TOWARDS A BROADER SOCIO-ECOLOGICAL EDUCATION:
A CASE STUDY OF SCHOOL BASED CURRICULAR REFORM.

THESIS

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by

Gary Martin Cimma
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ABSTRACT

This work documents and analyses an action research project that the researcher undertook in conjunction with colleagues at an independent Catholic high school in Johannesburg. The main objective was to try to expand the existing curriculum in operation at the time of starting the research to one, which was more socio-ecologically sensitive. One of the key references during the action research was the recently drafted 'Vision Statement' document, which detailed the educational ideals of the school.

Some of the key findings that emerged as the research proceeded, were that the levels of socio-ecological sensitivity displayed by the learners were influenced by the backgrounds from which they came, and that these background environments were often not comfortable with the changes taking place in the educational and greater South African environments.

The Participatory Action Research mode of research which was used proved to be problematic in that only a handful of the educators actually got involved in participating in the project. The failure of many of educators to get involved was, in the opinion of the researcher, due to their lack of understanding how important the development of social and ecological sensitivity are to the necessary change capacity required in present day South African society. The need to be involved in the ongoing development of curriculum as required by Curriculum 2005 as a form of Outcomes Based Education was also problematic as some educators were not familiar with their role in this regard.

The limited time-span of the research was also a limiting factor as the development of a socio-ecologically sensitive curriculum required changes in some fundamental attitudes and approaches to education and the environment.

ACKNWOLEDGEMENTS

DEDICATION

This work is dedicated to those willing to embrace change.

LIST OF CONTENTS:

The following is a list of abbreviations and acronyms used in this document.

OBE: Outcomes-based education.

PAR: Participatory action research.

VS: Vision statement document.

C2005: Curriculum 2005.

IEB: Independent Examinations Board.

IGCSE: International general certificate of secondary education.

CAP: Curriculum as prescription.

CNE: Christian National education.

EE: Environmental education.

NQF: National Qualifications Framework.

GETC: General Education and Training Certificate.

CO: Critical Outcome.

SO: Specific Outcome.

HSS: Human and Social Sciences.

CHAPTER 1: INTRODUCTION TO THE RESEARCH

1.1 Background to the study

The school at which the study was undertaken is an independent Catholic school in Johannesburg. The researcher is a teacher at the school. The academic track record of the school is above average and the socio-economic level of most of the pupils is reasonably good.

Towards the end of 1999 there was a radical change in the management structure at the school and several new portfolios were created. Within the parameters of the new structure the entire high school staff were to participate in making decisions on the day to day running of the school as well as long term policies on a number of areas.

One of these new portfolios was that of 'Curriculum Development'. Essentially the aims of this portfolio were to keep track of significant developments in the field of curriculum change and development specifically in the light of the change to OBE in South African education as well as to explore ways in which pupils could be exposed to a more balanced education.

The understanding of what a balanced education entails as emerged during the early part of the research, revealed that despite varying opinions regarding the concept of balanced education, there was a general opinion that it was not being achieved. Areas of education such as arts and culture, as well as sport and sportsmanship were all mentioned as components or aspects that could contribute to a balanced education.

This need was identified in the light of another development, which accompanied the change in management structure, namely the drafting of a 'Vision Statement' (VS) document [Appendix 1].

The purpose of this document was to formalise the educational ideals that the school claims to stand for. Many of the statements within the document not only reflect the religious nature of the school, but also relate closely to directive principles found in the National Education Policy Act of 1996. The document was intended to act as a

touchstone against which activities at the school could be monitored. It essentially reflects the ethics, which underlie our educational praxis.

1.2 **Reasons for embarking on the research**

Prior to the drafting of the VS document there was already an awareness among staff of the inadequacies and shortcomings of the curriculum package on offer at the school. The prioritising of the hard science subjects like maths and science above the human sciences was clearly obvious. The unapologetic attitude in this regard was backed by the claim that these subjects were indeed more important than others because of their importance with regards to university entrance. The academic nature of the education offered at the school was actually a point of pride and results were, and still are, frequently compared with those of other independent schools.

 While there is absolutely nothing wrong with good academic results, especially in the light of present matric results on a nation wide scale, a lot of educators felt that too little emphasis or priority was placed on subjects other than the natural sciences.
 It was also expressed that the learners were missing out on a balanced education because of little or no exposure to subjects like Music, Art or Drama. This was believed to be seriously limiting the overall development of the pupils. There was a sizeable portion of the staff who in their silence, however, reflected the attitude that there was no problem with the emphasis on certain subject areas.

Following the drafting and discussion of the VS document, a number of these concerns regarding the need for a more holistic education came to light in staff meetings as well as in informal discussions.

 A number of these concerns could be directly linked to statements in the VS document. The competitive nature of the school with regards to academic performance was having unintended spin-offs which were resulting in a negative impact on the self-esteem of pupils who found themselves at the wrong end of an academic hierarchy. The hierarchy was essentially the result of the sum of marks on a report card.

The distinction between the areas of academic talent and personal worth were becoming blurred in the eyes of the learners. Learners who could not achieve in certain subjects were being viewed, albeit unintentionally, and viewed themselves as stupid or inferior. This unfortunate state of affairs was clearly linked to a statement from the VS document, namely.

> Our pupils have a right to a curriculum that develops within them a love of self, a recognition of self-worth and an appreciation of their own inherent value and dignity.

This awareness that the VS document was creating with regards to the shortcoming of the curriculum package on offer at the school is what led to the study. How could the ideals that are stated in the VS document be realised?

Relating the curriculum development to the field of Environmental Education can be seen from the following extract from the VS document.

> Above all, pupils of xxxxxxxxx are encouraged to be sensitive to social and ecological issues and accept their responsibility in and to society, and respond as agents of transformation.

This is the basis for the study. If there is seen to be social justice within the immediate environment of the learner with regards to issues like subject choice and self-esteem then there is an increased chance of social and ecological sensitivity on a larger wider scale than the immediate school environment.

1.3 Goals and objectives of the research

The main goal of the study was the development of the existing curriculum package at the school into one, which was more socio-ecologically sensitive, using the VS document as a reference to the ideal.

The term 'socio-ecologically sensitive' is very general and covers a wide range of areas. Within the context of the study the incidents of social insensitivity that were discussed were very real and had real consequences for the people concerned. It will be seen that once an incident or area of concern was raised that it inevitably led into related areas. This soon made me realise that the scope of this one concept, namely socio-ecological

sensitivity, was very wide and that the impacts of exploring how this could be increased, could touch on many other areas of school life.

The main aim of the study was to develop socio-ecological sensitivity in the pupils at the school level. This was to be encouraged in the 'what and how' we exposed them to in our daily classroom and school environment. This process, however, is limited by the lack of socio-ecological sensitivity displayed by the educators themselves as well as the lack of sensitivity that they are exposed to in the home environment as the primary learning environment. This essentially resulted in redefining the real issue, namely that the learners are mostly merely reflecting what they are exposed to in the classroom, at home and through the media, and that any form of socio-ecological sensitisation would need to include more than just classroom activities. It is my opinion that only when the immediate (school) environment is functioning correctly (if indeed such an ideal exists), that the larger environment (society at large, nature etc.), can be meaningfully taken into account and possibly acted upon. Addressing environmental issues in the school environment within the local community context is the starting point to greater environmental awareness.

1.4 Framework of the thesis

Chapter one presents an introduction to the study including the background to the study the reason for and aims of the study.

Chapter two deals with the context of the study in more detail and places the study in context to the literature.

Chapter three describes the research methodology and the process of data collection that took place, as well as detail of the problems and limitations encountered.

Chapter four covers the findings of the data analysis and the discussions around these findings.

