal constructs

Chapter Four has shown how the ethnographic combination of observation and interviewing uncovered several disparities - gaps between what the teachers say and what they do. Also revealed are contradictions in the various versions of what the school is doing. Ms James, in inviting me into the school, had assured me that Galant Primary employed the project

method. The fact is that, despite the fair amount of time spent on projects, they count for very little in Grade Seven and there was no sign of project work in the other grades. Researchers in other contexts have found the same kind of contradiction. In the late 1970s, in a study of 38 primary schools in London, Leith explored what she calls the "enigma" of the disparity between amount of time spent on project work and teachers' casual attitudes towards assessing it. She concludes that, where teachers do not keep records and do not assess project work systematically, projects are "a respectable time-filler" "doing little more than keeping children occupied" (1981: 61). She suggests that each teacher needs to make a personal evaluation of the use of projects as a teaching method. The account in Chapter Four lends support to her view but also indicates that such an evaluation would be contigent on the teachers' underlying assumptions and beliefs about learning.

The field study reveals the strategies employed by the Grade Seven teachers to adapt new ideas and methods to their own reality. In the case of Ms Abrahams' science project, the finding has been that the concept of project work became in the process meaningless. Her science "project" was a travesty as it in no way fulfils the purposes of project work, as suggested in educational theory. Yet neither she nor her colleagues question her approach. Ms Abrahams admits that it was not a success but she attributes its failure to this particular class. She has every intention of repeating the same project next year.

An understanding of, and perhaps an explanation for, the disparities could lie in the constructivist research into the significance of teachers' "personal constructs" - their deeply-held beliefs about teaching and learning - for their teaching behaviours. According to George Kelly, the cognitive psychologist discussed in Chapter Two (2.2.3.1), personal constructs are the frames that people create to interpret their world. They are core beliefs, which frame a

person's existence. Barnes defines an interpretive frame as "a clustered set of expectations through which all adults organize, not only their knowledge of the world but their behaviour in it" (1992: 16). His discussion of his own study, which found puzzling gaps between teachers' explanations for a classroom situation and the researchers', might throw light on some of the findings of Chapter Four. He suggests that:

> When teachers theorise - and not all do - the theories are not always related to their actual behaviour in lessons. This is not because they wish to deceive but because they are often acting upon a set of priorities of which they are not fully aware. Moreover, what a teacher tells a curriculum developer is always partly a justification of strategies already adopted for coping with dilemmas (Barnes, 1992: 15).

Hamilton provides a useful survey of a large number of research studies on the role of teachers' personal constructs in their choice of goals and teaching behaviours. These studies use varying terms such as "beliefs", "constructions", "perspectives", "understandings", "ground", "vision", and "knowledge" (1993: 89). Pope's survey of this research might also suggest the inclusion of the terms "voice", "thinking", "theories", and "conceptions" (1993: 22). Pratt (1992: 205) prefers this last term, and points out that conceptions of teaching involve conceptions about the following: *content* (what is to be learned), *learners* (the nature of learners and the learning process), *ideals* (purposes of education), and *teachers* (roles, functions and responsibilities). Nespor's choice of the term "belief systems" indicates the futility in trying to identify beliefs and then correlate them with certain behaviours. They are "loosely-bounded systems with highly variable and uncertain linkages to events, situations, and knowledge systems" (Nespor, 1987: 321).

As indicated in Chapter Three, the fundamental assumptions of the field study of Galant Primary are constructivist. Information literacy was analysed as a constructivist concept in Chapter Two - as was the approach to learning implied by the project method in Chapter One.

The constructivist perspective, in following up and interpreting the description and analysis of the Grade Seven projects contained in Chapter Four, assumes the following:

- The world is real but individuals vary in their perception of it.
- An individual's conception of the real world has integrity for that individual.
- Teachers use personally pre-existing theories to explain and plan their teaching.
- Teachers test these theories for fruitfulness and modify them in the light of such testing (Pope, 1993: 21).

Of course, much of this construction is tacit and unconscious. One of assumed purposes in constructivist educational research into teachers' beliefs is to encourage reflection among teachers so that their choices become explicit. It is important to emphasise that teachers' conceptual frameworks can be modified in the light of new ones; they can also be demolished and replaced (Pope, 1993: 20). There might be much in the account in Chapter Four to which proponents of the project method, if evaluating the project work described, might object. However, as stated in Chapter Three, the purpose of the ethnographic field study is neither to evaluate nor to intervene. Its interpretist stance assumes that understanding what the teachers believe is crucial to understanding how they behave. The current focus on teachers' personal constructs in educational research comes from recognition that research in the past has not been applied. As Pope points out, new approaches assume that research needs to improve classroom practice as much as to build theory (1993: 21). The constructivist approach sees teachers as active constructors - and testers - of their theories of the world. Interventions from outside which do not recognise this, are, to constructivists, doomed to fail. Research that hopes to contribute to change should help teachers articulate their choices and clarify their thinking so that change can be brought about collaboratively. This theme will be taken up again in Chapter Seven.

5.3 Teachers' scripts

Research into teachers' beliefs has its roots in cognitive psychology. However, there is recognition that beliefs about teaching are anchored in cultural, social, historical, as well as personal realms of meaning (Pratt, 1992). Both Barnes and Pope warn of the dangers of being insensitive to the political and economic constraints on teachers' beliefs - although both also state that this does not mean that teachers are mere passive functionaries (1992: 25; 1993: 28). The research into teachers' "scripts" expands the studies of their personal beliefs by exploring the role of the "teaching culture" within a school - its shared implicit knowledge.

The value of the research in school cultures, "the beliefs, values, habits and assumed ways of doing things among communities of teachers" (Hargreaves, 1996:320) was referred to at the end of the previous chapter. Teaching cultures serve to give meaning, support and identity to teachers and offer certain "scripts" to them. Scripts are learned and help people behave appropriately (Hamilton, 1993: 90). The teachers at Galant Primary have perhaps constructed identities or scripts for themselves from the "storylines of their culture" (Reynolds, 1996: 69). Reynolds gives examples of four scripts that she identified in a study of new teachers in Canada: child saver, the learned one, the super friend/coach/ parent, and the professional (1996: 73). She contends that culture gives teachers a limited choice of positions or scripts. Their identities - how they see themselves - evolve from the "workplace landscape", which is pervasive, restrictive and demanding (Reynolds, 1996: 75).

This research has clear application in the analysis of Ms Abrahams' project. For example, her puzzling refusal even to consider applying the ideas modelled for her at the Kirstenbosch workshop (see 4.4.1), even though she clearly likes them, can be seen in terms of the script

she has chosen. Her perspective is shaped by her view of herself as a disadvantaged teacher, in need of resources. Her anecdote about meeting a "white" child carrying a good-looking poster to school was referred to in Chapter Four (4.4.1). There are several similar references in the field notes. The teachers refer often to the advantages enjoyed by white schools. Ms James refers to a "*white inspector*" who does not understand their problems. As reported in Chapter Three (3.3.4), the researcher reflexivity demanded by ethnography alerted me soon to the perception among the teachers that I was a white expert, ready to give all the answers.

Such perceptions are threads of meaning which make it impossible to ignore the historical context of Galant Primary. In Chapter Three, it was stated that "critical ethnography seeks to illuminate how the distribution of power affects society and culture" and to identify "contradictions between actual and perceived conditions of material life" (LeCompte, Preissle & Tesch, 1993: 26). As the field study progressed, the need for a broader lens to interpret the data on the Galant teachers' beliefs became clear. The research into teachers' scripts provides this wider lens. The scripts fashioned for themselves by the teachers have to be viewed within their historical context. The early part of the first interviews with the teachers explored their biographies - why and how they became teachers, where they trained, their first jobs, and, so on. Most of them refer to the fact they were restricted in their choice of career and training by apartheid policies and also by poverty:

> *"Even though it was 'Ach, do I want to do this?', but I had no other way of, there is nothing else for me to do....My parents came from S..., bought a house in District Six and then they were evicted and those things, and then we landed up in Athlone. But to them it was you become a teacher, you become a nurse..."* (Ms King interview 18 August 1997: 5).

> *"I was accepted at Pentech but before you could be a student there you had to buy certain things. And when I priced those things, it was quite expensive...and my father told me to look decide on something that will be there for the future, for you for the future....He* [his father] *tell me that teaching you obviously get a subsidy and all those things if you work for the government"* (Mr Olifant interview 11 August 1997: 5).

> *"1985 riots - en toe het my pa my uit die skool gehaal en sê vir my ek moet my maar nou oplei in 'n praktiese rigting....I stopped that and went back to school the following year*

[1985 riots - and then my father took me out of school and said that I must now get practical training]" (Mr Barry interview 22 August 1997: 3).

Mr Barry explicitly links problems with project work to the fact that "coloured" teachers have not been trained for independent thinking:

> *"Want dit is waar ons sogenaamde kleurling studente platval in die universiteit ook veral, want ons word nie geskoei in so 'n rigting nie....Ons was nie opgelei, geskoei om self dinge te ontdek nie. We were just spoonfed...So eintlik dit is waar projek werk inkom* ...[It is true that we so-called coloured students come down at university especially - because we are not prepared for such a direction....We were not trained to discover things for ourselves...So really this is where project work comes in]" (Mr Barry interview 22 August 1997: 16).

The study uncovered some sensitivity and conflict among the teachers over the issue of training, which will be returned to below (5.3.4).

A discussion of the "workplace landscape" of Galant Primary cannot ignore the current crisis in Western Cape schools. A selection of headlines from Cape Town newspapers in late 1997 and early 1998 is given in Appendix B to document the crisis in the school system and the resulting anger in school communities. The field study revealed that most of the ten most stressful aspects of teaching as ranked in international studies of teachers apply at Galant Primary. These include:

- discipline/attendance problems
- lack of administrative support
- working conditions, lack of equipment/texts
- lack of security, redundancy, declining enrolments
- large class size
- ministry directive, changing curriculum/course content
- lack of public/parental support (Fullan, 1991: 124).

As a new curriculum and new policy are being introduced, teachers at Galant are also being confronted with staff cutbacks. With the new teacher/pupil ratios coming into force, classes are doubling in size. No replacements are being provided for teachers away on leave - sick, study, maternity or long leave. The field study documents the impact on the educational

programme. In the course of the study, the absence of Ms King and the demands on Mr Moosa, as Deputy Principal, meant that the Grade Seven pupils spent two or three periods a day without a teacher. Whenever a teacher is absent, a colleague is, without warning, faced with a class of over eighty. These pressures perhaps contribute to the high levels of illness among the staff. In the third term, three teachers took extended spells of sick leave - all of them citing hypertension as a factor in their ill health. As I left the school, Ms Oliver, the remedial teacher, confided that she was again being booked off on sick leave.

As a constructivist, Reynolds is at pains to point out that the term "script" need not imply a kind of passive determinism (1996: 72). Teachers are able to read their scripts literally or in new ways; they can accept the scripts available or search for new and better ones. The notion of "script" thus allows for the teacher as active agent - while also acknowledging that he or she works within system structures which, Reynolds warns, encourage teachers to stick to old conservative scripts (1996: 75).

Analysis of the "unruly experience" (Wolcott, 1994: 10) of the field study at Galant identifies four refrains which point to the deeply held beliefs of the Grade Seven teachers. These refrains or themes run like "webs of meaning" (Harvey& Myers, 1995: 17) through the field notes and interview data. The four key themes are labelled as follows:

- *"We know our people"*. The Galant teachers are confident that they (and only they) know what the community and their children need.
- *"We are social workers here"*. The shared identity, to which Galant teachers subscribe, is close to Reynolds' "child-saver" referred to above (1996: 75) - a teacher who administers to the welfare of the disadvantaged.
- *"We have to give it all here"*. The prevailing teaching style is one in which

the teacher knows the answers. Learning is finding the right answer. What discussion there is, consists of teachers giving more and more clues until the pupils find it.

- *"We're already doing it"*. With the exception of the principal and, perhaps, Ms King, Galant teachers seem to believe that they are progressive teachers who are ahead of change. New ideas are, thus, filtered through this belief.

These refrains are strong threads, which connect themes and sub-themes - and which have been found to give the meaningful shape to the study which ethnography aims at. The connections between these themes are not linear. As pointed out in Chapter Three, the goal of ethnography is not causal explanations. The complexities and the ambiguities of the socially constructed reality of the school cannot be reduced to cause/effect relationships. For example, attitudes towards the community cannot be said to cause the teaching behaviour of the Galant teachers. However the two phenomena are clearly subtly interconnected. Each has implications for the other.

The world within which teachers work is complex, involving interaction with learners in classrooms, the subject matter which he or she teaches, the school organisation, parents, the outside community and the educational system structures. Nespor contends that the function of beliefs is that they help teachers make sense of their complex world:

> The answer suggested here is that the contexts and environments within which teachers work, and many of the problems they encounter, are ill-defined and deeply entangled, and that beliefs are peculiarly suited to making sense of such contexts (Nespor,1987: 324).

5.3.1 *"We know our people"*. School/community relations

A certain ambivalence in teachers' attitudes to their community Paradys was noted in Chapter

Four (4.2). What Hamilton calls their "public" belief (Hamilton, 1993: 89) - the one they bring out in staff meetings and in formal interviews - is that they respect it as a struggling, but somehow cosy, enclave. However, more negative beliefs are implicit in much of what they do and say, as will be explored below.

The teachers' talk is laced with references to "*our people*". Their pleasure in doing things for the community was evident in the first few days of the study when the school programme came to a halt as the teachers prepared for a fundraising dance. The women teachers gathered every day in Room One to prepare food and table decorations. The daily staff meetings were filled with the dance plans, amid much laughter and joking. At one of these, one teacher reported on the surprise of a friend at a "rich" school at the amount of work she was putting into the dance. The friend had commented that at her school "*the parents do the work*". There was a murmur of agreement - and perhaps of self-congratulation. The principal later pointed out to me, after disappointingly few people turned up for the dance, that the purpose of the dance was less to raise money than to show the parents that the school cares about them.

This is in keeping with her optimistic view of school/community relations. She and her colleagues claim that the local people protect the school. At times, they describe Paradys as a close-knit community:

> *"When there's trouble like that killing* [of a child at a local school] *then everybody comes together....When there's trouble at D or M* [two Hilltop schools just outside Paradys] *we miss it"* (Ms James 16 July 1997).

> *"I can leave the car of my door open - they know I'm a teacher at the school and will leave me alone"* Mr Moosa 21 July 1997.

A certain pride in the school's relationship with local criminals is evident in the principal's first interview:

> *"Look the night of our election* [for the school's Governing Body] *they just waited until we were finished then they started their gang warfare outside....If they had no respect for the school they would have run in here and damaged the cars....Yes you can feel quite safe here, all you do is just greet them in the morning. And even the greeting is very important to them,. If a new teacher comes down like a month without greeting they come and tell me: Sê vir daardie juffrou met daai wit kar sy moet darem waai in die oggende juffrou* [Tell that miss with that white car that she must wave in the mornings, Miss]" (Ms James interview 15 August 1998: 4).

The meeting, to which Ms James refers here, has already been commented on in the previous chapter (4.3.1). Her unease at the youth of the newly elected parents is recorded there. One of the implications of the belief among the Galant teachers that it is their role to do things **for** the community is that it might sit uncomfortably with the ethos of the new Schools Act, which aims at more democratic school governance (MacGregor, Lee & Frost, 1997).

Quite often, the teachers reveal feelings less favourable towards their school and its community than those recorded above. For example:

> *"When I heard you were coming I said "Does she know about this school? Have you told her the truth*?" (Mr Barry, Grade Four teacher, field notes 25 July 1997: 14).

An incident, a few weeks into the field study, supports this less benign aspect of the relationship. After an outbreak of gangster shooting in which a young child from a nearby school was killed, Galant Primary, after much debate in the staff-room, took part in a protest march with other Hillside schools. The next morning, eight large young men arrived at the school gate and hung around all morning. The principal refused to take part in the next demonstration - in the next interview, citing her fear that the school might be viewed as supporting the vigilante group PAGAD (People's Action Group against Gangsterism):

> *"They* [the eight young men] *stood around here and then they left. So I told them* [the teachers] *I don't think I must upset the hornet's nest. This is a different issue altogether. It is one force against another"* (Ms James interview 15 August 1998: 4).

The sense of serving a special community has fostered a camaraderie - evident in staff meetings and in many of the teachers' comments. A pride in being embattled is at times evident. They see themselves as struggling to do a good job unrecognised and undervalued, as evidenced in the following comments:

> *"We stay at this school". "We have parties and dances to raise money". "We don't have cliques". "We could talk all day". "We've seen everything". "My friends in rich schools sit back and listen when they hear me talk"* (Grade Seven teachers: introductory interview 16 July 1997).

Any attempt to introduce a new programme at Galant would have to take into account the sense of "specialness" that the school's position has engendered in the consciousness of the school staff. They are loyal to the school - all having worked there for more than five years. None has worked in any other school for any length of time.

The Grade One teacher's certainty that, *"We know how to do things here - because we know our people - they know us and we know them"* (field notes 21 July 1997) is echoed by several teachers. Ms Abrahams says that she advised another teacher with problems to go back to the rural community, from where she comes, as there, "*she* [the other teacher] *knows what they need*". She says:

> *"I have been happy ja, because I know the child -what he is and where he comes from. I know what goes on in their homes ..Because I lived across on the other side of the bridge, that is why I tell the other teachers that came from up country: Why don't you go back to the country, you know the situation ...*" (Ms Abrahams interview 5 August, 1997: 3).

Mr Moosa often comments on Ms Abrahams' influence within the school. She is regarded as a role model for the children as she was brought up in nearby Hillside. She says that she tells her classes "*to reach for the stars*". Yet her metaphor for teaching as "*biting into a juicy apple only to discover its pips*" and her words just below point to a more fundamental cynicism:

> *"Life outside is terrible. You got to take responsibility for your own life - we can give them a little at school, maybe it will last till they leave the school"* (Ms Abrahams interview 5 August: 20).