Chapter five covers the conclusion made from the study as well as future recommendations considering that the curriculum development work is still underway and should continue indefinitely.

CHAPTER 2: CONTEXT AND LITERATURE REVIEW:

2.1 Context

The instance of curriculum work being done is that of a participatory action research (PAR) process in operation at an independent Catholic school in Johannesburg. As an academic institution the school has an excellent record of no matric failures in over two decades and many of the school leavers go on to study in the prestigious faculties at tertiary level such as Engineering and Medicine.

Even though the school is Catholic, about 40% of the pupils and educators are not of this faith. The differences in faith between the school and some of the educators and pupils have implications for the learning environment. Educators in particular are sensitive to this issue. Non Catholic teachers sometimes refer to themselves as second-class citizens. The unapologetic way in which issues of faith are dealt with from a Catholic standpoint has the potential to alienate some of the teachers. Their responses in this regard vary from indifference to very real irritation. The attitudes of the Catholic teachers toward the non-Catholic teachers also vary greatly. While I think it would be fair to say that religious issues are not problematic for the majority of teachers, there are some who have very strong views in this regard. As a Catholic myself, I have a very definite view regarding the role of religion in education. I feel that an education informed by the moral structure of a religion is important to the development of the pupil. I do not believe that any one religion is more important than any other, but that what religion per se, has to contribute to education is important for human development.

Many pupils are attracted to the school because of its reputation for sound academic performance. One particular area of pride is the results in the Natural Sciences such as Mathematics, Science and Computer Studies. The parents who send their children to the school tend to be successful in corporate or private business with high ideals for their children. Progression to tertiary education is the expected norm and parents expect good academic results in turn for the fees they pay. In South Africa at present this may look like a model school by comparison with many others. There are, however, problems which, are not perceived by the public but are evident to some of the educators. The emphasis on the 'hard sciences' has resulted in an unbalanced education with little or no

exposure to areas of our culture such as Art and Music. By using the term 'hard sciences' I am referring to mathematics, physical science and computer studies. While exposure to a wider range of subjects alone does not necessarily result in a balanced education, they are learning areas that can contribute more to a balanced education than can the technocratically oriented subjects from the Natural Sciences.

The aim of the PAR process is to facilitate the changing of the existing curriculum in use at the institution to one that is more socio-ecologically sensitive. The term socio-ecological sensitivity is very wide, and a more accurate understanding will emerge as the context unfolds.

In a situational analysis that I did on the institution in early 1999, I looked at the attitudes of grade 8 pupils with regards to how they perceived the school environment. They were asked to prioritise what was important in their lives, what their opinions were with regards to the importance of academic subjects, what their fears were and also if they saw themselves as part of nature and how they saw the future of the planet. The results indicated that for more than 70% of the group academic success had the highest priority. The results also revealed that 80% of the pupils did not consider themselves as always part of nature. Only 20% saw the future of the planet as good. Despite the fact that the school is a Catholic school, only 1% considered religion as a priority. The implication of these results, that many of the pupils do not consider themselves as a part of the greater environment and are more concerned with their own immediate world, is that the school environment in which they find themselves is failing to develop in them the necessary social and ecological awareness required in the Critical and Developmental Outcomes of C 2005. For example, one of the developmental outcomes as stated in the Norms and standards document is;

> Participate as responsible citizens in the life of local, national and global communities.
> (Norms and Standards for Educators 1999: 2)

The PAR process entails asking high-school staff at the school to compare how they relate their daily teaching to a section from the school's Vision Statement document. The Vision Statement document has been drawn up to act as a touchstone against which daily activities at the school can be measured. The basic aim of this is to see if we indeed practise what we preach. This process explores the attitudes of the staff

regarding the situation at the school. Staff were asked to compare their daily teaching as well as the curriculum package offered at the school and their views of the pupils' levels of socio-ecological sensitivity to one section from the 'Vision Statement' document, namely;

> Above all, pupils at xxxxxxxxxxx are encouraged to be sensitive to social and ecological issues and accept their responsibility in and to society, and respond as agents of transformation.

The 'Vision Statement' document is an important document as it details the educational, social, moral and religious ideals that the school stands for.

Several areas of insensitivity were identified, varying from the litter problem to pupils being insensitive to and prejudiced against people from 'the other side of the tracks', the poor and destitute. One staff member had the following to say in this regard.

> The school is lacking in social awareness classes where children are asked to reflect on their society, past and future, as well as their role in that future. I believe the lack of interest in this regard is due to the fact that boys do not view themselves as part of a greater South African society…
> (Staff response)

This response from one staff member echoes the findings from the situational analysis mentioned earlier and is again apparent in the findings and discussions in chapter 4.

The PAR process is using these inputs from the staff as a starting point in an attempt to help the staff in the monitoring, evaluation and modification of classroom activities in order to try and create more social and ecological awareness and sensitivity among the pupils.

Capacity building among the staff with regards to praxis in the classroom is also intended. This is intended to result in the continual rethinking of teaching practices or methods in the light of ongoing discussion. The development of such reflexive competence is a long-term ideal, which will hopefully lead to the evolution of a socio-ecologically sensitive curriculum. This process is very much a long-term one as

"meaningful change can only come about through the concurrent development of theory and practice" (Pepper 1987: 74).

Issues raised by the staff were discussed and prioritised in order to provide foci for emphasis in the monitoring of classroom activities. The suitability of certain subjects in this regard was noted. Subjects from the Social Sciences such as Languages are considered more easily adapted to this end than subjects from the Natural Sciences such as Mathematics. The language subjects by their very subject matter are dealing with human contexts and the human condition such as in poetry and literature. History and Geography too deal with the human condition such as conflict situations in which attitudes, opinions, religions and ideologies need to be understood, compared and contrasted.

The way in which subjects like Mathematics and Science tend to be taught at school level is very technical and there is no exposure to metatheories or the underlying philosophical assumptions which are so fundamental to the coherence of any field of knowledge, scientific or otherwise. These subjects are put forward in such a way that they are the repositories of ultimate wisdom. Subjects like Mathematics, Science and Computer studies are considered more valuable because the are more influential in helping learners gain access to the prestigious faculties at university such as Engineering and Medicine.

2.1.1 Socio-economic and cultural context.
The feeder culture for the school is predominantly white and reasonably affluent. At the time of the study the school fees at Grade 12 level were at R17000 a year, and this is a day school only. In order to be able to pay such fees the parents have to be economically better off than most. The scholarships granted to pupils entering at Grade 8 level are based solely on academic results from a scholarship exam and not on any racial lines with regard to helping those from previously disadvantaged backgrounds. The progression from school to tertiary institution is considered the norm by these people. The pass rate has been 100% for over twenty years and the exemption rates are always upward of 90%. Any alternative to this progression is considered a failure in terms of what the parents have paid for and what the school is supposed to facilitate. Academic performance, especially in the 'hard sciences', is emphasised. This is also

the area of concern with regards to the curriculum work in progress, namely that a balanced education cannot be achieved if there is an overemphasis on one area of school life. Essentially a balanced education means an education in which the pupils are exposed to a wide range of subject areas and, more importantly, the different types of knowledge and skills that such exposure develops. While exposure to different subjects results in a larger range of skill development, this in itself cannot be considered a balanced education. The most important part of any educational process is the full development of the person. Education is concerned with exploring and developing attitudes rather than mere skills. The development of attitudes and skills appropriate to ever changing society and world is part of a balanced education. The development of a healthy self-image, respect for oneself and of others, respect for the environment and so on. The development of these, are what a balanced education is about.

An extract from a NQF document states citizens of our country need certain skills and attitudes if South Africa is to be:

> A prosperous, truly united, democratic and internationally competitive country with literate, creative and critical citizens leading productive, self-fulfilled lives in a country free of violence, discrimination and prejudice.
> (NQF document in du Toit and Sguazzin 1999: 11)

This reflects what the purpose of education should be. In the National Education Policy Act of 1996 one of the directive principles states that the policy be directed towards-

> enabling the education system to contribute to the full personal development of each student, and to the moral, social, cultural, political and economic development of the nation at large, including the advancement of democracy, human rights and the peaceful resolution of disputes.
> (National Education Policy Act, 1996: 6)

The ability to function as a member of a society such as this is dependent on more than the performance in a few academic subjects, especially if these subjects have little to offer in terms of the full personal development the pupil. The tension that the emphasis on 'hard sciences' generates among staff is always an undertone. I am not saying that the subjects within the 'hard sciences' have no role to play in the pupils full development. It is just that when there is an emphasis on these subjects at the expense of others, and

when these subjects are continually said to be more important that the situation is problematic.

It is exactly the devil's bargain that Goodson (1990) refers to when he says that schools are emphasising the passage to tertiary institutions rather than issues central in education. The emphasis is on product rather than process. The pressure from parents and the expectations of the immediate community that the school serves make any change to this norm extremely difficult to initiate.

Amongst the learners themselves the achievement in school in general and in subjects like Mathematics in particular creates a perceived hierarchy of academic worth. At the school in question there is prestige attached to being in the class that does additional mathematics. The sum of score on a report card places the pupil somewhere on the academic ranking. This academic hierarchy and associated worth unfortunately blurs the more important issue of personal worth. Those who do not perform in this 'important' subject even refer to themselves as stupid and sometimes lose self-esteem if for example they drop to standard grade Mathematics. This a good example of an opportunity through which the way in which Mathematics is taught can evolve into a way which can be used to explore the development of the pupils sense of worth. Subjects operating in this way would be contributing to a holistic education. The VS document says the following;

> Our pupils have a right to a curriculum that develops within them a love of self, a recognition of self-worth and an appreciation of their own inherent value and dignity.

This is what is being said by the institution but it is not happening. While there is an overemphasis on one aspect of learning at the expense of those who struggle in this regard there cannot be development of self-worth in all pupils. The development of self-worth is in my mind integral to education, and to the full development of the individual. The introduction of alternative subjects to Mathematics and Science is repeatedly called for as these are compulsory up to Grade 12.This call for widening the range of subjects is in line with government policy for the new education system. In the White Paper on Education and Training 1995, chapter 4 deals with the Values and Principles of the Education and Training Policy. In paragraph 6 it states that the system:

Must provide an increasing range of learning possibilities, offering learners greater flexibility in choosing what, where, when, how and at what pace they learn.
(Government Gazette 15 March 1995: 21)

One of the points that staff, especially the Mathematics teachers themselves, identified and prioritised for action in daily teaching through the PAR process, is that of trying to boost the self-esteem of pupils who have moved on to standard grade Mathematics. This response to context has made some staff aware that creating social awareness in the classroom among the pupils with regards to one another can be used as a starting point of creating wider social awareness. This is an example of how Mathematics is presented can contribute to the full development of the pupil. Within any learning area subject material can be used in a way that contributes to the development of the whole person. The intended development of the curriculum is to be seen in two ways, it is the extension of the subject choice and the change in the way that existing subjects are presented. The extension of subject choice will be to the benefit of pupils who do not do well in the 'hard sciences' and whose self image is negatively impacted on by this as well as increasing the range of skills development but most importantly the increased potential for human development in the pupils.

The change in how existing subjects are presented is intended to benefit all pupils in that the development of classroom practices that encourage the development of personal and interpersonal skills as well as social and ecological sensitivity will enable the pupils to become successful citizens interactive in a dynamic society. This is, once more, in line with the calls from government. In the White Paper of 1995 chapter 4 deals with the values and principles of the policy. Paragraph 17 states that teaching methods "should encourage independent and critical thought.", and paragraph 20, states that environmental education should be approached in an interdisciplinary way "in order to create environmentally literate and active citizens" (Government Gazette, 15 March 1995: 22).

2.1.2 The context of Religion.

The religious nature of the school is important from an educational point of view. Social awareness is always on our lips, and there are programmes and activities intended to

help those less fortunate and to increase the levels of awareness among the pupils. The effect of these programmes are not significant as they could be, as what mostly happens is that it is all too easy for pupils to give money, goods or some of their time. Those who do get involved in these programmes, however, do indeed benefit from them. But the number of pupils who are involved is minimal in comparison to the size of the school. The Catholic pupils who are confirmed in Grade 11 are expected to participate in outreach programmes as part of the confirmation programme, but besides this there is only about 20 pupils who regularly participate in the high school section of 500 pupils. Outreach programmes are an underutilized resource with regards to developing the social sensitivity at the local level. Exposure to situations through which pupils interact with those from disadvantaged backgrounds is important because they can be used as stimulus to help develop critical inquiry.

There needs to be critical inquiry into why these, socio-economic/political situations exist. While many agree that for example, the incidents of abandoned HIV babies is shocking there needs to be critical enquiry into why the situation is as it is. One of the Directive Principles of the National Education Policy Act of 1996 is that of "encouraging independent and critical thought" (Government Gazette, 24 April 1996: 8). Comments regarding situations in our society reflect that many have never developed the critical thinking skills so necessary to analyse such a situation. This is testimony to the insidious effectiveness of the apartheid education system all races were exposed to. This is not merely my opinion. In the White Paper on Education 1995 part 2, chapter 3, paragraph 6 reflects this:

> When all South Africans won equal citizenship, their past was not erased. The complex legacies, good as well as bad, live on in the present. Difficult as it may be to do so, South Africans need to try to understand each other's history, culture, values and aspirations, not turn away from them, if we are to make the best of our common future.
> (Government Gazette, 15 March 1995: 17)

Being part of a Religious denomination implies the acceptance of a world-view according to which there are absolute and unquestionable rules and truths. This is sending messages that some forms of authority or conventional wisdom should not be questioned. When the world-view of students is being influenced in such a way then it becomes difficult for learners to distinguish between those conventional wisdoms that

should be critiqued and those that dare not be. The social conventions which, manifest conventional wisdoms are based on some form of ideology.

 The concept of ideology may be seen as being explanatory or pejorative. Sumner says that ideology provides a "total way of looking at the world" (Sumner in Fien 1993:16). Fien says that the pejorative view of ideology is that.

> A different understanding of ideology sees it functioning as a system of beliefs which legitimate and render 'natural' asymmetrical relations of power and wealth in society.
> (Fien 1993: 17)

Religious ideologies may be seen to fit either of the abovementioned views. While some may say that the role of religion is to provide a world-view which informs a life-style resulting in salvation, others from a more critical perspective would see religion as a form of social control serving some other interest. At the school in question religion is the very reason for the schools existence and it is seen as, and said to be, the most important component of education contributing to the complete human development of the pupil. Religious education is intended to lead pupils to a way of understanding and interacting with the world, which is consistent with the teachings of the Catholic church. The religious and moral values and ideologies of the school are reflected in the 'Vision Statement' document.

If religion is critiqued, it brings to light the question of whether an education system calling for the development of critical thinking, such as National Education Policy Act , 1996 which informed C2005, and religious based education are compatible. There is tension between the two and this may be seen in the following words.

> Criticism has plucked imaginary flowers from the chains, not so that man may bear chains without any imagination or comfort, but so that he may throw away the chains and pluck living flowers.
> Marx, Critique of Hegel's 'Philosophy of Right'
> (Lyon 1979:11).