Her comment on "*life outside*" is echoed by her colleagues. All are aware of their pupils' experience of drug and alcohol abuse and of family and gang violence. Several comments reveal that some of the teachers aim at nothing more than providing some kind of refuge for their charges and that giving their classes some "fun" is as important as academic learning. Mr Moosa, for example, says that he likes, on a Monday, to get his class talking about the soap opera *The Bold and the Beautiful* because then "*at least I know that he is thinking about something and not the problems at home, so I feel then I create a relaxed atmosphere where he can do whatever he feels like doing*" (interview 12 August, 1997: 4). Similar comments are:

> *"We are like an oasis for the kids"* (Mr Moosa interview 16 July 1997).

> *"I don't like to force a child, I would like him to relax and enjoy what they are doing. Because your childhood days are so short"* (Ms Abrahams interview 5 August 1997: 5).

5.3.2 *"We are social workers here".* Teachers as social workers

In our first meeting Mr Olifant, the Grade Seven history teacher, told me:

> "*We are social workers here"* (16 July 1997).

In the weeks that followed "*teacher as social worker*" came to encapsulate for me the Galant teachers' conception of teaching. This is more than a convenient label; it affects their everyday classroom practice. Central in the script of social worker is the notion of being "needed". Ms Abrahams for example felt uncomfortable in her first job in a more affluent school and kept nagging the principal of Galant until he offered her a job. Mr Moosa, a devout man, says he could never work in another environment. Mr Olifant believes that God sent him to the area. There is at times an almost missionary zeal to their words:

> *"Ja I taught there but the parents thought that they were above everything ... So I thought to myself I can't give anything to these children, they don't need me"* (Ms Abrahams interview 5 August 1997: 3).

> *"In the Moslem tradition we got to give money, right.... I got to share that is why it is so easy for me to teach at this school I think"* (Mr I Moosa interview 13 August: 6).

> *"Most probably the area* [is what led me to the school]....*He* [the principal who had interviewed him for the job] *said 'jy is gelei deur God om hier te wees'* [you are led by God to be here] *and when I came to the school I could see what he meant.... Paradys is like the outcast"* (Mr Olifant interview 11 August 1997: 6).

Teachers constantly refer to the need to give the children ways out of the poverty and crime of Paradys. They see the immediate neighbourhood as having little to offer. How the teachers are influenced by their own backgrounds might be a factor here as revealed in Mr Olifant's dismissal of the day hospital as suitable content in their compositions. In talking of projects and having said that, "*if you want information out, you must put information in*", he carries on:

> *"You have to give them a lot of info first, especially our kids. Because our kids are located in this area where there is actually no information. ... So that when we want something from them, we can know that we are going to get something out, because you have given them information, you know. ..You will find out if you ask them to write a composition about say a visit to the doctor, they can tell you about the day hospital only. We expect a private hospital or private doctor ...You can tell him write a story about a day at the sea - 10% might have gone to the sea"* (Mr Olifant interview 11 August 1988: 13).

However they do not see existing schooling as a means to provide an escape for their pupils. The Grade Seven teachers attribute existing high drop-out rates to its academic nature. Ms Abrahams says, for example, "*It will be amazing if, out of 30, five reach matric*". Mr Barry, the Grade Four teacher, claims that 20 out of the 50 Grade Seven pupils will not turn up at high school the following year. The tolerance of the teachers towards the sporadic attendance of some of their pupils can perhaps be explained by the large numbers in their classes and also by the pragmatic acceptance that some children are in danger of dropping out of school altogether. The teachers prefer to have them attend a few days a week than not at all. There is general agreement among the Grade Seven teachers that academics are less important than

practical skills like plumbing, spray painting and selling. Mr Moosa repeats often that his maths teaching is less important than his teaching of values. Indeed, I witnessed how often he digresses in his lessons into gentle homilies on topics such as cruelty to animals and gangsterism. Typical of their comments are the following:

> *"Our children won't be lawyers or doctors. We need to educate them for their reality. Bright children will rise to the top anyway. We are different, we cater for the others ...."* (Mr Olifant field notes 21 July, 1997).

> *"If a child is going to become a doctor one day he's going to go through the system and he will pass, he will become a doctor all the way. But you don't find that here, you find that our kids become dropouts. So rather give them something else to do, something that is more tangible"* (Mr Olifant interview 11 August 1997: 20).

> *"Especially in this area because most of them they really don't have it as far as academics is concerned. But they can do things which they don't need real reasoning for. They can work with their hands, they are good at sports, they are good at cultural drama"* (Mr Barry interview 22 August 1997: 1).

> *"Most of the time they don't feel like doing science and geography."* (Ms Abrahams interview 5 August: 5).

Such comments ostensibly refer to the curriculum but they might also reflect the teachers' low expectations of their pupils. This is of concern, given the limited choice "bright" but poor Paradys children might have over choice of school. The concern comes from research evidence (Fullan, 1991: 177) that teachers' expectations, low or high, are a crucial factor in student performance. Nonetheless, the constant provisos linked to new ideas that they will not work with "*our kids*" are a warning that that any new programme will need to convince teachers that it is relevant to the needs of their pupils as they perceive them.

5.3.3 *"We have to give it all here".* Teachers' beliefs about learning

The connections between the above attitudes to the community of Paradys and atttitudes towards teaching are made explicit by Ms Oliver, the remedial teacher's suggestion that the teachers' attitudes might serve as an obstacle to good teaching:

> *"I think it is more that the teachers feel sorry for the children, where they come from and they sort of want to give - to let the child feel good about himself or to feel happy - because we know what the set-up is at home. With the result we don't really go into what is going on in the child's mind"* (Ms Oliver interview 16 September 1997: 11).

Freire's concept of teaching as banking has already been used to interpret Mr Olifant's words, quoted above, that, "*If you want to get information out you must pour information in*". They reveal that he sees the pupils as "empty vessels" into which knowledge is poured - empty in large part because of the poverty of Paradys. Ms Abrahams, though herself brought up in the area, believes that new approaches will not work with township children as they "*are different*". She says:

> *"Forget what you have been taught at college and take the child the way he is now...The children don't need it* [what she was taught at college]. *Maybe it will work in a more affluent school but not here in our townships. Children from townships are different you can't get away from it"* (Ms Abrahams interview 5 August 1997: 9).

These comments reveal as much about the teachers' frameworks of understanding of what learning is as about their attitudes to the community. Teaching and learning are seen in terms of giving and receiving of information. Information is thus seen as a thing rather than as a process. (This will be returned to in the following chapter). The description in Chapter Four has recorded the prevailing style of teaching at Galant with its use of closed questioning, its belief in the "right answer", and, so on. This style is fundamentally incompatible with the project method.

One of the most obvious signals of the complex interconnections between beliefs about the community and beliefs about learning is the perception of the Grade Seven teachers that their pupils cannot be expected to do homework. The implication is that all project work has to be done in class time. They blame the poor conditions at home and the lack of education of the parents. Implied below is criticism of the fecklessness of their pupils - and also that of the community:

> *"Children lose them* [textbooks] *so we keep them"*(Ms Abrahams interview 5 August).
>
> *"I am worried about my books coming back, the condition. I give them about five minutes after school just to complete it* [the homework] *, but I am very reluctant to send them home with books"* (Mr Barry interview 17 September 1997: 9).
>
> *"The children don't think of school from the time they leave it in the afternoon til the time they get to the gate the next morning"* (Mr Moosa interview 25 July 1997).
>
> *"They are living as though there is no tomorrow"* (Ms Abrahams interview 5 August 1997: 23).
>
> *"Our parents are not involved. The child is supposed to ask the parent for further guidance"* (Ms Abrahams interview 5 August 1997: 11).

It should be noted here that the Grade One and Two pupils every day take home reading cards and readers. On being asked how they manage this, their teachers say that they call in the parents at the beginning of the year and explain "*what is expected of them*" (field notes 30 August 1997.

Several of the questions in the first interview protocol (Appendix E) probe the values and assumptions of the teachers as to what it is to teach and to learn. They are asked how and why they became teachers and to describe their teaching activities and how these might have changed over the years. They are also asked to give metaphors that sum up their approach to teaching and learning - in the hope that these would give insight into their deeply held beliefs (Pratt, 1992: 208). The difficulty that all of the teachers experience in this part of the interview is striking. They are not equipped to see teaching in terms of choices from a repertoire of different techniques. They do not seem to connect what they, as teachers, do with the learning that might follow. In talking of how their methods might have changed over the years, all of them focus on discipline and classroom management issues. When asked about "learning", they see the question in terms of "Learning" with a capital "L", meaning "education". They seem to give no thought to the cognitive processes of their students.

There has been some comment on the failure of teacher training in South Africa in the past to empower teachers to reflect on their practices (Kallaway, 1990: 235; Flanagan, 1991: 3; Walker, 1991: 121). Reflection enables teachers to adapt their practices according to desired outcomes. The legacy of apartheid is perhaps that, as in ex-colonial countries in other parts of the world (Marsh & Morris, 1991: 264), teachers are passive technicians. Borman's 1994 survey of Western Cape teachers (1995: 52) concludes that many do not understand learner-centred approaches. Laursen highlights the implications of the international research that finds that teachers know little about how students learn (1996: 54). He points out that, if good education is learning-oriented as current thinking holds, then there is an urgent need to educate teachers in learning processes.

The discussion of teachers' constructs of teaching and learning in this section has relied on their teaching techniques observed during the Grade Seven project work and explicit questions asked in the formal interviews. It has demonstrated the connections between their beliefs about learning and those about their role in the community. The field study uncovered other facets of the school's reality which are symptomatic of the teaching culture and of the personal constructs of the teachers. They all have an impact on project work and so on information literacy education. These include:

- the use of groupwork
- teachers' beliefs about curriculum integration
- teachers' attitudes towards reading skills and reading materials.

Again it has to be stressed that the relationships are complex and intertwined. The approaches to groupwork, for example, cannot be said to be caused by the teachers' conceptions of themselves as bankers of knowledge or as social workers - or vice versa.

They can be said to "feed off" each other, each implying the other. Thus, if a teacher fundamentally sees herself as **the** transmitter of knowledge and as **the** expert, then the kind of collaborative learning implied by groupwork cannot happen.

The field study confirms Gordon's finding on the need for consonance between teachers' everyday classroom practices and those in project work (1996). She concludes that pupils struggle to switch to independent discovery learning for a project when, in their everyday experience with their teacher, they are taught to value other approaches. Her finding throws light on Mr Barry's complaint that he cannot "*do projects*". A comparison of his description of the failure of his project the previous year with his description of his normal teaching methods might give insight into what went wrong:

> *"I tried and I couldn't get anything from them - I gave one group 'food'* [as a project topic] *one group I gave 'clothing'. But I couldn't get anything from them. Only after I gave them everything then they would share"* (Mr Barry interview 17 September 1998: 2).

> *"Ordinary teaching, I just pick up a book and I have to teach what is in this book or in my work scheme"* (Mr Barry interview 22 August 1997: 14).

Gordon's finding might indicate that Mr Barry's pupils could not do the project because they could not adjust to the different kind of learning required. Like the Grade Seven pupils (see 4.4.1), perhaps they just did not see it as "real" learning. This might answer some of the questions concerning the Grade Seven project work at Galant. The teachers need to model the kind of learning required by projects in their routine classes. But again it has to be said that, to do this, they might have to rethink their fundamental beliefs about learning.

5.3.3.1 Groupwork

The observation of the groupwork, undertaken in the Grade Seven classes, provides support for the above suggestion that the Galant teachers lack understanding of their pupils' learning processes. Groupwork was an early data category in the field study as there were such

frequent references to it. Mr Moosa, for example, in our first meeting invited me to observe his maths groupwork. Curriculum 2005 recommends "groupwork and teamwork to consolidate" learning (South Africa. Department of Education, 1997a: 7). The chief pedagogical purpose in seating children in groups is to encourage collaborative learning in which children, sharing tasks, make their own meanings clearer to themselves through explaining them to others, debating them, and, so on (Reason, 1996: 194). Learning is thus "scaffolded" (Reason, 1996: 194) through the teacher's setting up appropriate tasks and through group interaction. The Galant teachers mention other benefits of groupwork - for example as a method of coping with a large class and as a means of motivating children through peer assessment (Ms James interview 15 August 1997). Another benefit is that the children clearly enjoy sitting together and much informal, what Alexander calls, "off task" chat goes one (1994: 150).

All the Grade Seven teachers, with the (alleged) exception of Ms King, arrange their class in circular groups which are settled at the beginning of the year and which remain the same for each subject. The word "alleged" is used here because the study reveals some controversy over Ms King's teaching methods. She is clearly regarded by the principal (for example interview 15 August 1997: 29) and her colleagues as a conservative teacher who will not change her methods. Her dislike of the arrangement of desks in the Grade Seven classroom is seen as evidence of this. Even the Group 8 pupils have a comment to make on her attitudes to groups, linking it to behavioural issues:

> GH: *Do you work like this in all your classes?*
> Resp: *Yes, in groups. But Juffrou King, sy wil nie hê ons moet in groepe werk nie.* [But Ms King doesn't want us to work in groups].
> GH: *So, you work in groups with all your teachers, except for Ms King?*
> Resp: *My meneer het gesê hy gaan uitvind by Juffrou [King] hoekom wil sy nie hê ons moet in groepe werk nie. Sy sê ons is baie onbeskof...* [Sir said that he is going to find out from Ms King why she doesn't want us to work in groups. She says we are very rude] (Group 8 interview 28 July 1997: 4).

Mr Moosa's later comment about a Grade Seven teacher who insists on re-arranging the class into rows when she begins her lesson, thus wasting ten minutes of classtime, probably is a reference to Ms King. The field study uncovered bitter conflict between Ms King and Mr Moosa, the significance of which will be expanded on in Chapter Six. Of interest for this section is her complaint, in the discussion of her views on project work, over the lack of what she calls "discipline" among the teachers. Her use of the word "discipline" refers to the need for teachers to plan ahead for project work, assess it, keep records, and arrange for resources in good time. Her comments might thus reveal that she has a more realistic understanding of the demands of project work than the other teachers who, the field study finds, might be paying only lip service to the concept. The relevance to the discussion of groupwork is that the same disparities seem to exist in its application at Galant Primary. It is viewed as a mark of "progressiveness" which might imply that collaborative learning is valued. But classroom observation raises similar questions over its implementation as it did over that of project work.

In some maths classes, some cooperation is evident. Mr Moosa allocates different problems to each group and expects the group to come up with a common answer. Some lively discussions among the children were recorded as they worked their way through their allocated tasks. Mr Moosa, the Deputy Principal, acknowledges that groupwork enables him to leave his class alone for many of their lessons, while he fills in for the principal. Left without a teacher, the class mostly remain focused in their groups and, when he returns, he asks one person from each group to work through their problem on the board.

Observation revealed that, at Galant Primary, groupwork is thus as much a convenient method of arranging a class as an approach to learning. Despite the appearance of

collaboration, much of the day-to-day classwork involves each child working through worksheet exercises on his or her own. The tasks given are individualised "find the right answer" tasks and do not require collaboration. As noted in Chapter Four, the biggest advantage for the children in the way they sit is that, when they fall behind with the work, they can copy the answers from a friend. They are secure in the knowledge that rote-memorising (not understanding) will be tested in the coming tests. The field study shows that the theory that groupwork enables teachers to reach a wider range of children might well be an illusion. For much of the time, the Galant teachers circulate from group to group, giving routine comments to the group and signing worksheets - but engaging very little with individuals. Most of the children keep their heads down, giving the impression that they are productively occupied. The completed worksheets are periodically taken in and handed to the Head of Department, Mr Moosa, for his signature. In what whole class/teacher interaction there is, recordings of Mr Olifant's and Mr Moosa's classes reveal that two or three extrovert children, like Joy, enjoy most of the teacher's attention.

Grade Seven teachers are unanimous that project work always demands groupwork. This perception might imply that the tasks and skills involved in their projects are different from those in other classroom activity. The history model building certainly did involve a sharing of work - although some children chose to work alone. Observation of the science project highlighted the social skills demanded by groupwork. As noted above, Group 8 soon lost its cohesion. Charlene, their leader, grew tired of the squabbling and abdicated after three lessons. No support was given to the girls to help them work together.

Overall, the study lends support to Alexander's warnings after research in British classrooms, where groupwork has achieved "doctrinal status", that genuine collaborative learning is rare,

that "undemanding" learners are ignored and that learners miss out on valuable one-to-one teacher/child interaction (1994: 146).

5.3.3.2 Curriculum integration

The documentation of Curriculum 2005 promotes an "integrated approach to learning", which "rejects the rigid division between academic and applied, between theory and practice and between knowledge and skills" (South Africa. Department of Education, 1997c: 11). Chapter Two discussed the prevailing view that the value of project work is that it provides a meaningful context for the integration of concepts and skills across disciplines. Yet observation of the projects at Galant Primary shows that project work will only perform this function if teachers plan for it. The field study reveals the same kind of ambiguity over the construct of integration as over other constructs. It all depends on how teachers interpret "integration" and this interpretation again depends on their beliefs about learning. In the course of the project work, Mr Moosa referred frequently to the concept of integration. Moreover, in their interviews, all of the Grade Seven teachers quote the integration of skills and learning across subjects as benefits of project work. But this was in the first part of the interview, when they were asked specifically about the theoretical benefits of project work. The later question, which probes their views on integration, reveals that they have only an intellectual understanding of the concept. These responses reveal their fundamental doubts as will be shown just below. And their classroom practices show how they have adapted their interpretation to suit their fundamental conceptions of teaching.