The flowers here refer to religion as a way to beautify or deny social problems. Marx suggests tearing away the flowers in order to see the reality of the situation, the power relations, so that real change can be brought about in order to improve the socio-

economic milieu. The developing of critical thinking capacity among pupils is called for by the education system. In the context of a religious school, critical thinking and religious doctrine may be seen to be unlikely bedmates, but what the VS document states is compatible with the calls from the education system. For example, in the White Paper of 1995, chapter 4 paragraphs 17 and 20 respectively call for "independent and critical thought" and "environmentally literate and active citizens" (Government Gazette, 15 March 1995:22). The VS document states "pupils of XXXXXXXX are encouraged to be sensitive to social and ecological issues and accept their responsibility in and to society, and respond as agents of transformation" (Vision Statement Document). The religious nature of the school is not problematic with regard to the new education system.

2.1.3 The context of Outcomes-based Education in South Africa.

The advent of Curriculum 2005 as a form of OBE necessitated a change in approach to education from both learners and educators. At the very heart of OBE are the philosophical underpinnings. According to Spady and Marshall OBE is based on three basic premises:

- All Students can learn and succeed (but not on the same day in the same way).
- Success breeds Success.
- Schools control the conditions for success.
        (Spady and Marshall 1991: 67)

Looking at the first premise, educational assessment according to OBE is significantly different from previous assessment strategies. This reflects that OBE has ties with Social Constructivism, according to which the learner "builds information on the basis of old knowledge and past experience" (Young and Marks-Maran 1998: 30). Curriculum 2005 which, is a South African version of OBE reflects the same links with constructivism, if one looks at the Directive Principles of the National Education and Policy Act of 1996. One of the directives say that the policy should be directed toward "recognising the aptitudes, abilities, interests, prior knowledge and experience of students" (Government Gazette, 24 April 1996: 8). Clearly the role of prior knowledge and past experiences are important in OBE.

Because Outcomes Based Assessment (OBA) is criterion referenced rather then norm referenced pupils are not compared with the group on the traditional bell curve distribution. If a pupil can demonstrate the ability to meet certain criteria then the pupil has met an outcome and this is considered a demonstration that successful learning has occurred. Each learning area has its own specific outcomes and teaching is planned so that, pupils at the end of the day demonstrate the ability to satisfy those outcomes. For each outcome there are range statements and performance indicators to guide the educator and the learner. For example in the Independent Examinations Board document on the GETC, Specific outcome number 4 (SO4) for the learning area of Human and Social Sciences (HSS) states "Make sound judgements about the development, utilisation and management of resources" (IEB GETC 2000: 4). For this SO there are required skills, an example would be identification and recognition of resources. If a learner fails to meet an outcome then he/she will be expected to re do the section or module, until the outcomes are met. All classroom activities are planned to achieve these outcomes. The learning experiences in the classroom designed around the desired outcomes.

In addition the learning programmes are not as much content bound as previously. Virtually any appropriate source material or context can be used in order to reach a set of outcomes. This last point is what in my opinion makes OBE so appropriate for dealing with educational change in South Africa. There are still huge disparities between the former disadvantaged and privileged sectors of our communities. The lack of resources in the rural areas of the former homelands makes any form of education in these regions very difficult. The ability to use local examples and stimulus for the learning experiences as allowed in OBE is an advantage for the people operating in these regions. This takes into account their prior experience and knowledge as called for by the Directive of the Policy Act which informed C2005. There is no longer the absolute dependence on text books as source material. Another problem is that for most learners in South Africa English is not their mother tongue. The way that learners can, according to the philosophy of OBE, progress at their own pace is a benefit for learners who are struggling with a second language.

The change to OBE at this institution was not as difficult as it could have been as the school had already been writing the Cambridge IGCSE for four years. The teaching and

examining methods associated with the IGCSE are outcomes based in nature so the staff were already familiar with teaching and assessment of this kind. What continues to pose a problem however, is developing the capacity of staff as "interpreter(s) and designer(s) of learning programmes and materials" (Norms and Standards Document 1999:5). This necessitates a breakaway from the textbook dependency associated with curriculum as prescription (CAP). The teaching methods and methodologies associated with CAP are what most of the staff and parents have been exposed to as learners themselves, and this is the norm to them.

There are however, significant differences between the types of OBE that the IGCSE and C2005 represent.

The Cambridge IGCSE system is essentially what is termed traditional OBE, according to which the development of skills demonstrated by achieving outcomes indicates that learning has taken place. The three premises mention earlier reveal the philosophy of OBE in general which is that everyone can succeed, even if it is at different rates. The IGCSE programme has a clearly defined syllabus which cannot be deviated from. This is what is meant by traditional OBE namely that "the curriculum actually precedes the outcomes in the design process" (Spady and Marshall 1991:68).   Even though there is a demonstration of outcomes (skills competence), the learners have no real interaction with the curriculum with regard to what is important and what skills need to be developed. The underlying philosophy revealed by the IGCSE as a from of traditional OBE is the assumption that the curriculum is to be developed by experts and implemented by practitioners. Neither the educator nor the learner is empowered to contribute in the design of the syllabus or the outcomes. This implies that they are unimportant with regard to the design of the learning process.

The type of OBE that C2005 as the South African version represents is intended to be a form of transformational OBE. According to Spady and Marshall (1991)

> Transformational OBE takes nothing about schooling today as a given; no existing features are considered untouchable in carrying out a curriculum design. (Spady and Marshall 1991: 70)

Transformational OBE has at its core certain outcomes and

> Curriculum and instructional design inherently should carefully proceed backward from the culminating demonstrations (outcomes) on which everything ultimately focuses and rests, thereby ensuring that all components of a successful culminating demonstration are in place.
> (Spady and Marshall 1991: 70)

According to transformational OBE the outcomes are set end then all else including classroom activities learning programmes etc, are be planned to meet those outcomes. There are claims that C2005 is an example or form of transformational OBE.

> The new policy for education and training in South Africa is based on a shift from the traditional aims-and-objectives approach to **transformational outcomes-based-education**. (emphasis in original)
> (du Toit and Squazzin 1999: 11)

In the National Education Policy Act of 1996 one of the directive principles states that the policy should be directed toward "cultivating skills, disciplines and capacities necessary for reconstruction and development" (Government Gazette, 24 April 1996: 8). The term capacities necessary for reconstruction and development imply that the education system needs to develop a schooling system that will change society. In light of the inequalities in society at present, this would be a reasonable aim. C2005 does not match the type of transformational OBE that Spady and Marshall describe. The learning areas with their specific outcomes, the performance indicators and the range statements are too structured and prescriptive for C2005 to be considered transformational OBE according to how Spady and Marshall describe it.

C2005 does have characteristics, however, which contribute to the development of important skills, such as participation and decision making. In the Norms and Standards document the one of the roles of educators is stated that they be "interpreters and designers of learning programmes and materials" Norms and Standards Document 1999: 5). If the development of learning programmes through which critical and specific outcomes can be achieved are contextualised in the local environment, then there is greater chance of effecting change in that environment. This type of design in which the educator and learner are not only allowed, but obliged to be involved in the design of learning programmes acknowledges their prior knowledge and past experiences as being valuable. The implications of this type of education for South Africa are that learners who have being involved in such a form of education will be far more likely to

socially empowered and capable of contributing to society. This by implication will transform society, which is essentially what the main aim of C2005 is.

Looking at the critical and specific outcomes of C2005 as a form of OBE, we can see the underlying influences of both socially critical education as well as education for the environment as presented in the previous sub-section. Below are some of the critical outcomes from the Gauteng Department of Education's Guideline Document:

1. use science and technology effectively and critically, showing responsibility towards the environment and health of others;
2. demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.
9. participating as responsible citizens in the life of local, national and global communities;
   (Gauteng Department of Education 2000)

These reflect the need for critical responsibility, the importance of participation and the connectedness of local and global communities.

Looking at the specific outcomes of the Human and Social Sciences (HSS) syllabus, we can see closer ties to socially critical education.

Specific Outcome No. 7: Address social and environmental issues in order to promote development and social justice.
(Independent Examinations Board GETC 2000: 5)

The norms and standards document 1999 for C2005 states that one of the roles of the educator is to be the "interpreter and designer of learning programmes and materials" (Norms and Standards Document 1999: 5). The development of this capacity in educators can only be accomplished if an interactive (constructivist) mindset is encouraged. Educators who still cling to the comfortable option of implementing the new syllabus using the textbook as a norm of reference rather than as a collection of sources, are in so doing, prolonging CAP. It is here too that schools are still entering into Goodson's (1990) devil's bargain in that schools are training for entry into tertiary institutions rather than educating for life.

It can be reasonably assumed that the staff have more experience regarding the changes related to C2005 than many parents who, although have experiences of education, may not be familiar with underlying philosophies. There seems to be, however, a tendency among some staff and parents to view the changes associated with OBE and C2005 as a lowering of standards, or even evidence of a disintegration of education in general. In the editorial section of the magazine of the Independent Schools the editor refers to a research project which, found that:

> Many parents of children in private and well-resourced former Model C schools equate change with a weakening of their own positions.
> (Independent Education Spring 2000: 7)

In an institution which, has not had a failure at matric level in more than two decades there seems to be no reason to change a system that works. In the White Paper on Education in1996 in chapter 3, referring to educational legacies it states (in paragraph 8)

> Access to technological and professional careers requiring a strong basis in mathematics and science is denied to all but a fraction of the age cohort, largely because of the chronic inadequacy of teaching in these subjects.
> (Government Gazette, 15 March 1995: 18)

At a school, which has excellent results in mathematics and science, and in an educational environment which is crying out for such results there seems no reason for changing. There is the unfortunate tendency here to equate pass rate with a working system. While the results of the institution are good, there is more to education than the accumulation of marks on a score card, especially in a country undergoing such fundamental educational, and other, change.

The reality of South Africa as a country in transformation not only in education, but, in all areas of society, is providing a context for meaningful inquiry into many areas of social and ecological problems.

2.2 The concept of change

Within any social environment or organisation change can occur as a result of internal or external pressures. In this particular situation the initiators were both internal and external. The internal initiator was the development and adoption of the school 'Vision

Statement' document and the pressure that this placed on the high school to see if we indeed practice what we preach. The external pressure came from the radical restructuring of the state education system post 1994. The change to OBE with Critical and Specific Outcomes and the introduction of Phase Organisers including the environment called for a paradigm shift in educational thought and practice, essentially moving away from CAP to skills-based education.

The changes that have taken place in South Africa since 1994 have had an impact on all levels of society. Many people have embraced the changes while some have reacted against them. For both groups though, the changes have been stressful.

Not only in South Africa, but in the rest of the world there is an increasing awareness that society;

> expects its citizens to be capable of proactively dealing with change throughout life both individually as well as collaboratively in a context of dynamic, multicultural global transformation.
> (Fullan 1993: 4)

The transformation that is taking place globally and locally is placing education in the spot-light. The role of education is still to prepare people for society but the nature of that society has changed drastically. Society is continually changing so education has to develop change capacity within people.

> To become expert in the dynamics of change, educators – administrators and teachers alike – must become skilled change agents. If they do become skilled change agents with moral purpose, educators will make a difference in the lives of students from all backgrounds, and by so doing help produce greater capacity in society to cope with change.
> (Fullan 1993: 5)

These words ring true for a South Africa in which there have been radical changes at all levels of politics and society and in which the changes are still far from over. The role of education and the educator is undergoing some radical and stressful changes.

Fullan referring to the concept of 'Change Agentry' says that there are four capacities that need to be developed.

1. Personal vision building.

2. Inquiry.
3. Mastery.
4. Collaboration.

Personal vision building is according to Fullan a critical starting point with regard to developing change agentry. I agree with this point. The role of the education system on society is central to facilitating social change and development. Within a South African context this would involve educators asking themselves why they are in education and what difference they think they can make in the lives of learners, specifically in the light of the restructuring. Educators cannot be neutral with regard to values. The changes in our society over the last ten years have been the result of moral and physical conflict between different ideologies. Education and educators are pivotal to the changing of attitudes of people. This can only take place if the educators themselves have personal vision for themselves and society.

Inquiry involves the ongoing reassessment of and reflection on the present situation in order to bring about continuous learning. This would include action research as a process by which educators could continually reassess their environment with the aim of continually effecting change, and continually learning.

Mastery ties in closely with personal vision and inquiry. Fullan quotes Senge (1990) saying;

> People with a high level of personal mastery live in a continual learning mode…personal mastery is not something you possess. It is a process. It is a lifelong discipline. People with a high level of personal mastery are acutely aware of their ignorance, their incompetence, their growth areas. And they are deeply self-confident. Paradoxical? Only for those who do not see that the journey is the reward.
> (Senge as quoted in Fullan 1993: 17)

Collaboration is critical for both personal and group mastery to take place (Fullan 1993).

> In short, without collaborative skills and relationships it is not possible to learn and to continue to learn as much as you need in order to be an agent for societal improvement.
> (Fullan 1993: 18)

The point of collaboration is critical to the success of developing change agentry in educators as well as learners. The greater the collaboration and interaction between educators, learners, parents and society, the greater the potential for reflexivity within education. The social interaction that collaboration will require has great potential for generating ownership for the education process among the stakeholders.

Only when educators have developed these capacities to be effective change agents themselves can they possibly develop similar skills in the learners. The development of these capacities will initially, in my opinion, be extremely difficult. Educators who have functioned under the old education systems need to be re-educated with regard to the OBE system of education. There are great differences between the old system of education under which the curriculum was developed by experts and implemented by practitioners, and where content was of paramount importance, and C2005. The demands of C2005 on the educators are that they develop these capacities of change agentry as stated by Fullan. If in South Africa, some educators are either unable or unwilling to change to the new realities facing society and education, then they have no place in education.

2.3 Curriculum development

Change with regard to curriculum development can be influenced in various ways. Carl (1995) refers to Wouters who describes various approaches to curriculum development.

> The academic approach:
> According to this approach curriculum development is a systematic process directed by academic rationality and theoretical logic. In this approach the curriculum specialist or specialist team is placed in a position where curriculum decisions can be taken unilaterally.

> The experiential approach:
> In contrast to the academic model which lays claim to objectivity and universality and results in a subject disciplinary design, the experience approach is subjective, personal, heuristic and transactional. It lays stress on the role of the teachers and pupils and their co-operative curriculum decisions.

> The technological approach:
> As with many other aspects of education, curriculum has also been influenced by large-scale technological development. More important, however, is that the philosophies, ideologies, methods of approach are often taken over by educationalists for curriculum planning, implementation and evaluation.