It is clear that the completion of the history project rested on the good relationship Mr Olifant has with his colleagues - all of whom, except Ms King, allowed him to take over their teaching periods. However the swopping of periods is not integration. Mr Moosa's frequent

claim to have integrated the science project into his maths teaching in reality meant he merely introduced some animal characters into his maths problems for the term. He had not even informed Ms Abrahams who was surprised to hear of it. Both Mr Moosa and Mr Olifant are unable to conceive of designing a topic- or theme-based curriculum as they still think in terms of a set of subject syllabi laid down by head-office:

> *"Integration for* [standard] *fours and fives* [that is Grades Six and Seven] *it is a bit difficult. But what the Department don't understand it's that guy sitting on the 18th or 19th floor and he is putting it on paper....But the moment you have to do, say I have to do 'Voortrekkers' and Ms Abrahams is doing 'animals' there is only one or two animals in there ...So there is no relation between the two"* (Mr Olifant interview 11 August 1997: 14).

> *"For a junior child it is easy ... say 'a rainy day'. But if we have to use that theme in Standard Five in each subject, what am I going to do with it? In geography they got to do it - the weather. It is limiting me again like the syllabus does"* (Mr Moosa interview 12 August 1997: 1).

Ms Abrahams disapproves of the idea of bringing the animal project into her English classes, claiming that the students would be bored:

> *"It is enough that I do science - I don't feel like reading in English about the frog"*(Ms Abrahams interview 5 August 1997: 28.

Mr Moosa interprets integration in terms of collaboration among teachers, saying that teachers should deposit their term's work into a file available to all their colleagues (interview 12 August 1997: 1).

The Galant teachers' subject allegiances are significant. The timetable is very much a subject one - with the day divided into 35 minute periods. Even the class teachers of more junior classes keep rigidly to a subject timetable - both Mr Barry, the Grade Four teacher, and Ms Gold, the Grade One teacher, claimed that "*the office*" might accuse them of neglecting their work if they did not (field notes 19 August 1997). Yet the principal, herself, seems genuinely in favour of cross-curricular work (interview 15 August 1997: 16), although she admits that it is easier in more junior classes where the class teacher is responsible for a number of subjects. She recognises that children do not transfer or generalise what they learn in one

subject to another and also worries about the lack of transfer across grades and phases. She claims that learners and teachers work "*in a vacuum*" because of the emphasis on content rather than skills:

> *"They had the bird in standard two, they had the bird in standard three....Yet when the child comes in standard five, then the teacher must teach that bird new - everything. . The child doesn't know the difference about feathers ..".*
>
> *"But when they come to standard eight, it is brand new, almost they have never heard of it. Because they were taught only in that vacuum...".*
>
> *"Because they still teach in a vacuum, they don't think if they do reading, that reading is for everything....In maths they have that* [reading] *they can't read ..."*
>
> *"The emphasis is on the content. If you come to me for science, you are going to get as much information from me for science. You are not going to explain the terms or that this means that. If they get a word in maths and maybe it was explained to them, they will get the same word in English but that word is 'English'"* (Ms James interview 16 September 1997: 26-27).

In her diagnosis of what is going wrong with regard to curriculum integration, Ms James makes explicit the fundamental argument of this chapter - that teachers' beliefs about learning are crucial to the implementation of new methods. She attributes the problem to the transmission style of teaching, which values only rote learning. She blames teacher training colleges which might offer separate courses on learning psychology but which do not show teachers how to apply the theory in their lessons:

> *"Maybe they learned it* [about learning] *in college separate, but our whole system of learning and being a good teacher is rote. If a child can give back in the exam what I taught him"* (Ms James interview 16 September 1997: 26).

5.3.3.3 Galant teachers' beliefs about reading

Ms Abrahams' comment, quoted just above, that it would be too boring to talk about the frog in English classes is symptomatic of her preoccupation with content. Curriculum integration, however, refers to the generalising of skills as much as to the integrating of subject content. Thus, one of the most common arguments in favour of the concept of integration relates to

the need to integrate language teaching into all parts of the curriculum. The documentation of Curriculum 2005 recognises that language teaching cannot be confined to formal language classes. It stresses that language is not an end in itself, saying that, "Language is a means to acting in the world ... to integrate new knowledge into existing knowledge, to obtain and convey ideas and information" (South Africa, Department of Education, 1997b: 25). Here the overlap between the constructs of information literacy and "language across the curriculum" is obvious. In promoting "language across the curriculum", the new curriculum views every teacher as a language teacher and every lesson as an arena for the development of communication skills. One of the benefits of project work is the opportunity it allows for practice in and development of what are, at times, called the "basics" (Tann, 1988c: 4). Projects provide a meaningful context for the learning and practice of reading, writing and numeracy skills. Conversely, language competency is "crucial for academic mastery across the curriculum" (South Africa. Department of Education, 1997b: 25). Ms Abrahams and Mr Olifant are the Grade Seven language teachers, yet neither seems aware of this kind of thinking. Neither, for example, seems willing to use language classes to remediate the reading and writing problems, which, they admit, hinder the science and history work. READ, a South African non-governmental organisation, has found that rural Grade Eight South African children of 14.4 years have an average reading level of 7.6 years (1998: 3). It warns that the fact that Grade Eight textbooks are written at a sixteen year language level, means that pupils are unable to access the information in the textbooks. READ suggests that this is contributing to the high failure and drop-out rate in our schools. Follow-up research is clearly needed but the classroom observations at Galant Primary might provide tentative evidence that the problem is not confined to rural South Africa.

As the Grade Seven Afrikaans teacher, it is perhaps surprising how little awareness Mr

Olifant shows of the opportunities project work gives for teaching and improving reading competencies. In his first formal interview, he complains about the students' lack of interest in reading. However he perceives reading as an "*academic*" issue (interview 11 August 1997: 16), not especially relevant to the needs of the Galant pupils who, he says, need plumbing and bricklaying skills (interview 15 September: 11). Here he describes how he tries to encourage reading:

> Mr O: *"What I did was - I got two or three books there in the class ...I tell them read til page three. Now that is only a story book. I also have one that we are busy with, I think we are three quarter now with it".*
> GH: *"Which one is that?"*
> Mr O: *"That is Dok or something like that. And we also have another one dit is 'n Nederlandse* [it is in Dutch]. *It is a reader. But you find that you tell them everyday 'lees die boeke, lees die boeke'. Some of them will take the books, others won't..."*(Mr Olifant interview 15 September, 1997: 11).

His words here raise four issues. Firstly, "*two or three*" books cannot be adequate for a class of 53 children. Secondly, the use of the word "*only*" suggests that he is dismissive of the value of storybooks - an attitude surprising in the senior first language teacher. Thirdly, it is perhaps significant that he cannot remember the name of the class reader. Finally, the choice of a reader in Netherlands might explain why his pupils dislike reading.

Despite Mr Olifant's claim to be encouraging reading, there was no evidence of reading books in the Grade Seven room throughout the field study. The Afrikaans lessons, several of which I observed, were based on worksheet exercises, focusing on advertisements in local newspapers. His strategy to overcome the reading problems of his history class is to design short closed questions which require only word-recognition - as has already been discussed (4.3.3.1). Other teachers share his opinion that Galant children do not like to read, with Ms King, the teacher-librarian and Ms Oliver, the remedial teacher, blaming their home backgrounds. For example:

> *"You know what our setup is here. I don't think there is enough like magazines and books at home and stimulation from the parents' side....Nothing is happening at home"* (Ms Oliver interview 16 September 1997: 5).

There seems to be little awareness throughout the school of the research which shows that reading whole story books improves reading and comprehension (for example Flanagan, 1995). Several teachers, for example Ms Abrahams, rely on remedial reading cards (interview 5 August 1997: 18). The librarian, Ms King, accepts that reading problems are hindering children's work:

> *"Dit help nie jy verwag van 'n kind om sekere dinge te verstaan, maar daai kind kan nie lees nie* [it doesn't help that you expect a child to understand certain things but that child cannot read]" (Ms King interview 18 August 1997: 2).

But she shares the other Grade Seven teachers' feeling that reading has to be reserved for reading lessons. The aim in a history class, she says, is to "*get that piece of history done*" (interview 18 August 1997: 25).

As noted in Chapter Three (3.3.5), observation of the Grade Seven projects led me to explore further the issue of reading within the school. Towards the end of the quarter, I spent some days in more junior classes observing their reading materials and their reading lessons.

I started in Mr Barry, the Grade Four teacher's classroom. As noted earlier (3.3.5), I saw him as a "key informant" mainly because he often expressed alternative views. Unlike the other teachers, for example, from the beginning of the study, he articulated doubts about the project method. He sought me out early on in the field study to tell me that he had tried it out but it had failed. In a later more formal interview, he recognises that project work demands reading skills, saying that: *"If they can't read, they can't do research work"*. Mr Barry estimates that 75% of his Grade Four class have reading problems:

> *"They don't read fluently and on top of that they can't do selective reading. They can't distinguish between what is important and what is not"* (Mr Barry interview 17 September

1997:4).

Despite his seeming recognition here of the importance of "reading for meaning", Mr Barry has only a few tatty readers in his room (photograph Appendix G) and the book, which he is reading with his class, is an old classroom reader from the 1960s. He says that he cannot trust the children to take books home.

Like Mr Olifant, he believes that that the solution to their problems is to give the pupils short sentences and passages in worksheets rather than whole books:

> *"I think what we should do is to give them shorter passages. Even in standard five or four, give them shorter passages and then they at least understand that short passage rather than giving them long essays and not understanding anything at all.... I am saying short sentences"* (Mr Barry interview 17 September 1997: 4).

Mr Barry is a supporter of phonics or bottom-up methods in the teaching of reading and is critical of the junior teachers:

> *"I will probably be looking for scapegoats here, but I think we should lay down the basics properly as from Sub-standard A, Grade One, Two and Three.... These people should lay down the basics properly. ...At the beginning of this year I had to start with klanke* [sounds].... *I have to start with klanke and building of words before we come to building of sentences"* (Mr Barry interview 17 September 1997: 6).

Despite Mr Barry's criticism, Ms Gold, the Grade One teacher with whom I spent two days, seemed efficient and knowledgeable. She copes with her large class of 50 pupils by dividing it into three large groups and by rigorous planning and discipline. She interacts with one group at the front of the room while the other two groups carry on with other work. She has several reading schemes, which are systematically worked through. Children are free to help themselves to books from the piles of readers when they have finished their other exercises. As noted earlier (5.3.3), each child takes either a book or a card home every day to read to parents. Ms Gold is unusual among the Galant teachers in her insistence on keeping meticulous records of the progress of each of her charges. However, her class is no better equipped with "real" books. It has about 15 reading books at the back of the room, mostly

old Bible stories and books in English (photograph Appendix G). She talks of using the library but the reality is that, for the duration of the fieldwork, no library books were issued to her class.

Whatever the merits of the different methods of teaching the mechanics of reading, all experts agree that children need to be exposed to a wide variety of attractive real reading books. As Flanagan contends, "We learn to read by reading" (1995). Further study of the reading programme at Galant Primary is clearly needed but the tentative conclusion must be that something is going wrong between the solid foundation building of the Grade One classroom and the later classes. Perhaps the problem is precisely that there is no systematic programme. One of the obtsacles to such a programme might be the barriers between the foundation phase teachers and the other teachers. The field study uncovered division and tensions - as in Mr Barry's words, quoted just above, in which he criticises the teachers of more junior classes for not laying down the basics more firmly. The teachers, who should be well-placed to coordinate some kind of concerted reading campaign, the librarian, Ms King, and the remedial teacher, Ms Oliver, are both in vulnerable positions and thus incapable of taking on this kind of role. They seem both to be out of favour with Mr Moosa and his close allies, the other Grade Seven teachers, as evidenced in a vein of critical comments running through the interviews and field notes. Both Ms King and Ms Oliver admitted to feelings of insecurity and anger. The implications of such conflict will be returned to in Chapter Six. It is enough now to make three points:

- the classroom reading collections at Galant Primary are clearly inadequate
- there is certainly a general awareness that something needs to be done about reading
- the "library" is playing no role in improving this situation.

5.3.4 *"We're already doing it".* Galant and educational change

The description and analysis of the Grade Seven projects at Galant in the previous chapter lend support to Morrison's contention that cross-curricular project work implies massive changes in schools with regard to subject content, pedagogy, assessment, ethos and interpersonal relationships (1994: 124). However, a sense of alienation from the broader front of educational change is evident throughout Galant Primary. The teachers' criticisms of the existing curriculum as being too academic, mentioned above (5.3.2), do not mean that they welcome change. In fact they feel that the old "top-down" style of management is still in force. The school's isolation, referred to the previous chapter (4.2), might well be a factor in their unanimous complaint that they have not been consulted in the development of the new curriculum. The Grade Seven teachers view the Education Department officials as head-office bureaucrats out of touch with the classroom reality. They believe that only they know what their children need. The evident suspicion of change has to be viewed in the light of a perceived lack of support by the Education Department. They are angry that they are told to change but not shown how to:

> *"OBE* [outcomes-based education] - *we might not know what it really means but we have to think of our own children"* (Mr Olifant field notes 16 July 1997).
>
> *"We can't do what Mr Bengu* [the Minister of Education] *wants*" (Mr Moosa field notes 16 July 1997).
>
> *"Somebody comes with an idea, I don't know who. Somebody from the top says listen here, we are going to change the system now to theme work, which is all they say They don't say 'Listen here this is the way to do it'"* (Mr Moosa interview 12 August 1997: 21).
>
> *"At the end of the day you got a child that is supposed to go out in this world. That is your main aim, not what Bengu* [Minister of Education] *says about this or Zuma* [the Minister of Health] *says about that. That is not important. You are working with the raw material and only you know that person*" (Ms Abrahams interview 5 August 1997: 16).
>
> *"The department decided long ago what they were going to do, but just to make us happy sort of, they gave us questionnaires and those things to fill in and send off. I did not fill it in because I said it was a waste of time ...We are the experts, but we were not involved"* (Mr Olifant interview 11 August 1997: 20).

The cynicism in this last comment is particularly striking as it comes from a teacher, who

claims to have been an activist for change in the apartheid era and who is regarded by his colleagues as a progressive young teacher "*with ideas*".

Accompanying the suspicion towards the new curriculum is that towards teacher training colleges - whose products are clearly seen as idealistic but incompetent. Ms Abrahams' advice to new teachers, she says, is, "*Forget what you learned at college - it won't work here*". Both she and Ms James criticise the academic emphasis in the college curriculum. Here sensitivity over qualifications might be a factor. Both of them were originally trained in the now abolished Standard Eight (Grade Ten) colleges, which accepted students with the old Standard Eight Junior Certificate. Their products, according to Ms James, are more competent classroom managers than young teachers (interview 16 September 1997: 16). Both she and Ms Abrahams claim that colleges today spend too much time on academic subjects

It is hard to reconcile the obvious conservatism of the Galant teachers with their frequent claims to be ahead of change. At the same time as expressing the above doubts about change, they seem quite sincere in their belief that they are a progressive school already undertaking many of the changes recommended in the new curriculum. These claims were so persistent that they became a data category in the field notes, *"We're already doing it"*. Mr Moosa, for example, claims to see nothing new in Curriculum 2005. He contends that the challenges of working in a disadvantaged school have put Galant teachers at an advantage. They have had to be resourceful:

> *"To me the method of teaching* [outcomes based] *has been there all the time. To me it's not news. That's why I feel that 2005 will work much better in a school that hasn't had all the facilities....The reason I say so is because you as a teacher have been more creative - and improvising more than the one that had the machine so all I do is I take somebody else's work ...Now we didn't have it, we don't have enough paper so I have to create something to keep my children busy.To me 2005 is just a label. Whoever wants to take credit for it he can take credit, I don't mind"* (Mr Moosa interview 12 August 1997: 6).

Mr Barry echoes Mr Moosa:

> *"Like someone said one morning that we, without realising it, we have been busy with it* [the new methods of Curriculum 2005] *for some time*" (Mr Barry interview 22 August 1997: 23).

Mr Moosa's confidence that Galant teachers are abreast of change is not shared by his principal, Ms James. She sees the school's greatest challenge to be, *"to change the teachers' attitude - their attitude towards teaching, change their methods"* (interview 16 September 1997: 5). She expresses doubts over the professionalism of her staff and fears that, even when they attend workshops, they do so with closed minds:

> *"I fear that some teachers are going to chuck everything away. That is my fear because you know people and you know the people you are working with....*[It is] *professionalism- for I have been telling them* [the teachers] *that it is your attitude towards your work "*(Ms James interview 16 September 1997: 15).

> *"You attend a workshop because you must be there. But I am sure as you entered, you already said in your mind, 'I am not going to change'"* (Ms James interview 16 September 1997: 5).

Support for this more realistic view comes from the contradictions revealed by the field study of the project work and from the idiosyncratic interpretations of educational concepts among the Galant teachers. How concepts, such as continuous formative assessment, can be misinterpreted is evidenced in Ms Abrahams' comments that the new assessment methods will mean less work for teachers:

> *"In the old days you had to mark til late at night. These days it's not so much marking. You are supposed to give him a mark, whatever stage he is busy with, no matter how weak or good he is at it"* (Ms Abrahams interview 5 August 1997: 14).