The pragmatic approach:
In contrast to the above-mentioned educational view that curriculum development is a systematic scientific procedure, there are others who allege that this process is neither systematic nor rational. It is rather the outcome of a long and dynamically complex process of involvement and interaction. The proponents of the pragmatic approach allege that curriculum practice is reactive and takes place fragmentarily.
(Carl 1995: 49-56)

I do not believe that any one of these approaches can sum up curriculum development fully. The academic approach reflects the philosophy that, experts need to develop the curriculum and that the input of the educators and learners are neither needed nor valued. This would be true of many education systems including that under the previous government. C2005 is supposed to allow the interaction of educators learners and parents in determining the learning experience and bringing about change in the local environment. This then reflects a different philosophy towards education and people. It recognises and values the roles of educators, parents and learners in the whole education experience. The reality is that the C2005 was developed by experts who took into account social, political and economic needs of the country. The way that the new curriculum eventually manifests itself in schools is going to be best described by looking at all approaches mentioned. The pragmatic approach is I suspect the closest to reality. The notion of a curriculum package, or that the curriculum is an entity is problematic. Curriculum is more of a process that includes a wide range of factors. The pragmatic approach recognises the complex nature of curriculum development as well as implementation. The role of the educator in a reflexive curriculum is one of continually reflecting upon and modifying what is being done, and so the curriculum process cannot be static.

The introduction of an unfamiliar process or ideology will always disrupt the existing equilibrium. This is what the implementation of C2005 has done. Curriculum design has been considered the realm of others outside the scope and reach of the classroom practitioner (Goodson 1990). Teachers have been using text books as guides for teaching rather than as resources which can be adapted as the reality of the classroom dictates. The underlying philosophy that teachers are not the experts in curriculum development is evident in such a framework. This has resulted in lack of capacity building and empowerment in educators with regard to curriculum development. The

Curriculum as Prescription (CAP) mentality is so ingrained in those who underwent teacher training in past decades that challenges to this view can be seen as threatening the comfort of the known.

The traditional praxis within CAP is nothing more than trying to improve upon how to use the text-book more effectively and how to teach the prescribed body of knowledge, namely the prescribed curriculum or syllabus, more efficiently.

Within C2005, the emphasis shifts to curriculum as process. Here the emphasis is less on knowledge being transmitted. This is because the nature of knowledge within OBE is radically different from that in traditional education. The body of subject-based knowledge which, was so central to past educational systems is now only really relevant if it allows for informed decisions on the part of the learner. This in turn is measured in terms of outcomes. Within this view of education praxis takes on a whole new form. The tension between theory and practice is ongoing. This relates to the pragmatic approach to curriculum development. Even if the curriculum is informed by the most recent and sound theories, the actual implementation thereof will be slow and fragmented as educators come to grips with a new curriculum.

Within the field of curriculum development in Environmental Education, there has been to date very little done in a school environment. The concepts of ecology within the subject areas of Biology and Geography are what is traditionally considered EE. The introduction of environment as a phase organiser within OBE has opened a new area of curriculum development needing attention, particularly with the existing misconceptions about what EE is. The most common misconception regarding EE is that is to do solely with the physical environment.

Creating the awareness that Environmental Education from a socially critical perspective has strong ties with issues relating to social justice is a key issue in making EE more credible in educational circles. By this I mean that in a South Africa where there are many social and economic inequalities, the misconception that EE is only related to the other than human environment, can be damaging. The awareness that EE really starts by creating sensitivity in the local, human and other than human environment, and then moves out to the wider environment is of great importance. This will be covered more under socially critical education in section2.3.2.

2.3.1 Key features of the curriculum framework informing the curriculum work.

There are many factors contributing to the curriculum framework and the concept of a curriculum matrix put forward by Doll provides some insight into how the various factors interact using the concept of a matrix;

> A matrix of course, has no beginning and no ending; it does have boundaries and it has points of intersection or foci. So, too, a curriculum modeled on a matrix is nonlinear and nonsequential but bounded and filled with intersecting foci and related webs of meaning. The richer the curriculum, the more the points of intersection, the more the connections constructed, and the deeper the meaning. (Doll 1993:162)

The boundaries that make up the framework for the matrix are concepts like learning theory; social theory; as well as various socio-economic and political constraints influences and needs.

Each of these provides one or more threads of ideas, which can then intersect with those from another component of the framework to result in the intersections or foci. The contributing areas are like the parts of a framework that is used in weaving. The greater the number of components to the framework, the more complex the weaving that results. The interactions between these, various components are, not static either. Because curriculum is more a process than an entity there is continual shifting in emphasis within such a matrix.

The more complex the web that results, the greater the number of foci, the more comprehensive, complex, complete and holistic the educational process. The learner and his background, too, will make up part of the framework. The experiential history of the learner will form the basis of reference for interaction with regards to educators, learning materials and processes and so also form part of the matrix. The experiential history of the learner includes what he/she has been exposed to at home, in the classroom and through the media. All of these are co-contributors in a constructivist ontology. By using a matrix as a model for curriculum there is the assumption that each contributing area or theme has value for the curriculum process and therefore the education process. By acknowledging the value of the various contributing areas there is

more chance of a balanced curriculum that is less likely to be dominated by one contributor. What is important here too is that because the various areas contribute to the construction of knowledge, reality is a personal and social construct rather than something, which is out there to be discovered by some positivist method.

If any part of the curriculum framework is favored, then the entire tapestry is skewed. The foci are forced in a particular direction in order to accommodate the area of emphasis. In so doing any natural connectivity between threads in the matrix is negated. The value of the contributing areas is reduced and the curriculum becomes unbalanced. The emphasis on Natural Sciences for example will draw the curriculum into a positivistic frame of mind due to the positivist way in which natural science subjects are generally taught at school level. If the dominant world-view is positivistic then this will influence how other learning areas are viewed and taught. The language in everyday use will tend to be positivistic and this will limit the pupils' ability to interpret the environment. The language we use speaks concepts into reality, and if the language is steeped in positivism the world-view of those who use that language will be positivistic. This will be to the detriment of the Human and Social Sciences (HSS) sections of the curriculum, which although not uninfluenced by positivism, still have more of a need for a wider or alternative world-view by comparison.

If the framework is viewed as being rigid then this too can detract from the effectiveness of the educational process. In this case the matrix becomes an entity instead of a process. Curriculum should be seen as "an ongoing social process" (Cornbleth 1990: 5) rather than as an entity. Even though curriculum is bounded by a framework it should not be static. Using the localised social context is critical for the development of a curriculum that is relevant to the learner, educator and the community as is called for by C2005.

Goodson comments on curriculum as prescription (CAP).

> Most notably CAP supports the mystique that expertise and control reside within central governments, educational bureaucracies or the university community. (Goodson 1990:299)

Prescription set parameters, bounding the curriculum, and the rhetoric behind prescriptive curriculum has resulted in what Schwab calls the moribund state of curriculum;

> The curriculum field has reached this unhappy state by inveterate, unexamined, and mistaken reliance on theory.
> (Schwab, as quoted in Goodson 1990:300)

This base of theory is unrelated to classroom practice and "self-serving" for the universities. The emphasis is on product rather than process. An education system which, dominated by CAP will be content based and the syllabi will dictate what is to be learnt. Goodson follows up on this concept by saying;

> In short, schools of education entered into a devil's bargain when they entered the university milieu. The result was their mission changed from being primarily concerned with matters central to the practice of schooling towards issues of status passage through more conventional university scholarship.
> (Goodson 1990:301)

This results in the schooling process producing human products. Neither the educator nor the learner has much say in what is in the curriculum or even how it is dealt with. The very teaching process itself becomes prescribed and rigid as the nature of knowledge and learning is prescribed. Fundamental pedagogics as prescribed by Christian National Education (CNE), was an example of extreme prescription in which the nature of knowledge, learning, and even human nature were prescribed. This is typical of positivistic approach to knowledge according to which reality is to be found by scientific procedure developed over time and proved inviolate.

In accordance with the principles of Outcomes Based Education (OBE), Department of Education, Norms and Standards Document (1999), the educator needs to display and practice reflexive competence. This is the ongoing process whereby practice and theory are in a constant state of flux or interaction. Theory informs practice and reflection on practice influences the theory, which in turn informs new practice. The underlying philosophy of a system which, operates in this way is that both educators and learners have valuable contributions to make to the educational process. The philosophy behind this is more postpositivist accordingly which rejects the idea of reality being out there to be found, rather it is to be discovered or created through the process of social

constructivism. This is fundamentally different from CAP where everything from knowledge to practice is handed down.

At the school where the present curriculum work is being done, the curriculum framework is skewed and rigid. The emphasis on academic performance and grooming for university especially in the 'hard sciences' has resulted in an imbalance of education in general. Areas such as Drama are underdeveloped and Art and Music are non-existent. Cultures throughout the world embrace Drama, Art and Music as integral part of their structure, but these pupils are 'educated' in their absence. At the same time Mathematics and Science are compulsory up to Grade 12. The curriculum is essentially one that is rooted in "phallocentrism" (Lather 1991), in a curriculum, which has a positivistic masculine world-view according to which, hard science can dominate the environment at all levels. This has been rooted in the historical development of science. The positivistic nature of the 'hard sciences' implies that knowledge can only be gained through rigour of scientific investigation, and that which cannot is unimportant or does not even exist. The morals or ethics, which, underlie such a world-view direct the educational process needed for its survival. These ethics reflect the "Dominant Social Paradigm" which views nature as subservient to mankind and the needs of development (Milbrath in Fien 1993: 4). The underlying philosophy of this is related to the Newtonian notion of nature being seen as a clock like machine, if man can get to know enough about it then he can control and use it for his ends. This reflected in that the curriculum has changed from being a process to a mere package that facilitates passage into the realm of tertiary education.

The rigidity of the curriculum is reflected in a slightly different way. While there is the ongoing tension between the Social and Natural sciences there has also been vociferous resistance to the development of sporting activities. Opinions were forwarded that 'academics' are more important than sport. While this is true in terms of progress up an academic ladder to tertiary institutions sport is integral to a balanced education. Not only does it facilitate healthy physical development but also exposes pupils to situations in which self-discipline and team co-operation are developed. Working successfully within a group is one of the critical outcomes of OBE. Sporting activities can in my opinion also serve to boost the self-confidence and self-esteem of pupils who may not be academically talented, but who have natural ability in some aspect of sport.

The successes that occur with regards to areas of school activities other than pure academics and even particular subjects are not considered as important as those in the privileged areas. The value of an activity or area of interest is always judged by its relevance to gaining access to tertiary education rather than its contribution to the education of the whole person. Learners and educators involved in an education process such as this, in which there is little or no chance for reflective interaction between themselves and the curriculum framework, may find foci as obstacles rather than growth points. For the pupil, too often if academic criteria and averages are not attained then this is seen, albeit not intentionally, as an indication of personal worth or the lack thereof. Education equates to marks and academic progress rather than personal development and growth. Education in this way which is more summative than formative reflects the positivist underpinnings of the education system.

The development of the Vision Statement document is intended to provide an educational ideal to strive towards. It is an educational hypothesis. The use of this document in the PAR process is aimed at checking that the vision is not lost and that the mission is accomplished, namely a balanced education.

2.3.2 Socially critical education.

Curriculum 2005 has links to socially critical education. One of the directive principles of the National Education Policy Act of 1996 is to "encourage independent and critical thought" (Government Gazette, 24 April 1996: 8). A critical approach to education needs an educational system in which students engage in:

> …the intellectual tasks of critical appraisal of environmental (and political) situations and the formulation of a moral code concerning such issues, as well as the development of a commitment to act on one's values by providing opportunities to participate actively in environmental improvement.
> (Stevenson, as quoted in Fien 1993:5)

This is indeed similar to the paragraph from the 'Vision Statement' document presented earlier, which was used to evoke response from staff members and in so doing provide a starting point for the PAR. The emphasis is not only on reflexive interaction but commitment to change in the immediate environment. This central to the curriculum work being done as it questions the present situation with the intent of changing it. It

questions the positivistic underpinnings of the present curriculum structure with the intention developing one which is postpositivistic in that it allows for interpretation and interaction with the environment through which the reality of the curriculum process can be constructed.

Carr and Kemmis, identify five implications for a critical social science approach:

1. eschew positivist notions of rationality, objectivity and truth in favour of a dialectical view of rationality;
2. be grounded in the experiences and interpretations of teachers and other participants in educational processes;
3. distinguish ideologically distorted interpretations in teachers' understandings of their experiences (i.e. instances of false consciousness) from those that are not;
4. identify aspects of the existing social order that frustrate the attainment of critical educational goals; and
5. integrate theory and practice, by providing a language and strategies for action to address false consciousness and obstructions to critical pedagogy and also, by providing support for teachers who wish to engage in further critical reflection and action.
(Carr and Kemmis 1986: 129-30; 179-80)

These implications that socially critical education is interactive for both educator and learner, and challenging of conventional wisdoms and authority may prove problematic in reference to the curriculum in operation at present. Take point number 1 above, the way in which subjects from the 'hard sciences' are taught a school level does not allow for a dialectical view of rationality. Also the capacity for critique developed through the process of a socially critical education may have implications for more than just the 'hard sciences'. Tension may develop between religious obedience and critical inquiry. A critical analysis for example of the situation in the country with regard to the HIV/AIDS situation would most likely bring under the spotlight the Catholic Churches views on contraception. Whatever conclusions would be reached this is just one example of how a socially critical education has the potential to challenge conventional wisdoms. The capacity for critique or informed scepticism is a life skill and it should be applied to all social and environmental issues, it cannot be applied selectively.

A socially critical approach to EE is termed education for the environment (Fien 1993). This form of EE has characteristics of critical pedagogical practice as follows:

1. Education for the environment emphasises the development of a critical environmental consciousness based upon:
   a) a holistic view of the environment as a totality of the interdependent relationship between natural and social systems;
   b) a historical perspective on current and future environmental issues; and
   c) the study of the cause and effects of environmental problems, and alternative solutions to them through an examination of:
      (i) the relationships between ideology, economy and technology, and
      (ii) the linkages between local, regional, national and global economies and governments.

   (Fien 1993: 12)

These characteristics of socially critical EE are not compatible with those in operation at the institution at present and this is where the 'Vision Statement Document' comes into the picture. The extract form the VS document which, states that the pupils are expected to be agents of transformation in society reflects the potential for moving towards socially critical education.

2.3.3 The Vision Statement Document.

This document (Appendix 1) does more than just describe a vision. It provides insight into the ideals for and attitudes towards people, learning and education, and the world in general. It is the hypothesis for how education should take place. The document may prove to be invaluable, not only in terms of the PAR process as a research endeavor but for the ongoing readjustment of educational praxis at the school. Here the notion of ideology as a "total way of looking at the world" (Sumner in Fien 1999: 16) is useful. The document openly reflects the ideology of the school. Within the document there are statements which imply or reflect an underlying philosophy which is postpositivist. For example:

> Our primary academic intention is to develop the faculties of critical inquiry and informed scepticism.
> Constructive critique of received wisdom and consensus reality must become a life skill, enabling pupils to make their own judgements and decisions. We also commit ourselves to the constant reappraisal of rituals and traditions.
> (VS document)

These extracts reflect underlying philosophies of a socially critical and constructivist nature. The essential problem of the research is that these are not reflected in the actual

curriculum in operation at the school in question and that is what the PAR process is trying to initiate.

Fullan (1993) comments on how vision building is an important contributor to classroom and school improvement. Vision building interacts with other aspects of school improvement and is not mere rhetoric in isolation. This is part of the problem at present namely that the VS is largely rhetoric in isolation as there is little evidence in my opinion of it actually informing the curriculum process.