Meyer and Newton's study of the implementation of resource-based learning in some Canadian schools finds similarly that some of their subjects claim to have always done resource-based teaching when clearly they have not (1992: 17). They attribute the claim to a basic misunderstanding on the teachers' part of the concept. At Galant Primary, this might

well be the case. The preceding section commented on the lack of understanding of the concept "integration", for example. However, the stance "*we are already doing it*" has to be seen within the context of the enormous pressures teachers are experiencing. It could simply be a response to the demands of their "workplace landscape" as discussed above (5.3). Morrison provides a useful table of factors that have been found to facilitate and impede innovation in a school. He lists three obstacles to change of particular relevance here: swamping participants with too many innovations; expecting them to do too much in too short a time scale; and not giving enough time for staff development (1994: 132). Indeed, what might be seen by outsiders as "resistance to change" might well, from another perspective, be seen as a pragmatic realisation among teachers that they lack the resources to set up new practices (Barnes, 1992: 14).

The principal's awareness of her teachers' needs is reflected in the suggestions and comments she makes in the daily early morning staff meetings. However, there is little room in these meetings for discussion and they are usually one-way peptalks. Staff development is reserved for the last period on Wednesdays, the "enrichment" sessions. I attended and recorded one session on change. Ms Gold, the Grade One teacher, had attended a series of workshops run by a local non-governmental organisation specialising in teacher development and the session was modelled on one of these workshops. It started with a game to break the ice, then broke up into groups to discuss what was positive and what was negative about change, and finally the groups' ideas were shared. There was some discussion around the meaning of outcomes-based education with Mr Moosa reassuring his colleagues that it was going to make their jobs easier as it meant that no child would fail. Ms Gold had prepared a poster with an acrostic "C-H-A-N-GE" (c = curious; h = hungry; a = aware; n = normality; g = goodness; e = exploit). The discussion was lively and there was much laughter. However,

the 35 minute session was soon over and the way in which everyone packed up to go so punctually made me wonder about the depth of the experience.

However much the principal would like to introduce change in her classrooms, the reality is that she is preoccupied with management and administrative issues. Interviews and observation over a few days from the room, allocated to me near her office, shows how little time she has for pedagogical issues. Her time is taken up with disciplining naughty children, interviewing parents, who constantly come in with family problems, and with administrative meetings out of the school. Research shows how crucial the principal is to successful change in a school (Fullan, 1991: 156). The potential role of Ms James is being curtailed, it seems, by her frequent absences in the course of the school day. This highlights the role of Mr Moosa, the Deputy Principal, allusions to which are scattered through the study. The field study reveals much about the complex web of relationships within the school and uncovers the power of Mr Moosa in the day-to-day teaching programme. The significance of his beliefs and interpretations for information literacy issues will be returned to in the following chapter.

5.4 Conclusion

The above section has revealed even more contradictions within Galant Primary - this time with regard to the teachers' views of the new curriculum and their readiness for it. The central "web of meaning" of the ethnographic field study of Galant has ironically to be that labelled "*contradiction*" or "*ambiguity*". Fortunately, the constructivist and interpretivist approach throws light on these contradictions and leads to the conclusion that any attempt to reconcile them would be futile. They are at the heart of the reality of the school.

As pointed out at the beginning of the chapter, a discussion of teachers' beliefs has to be sensitive to social, political and historical contexts. The influence of the systems, within which the teachers have trained and have worked, on their beliefs and behaviours is apparent. The contradictions make sense as they reveal the cracks and strains in the construction that the Galant Primary teachers have created. The study reveals the strategies which teachers use to cope with change. Their construction served them well in the past, giving them meaning, support and identity. Yet they are receiving little help as they now confront change on all sides. It was also stated at the beginning of this chapter that constructions can be modified, demolished and rebuilt. The Galant teachers are active agents in the construction and re-construction of their social reality.

So far, the report of the field study of Galant Primary has not commented explicitly on information literacy or information literacy education. This is because, in the course of the field study, it was found that such comment had to be grounded in the exploration of the socially constructed reality of the school. The study set out to investigate how projects - as undertaken in a typically disadvantaged school - can be used to develop information literacy. However, the participant observation of the Grade Seven projects soon made it clear that any attempt to "make meaning" of them required deeper and wider analysis. It found, for example, that it was impossible to ignore the assumptions about learning of the teachers. The iterative data-gathering and analytic process led to an exploration of the complex intertwining of teachers' frameworks of understanding and their behaviours. As pointed out in Chapter Three, ethnography was chosen as a methodology specifically because it allows such open-ended exploration.

However, the implications of the interpretive study for the research problem posed in Chapter

Three - the implementation of information literacy education - need to be taken up in more depth. This exploration will be the focus of the final two chapters. Chapter Six reviews some of the data and themes already discussed in the light of Moore's concept of a school's "information climate", discussed in Chapter Two (2.3). There it was defined in terms of:

- recognition of information skills in policy
- procedures and practice
- support in meeting professional development and information needs
- teachers' perception of information and its use in resource-based learning.

The aims in Chapter Six are, first, more explicitly to investigate the information climate of Galant Primary, and then to draw some conclusions about the challenges of introducing information literacy education into disadvantaged schools.

CHAPTER SIX

GALANT PRIMARY TEACHERS' INFORMATION LITERACY

6.1 Introduction

The central finding so far of the field study has been the significance of teachers' beliefs for project work. Their deeply held assumptions - about their identity, their community and what learning is - have been found to be crucial to the effective implementation of the concept of the project method. As the field study progressed and as it grappled with the confusing contradictions between, for example, teachers' words and teachers' behaviours, its lens became more and more sharply focused on their personal constructs or beliefs. This chapter examines the data from the interviews with the Grade Seven teachers and other key informants in an attempt to build a more explicit understanding of the information literacy of the teachers. Chapter One concluded that information literacy is best defined in terms of a set of attributes, deemed necessary for the information society. Two crucial attributes, perhaps more easily measurable than the others, are the ability to use information from a wide variety of sources and an understanding of the strategising required in an information search. These two attributes imply the twofold meaning of information "access" - physical and intellectual - as discussed in Chapter One. Information literacy education aims at teaching the skills needed to access information in the wide range of information sources of the information society. It also, more importantly, aims at teaching the higher-level thinking and problem solving processes needed by information users to access and make sense of the knowledge contained in the sources (Moore, 1998: viii).

The analysis and interpretation in this chapter are consistent with those in preceding chapters as it finds that such understanding depends on teachers' attitudes. It finds that attitudes

towards and use of information are inextricably linked to attitudes towards learning and teaching.

6.2 The Grade Seven projects and information literacy

Implicit in the preceding discussion of the Grade Seven projects has been an analysis of their potential for developing information literacy. The premise of the field study was that good project work is the ideal vehicle for the development of the attributes of information literacy. One of the aims of the observation and interviewing of the Group 8 girls (and of other learners) was to investigate what they learned in the projects - and specifically whether they learned or put into practice any of the information skills, regarded as crucial to good project work. It is not necessary here again to analyse the project work step-by-step in terms of these skills. It is evident that neither of the two projects had very much to do with information literacy. The learning outcomes of the science project are dubious. The history project was more successful in terms of Mr Olifant's expectations - but its outcomes were not information oriented. It clearly has potential as a vehicle for information education but, to achieve its potential, Mr Olifant would need to shift his thinking about learning.

The discussion in Chapters One and Two perhaps indicates that there are three prerequisites for the use of projects for information literacy education:

- Project work has to be meaningful to learners. It should build on their existing knowledge and interests. They should understand why they are doing it.
- Learners have to be given responsibility for planning, organising and assessing their work, with the proviso that this kind of autonomy has to be introduced gradually. As discussed in Chapters One and Two (1.1.4; 2.3), several research studies have found that "scaffolding", support and mediation, is

required.

- Process has to be regarded as important as content. Projects provide opportunities for the development of and practice in skills.

It cannot be said that any of these three existed in Ms Abrahams' science project. Mr Olifant's history project did build on a visit to the South African museum and did exploit the children's interests. It also allowed them some freedom in the way they approached the model building. However in neither project was there evidence of any awareness among the pupils of a project as an information process, involving phases and strategies. The pupils' inability to talk **about** their learning has already been commented on (4.3.2.1) but it is clear that the two projects would certainly not have developed insight into the information process. There was no teaching of process skills built into the management of the projects. Here, reference can again be made to the lack of record keeping and formative assessment. The study reveals the same chicken and egg situation which Moore comments on in her study of four primary schools in New Zealand (1998). The teachers do not give tasks that demand higher-level skills because they are too difficult; and the children will continue to find the tasks too difficult unless they practise the skills.

6.3 Teachers' information literacy

Much of the interviewing of the teachers aimed at exploring their information literacy - contending that projects can only be used as vehicles for information literacy education if teachers are themselves information literate. As mentioned just above, the two projects observed at Galant cannot be said to have any information literacy outcomes. The way in which the textbooks and worksheets were used showed no awareness of the need to teach any of the information skills, identified by Long, among others, as necessary for good project

work (1988: 181). The assertion has been made that the failure of the projects was caused as much by the teachers' conceptions of teaching as by a shortage of resources.

6.3.1 Teachers' use of learning and information resources

Questions 23 to 29 in the teachers' interview protocol (Appendix E) attempt to evaluate use of teaching and learning resources in general (not just for the two projects observed) and to explore the factors which influence their use. The responses confirm the classroom observations that the teachers use very few resources. They rely on textbooks and worksheets. Personal contacts - relations and teachers in other schools - are the most frequently used sources, for loans of worksheet material mostly. Both Mr Barry and Mr Moosa comment on how they use their wives' materials - both of whom work in more "affluent" schools. The only outside source mentioned by any of the teachers interviewed is the public library nearest to where they live. They all agree that the gangs have made Hilltop Public Library, the library closest to Galant Primary School, out of bounds to Paradys children.

Despite teachers' concerns over the narrowness of the pupils' lives, there seems to be little concerted effort to bring the outside world into the school. There is, for example, very little use of television or video in the Galant classrooms. Throughout the field study, the only occasion for any class was the showing of a video to two Grade Two classes, combined for the day as a teacher was absent. The video shown was one that Mr Olifant had made of various school activities in 1996. The school has one television and video cassette recorder, donated in 1996, when the school placed an advertisement in the local community newspaper after the theft of the school's television. There is a small collection of taped television programmes in the storeroom off the principal's office - all provided by Mr Olifant, the

school's cameraman and audiovisual expert. No use is made of the various film and video libraries of Cape Town. Mr Moosa claims to bring in newspapers to stimulate interest and general knowledge (interview 13 August: 22). One Monday, he did indeed bring into class the Sunday newspapers and led a discussion on their lead story, Max, the zoo gorilla, who had been shot by a runaway burglar. He left the papers in the class asking the class to read them and promising to return to them the next day. However no child showed any interest in them after he left and there was no follow-up discussion. Some teachers regard excursions as a means to enrich the life of the school. Money is raised for an annual school outing to the beach and, in my time at the school, a group of 18 pupils went for a "culture club" weekend to Langebaan, a coastal resort - paid for by their parents. Evidence of the value of such excursions is the success of the history model building which exploited the visit by the Grade Seven class to Cape Town museums.

The school has one personal computer - donated by an insurance company. It is unused with Mr Moosa claiming that it takes hours to print out a page. Mr Moosa is the only one of the teachers interviewed to have a computer at home. He uses it for for worksheets and notices. He believes that this skill gives him an advantage. As he puts it, it gives him *"an edge"* within the school.

6.3.2 Information literacy and teachers' beliefs about learning

A discussion of information literacy at Galant Primary has to make it clear that there are many potentially useful information sources within reach of the school. Cape Town is a large metropolis, a national and provincial capital. The school lies some ten kilometres from the centre of Cape Town with its wide range of libraries, including the Model School Library, which sends block loans of books out to schools for projects, and Edulib, the teachers'

library. Within three minutes drive of the school there are two public library branches. There are two universities, two technikons and two teacher-training colleges within twenty minutes drive. The headquarters of the National Film Library in Bellville, which has a large catalogue of educational videos, is close - as is Edumedia, the teachers' media centre in Mowbray. There are several non-governmental organisations and resource centres within reach. The city centre has several museums and art galleries which offer educational programmes.

The question is why do the teachers make so little use of the surrounding resources? Part of the answer is that the teachers simply do not know about the services offered by the above institutions. They know about their existence in general terms only. However the field study suggests other answers to this question.

One answer might lie in the geographic and psychological isolation of the school discussed in Chapter Four. The teachers feel cut off from the wide range of educational support services available in Cape Town. The recent amalgamation of different education departments into the Western Education Department might be a factor here, although it has to be said that the teachers seem to be as vague about the support services offered by the ex-House of Representatives teachers' library until 1994. Another answer might be that the curriculum has, until recently, not demanded any use of resources other than the textbook. A third answer has been signalled in the discussion of Ms Abrahams' reluctance to apply what she liked in the project workshop at Kirstenbosch in her own classes. The non-availability of specimens was less a reason than her fundamental conceptions of her role as a teacher and of learning.

Support for this last answer lies in the use of the resources **within** the school. The observation of the two Grade Seven projects reveals that there are resources within the school - but that they are managed badly. Ms Abrahams, for example, brought into her class and dumped on the floor piles of charts, posters and overhead transparencies. She had on her desk scores of pamphlets on animals, obtained from the South African Museum. The problem is that she does not view them as learning and information resources but as presentation aids.

Teachers at Galant, as discussed earlier, see learning as something they give to their students. They talk of "giving" learning and then "getting learning out of learners". Mr Barry's words have already been quoted (5.3.3):

> *"I tried and I couldn't get anything from them - I gave one group 'food'* [as a project topic] *one group I gave 'clothing'. But I couldn't get anything from them. Only after I gave them everything then they would share"*(Mr Barry interview 17 September 1997: 2).

Information, similarly, is not seen as a constructive process but as something, an entity. They dismiss the local community as a potential learning and information resource. Thus:

> *"Because our kids are located in this area where there is actually no information"* (Mr Olifant interview 11 August 1988: 13).

> *"In this school I will have to supply all the material ..."* (Mr Barry interview 22 August 1998: 13).

Ms Abrahams is pessimistic about project work at Galant because she believes that Paradys parents can give their children no support:

> *"Now when we do project work, our parents are not involved"* (Ms Abrahams interview 5 August, 1997: 11).

It is clear that the Galant teachers view resources in terms of books and money. Their thinking contrasts with that of the interim curriculum of the Western Cape Education Department, which points out that "information resources can be found among the people and in the environment of any community" (1995: 2). They do not see yet the potential for

learning in the community information sources within Paradys and Hilltop. In the course of the field study, Mr Olifant arranged a visit to the local police station by his Grade Six class (cancelled at the last minute because of a gang incident) and called in a local character, Uncle Arrie, on 22 July to talk to his classes. The aim in both these one-off initiatives was to teach children about the dangers of crime. Ms James supported the visit to the police station, she says, because the children need to see the squalour of a police cell. This kind of enterprise has clear potential for future projects which might fulfil these salutary purposes **and** be a useful vehicle for information literacy education.

6.3.3 Teachers' awareness of information as process

So far, the discussion of the information literacy of the Galant teachers has focused on their use or non-use of resources. The final question in the first interview protocol attempts to measure the sense of information as a process. It is modelled on Todd's technique (1995a; 1995b) in which, before and after the intervention of an information skills course, students were presented with the words "rubric" and "gorse" and asked to describe how they would go about researching them. His methodology assumes that a constructivist approach to information is inherent in information literacy. The assumption is that information literate answers should show awareness of the phases of the information process and of an information strategy. Todd analysed responses in terms of the phases of the information process, using Kuhlthau's model discussed in Chapter Two (2.2.3), and, indeed, found that, after the intervention, there was more awareness of the complexity of the process. He concludes that his approach provides a valid instrument with which to measure information literacy. The purpose at Galant was not to measure the effectiveness of an intervention but rather to explore the value of Todd's technique in assessing the information literacy of the teachers at Galant. As pointed out in previous chapters, the nature of the construct of

information literacy makes its measurement problematic. Todd's methodology offers an instrument to measure the inner thinking of the respondents.

The initial question in Ms Abrahams' and Mr Olifant's interviews asks teachers how they would set about researching the topic "Globalisation and the African Renaissance", a topic being given wide coverage in the press at the time, after speeches by Thabo Mbeki, the Deputy President. Both Ms Abrahams and Mr Olifant become bogged down with defining the words "globalisation" and "renaissance". They both seem threatened by the question and request to have the recorder switched off while they think of the right answer - despite my stressing that I am more interested in their strategy than in their present understanding of the concepts.

Ms Abrahams immediately tries to guess what the two concepts mean and to build some sort of answer on the spot. She sees it as some kind of comprehension test and is so uncomfortable that I soon abandon the question:

> Ms A: *Sjoe where do I start? Has this now got to do with the past? ... If I think of globalisation and the African renaissance I am taking Africa into consideration is that in - in South Africa ...African renaissance ... are they referring to something specific?*
> GH: *I think it's Thabo Mbeki talking..*
> Ms A.: *I don't understand what you are talking about.*
> GH: *So what would you do to find out? How would you find out what the topic is about?*
> Ms A: *I would go to the person who introduced this whole concept first of all and I will get hold of him and ask him to clarify this African renaissance bit and how they want to globalise it, because globalise is big, is massive"* (Ms Abrahams interview 5 August 1997: 33).

Similarly, Mr Olifant tries at once to come up with an answer:

> *"Let me analyse them. Globalisation obviously world. African renaissance obviously you are South African, you are African ..."* (Mr Olifant interview 11 August 1997: 29).

He pauses in silence for a long interval than builds an answer:

> *"Can I just say what I think what it is? The way I see globalisation, African renaissance - that South Africa the important role it is playing. Most probably the democracy of South Africa. That is where I would start, how that gave rise to a renaissance of the African continent and Mandela obviously being the symbol of that renewal... ".*

The fact that the topic contains associations with two familiar concepts, "globe" and "Africa", might explain why they both find it impossible not to get involved immediately with the topic. The lack of awareness of strategy or process could thus be due to the topic given. The topic was changed for the remaining interviews. The situation given to Mr Moosa, Mr Barry, Ms James and Ms King involved a sick young family member living in the country who has been diagnosed with an imaginary disease "piomelis". She writes to Cape Town in need of more information on how to cope.

Mr Moosa says he would go to a doctor or to a chemist to find out more:

> *"I will try to go to the ...my resource must be the person with the knowledge, the skilled person"* (Mr Moosa interview 12 August 1997: 18).

He shows awareness that the information he sends to the cousin has to be appropriate to a fifteen year old.

Ms King, the librarian, immediately sees libraries as a place to start and specifically medical dictionaries. She says she would then know where to go - probably to journals. She also mentions her own doctor. Like Mr Moosa, she is aware that her cousin is young and that she might need to sit down with the cousin to explain what she has found out.

The change in topic halfway through the interviews might throw doubt on any assertion here about the information literacy of the teachers. I felt that I could not revisit this part of the interview with Mr Olifant or Ms Abrahams because of their obvious unease with any question that seemed like a test. I had intentionally placed this question at the end of the interviews just because it might be interpreted as evaluative. What can be said is that the

choice of the second topic "piomelis" seems to be a more effective instrument but that it requires further exploration, perhaps in a confirmatory study of teachers in other schools.

6.4 "Information skills" as a subject at Galant Primary

Information skills as a subject has a place on the Grade Seven timetable - unusual in Hillside schools which, as the follow-up survey found, mostly ignore the fact that it is a compulsory subject in the interim curriculum (Hart, 1998). Ms King, as teacher-librarian, is responsible for information skills education throughout the school. According to Ms King, she, Ms James and the Grade One teachers attended a workshop on the new subject when it was first introduced in 1995 to replace the existing subject, book education. Question 28 in the interview schedule probes the teachers' knowledge of and attitudes towards the new subject.

The Grade Seven teachers do not seem to see any difference between information skills and the old book education. They all describe the new subject in terms of learning to use the library, the Dewey classification system, looking after books, and, so on. Only when I ask them how the new subject differs from book education do they mention that it teaches how to find information. They use almost identical words, talking of the "*sifting for relevant information*"- which might suggest that their knowledge is at an intellectual level only - garnered from a workshop:

> *"And how to sift important facts from non important facts. Because they have their project where they give facts which are irrelevant. So this is a skill that must be taught"* (Ms Abrahams interview 5 August 1997).

The teachers see the teaching of information skills to be the responsibility of the librarian and a subject to be taught in a "library period". Interviews with Ms King confirm that she shares this belief. The "library" at Galant has been moved three times, as will be discussed in the following section, but there has always been some sort of space called the "library". The

original library was a standard House of Representatives primary school library consisting of a small bookstore and an interleading reading room. Ms King reveals that she has always preferred to bring boxes of books to the classrooms rather than have classes come to the library. Given her description here of the problems this has caused, it is difficult to understand why:

> *"I had to carry them down, open up the box and when the child brings the box, then you discovered the child took the wrong box, so down he goes again, comes back with the other box - even though you tell the child "die boks is gemerk so en so"* [the box is marked so and so]. *He comes back, eventually you find the right box"* (Ms King interview 18 August 1997: 19).

Crime played a part. The original library was not secure:

> *"Because of the burglaries we had and then I became fed-up and I said to Ms* [James] *now I am just going to pack in these boxes and put them away. Okay we put it away and then as time went on I thought 'No man, the books can't lie there'. I took it out again, put it up in a little corner down there next to the art room. That was the library and then they* [burglars] *started coming in there. And then we moved from there to room number 17. And we are at room 17 for quite some time now, so I hope that it will be safe"* (Ms King interview 18 August 1997: 19).

Here she does not mention that the books, once moved to Room 17, have not been removed from the boxes. The room remains locked and inaccessible to teachers and pupils. Only she has the key and she is busy teaching in other classes all day.

This fact and her comments, to be returned to in the next section, on her irritation at having to tidy up the library after teachers, might suggest that Ms King is just not ready for a genuine open-access library, which might provide an arena for the school wide development of information literacy. Current thinking on information literacy education represents a paradigm shift for librarianship worldwide (Behrens, 1994: 316), as was discussed in Chapters One and Two. Observation of Ms King's methods and interviews with her and her colleagues suggest that the in-service training, which she received as the new subject was implemented in 1995, was inadequate. The book education or media studies, previously taught in South African schools, and as taught

still by Ms King, is typical of what Kuhlthau calls "source-oriented library instruction" (1994: vii). The syllabus, to be worked through in weekly library periods, is divided into sections according to type of information source (South Africa. Department of Internal Affairs (Coloured Affairs), 1982). Thus, Ms King teaches how to use an atlas in a "library period" by taking a box of atlases to a class and giving them perhaps a worksheet exercise. The new paradigm recognises the futility of such an approach and proposes a process approach. As discussed in Chapter Two, this new perspective has emerged from cognitive research into how people use information and from learning theory - and from new perspectives on the nature of "information". This research has uncovered the common ground between the constructs of information literacy and lifelong learning (Behrens, 1994: 318). The resulting consensus is that information literacy programmes need to be embedded in the core curriculum (for example American Association of School Librarians, 1995: 21). The new *Core Teaching Programme for Information Skills: Grade 1 to Standard 10* (South Africa. Department of National Education, 1994), adopted by the Western Cape Education Department in 1995, follows the example of other countries' programmes in emphasising the constructive information process from the information user's point of view. The learning programme for information skills in Curriculum 2005 is very similar (South Africa. Department of Education, 1997b).

The embedding of information literacy education in subjects across the curriculum presupposes school-wide planning and collaboration. Despite the principal's enthusiasm for project work and her claim to understand their value for information literacy education, there is no evidence of any development of a whole-school policy with regard to information skills at Galant - something that Moore sees as an indicator of information

climate within a school (1998: iii).

6.5 The role of the school library

Information literacy education, it is assumed throughout the world, is the mission of school libraries, although the discussion in Chapter Two has pointed out that this need not imply that it is the sole responsibility of the librarian nor that it is taught as a stand-alone programme. Moreover, the existence of a qualified teacher-librarian in every primary school cannot be assumed even in countries like Canada (Asselin, 1998) and New Zealand (Moore, 1998). The study undertaken in this dissertation assumed that Galant Primary had no functioning library; it specifically wanted to explore project work in a school without the kind of library a historically advantaged white school might have. And indeed the reality is that the school does not have - and has never had - what any of the studies, surveyed in Chapter Two, would regard as a school library. However, the participant observation soon found that the participants did not share this view of their reality. Here again, the sensitivity of ethnography in revealing the complexities and ambiguities of a socially constructed world has to be underlined. An investigation of the position of the school "library" and "librarian" at Galant Primary reveals the same kinds of ambiguities found elsewhere in the field study. The teachers believe that they have a library and a librarian - even if they complain about it and Ms King. The belief can only be understood in the light of what they believe a library or librarian to be. Their talk of the library - as it was in the past, as it is now and what they would like it to be in the future - holds clues as to their beliefs.

The school cannot be said to have a functioning library, even though it has always had a room set aside labelled "library". Its stock amounts to fewer than two books per child; it has received no new books since 1986; it appointed a teacher-librarian (Ms King) only in 1992.

She lost her position in 1995, after staff retrenchments, so is now expected to administer the library in the hours after school. Ms King finds this impossible as she does not feel safe once the school day is over. The follow-up survey of the other 14 primary schools in the circuit found that none of the other Hillside schools have librarians (Hart, 1998; Hart, 1999: 79). Only the three historically white schools in the circuit employ a librarian to manage the library and to teach information skills. These three teacher-librarians are paid for out of the funds generated by school fees.

The library at Galant Primary is at the centre of some controversy. As stated above, its stock (fewer than 1000 books) has been in boxes in a large locked room since the middle of 1996. The original library - conforming to the standard primary school model laid down by the House of Representatives - was a small windowless storeroom off a classroom, which was designed to be the library reading-room. It then moved to a small room at the end of a passage but there were two break-ins. The stated idea in moving it to its present larger room was to transform it into what Ms James calls a *"proper"* library. However, a year after the move, it remains locked and unavailable. The given reasons are that Ms King and Ms James wish to *"reorganise it"* and that Ms King has been ill. Ms James insists that no-one else can step in, saying, *"Nobody is to take responsibility if we have ten people moving in and out"* (interview 15 August 1997: 27). The prolonged closure of the library allows Ms King's colleagues to make some snide remarks. Mr Moosa's irritation at the situation is clear in his comments about having a trained librarian on the staff but no access to the library. He implies that librarians worry too much about the "system". It has led to his decision to establish a teachers' resource centre with the school's textbook allocation:

> *"I went to him* [Mr Olifant] *and said don't buy books for the children. Take and I gave him R14,000, and you go to Maskew Miller, ask them to put out every book they do - so we make our own resource centre for teachers. The two of us didn't do the course that Ms [King] did. But our school library - we've got a room for it - but it isn't being used*

like we would like it to be used" (Mr Moosa interview 12 August 1997: 28).

"What has been said every time now is that the books isn't ready yet, because it must be counted - OK I do understand that....Ja, and the other thing is that one person carries the key" (Mr Moosa interview 12 August 1997: 30).

There are signs that the conflict is about more than the locking of Room 17 in the middle of 1996. Ms King's revelation that she had once before closed the library was quoted in the preceding section. There are several comments that point to a more long-term resentment among the teachers over her jealous guarding of the books. Mr Moosa's description of his plans for the teachers' resource centre implies strong criticism of how she runs the school library:

"We won't have a system like the Dewey system - it will be a place where I can go and sit, take a book, make a photostat, that is what we want. ...I don't like to interfere with the harmony sometimes or I won't come and tell you, this is not right. I don't like to create a problem over a book" (Mr Moosa interview 12 August 1997: 29).

His words here reveal much about his relationship with Ms King. Other comments by him and Ms King confirm the existence of some conflict between them. A contributing factor here is that, at the end of 1996, both had applied for the position of Deputy Principal and, although, as he himself concedes, under-qualified with only a three-year certificate, Mr Moosa had secured it. However, Ms James, herself a qualified librarian, confirms that Ms King's control over access to the books is controversial with other teachers. She also confirms here that Mr Moosa's plans for the teachers' resource collection is a way of bypassing the library:

"You see that also comes to attitude - going around the library...You see now, everybody has his own way of running a thing. If you go via the librarian, you get a card, you can only come to her at certain times...And she will tell you the Wednesday afternoon because it suits her the Wednesday afternoon. Or it suits her Friday afternoon because she waits for somebody to pick her up - she's got that hour [free]. *But Friday afternoon, they go home, you see. So that is my obstacle. So what do I do? I cut out the school library..."*(Ms James interview 15 August 1997: 28).

"They come and tell me. I know what the problem is - when they are busy with a lesson then they need some things..." (Ms James interview 15 August 1997: 29).

Ms King gives a different perspective. She admits her bitterness at the education authorities for cutting back teacher-librarian posts. She criticises her colleagues, accusing them of a lack of "*discipline*" - saying that "*it is sickening*" (interview 18 August 1997: 3) to have to tidy up after they have brought their classes to the library. She is also angry at the lack of support from the principal - labelling her as too "*soft*".

The tussle has had two results. The first, the teachers' resource collection, has already been mentioned. Mr Olifant, under Mr Moosa's guidance, spent the entire 1997 textbook budget (R14000) on books which are to be shelved in a separate teachers' collection of books. This collection will not be available to the children. Mr Olifant's views of this teachers' collection have already been commented on (4.3.3.1). He sees it as a way to save money. More titles can be bought and copies of pages can be made for worksheets (interview 11 August 1997: 34). The books, bought for this collection, were in boxes in the strongroom off the principal's office throughout the field study.

The second result of the conflict is Mr Moosa's plan to bypass his problems with the school librarian by opening what he calls a "*resource room*" in Room One. He sees it as a homework room, referring to it as a place where "*they can drop in - coming in one door and going out another*" (interview 12 August 1997: 29). His frequent comment that his centre will "*spoonfeed*" the pupils holds a veiled criticism of Ms King who seems to be seen as a martinet. By "*spoonfeeding*" he means simply that the centre would provide whatever the pupils need to do their homework - including pencils and paper. The frequent mentions by Mr Moosa and Ms King of the problems of teaching children who never have pencils might indicate a long-standing difference of opinion between them. To Ms King, it is evidence of fecklessness peculiar to Paradys children and of a need for more discipline. She says her

sister, who teaches in a nearby school, does not have the same problem (interview 18 August: 12). To Mr Moosa, the problem just has to be accepted as part of teaching within a community like Paradys.

Mr Moosa does not explain how his homework room will overcome the problems that Ms King has faced over the years. How it will be staffed in the afternoons, for example, is not clear. The principal's response to my suggestion that perhaps parents might help in the library is again symptomatic of the fundamentally negative attitudes to the community. She says:

> *"It is too much noise. They can't handle it. If they see they must now maybe cover a book or they must sort books, they don't come back again"* (Ms James interview 15 August 1997: 27).

It is clear that any future information literacy education at Galant will have to resolve the conflict over the library. It is hard to see any role for the teachers' resource centre or Mr Moosa's envisaged homework room in information literacy education. Yet they will clearly sideline the existing library. Money, which in previous years was spent on textbooks, is not being spent on library materials but on teachers' books, which will be locked away from learners. After school, if Mr Moosa's plan is implemented, teachers will supervise the homework room rather than perhaps help in the library. The prevailing worksheet-dominated teaching style will thus continue.

The personality of the librarian, Ms King, might be a key factor - as has been found in international research into the success of school libraries and resource-based learning initiatives (Blair, 1978: 94; Phillips, 1988: 13; Meyer and Newton, 1992: 17). It is difficult to see how the library can be developed into a dynamic collection of learning resources given the present gulf between Ms King and her colleagues. The problem at Galant is that Ms

King, at her own admission "angry" and "depressed" at having to teach full-time (interview 18 August, 1997), stands in the way of any fresh look at building and managing resources within the school.

6.6 Conclusions

The above exploration of the information literacy of the Galant teachers suggests that the information climate at Galant Primary falls short with regard to all four of Moore's criteria, which were listed at the end of the previous chapter as.

- recognition of information skills in policy
- procedures and practice
- support in meeting professional development and information needs
- teachers' perception of information and its use in resource-based learning (Moore, 1998: iii).

Overall, the interviews and classroom evidence agree that the Galant teachers lack the attributes of information literacy. They are not aware of information as a process demanding certain strategies. The non-use of resources in their teaching reflects a lack of knowledge of the resources in their surroundings and of the value of information education. The introduction of information skills as a new (and compulsory) subject in 1995 seems to have had little impact. Its introduction presented an opportunity to raise the consciousness of teachers with regard to information education. The field study at Galant Primary (as well as the later survey of other schools in the circuit) suggests that the in-service training that accompanied the new subject was inadequate. It seems to be viewed as the old book education under a new name and is ignored in most of the Hillside schools (Hart, 1998).

Overall, the field study of the two Grade Seven projects does not lead to a call for more resources for project work at the school. It rather calls for different ways of using the existing resources. Moore uses Doyle's words in 1992 to underline the crucial role of

teachers:

> Teachers are the most critical key to student attainment of information literacy. They must become information literate themselves, comfortable with the variety of resources as well as the process of assessing, evaluating, and using information (Moore, 1998: 97).

The Galant Primary teachers' fundamental assumptions about learning hinder the kind of information problem solving alluded to by Moore. The analysis and interpretation in this chapter have highlighted the complex links between teachers' beliefs and information literacy. Mr Olifant's and Mr Moosa's descriptions of the planned teachers' resource centre and the pupils' resource room are the key to this interpretation. In keeping with the beliefs explored in Chapter Five, they see information as something that they give to children in worksheets. The implications of these links will be explored in the final chapter.

The lack of information literacy evident at Galant Primary is worrying. Several writers warn that, unless schools engage in effective information literacy programmes, the information age might increase the gap between so-called information rich and poor (for example Lenox & Walker, 1993; Moore, 1998: 97).

CHAPTER SEVEN

REFLECTIONS ON THE GALANT CASE STUDY

7.1 Introduction

This final chapter reflects on the field study of Galant by considering its implications for information literacy education in the school and for other disadvantaged schools in South Africa. Following the example of McGregor (1993) and other qualitative writers, it takes the form of "assertions". There are five key assertions that emerge from the exploratory study:

- Teachers' personal constructs about teaching and learning are crucial for information literacy education.
- More effective teacher development programmes are needed.
- Structured "stand-alone" information literacy education programmes should be timetabled in the context of whole-school planning.
- Reading interventions and programmes are urgently needed.
- The value of the qualitative approach of the ethnographic field study is confirmed.

These assertions contain recommendations for the development of information literacy education in South African schools in general and also within Galant Primary School itself. The sensitive issue of the communication of the findings of the field study to the Galant teachers was discussed in Chapter Three (3.3.4). One of the strengths claimed for ethnography is that it bridges gaps between theory and practice (Harvey & Myers, 1995). Therefore, it is hoped that the reporting-back of the study in one of the school's Wednesday enrichment sessions will lead to the setting up of a teacher development project. This is discussed in more detail below.

The chapter concludes by suggesting certain key areas for further research.

7.2 Teachers' personal constructs about teaching and learning are crucial for information literacy education

The central assertion of the field study is that projects will not teach information literacy any more than any other pedagogical choice. Their value as vehicles for information literacy depends on the teachers who manage them. It lends support to Gordon's finding (1996) that there needs to be a consonance between projects and "ordinary" classroom approaches. Her finding is all the more striking since her study took place in an international school with a well-stocked library and where a full-time librarian works collaboratively with the teachers. The philosophical basis of good projects - a belief that the best learning comes when children construct it themselves - is as important as the classroom management issues. Bruce's warning (1995: 73), in the context of higher education, of the problems for information literacy programmes in environments where teaching is seen as a process of transmitting information, has been found to apply to Galant Primary.

The study suggests that the conceptions of teaching of the Galant teachers are influenced by their attitudes to the surrounding community, their training, their historical situation, their feelings of isolation, and their perceptions that they lack resources. Their personal beliefs as to what learning and teaching are serve as filters as they interpret educational concepts such as projects, themes, outcomes, learning, resources, groupwork, and integration.

The field study of Galant Primary reveals the inadequacy of existing information literacy research in interpreting its data. The interpretation and theorising of this dissertation relies on research in teaching, which has, since the early 1980s, recognised the significance of teachers' beliefs. Munby and Russell attribute this recognition to shifts towards ethnographic

and qualitative approaches (1992: 2). The contribution of the ethnographic study of Galant Primary is that it demonstrates that information literacy is intertwined with teachers' beliefs about learning. These beliefs cannot be isolated from the culture of the school as they are the constructs which teachers use to make sense of their complex world.

Research in information literacy education can learn much from the literature of educational change. Barnes points out that this literature accepts as commonplace the notion that failures in development projects within schools can often be attributed to differences in perspective between teachers and curriculum developers (1992: 12). According to the research in teachers' beliefs and scripts, already discussed (5.2; 5.3), such failures are caused by unrealistic expectations on the part of curriculum researchers and developers. Teachers cannot simply be expected to implement new ideas since they interpret these ideas only in terms of their existing, often inappropriate, beliefs or frames. This means that changing teachers' practices depends on changing their frames, or, at least, expanding their repertoire of frames. As Barnes says:

> Teachers who can only "frame" in one way what happens in their classes can therefore only see one set of possibilities for teaching. If such teachers are asked what they would wish to change in their work, they often mention only external concerns such as the time or technical resources available. For them, the social context and its demands, the kinds of learning expected, the constraints of examinations and syllabuses, and the power structures of the school are taken for granted as part of the conditions of teaching that must be coped with (1992: 17).

7.3 More effective teacher development programmes are needed

There is a clear need for teacher development programmes that encourage teachers to question their assumptions and to accept the possibility of new frames. In discussing the applications of these ideas, Barnes (1992) alludes to Schön's concept of "reflection in action" which owes much to John Dewey's theories on reflective teaching. These influential theorists see the truly professional teacher as a practitioner who, when confronting something

new, will "surface and criticise his initial understanding of the phenomenon, construct a new description of it, and test the new description" (Schön, 1996: 7). Teaching is thus a constant constructing of and testing of theories. As pointed out in earlier chapters, the work on teachers' personal constructs gives insight into the gaps and contradictions of the field study - between what Galant teachers believe they are doing and what the study found they are doing. It is clear that the success of any future information literacy initiative at the school will depend on teacher development that supports the teachers in acquiring the attributes of this kind of professionalism.

The Galant teachers' problems are not unique. There is consensus in the literature that teachers commonly underestimate the complexity of the learning and skills demanded by projects (Tann, 1988b: 25; Olën, 1993: 80; Kerry & Eggleston, 1994: 192). Wray warns that the integrated approach to teaching information skills puts great demands on the teacher (1985). Kerry and Eggleston point out that some teachers just cannot cope with the open-endedness implied by the philosophy of project work (1994: 192).

In suggesting that project work at Galant Primary would be ineffective even if the school had a wide array of resources, the field study confirms Brown's point that:

> To ask teachers to change the materials they use for teaching, and the teaching approaches they use, is to require a change in their basic beliefs about how students learn (1988: 13).

On the whole, the Grade Seven teachers conceive of teaching and learning in terms of giving and receiving the right answers - a conception incompatible with the constructivism inherent in information literacy education.

Several studies agree that teacher training neglects project work (O'Hanlon, 1987; Hallein,

1988: 22; Best, Abbot & Taylor, 1990: 47; Olën, 1993: 320). Long (1988: 174) claims that the past emphasis on content and subjects in teacher training explains the lack of understanding among teachers of the processes of learning. The issue of teacher education is clearly significant for the field study. It is important to note that none of the teachers interviewed at Galant Primary was trained in project work as part of their pre-service training. In-service training, so far, has consisted of a workshop on projects, which was run by the departmental information skills subject advisor at the beginning of 1997. Ms James claims that one or two of the staff enrichment sessions in the first quarter followed up on this workshop. Several teachers have attended workshops on aspects of Curriculum 2005. One school in the circuit has been identified as a pilot school for the phased-in implementation of the new curriculum and, in the course of the field study, most of the teachers attended a workshop at this school. Ms James calls this workshop a "*hopeless flop*" (interview 16 September 1997: 12), claiming that it made such excessive use of Curriculum 2005 jargon that it only confused the participants.

The study has shown the ineffectiveness of the departmental workshop on the project method held within the school. The Grade Seven teachers basically dismissed it as irrelevant to their needs. Any innovation within the school would have to confront the barriers implicit in the teachers' beliefs that the field study has discovered. These include the following:

- Only they know the real needs of their children.
- The community has unique needs which only they understand.
- The school needs teachers who are social workers rather than conventional teachers.
- They are disadvantaged teachers working within a community which has no resources.

- They are already doing much of what Curriculum 2005 advocates.

The Galant experience supports Fullan's point that one-off workshops, though widespread in teacher development, are ineffective (1991: 316). It appears that, if an innovation does not conform to teachers' existing beliefs about teaching and learning, then one or two isolated workshops on it will be inadequate. As stated in the preceding section, changing teaching in schools means changing interpretive frames of thinking. Careful thought needs to be given to an in-service training programme which encourages teachers to reflect on their practices and philosophies and which, above all, provides ongoing support for them as they experiment and adapt. A holistic approach is crucial as teachers adjust to the subtle shifts in power entailed in learner-centred approaches. New beliefs have been found to be fragile and in need of nurturing (Asselin, 1998: 11). Such nurturing is evident in the information literacy project designed by Moore for teachers in four New Zealand primary schools, which was described in Chapter Two (2.3). Moore lists the prerequisites for successful in-service training:

- time to reflect, practise and to share information within a school and among schools
- something to be taken from each workshop to be applied in class at once
- a balance between 'quick-fix' solutions and building longer term appreciation of information problem solving processes
- actual learning outcomes are focused on, regardless of children's ability
- teachers' efforts are affirmed by the learning gains they see (1998: 91).

Moore's project serves as a model for the development of teacher groups within Galant Primary's circuit of schools. The information skills specialist of the Western Cape Education Department, responsible for the Galant circuit of schools, has 400 schools under her wing and at the time of writing is booked up for months to come with one-off visits to schools (Zinn, 22 April 1998). Given the evidence that such one-off visits might be ineffective, I have discussed with her the need for the collaborative planning of a pilot project within the Grade Seven classes of the circuit. The goal is to provide the support and the kind of "nurturing"

that Moore describes in her New Zealand project, as teachers embark on projects within their subject teaching. The invitation by the principal of Galant Primary School to use her school's Wednesday enrichment sessions for one quarter provides a useful opening.

7.4 Structured "stand-alone" information literacy education programmes should be timetabled in the context of whole-school planning

The participant observation of the study at Galant Primary has to be examined carefully by those who are wary of, what Wray calls, "separatist" approaches to teaching information skills by means of a timetabled subject. As discussed in Chapters One and Two (1.1.3.1; 2.3), the current thinking on information literacy education is, indeed, that it is best immersed in the curriculum. However, this thinking has evolved out of studies and experience in contexts very different from Galant Primary.

The study at Galant Primary is significant for the theory of information literacy education as it demonstrates the risks in assuming that progressive curricula and policies will, in themselves, provide a more favourable climate for information education. Although the study has suggested that the teachers at Galant underestimate and even mismanage the resources they have, it does not dismiss the fact that their school is badly under-resourced. It is clear that information skills are more easily immersed in projects within schools that have resources. "Resources" involve more than books and computers. Moore's study of four primary schools in New Zealand which are advantaged by South African standards in terms of access to information resources but which have no teacher-librarians is of interest (1998). Her conclusion is that some kind of media specialist within a school is needed to mediate learning and to provide a climate for effective information problem solving.

There is some support in the literature for the view that there is a place for stand-alone

programmes. As pointed out in Chapter One (1.1.3.1), Chris Pratt (1991) and Eisenberg and Brown (1992) warn that the widespread belief that information skills have to be integrated at all costs is based on conventional wisdom rather than empirical evidence. One of the few studies which addresses the question is that by Todd which was discussed in Chapter Two (2.3). It seems that Todd's study involved cooperation among three people - himself, a full-time school librarian and the science teacher (Todd, Lamb & McNicholas, 1993). Pratt (1991) suggests that, in environments where such cooperation is impossible, as in his own college, structured information skills courses with their own place on the timetable might be a sensible strategy. The proviso is that the information skills specialist who gives these courses has to ground the instruction in the assignments being undertaken by the participants in subjects across the curriculum - so that they learn to transfer and generalise the skills. Wray contends that the two approaches - integration and stand-alone - need not be mutually exclusive. Timetabling separate classes on information skills ensures that they are not neglected. But he warns that the effectiveness of these classes depends on school-wide policies and planning. Teachers need to be included in the planning of the information skills programme so that the learning in information skills classes is reinforced and generalised in other classes:

> In the context of this kind of whole-school planning it is possible to see that separate information skills lessons may have a place, because each member of staff will know what is to be covered in these lessons and will be able to develop further the relevant skills in his or her own lessons (Wray, 1985: 11).

The wide research into the effectiveness of general study and learning skills courses might hold lessons for the planning of information literacy education. Bruer's review of such research concludes that "general" skills teaching (as opposed to domain specific) can succeed if children are taught explicitly not only what learning strategies to use but also when and why to use them (1993: 74). The concept of metacognition was defined in Chapter Two as

"the ability to think about thinking, to be consciously aware of oneself as a problem solver, and to monitor and control one's mental processing" (2.2.3.2). Perhaps just as metacognitive skills can be taught so that children are "intelligent novices" when confronted with new learning situations so information skills can be taught to empower information users in any situation. The maligned traditional library skills courses perhaps fail for the same reason as other general skills courses do - because they overestimate children's ability to generalise from one learning situation to another (Bruer, 1993: 75).

The study at Galant might suggest that a so-called "stand-alone" information skills programme might be the path to follow in the next few years of educational transition - as long as it is accompanied by whole-school policy-making and planning. The argument here is that a well-structured programme in which information skills are spelled out and systematised will provide a vehicle for the introduction of information literacy education in schools like Galant Primary. The kernel of such a programme does exist in the form of the information skills learning programme in Curriculum 2005, although none of the Galant circuit of schools seems aware of its existence. There are several implications here.

- The information skills learning programme of Curriculum 2005 urgently requires first expansion and then promotion in schools. One of the most important outcomes of this promotion must be that teachers are able to differentiate between new information skills programmes and the old barren book education.
- Innovative teacher-friendly learning materials should be developed. The obscure language and awkward format of the existing information skills learning programme within the documentation of Curriculum 2005 makes it inaccessible. Models might be found in some of the international materials. As they stand, these are not appropriate for most South African schools as they assume levels of skills

and resources uncommon here. But their two-pronged approach, in providing a structured information skills curriculum accompanied by detailed examples of projects and assignments for the integration of these skills in subjects across the curriculum, might be copied.

- Staff will need to be identified within schools who are able to take special responsibility for the programme. Internationally and in some advantaged South African schools, teacher-librarians are taking on this work. Although a policy framework for school libraries and their staffing has been drafted, it is still at the discussion level and a long way from being approved by government (South Africa. Department of Education. Directorate: Centre for Educational Technology and Distance Education, 1998). The need to introduce information literacy education is urgent if gaps between the information rich and poor are to be narrowed. Whoever takes on responsibility within schools will require on-going support of the information skills specialists of the Western Cape Education Department.
- The support of principals and senior staff is essential if school-wide policies are to be implemented. Some of the weaknesses at Galant Primary could be overcome with genuine collaboration. Chapter Six showed the isolation of Ms King and her book education lessons. Here again, the role of the Education Department in encouraging the development of information literacy programmes is crucial. The study at Galant and the follow-up survey of other schools in its circuit provides evidence of how policy statements in official documents can be meaningless (Hart, 1998; Hart 1999). As reported in Chapter Six (6.4), the Hillside schools ignored the introduction of the new subject "information skills" in the Western Cape curriculum in 1995. Active intervention to support policy is required by means of

the kind of pilot project mentioned in the previous section.

7.5 Reading interventions and programmes are urgently needed

The observation of Group 8 - and the other Grade Seven pupils - holds some important lessons. The most significant is the need to follow up the suggestion that their poor reading abilities are hampering their learning across the curriculum. The seeming inability of the Grade Seven children to read their textbooks and the failure of the teachers to address the issue require urgent attention. The reading interventions of organisations like READ have shown how book-based programmes can dramatically improve reading within a short time (Le Roux & Schollar, 1996) and could serve as models. The school's library could perhaps play an important role once its problems are solved. Again, it is clear that a school-wide programme will be needed with teachers of all phases working together.

Dependence on textbooks by learners and teachers is condemned as part of what was wrong in the old didactic South African education system. The policy at Galant not to provide each child with a textbook but to buy several titles, at first sight, sounds promising for information literacy. Children learn how to evaluate information and how to organise and synthesise it through interacting with several different sources. However, at Galant, the children are not to be allowed direct access to the new books. The worksheets used in Mr Olifant's classes are no more imaginative than the old textbook and indeed might hinder the acquisition of reading and information skills. The irony is that the textbook could possibly, if handled well, better teach reading strategies - skimming and scanning, using the index and contents pages, reading for detail. Textbooks based on the outcomes-based model are now being published and could perhaps provide support for over-worked and stressed teachers like those at Galant.

7.6 The value of the qualitative approach of the ethnographic field study is confirmed

Weber's words, already used at the end of Chapter Four, summarise the purpose of the ethnographic field study of Galant Primary School:

> In the sphere of action things are rationally evident chiefly when we attain a completely clear intellectual grasp of the action-elements in their intended context of meaning. Empathetic or appreciative accuracy is attained when, through sympathetic participation, we can adequately grasp the emotional context in which the action took place (in Sutton, 1993: 421).

The strength of the qualitative methodology is that its combination of in-depth interviewing and relatively long-term observation uncovers contradictions and disparities - between, for example, what the teachers say they do and what they do. It is difficult to see how these would have been revealed in any other approach. The disparities have been explained in terms of the deeply held assumptions or beliefs the teachers have about learning and teaching. Any new programme will succeed only if it starts "where the teachers are" - hence the significance of the uncovered beliefs.

The debate over the generalisability of case study research has been covered in Chapter Three. The stance of the study is that, in giving understanding of a specific context, it contributes to the overall field of information literacy research. As Harvey & Myers (1995: 23) point out, ethnography has value for both the development and application of theory. They claim that theory has to be built on knowledge of a large number of different contexts. The contribution of the Galant study to information literacy education theory is that it confirms the links between learning theory and information theory. In its exploration of the webs of meaning at the school, it discovered how entangled teachers' beliefs about learning are with those about their community. In its uncovering of the significance of teachers' scripts and beliefs, it supports those few studies in the literature of information literacy which

go beneath the surface of teaching practice to explore teachers' personal constructs. The ethnography thus highlights what needs to be asked in the study of project work and information literacy within schools.

One of the strengths claimed for ethnography is its power to influence practice through building bridges between researchers and practitioners (Harvey & Myers, 1995). The field study certainly provides information essential for any future intervention within the school. In addition, it is hoped that the study of Galant Primary will be useful to those involved in establishing information literacy programmes elsewhere. This might seem paradoxical, given the stress in ethnography on context. The qualitative approach makes no attempt to reduce variables to those likely to give cause and effect relationships. The aim is rather to provide rich insights into the social reality within one school - which might then lead to a deeper understanding of the challenges facing information literacy education on a broader front. Harvey and Myers contend that so-called generalisable knowledge is "often neither relevant nor meaningful, in which case we are better off understanding specific contexts" (1995: 26).

7.7 Recommendations for further study

There have been several comments in the course of this dissertation on the need for further study. The reading levels within the school require closer investigation as do the information and learning processes of the pupils as they undertake assignments.

Despite the above defence of ethnography, the need for follow-up research is clear. The field study presents a unique picture of one school - that is, after all, the point of a case study (Stake, 1994). In Chapter Three, it was stated that Galant Primary qualified as a "typical" case study as it was chosen as fairly typical of ex-House of Representative primary schools. The account in Chapters Four and Five of the teachers' belief that they serve a special community might at times suggest that it is rather an aberrant case. This suggests the need

for a confirmatory study of the other schools in the circuit. As reported earlier, such a study has been undertaken (Hart, 1998) A report of this study falls outside the frame of this study; however, it can be stated that preliminary analysis confirms that Galant Primary is not unique.

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APPENDIX A
LETTER TO THE PRINCIPAL OF GALANT PRIMARY SCHOOL

3 May 1997

Ms J
Principal
Primary School

Dear Ms J

RESEARCH PROJECT: *INFORMATION SKILLS & PROJECT WORK*

As discussed with you earlier this year, I would like to spend the third quarter in your school undertaking a research project in the Grade Seven class. The project's tentative title is *Information skills development in project work in a disadvantaged Cape Town primary school.*

The aim of the research is to investigate the use of project work in the development of information literacy. *Curriculum 2005* signals a move towards formative continuous assessment and so an increase in project work is likely. However, there is speculation that this trend might well provide problems in schools which do not have enough resources. So the second aim of the research project is to explore innovative ways of undertaking project work in historically disadvantaged schools.

The study has been accepted and registered by the Arts Faculty Research Committee here at the University of the Western Cape and will form part of my MBibl Degree at the University of Cape Town.

I will be happy to meet you and the Grade Seven teachers to discuss my plan in more detail.

Yours sincerely

Genevieve Hart

APPENDIX B
SCHOOLS IN CRISIS

This selection of newspaper headlines serves to document the turmoil in schools in the Western Cape in 1997 and 1998. Amid much protest, ex-House of Representatives and ex-House of Assembly schools had to accept staff cutbacks as the province fell into line with national teacher/pupil ratios. At the same time, they were facing the the phasing-in of the new curriculum, Curriculum 2005, and changes in governance policies as the South African Schools Act was implemented. The headlines also show the impact of gangsterism and crime on schools.

Cape Times 12/3/97

Pupils stage march on teacher cutbacks

TALKS WITH UNIONS FRUITLESS

Cape Times 12/1/98

3 600 teachers to be axed

Cape Argus 16/1/98

Unions set for new schools cutback fight

Talks today on Bengu's 'draconian' plan as further job losses loom

ORGANISATION THREATENS 'PROTRACTED MASS ACTION'

Cape Times 19/2/98

Pagad joins education fray

CAPE ARGUS, THURSDAY, MARCH 5, 1998

Schools left at mercy of gangsters, say teachers

Guns in Grade 2

Children line street in sad farewell to friend

Gang war claims 20 this month

C Times 22/1/98 p.9

Vandalised schools left out

Cape Times 12/2/98

Pupils in impromptu march to Parliament

Gang war fears shut schools

C Times 12/4/98

CAPE ARGUS, MONDAY, MAY 11, 1998

Teacher crisis: 2 out of 3 think of leaving

APPENDIX C
DIARY OF VISITS TO GALANT PRIMARY, THIRD QUARTER 1997

DIARY OF KEY EVENTS IN DAILY VISITS TO GALANT PRIMARY SCHOOL 16 JULY - 19 SEPTEMBER 1997		
16 July	Interview Ms James, Principal Interview three Grade Seven teachers (Mr Moosa, Mr Olifant & Ms Abrahams)	
16-21 July	Preliminary staffroom & classroom observation (Grade Six & Seven) Observe Mr Olifant's combined grade six classes revision lesson (history)	
21 July	Classroom observation of Grade Seven science project begins	Parents' evening meeting to elect Governing Body
22 July	Uncle Arrie visit Grade Six Long interview Group 8 Grade Seven outing to museums	
25 July	Dance preparations all day (no formal teaching)	
28 July	Science project presentations begin Grade Seven history module begins Interview Group 8 Interview Group 1 (Joy, Lavona, Anthea)	
30 July	Ms Abrahams interrupts presentations: she gives out worksheets on the crab that she was given at the museum	Staff meeting discusses shooting in street - called a "war-zone"
28 August-6 August	History worksheets	
1 August		Ms King returns from sick leave
4 August	Group 8 presentation. End of science project Long interview Group 8 & 1	Burglary. Some vandalism. Doors stolen.
5 August	Ms Abrahams' interview	Ms James reports at staff meeting that 3 other schools had doors stolen. Staff discuss outbreak of gang warfare in area.
6 August	Ms Abrahams' classes taken over by Mr E.M.	Staff braai to celebrate dance
6 August	Grade Seven project: model building	
8 August	Models on display Gumboot dances Play	
11 August		Break-in. Doors without iron bars taken. Whole school assembly.
12 August	Interview with Joy, Lavona & Anthea	School closes early because of

	about their history model Mr Olifant's interview	flare-up of gang violence
13 August	Mr Moosa's interview	
14 August	Ms King's interview	
15 August	Ms James' interview (2 tapes) Grade Four (Mr Barry's class) observation	
18 August	Ms King's interview	Break-in.
19 August	Grade Four class (Mr Barry's class)	
19-22 August	Ms Gold's Grade One class	
20 August	Staff enrichment session	
22 August	Mr Barry's interview	
22 August-15 September	Whole school writing "Controlled tests". Three visits to discuss interview transcriptions & to photograph.	
15 September	Mr Olifant's follow-up interview Ms Abrahams returns from sick leave	Weekend burglary. Door - still wet with varnish - taken.
16 September	Ms Oliver's interview Ms James follow-up interview	
17 September	Mr Barry's follow-up interview	
19 September	End of term	

APPENDIX D
EXAMPLE OF HISTORY WORKSHEET 4 AUGUST 1997 & TEXTBOOK PAGE

WORKSHEET

4/8/97
2nd period

Die Laaste Jare van die V.O.C. aan die Kaap, 1780-1795

From 'Ons Lewende Verlede' 5, Van Niekerk, Lintvelt, van Wyk, Stander. 1995. (pupils have p. 112-113. pupil's answers)

Die Patriottebeweging

Ons moet die geskiedenis altyd probeer sien teen die agtergrond van belangrike gebeurtenisse oor die wêreld heen. Een só 'n gebeurtenis was die Amerikaanse Vryheidsoorlog in die sewentigerjare van die 17de eeu.

Die koloniste in Noord-Amerika het ook gebuk gegaan onder die beperkende handelsbeleid van Brittanje. Die Amerikaanse koloniste het in opstand teen Britse heerskappy gekom en dit het die Kaapse koloniste aangespoor tot opstand. Veral in Frankryk en Engeland, het teen dié tyd ook 'n vryheidsgees geheers en dit het oorgewaai na die Kaap. Daar was ook woelinge in Nederland waar die volksgesinde party, die Patriotte, die koninklike Oranjeparty teëgestaan het. ('n "Patriot" is iemand wat sy __1__ liefhet.)

In dié omstandighede van ontevredenheid aan die Kaap en buitelandse vryheidsbewegings kan ons verstaan waarom 'n groep __2__ besluit het om ook vir hul regte te stry. Hulle het hulself ook *Patriotte* genoem en die Kompanjie-ondersteuners __3__. Een van die mees besielde Patriotte was __4__ en hy het hom sterk uitgespreek teen die politieke en ekonomiese toestande aan die Kaap.

Op 7 Mei 1779 is 'n vergadering gehou waar __5__ teenwoordig was. Op hierdie vergaderings is die klagtes van die burgers bespreek en daar is besluit om vier burgers, naamlik Jacobus van Reenen, Barend Artoys, Tielman Roos en Nicolaas Heyns na Nederland te stuur om 'n klagskrif namens die burgers voor die Here XVII te lê.

1. vaderland
2. Kaapse burgers.
3. Mamelukke
4. Adriaan van Jaarsveld.
5. 404 burgers.

COPY OF PAGE FROM TEXTBOOK

HOOFSTUK 11

Die Laaste Jare van die V.O.C. aan die Kaap, 1780-1795

Redes vir ontevredenheid

Gedurende die laaste vyftien jaar van die bewind van die V.O.C. aan die Kaap, het groot ontevredenheid, veral onder die boerebevolking, geheers. Daar was verskeie redes vir hierdie ontevredenheid:

1 Die amptenare van die Kompanjie het van oneerlike metodes gebruik gemaak om hulself te verryk. So moes die boere byvoorbeeld vir elke sak meel wat hulle aan vreemde skepe verkoop het, een Kaapse gulden aan die fiskaal betaal. Die prys van wyn was vasgestel op 40 riksdaalders, maar die wynboer het net 27 riksdaalders ontvang. Die Kompanjie het 3 riksdaalders agtergehou, en die fiskaal en goewerneur het 10 riksdaalders vir hulle geneem. Die boere het gevoel dat die mark reeds beperk was, dat die pryse laag was en hulle was verbitterd omdat hulle op hierdie wyse 'n groot deel van hul inkomste moes afstaan.

2 Daar was ook groot ontevredenheid oor die fiskaal. Die fiskaal het die reg gehad om minder belangrike sake te verhoor en boetes op te lê. Hy is toegelaat om 'n deel van die boetes vir homself te neem. Willem Cornelis Boers, wat toe fiskaal was, het sy regte misbruik en oortreders baie swaar beboet, sodat hy 'n groter deel in sý sak kon steek.

3 Die Kompanjie het hom nie veel aan die belange van die burgers gesteur nie. Die sake van die Kompanjie was in 'n baie swak toestand en die Here XVII het alles in sy vermoë gedoen om die Kompanjie van bankrotskap te red.

4 Die burgers was ontevrede omdat hulle nie toegelaat is om sonder toestemming met besoekende skepe handel te dryf nie.

5 Die burgers het geweet dat die meeste amptenare oneerlik is. Hulle het goedere en arbeiders van die Kompanjie vir hulself gebruik. Die amptenare was ook grondbesitters wat geboer en op 'n beperkte mark met die boere meegeding het. Die Kompanjie was hiervoor verantwoordelik, want die salarisse van amptenare was so klein dat hulle dit moes aanvul om 'n bestaan te kan maak.

Die ontevredenheid het 'n hoogtepunt in Januarie 1779 bereik toe fiskaal Boers 'n burger, Carel Buytendag, na Batavia verban het.

Die Patriottebeweging

Ons moet die geskiedenis altyd probeer sien teen die agtergrond van belangrike gebeurtenisse oor die wêreld heen. Een só 'n gebeurtenis was die Amerikaanse Vryheidsoorlog in die sewentigerjare van die 17de eeu.

Die koloniste in Noord-Amerika het ook gebuk gegaan onder die beperkende handelsbeleid van Brittanje. Die Amerikaanse koloniste het in opstand teen Britse heerskappy gekom en dit het die Kaapse koloniste aangespoor tot opstand. Veral in Frankryk en Engeland, het teen dié tyd ook 'n vryheidsgees geheers en dit het oorgewaai na die Kaap. Daar was ook woelinge in Nederland waar die volksgesinde party, die Patriotte, die koninklike Oranjeparty teëgestaan het. ('n "Patriot" is iemand wat sy vaderland liefhet.)

In dié omstandighede van ontevredenheid aan die Kaap en buitelandse vryheidsbewegings kan ons verstaan waarom 'n groep Kaapse burgers besluit het om ook vir hul regte te stry. Hulle het hulself ook *Patriotte* genoem en die Kompanjie-ondersteuners *Mamelukke*. Een van die mees besielde Patriotte was Adriaan van Jaarsveld, en hy het hom sterk uitgespreek teen die politieke en ekonomiese toestande aan die Kaap.

Op 7 Mei 1779 is 'n vergadering gehou waar 404 burgers teenwoordig was. Op hierdie vergaderings is die klagtes van die burgers bespreek en daar is besluit om vier burgers, naamlik Jacobus van Reenen, Barend Artoys, Tielman Roos en Nicolaas Heyns na Nederland te stuur om 'n klagskrif namens die burgers voor die Here XVII te lê.

Die Klagskrif (Burgerpetisie)

Die petisie het in breë trekke die burgerse ekonomiese en politieke griewe uiteengesit.

Ekonomiese griewe

(a) Hulle het gevra dat amptenare verbied moes word om te boer, want die amptenare het met die vryburgerboere op 'n reeds beperkte mark meegeding.
(b) Die burgers het ook versoek dat hulle weer toegelaat moes word om vryelik met skepe handel te dryf sonder om eers die fiskaal se toestemming te verkry.
(c) Hulle wou ook hê dat hulle toegelaat moes word om oorsee (byvoorbeeld in die Nederlandse besittings in die Ooste) handel te dryf. Dáár sou hulle 'n goeie prys vir hul uitvoerprodukte kon kry.
(d) Die pryse wat hulle vir hul produkte by die Kompanjie ontvang het, was veels te laag na hul sin. Die burgers moes baie aan hul plasies bestee en kon nie vooruit boer met so min geld nie.

Politieke griewe

(a) Hulle het gekla oor die gedrag van korrupte amptenare, veral dié van fiskaal Boers.
(b) Hulle wou meer seggenskap in die regering hê. Daarom het hulle versoek dat die Politieke Raad voorsiening moes maak vir die verteenwoordiging van sewe burgers by die bespreking van alle sake wat die burgers geraak het. Hierdie sewe burgers moes die reg hê om die Here XVII jaarliks in te lig oor die toestande aan die Kaap.
(c) Die burgers het gevra vir gelyke verteenwoordiging in die Raad van Justisie. Dit sou hulle 'n aandeel in die regspleging aan die Kaap gee, veral in sake waar hulle belange geraak word.
(d) Veroordeeldes moes nie verban

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APPENDIX E
FIRST INTERVIEW PROTOCOLS

Three protocols are included here: Ms Abrahams', Mr Moosa's and Mr Barry's. They are very similar. The differences among them are due to the different roles played by each respondent within the school and in the field study. Thus Ms Abrahams' and Mr Olifants's interviews included questions directly related to the two Grade Seven projects. Another difference, discussed in Chapter Six (6.3.3), is found in the first question in the section on information literacy. These first interviews can be classed as semi-structured. There are several closed questions but the purpose is to engage in conversation as much as to interview. The second round of interviews were unstructured conversations which picked up issues from the first interviews and which aimed at verifying tentative interpretations.

1. INTERVIEW/CONVERSATION WITH MS ABRAHAMS, GRADE 7 SCIENCE TEACHER. AUGUST 5 1997

A: "BIOGRAPHICAL" DETAILS

1. Years teaching
2. Any other experience
3. Training: What qualification?
   Where?
   How long?
4. How long at Galant Primary?
5. What subjects?
   Which standards?
6. Extramural activities for school

B: ATTITUDES TO TEACHING

7. Why did you become a teacher?
8. Has your teaching changed over the years?
9. How would you describe your main teaching activities?
10. Is there one piece of advice that you would give to a new teacher?
11. Can you think of a motto or metaphor to describe what teaching means to you?

C: ATTITUDES TO PROJECT WORK

12. How would you define "project work"? Is it the same as "theme work", "integrated work", "topic work"?
13. What are the aims of projects?
14. What are the advantages benefits of proejct work?
15. What skills do pupils learn in the process of doing project work?
16. Do you think that project work will increase with the new curriculum? If so, why?
17. If it does, what are the implications for your teaching?
18. What do you see as the chief problems in project work?

D: "ANIMALS" PROJECT WORK GRADES SEVEN JULY 1997

19. How did you plan for this theme?
20. Did you discuss it with other teachers?
21. What outcomes were you hoping for?
22. How did you assess whether pupils achieved these outcomes?

23. What resources did you use?
24. Are there any other comments you would like to make about this work?

E: INFORMATION LITERACY

24. *You have reached the final of a competition for a new combi for the school and university/technikon education for your children... To win you have to write a page on "Globalisation and the African renaissance".*
    Briefly describe how you would go about this task!
25. What resources do you use for your job?
    Libraries?
    School/Public/Edulib/Film libraries/Resource centre?
    Newspapers?
    Own collection of books?
    Other?
    Please comment on your use or non-use of these resources..
26. How are you with computers?
27. When did you last borrow a film or a video to show to one of your classes? Where did you borrow it from?
28. The new curriculum includes a new subject "information skills". What do you think "information skills" are? Do you agree that they are important enough to include in the timetable?
29. Do you buy a newspaper? How often?
30. List the books you have read this year.
31. Do you belong to and use a public library?

2. INITIAL INTERVIEW/CONVERSATION WITH MR I MOOSA, DEPUTY PRINCIPAL & GRADE 7 HOD. 13 AUGUST 1997

A: "BIOGRAPHICAL" DETAILS

1. Years teaching
2. Any other experience
3. Training: What qualification?
   Where?
   How long?
4. How long at Galant Primary?
5. What subjects?
   Which standards?
6. Extramural activities for school

B: ATTITUDES TO TEACHING

7. Why did you become a teacher?
8. Has your teaching changed over the years? If so, how?
9. How would you describe your main teaching activities?
10. Is there one piece of advice that you would give to a new teacher?
11. Can you think of a motto or metaphor to describe what teaching means to you?
12. How would you describe good learning?

C: ATTITUDES TO PROJECT WORK

13. How would you define "project work"? How does it relate to "theme work", "integrated work", "topic work"?
14. What are the aims of projects?
15. What are the advantages or benefits of project work?
16. What skills do pupils learn in the process of doing project work?
17. I've heard that "at this school we practise the project method?" Do you agree? If so, what does it mean, when does it start, how are teachers trained for it?
18. Do you think that project work will increase with the new curriculum? If so, why?
19. If it does, what are the implications for your teaching?
20. What do you see as the chief problems in project work?
21. Project work has been identified with "integration" of subjects and with collaboration among teachers. How do you see these concepts in relation to your staff?

C: INFORMATION LITERACY

22. *You have received a letter from your fifteen year old cousin in rural Namaqualand. She has been told that she has a rare (but not life-threatening) condition - piomelis. She asks you to help her find out more about it and how to cope.*
    Briefly describe how you would go about this.

23. What resources do you use for your job?
    Libraries?
    School/Public/Edulib/Film libraries/Resource centre?
    Newspapers?
    Own collection of books?
    Other?

. Please comment on your use or non-use of these resources..

24. How are you with computers?
25. When did you last borrow a film or a video to show to one of your classes? Where did you

borrow it from?

26. The new curriculum includes a new subject "information skills". What do you think "information skills" are?_ How does the new subject differ from the old Book education? Do you agree that such a subject deserves a place on the curriculum? Have your teachers been introduced to the new subject?
27. Do you buy a newspaper? How often?
28. List the books you have read this year.
29. Do you belong to and use a public library?

3. INITIAL INTERVIEW/CONVERSATION WITH MR BARRY, GRADE 4 TEACHER. 22 AUGUST 1997

A: "BIOGRAPHICAL" DETAILS

1. Years teaching
2. Any other experience
3. Training: What qualification?
   Where?
   How long?
4. How long at Galant Primary?
5. What subjects?
   Which standards?
6. Extramural activities for school

B: ATTITUDES TO TEACHING

7. Why did you become a teacher?
8. Has your teaching changed over the years?
9. How would you describe your main teaching activities?
10. Is there one piece of advice that you would give to a new teacher?
11. Can you think of a motto or metaphor to describe what teaching means to you?
12. How would you describe good learning?

C: ATTITUDES TO PROJECT WORK

13. How would you define "project work"? How does it relate to "theme work", "integrated work", "topic work"?
14. What are the aims of projects?
15. What are the advantages or benefits of project work?
16. What skills do pupils learn in the process of doing project work?
17. I've heard that "at this school we practise the project method?" Do you agree? If so, what does this mean, when does it start, how are teachers trained for it?
18. Do you think that project work will increase with the new curriculum? If so, why?
19. If it does, what are the implications for your teaching?
20. What do you see as the chief problems in project work?
21. Project work has been identified with "integration" of subjects and with collaboration among teachers. How do you see these concepts in relation to your staff?

D: INFORMATION LITERACY

22. *You have received a letter from your fifteen year old cousin in rural Namaqualand. She has been told that she has a rare (but not life-threatening) condition - piomelis. She asks you to help her find out more about it and how to cope.*
    Briefly describe how you would go about this.
23. What resources do you use for your job?
    Libraries?
    School/Public/Edulib/Film libraries/Resource centre?
    Newspapers?
    Own collection of books?
    Other?
    Please comment on your use or non-use of these resources..
24. How are you with computers?
25. When did you last borrow a film or a video to show to one of your classes? Where did you borrow it from?

26. The new curriculum includes a new subject "information skills". What do you think "information skills" are?_ How does the new subject differ from the old book education? Do you agree that such a subject deserves a place on the curriculum? Have your teachers been introduced to the new subject?
27. Do you buy a newspaper? How often?
28. List the books you have read this year.
29. Do you belong to and use a public library?

APPENDIX F: DATA CATEGORIES

This list includes every category constructed from the first day of the field study to the final writing-up. The research problem and the existing research literature (see Chapters One and Two) foreshadowed the study and dictated some initial categories. Field notes were scoured and annotated from the first day and categories of data entered on index cards. Each card served then to gather references to field notes and interview transcriptions as well as commentary by the researcher. The categories listed here are the result of ongoing analysis and interpretation of field notes of observation, interview data, and learning materials. The list thus represents various layers of analysis and interpretation. As described in Chapter Three, the process is iterative and cumulative. Categories were analysed - and connections and meanings would only later be tentatively recognised. Further analysis would then confirm (or discount) the tentative interpretation. The process is thus one of continuous and interactive analysis and interpretation, which leads to the identification of clusters, patterns and themes. As pointed out in Chapter Three, the data gathering of ethnograpy can be a wasteful process as the researcher does not know at the beginning what is going to be significant. However the waste is accepted as a necessary part of building grounded theory.

Abrahams, Ms	
Absent teachers	sa Teachers' professionalism, Timetabling, "Free" periods
Absenteeism (pupils)	sa Attendance
Abuse	sa Jane
Academic vs practical	
Active vs passive learning	sa Learning
Afrikaans materials	
Alienation	sa WCED, "Special school", Paradys
Annelise (Grp 8)	
Apartheid	sa Group Areas Act, Whiteness
Assessment	sa Recordkeeping
Attendance	sa Absenteeism
Audiovisual materials	sa Resources, Edumedia, Teaching stylec
Background knowledge (of pupils)/Prior knowledge	sa Socioeconomics, "Our kids", Information literacy
Barry , Mr(Grade Four teacher)	
Book Education vs Information Skills	sa Information Skills as subject
Budget - School's	sa Resources
Burglaries	sa Crime, Gangs, Violence. Security guards
Camaraderie	sa Teachers' relationships, "Special school"
Chalk & talk (Transmission mode of teaching)	sa Teaching styles, Content vs skills, Active vs passive learning
Change "We're already doing it" - (Teachers' perceptions of change)	sa Curriculum 2005,
Changes in SA education	sa C 2005, OBE
Charlene (Grp 8)	
Charles	sa Absenteeism
Circuit (School circuit)	
Circuit meetings (Principals')	
Class size	
Class size & projects	sa Projects
Classroom management	
Classroom management & projects [cf Tann]	sa Project work, History project, Science project
Classrooms	

Classwork	sa Homework, Groupwork, Teacher/learner interaction
Cognitive development	sa Academic vs practical, Learning, Metacognition, Oliver, Ms
Collaboration among teachers	sa Integration of curriculum, Teachers relationships
Communication among staff	sa Management style
Community (Paradys)	sa Socioeconomics, "Our people"
Community information resources **see** Information resources/sources in communityr	
Community/school relations	sa "Our people"
Computer literacy	sa Equipment, Teachers' information literacy, Moosa, Mr
Conflict	sa Collaboration, King, Moosa
Content vs skills	sa Projects -
Contradictions/gaps/ambiguities	sa Rhetoric
Cooperative learning	sa Collaboration, Groupwork
Copyrightr	sa Teachers' resource collection
Corporal punishment	sa Discipline
Crime	sa Paradys, Gangs
Critical thinking	
Culture Club	
Culture of silence	sa Apartheid
Curriculum 2005	sa Changes in SA education
Dance	sa Fundraising, Community/school relations
Democratic management	Management style, Teachers' relations, Governing Body, SA Schools Act
Didacticism **see** Chalk & talk(Transmission teaching)	
Disadvantage & teaching	sa Socioeconomics, "Our people", Resources
Disadvantage (as in school culture)	sa Teachers' personal constructs
Discipline	
Discovery learning	sa Learning, Teaching styles
Dress code (Teachers)	sa Moosa, Mr, Culture of school
Drink (Alcoholism)	sa Drug abuse, "Social work"
Drop-out rates	sa Absenteeism, Academics vs practical, "Our kids", Charles
Drug abuse	sa Gangs, Role models
EDULIB (Teachers' Library at WCED)	
Empathy see School/community relations	
Empty slates	sa Rote learning, Teaching styles
English	
Enquiry learning (Discovery/Active)	sa Active vs passive learning, Project work, Learning
Enrolment (Galant's drop in)	
Equipment	sa Resources, Disadvantage & teaching, TV, etc
Exams	sa Assessment
Expectations - Teacher's of pupils	sa "Our kids"
Expectations of project work- Gaps between teachers' & pupils'	sa Projects - Aims, Teachers' expectations of children
Facilitator see Teacher as ..r	
Fees	
Frans	sa Pigeon incident
Free periods	sa Absent teachers
Fun	sa Motivation
Fundraising	

Galant Primary - History
Gangs — sa Crime, Community
Gender
Geography of school — sa Community (Paradys), Paradys
Gold, Ms (Grade One teacher) — sa Reading - Teaching of
Governance of school — WCED, James, Ms -Principal
Governing body
Grade Four class (Mr Barry's)
Grade One
Grade Seven
Grade Three
Group Areas Act — sa Apartheid
Groupwork — sa Teaching style, Classroom management, Gender
Groupwork & projects - Teachers' perceptions
Health of teachers — sa Stress, Change
High school & Galant
Higher-order thinking see problem solving, Critical thinking
Hillside Public Library see Public Library (Hillside)
History project — sa Mr Olifant
Homework
Horses — sa Scrap, Socioeconomics
In-service training — sa Teacher development, Teacher training, Wednesday enrichment sessions

Information - Teachers' views
Information handling in class
Information literacy - Galant teachers perceptions of
Information literacy of Galant teachers — sa Teachers'
Information packaging
Information skills
Information skills - in Grade Seven projects — sa Project work - Skills
Information skills as subject
Information sources — sa Resources, Project work - Resources & materials, Museum visits

Information sources/resources in community
Innovation — sa Change
Integrated studies
Integration of curriculum (Cross curriculum) — sa C 2005, Timetabling, Collaboration, Resource sharing

Interviewing methodology
Involvement of pupils — sa Motivation, Groupwork, Project work - Motivation of learners

James, Ms - & Projects
James, Ms - Principal
Jane — sa Abuse
Joy — sa Gender
King, Ms (Teacher-librarian) — sa Library (School)
Knowing best (Teacher's claims to empathy, etc) see Empathy, "Our kids", "Our people"
Knowledge — sa Content vs skills, Background knowledge, Learning, Empty slate

Language across the curriculum

Lavona	
Leadership & groupwork (Pupils)	sa Charlene
Leadership - & change (Staff)	sa Management style, Communication, Staff relations, Conflict
Learner-centredness vs teacher/textbook	sa Learning, Empty slate
Learning	sa Metaphors, Lifelong learning, Enquiry learning
Learning resources	sa Audiovisual
Librarian (School) - Ms	
Librarian - Personality	sa Conflict, Moosa, Mr
Library (Public) See Public library (Hillside), Public libraries	sa Gangs
Resource room (Mr Moosa'a plan)	
Library (School)	sa Teachers' resource collection, King Ms, Moosa Mr, Resource room (Mr Moosa's)
Lifelong learning	sa Learning
Lifeskills - Teachers' perceptions of (spraypainting, selling potatoes)	sa Abrahams, Ms, Moral education, Academic vs practical
Literacy (in community)	sa Reading
Literacy in school see Reading	
Living for the day (Teachers perceptions of Paradys)	sa Socioeconomics, Our people
Lost children"	sa Groupwork, Frans, Charles
Love for kids & community - professed by teachers	sa Teachers' scripts
Management style	sa Change, James Ms, Teacher development, Teachers' professionalism, Principal
Mathematics	sa Moosas, Mr
Metacognition	sa Problem solving, Learning, Critical thinking
Metaphors (for learning)	sa Learning, Teachers' professionalism,
Middle school concept	
Modules	sa Project work, Themes
Moosa, Mr	
Moral education	sa Lifeskills, Moosa, Mr
Motivation of learners	sa "Involvement", Project work - Motivation of learners
Mural	sa Olifant Mr
Museums (Info. Sources) - Visits to	sa Information sources, History project
Newspapers	sa Moosa, Mr
Notetaking	sa Information skills, Reading
Olifant, Mr	
Oliver, Ms (Remedial teacher)	sa Stress, Cognitive development
Our kids" - We know them best	sa "Special school", Expectations, Teachers' scripts
Our people" (we know them best)	sa Community/school relations (Paradys). Teachers' scripts
Outcomes-based education	sa C 2005, Assessment
Outcomes-based education & projects	sa Project work - Skills
Outings (Visits etc)	sa Museums, Police station visit
Overhead projectors	sa Equipment, Audiovisual materials
Ownership (Teachers' attitudes) see Collaboration, Library (School)	sa Library (School), Collaboration
Paper	sa Disadvantage, Equipment, Worksheets
Paradys	
Parents	sa Community, Community/school relations, Governing Body
Parents and projects	sa Project work, Homework

Participant observation (Research methodology)	sa Research methodology
Past pupils	
Peer assessment	sa Project work - Assessment
Peer pressure	sa Groupwork
Pens, pencils	sa Resources, "Spoonfeeding" (Moosa, Mr), King Ms
Photocopying	sa Equipment, Paper
Pigeon incident	sa Moral education, Frans
Play (History module)	
Police station visit	
Poppie (Grp 8)	
Poverty	sa Socioeconomics, Fees
Practical vs academic see Academic vs practical	
Principal & change see	sa James, Ms
Principal (Ex) - Influence of	sa Management style
Change & principal	
Prior knowledge see Background knowledge	
Problem solving see Higher-order thinking	
Problem-solving see Higher-order thinking	
Process vs product see	
see **Content vs skills**	
Product vs process see Content vs skills	
Project work	
Project work & disadvantage	
Project work (Projects/Topic work/Thematic approach)	sa History project, Science project
Project work - Assessment	sa Assessment
Project work - Benefits of (incl. advantages over traditional methods)	sa "Our kids", Academic vs practical
Project work - Definitions of Galant teachers	
Project work - Duration of projects	
Project work - Galant teachers' attitudes	
Project work - Groups	sa Groupwork
Project work - Learners' motivation	sa "Involvement"
Project work - Management of	
Project work - Phases of - Topic exploration	
Project work - Phases of/Process of	
Project work - Problems in	
Project work - Purposes of / Learning outcomes of	
Project work - Recordkeeping	
Project work - Resources & materials	sa Resources, Textbooks, Museum visits
Project work - Role of teacher	
Project work - Skills	
Project work - Skills - Information skills	
Project work - Training for see Teacher training - Project work in, In-service training	
Project work -Phases of - Choice of topic	
Project work and background knowledge	sa Background knowledge
Project work as classwork	
Project work as innovation	
Project work as teaching method	sa Teaching style
Project work INSET sessions (first quarter 1997 - WCED Subject Advisor)	

Project work throughout the school	
Project work vs exams	sa Assessment, "Our kids"
Project work- Scaffolding by teacher	
Public libraries	
Public Library (Hillside)	
Questioning (in teaching) (Open/closed)	sa Teaching style
Questioning in class	
Rationalisation of teachers/Redeployment (Packages)	sa Stress, Change
Reach for the stars	sa Abrahams, Ms, Rolemodels, Expectations, Contradictions
Reading	sa Literacy
Reading - Approaches to teaching of	sa Gold, Ms
Reading skills	sa Information skills
Recordkeeping	sa Assessment, Project work - Skills
Refection in learning **see** Metacognition	
Reflection in teaching	sa Teachers' professionalism, Metaphors
Reflection in teaching **see** Teachers' professionalism, Metacognition	
Remedial/adjustment class	saO'Rryan, Ms
Research methodology	
Research methodology	sa Interviewing, Participant observation, Triangulation
Resource-based teaching and/or learning	sa Worksheets
Resource-sharing	sa Collaboration
Resources	
Rhetoric	sa Contradictions
Rhetoric see Gaps	
Role models	sa Gangs
Rote learning	sa Learning, Reading, Active vs passive learning, Chalk & talk
Rote learning	sa Content vs skills, Chalk & talk (Transmission teaching)
School culture	sa Camaraderie, "Specialness" of school, "Our people"
School grounds	
School/community relations **see** Community/Sschool relations	
Science	
Science project	
Project work - Planning for	
Scrap	sa Socioeconomics, Community (Paradys)
Security guards	sa Crime
Self-esteem	sa Learners, Mark
Skills **see** Project work - Skills, Information skills, Outcomes-based Education	
Social workers	sa Teachers' scripts, "Our kids", "Our people", Specialness of school
Socioeconomics	sa Poverty, Coomunity (Paradys), Unemployment
South African Schools Act	
Special needs learners	
Specialness of school	sa School culture, Camaraderie, Social workers
Spoonfeeding" (Moosa, Mr)	
Spoonfeeding" (Moosa, Mr)	sa "Living for the day", Disadvantage

Spoonfeeding" - Mr MoosaS	
Sports	
Staff development	sa Change, Inset
Staff development see Teacher development	sa In-service training, Wednesday enrichment sessions, C 2005
Staff management see Management style, Democracy, Governance	
Stress	sa Health
Stress	sa Health, Change
Study hall concept (Mr Moosa)	sa Library (School), King, Ms
Subject advisors (WCED)	
Subject allegiance of teachers	sa Teachers, Integration, Collaboration
Tanya (Group 8)	
Tea (Goodbye party)	sa Participant observation
Teacher as ... father/guide/facilitator/expert/giver/parent/missionary (Teachers' roles)	sa Teachers' scripts,
Teacher development	
Teacher qualifications	
Teacher training	sa Teacher qualifications
Teachers' "discipline" (used by James, Ms & King)	Teachers' professionalism,
Teachers' "passivity"	sa School culture, Culture of silence
Teachers' attitudes see Teachers' personal constructs, Teachers' scripts	
Teachers' attitudes (to teaching)	sa Teaching style, Teacher' scripts, Teachers' beliefs
Teachers' beliefs	
Teachers' biographies	sa Teachers' scripts
Teachers' empathy see Community relations, "Our people"	
Teachers' expectations of children	sa Our kids, Our people
Teachers' health see Health of teachers	
Teachers' morale,	sa Stress, Change, Camaraderie
Teachers' mothers see Teachers' biographies	
Teachers' motivations (for teaching) see Teachers' biographies, Teachers - Job satisfaction	
Teachers' professionalism	
Teachers' relationships with one another	
Teachers' scripts	sa Teachers' roles, Teachers as ..., Teachers - beliefs
Teachers' subject knowledge	sa Subject allegiance
Teachers'qualifications	sa Teacher training, Teachers' biographies
Teachers & change	
Teachers - Resources (use of, sources of...)	sa Information sources
Teachers induction	sa Teachers & change
Teachers Resource Centre (Mr Moosa's plan)	sa Library, Moosa, Mr, Olifant, Mr
Teachers training	
Teachers training (project work in)	
Teachers training curriculum	
Teachers/learner interaction	
Teaching - Job satisfaction	sa Teachers - Motivation (for teaching)
Teaching as "being needed"	sa Teacher as ..., Teachers' motivations
Teaching as "looking after", example, etc see Teacher as ...	

Teaching style (Pedagogy)	sa Teachers' beliefs, Spoonfeeding, Teacher/learner interaction, Questioning, Names of teachers
Television & VCR	
Textbooks	
Textbooks	sa Teaching style
Textbooks - Budget allocation	sa Teachers Resource Centre
Themes (Project work)	sa Project work, Modules
Timetabling	
Township schools" (Teachers' perceptions)	sa Group Areas Act, Disadvantage
Triangulation	
Unemployment	sa Socioeconomics
Vandalism	sa Crime, Burglaries, Gangs
Vernon	sa Reading
Veronica (Group 8)	
Violence	sa Crime
Waste	sa Resources
WCED	
Wednesday Enrichment Sessions	sa Teachers' professionalism. Teacher development
White schools	
Whiteness" (of researcher)	sa Participant observation
Worksheets	sa Resource-based teaching, Questioning, Teaching style

APPENDIX G
CLASSROOM READING RESOURCES

Ms Gold's Grade One Classroom reading collection (with two Grade One girls)

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Mr Barry's Grade Four Classroom reading collection

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