Stenhouse (1975) identified the central problem of curriculum study as the gap between our ideas and our aspirations and our attempts to operationalise them. Kemmis and Carr (1996) commenting on the interaction between theory and practice use a term "phronesis" and describe it as "a prudent understanding of what should be done in practical situations" (Carr and Kemmis 1986: 132). The theory (ideology) we develop or accept is useless unless it directs or informs our actions. The capacity of the educators to operationalise these ideals in a reflexive curriculum come under the spotlight here.

This in essence is what the PAR process is dealing with, marrying our ideals for education to practice. The tension between ideal and actual with regards to the use of this document relates to the dialogue between theory and practice in all educational praxis. This ties in directly with the reflexive competence expected from educators within the scope of OBE and Curriculum 2005 as well as developing the capacities for 'Change Agentry' mentioned by Fullan. The educator needs to be able to create and modify learning programmes in an ongoing and meaningful way upon reflection of classroom activities. The Vision Statement document provides a reference point for this reflection. This also links in with the idea of using the localised community as a context for developing learning programmes which supports the notion of curriculum as "an ongoing social process" (Cornbleth 1990: 5).

Relating this to Environmental Education (EE), socio-ecological reform is seen as contingent on socio-economic and socio-political reform. Only when the immediate social environment of the learner is free (if at all possible) of injustice can the wider social environment (society) be taken into account. Only when wider societal issues are seen or perceived to be resolved will learners (people) begin to consider the more than

human environment. This standpoint according to which social reform precedes environmental reform is termed red-green in environmental circles. This is very much a generalisation but, implies a Maslowian type hierarchy, according to which immediate environmental issues take precedence over those that do not immediately impinge on the learner. Pupils who are subjected to racial, gender or even performance discrimination are not likely to show concern for wider socio-ecological (environmental) issues. Persons who are subject to discrimination are largely disempowered with regard to social interactions and are therefore less likely or capable of acting in a reflexive manner through which they would interact with and act on the environment in a constructive way. There are, however, documented incidents of people who in difficult personal circumstances rise above their immediate environmental concerns to help others.

Here the importance of socially critical education cannot be overemphasised. It serves to create awareness, challenge the status quo and effect change. Carr and Kemmis identified five implications of socially critical education mentioned earlier.

Pepper as a red-green states the aims of the radical curriculum in EE:
3. To criticize the conventional wisdoms.
4. To explore the material and ideological bases of conventional wisdoms.
5. To open students' minds to alternative world-views.
6. To work and live cooperatively.
7. To realize that humans can act collectively to shape society.
(Pepper 1987:66-67)

This relates to the 'Change Agentry' mentioned earlier in section 2.2 (Fullan) in which the individual needs to develop certain capacities, namely :
1. Personal vision building
2. Inquiry
3. Mastery
4. Collaboration

If individuals, educators, parents and learners develop these skills then the aims mentioned by Pepper for a radical curriculum in EE can be attained.

Just as the challenge of conventional wisdom by socially critical education may be problematic in this school environment, so too the suggestion of Pepper may prove problematic as part of the conventional wisdom in operation at the school is that of the religious prescriptions that manifest themselves in the Vision Statement document as well as the world view projected by Catholicism. The challenging of certain conventional wisdoms may be condoned by Catholicism, but the world-view of Catholicism itself cannot be questioned. This would appear to be contradictory as in the VS document it calls for constructive critique of received wisdom.

While Catholic ideals and ideology are evident in the VS document, there is another conventional wisdom in operation. This is that of the class ideology of the feeder culture. This is underpinned by capitalist-materialism. The material and ideological bases of the conventional wisdoms dominant in the feeder culture may be seen to be in conflict with those of the religious nature of the school. The principles of capitalism when inspected closely may not be compatible with those of Christianity or Catholicism. In the process of developing the skills of critical inquiry necessary to unpack and expose what materialism and capitalism really stand for, it needs to be understood that these critical skills can and perhaps should also be applied to unpacking what religion in general and Catholicism in specific claim to stand for.

Fien quotes Tyler who, half a century ago asked the following question:

> Should the schools develop young people to fit into present society as it is, or does the school have a revolutionary mission to develop young people who will seek to improve society?
> (Tyler in Fien 1999:15)

This question does indeed relate to that section from the Vision Statement document which says that pupils need to be educated to be agents of transformation.

2.3.4 Constructivist theory.

Learning theories such as Constructivism which explore the socially constructed nature of knowledge inform the curriculum work in that Constructivism challenges CAP. C2005 as a form of OBE has links to constructivism. Looking at the Directive Principles of the National Education Policy Act of 1996, it states that the policy be directed toward "recognising the aptitudes, abilities, interests, prior knowledge and experience of students" (Government Gazette, 24 April 1996: 8).

The existing curriculum package in operation at the school in question tends to be inflexible and is positivistic. Pupils who do not read into this world-view do not perform in the subjects offered and this is problematic for academic and personal development as, Constructivist learning theorists view learning as.

> a constructive process where the person who is learning seeks and builds information on the basis of old knowledge and past experience.
> (Young and Marks-Maran 1998:31)

The underlying belief of such theories is that the learner is not passive but, "a purposeful agent, extracting and imposing meaning" (Lauder in Young and Marks-Maran 1998:31). The concept of agency of the learner is central to constructivist learning theory, as well as socially critical education. The concept of agency of both the learner and the educator is central to the curriculum work being done. The interactive contributions of both learner and educator are invaluable with regards to developing a socio-ecologically sensitive curriculum within a constructivist framework.

Agency is at its greatest value, however, when the range of exposure to and interaction with educational stimulus is also at its greatest. This calls for, amongst other things, a wide range of subject choice. It also requires that existing subjects be structured in a way that can contribute to the development of the whole human in a holistic way. The weaving of ideas into the curriculum matrix in an interactive way will be at its most powerful when the curriculum framework allows for a holistic approach and the process is truly interactive. Even if and when this is the case there are other issues to take notice of. According to curriculum theorist Elliot Eisner there are three curricula to be found in all curriculum materials (Eisner 1985).

The explicit curriculum is that which is overtly stated and includes objectives, goals etc.

The implicit curriculum is that which is not overtly obvious but is implied by the way things are to be done. The levels of structure, control and regulation all imply whether pupils and staff are considered capable of autonomous decision-making or not.

The null curriculum is what is not included. The omission of certain topics tells more about the mindset and world-view of the curriculum planners than what is included. The

ideology of the powerful in the educational power relations is reflected as much in the null curriculum as in the other two.

2.3.5 Narrative and Post-structuralist theories.
The power of language not only as a conveyor of meaning but as a code for conceptualising and creating reality cannot be underestimated.

Narrative theory describe humans as story tellers:

> Humans are storytelling organisms who, individually and socially lead storied lives. The study of narrative, therefore, is the study of the ways humans experience the world. This general notion translates into the view that education is the construction and reconstruction of personal and social stories; teachers and learners are storytellers and characters in their own and others' stories.
> (Connelly and Clandinin in Gough 1991:32)

From this perspective each subject area, as well as the curriculum as a whole, is a collection of stories that are considered worthy of telling.

Why a particular story (subject area) is privileged over another is a reflection of the world-view of the dominant group, be it racially, religiously, culturally or politically based. What is crucial to ask from this perspective is what is left out, and why (Gough 1999).

> In brief, narrative theory invites us to think of all discourse as taking the form of a story, and poststructuralism invites us to think of all discourse as taking the form of a text.
> (Gough 1999: 36)

With these perspectives in mind, if learners are not told certain stories then they will, not have been exposed to the concepts, nuances or even the codes that are carried in the stories. The hegemony of language comes to the fore here. Controlling and/or limiting the range of language codes empowers the controller and disempowers the controlled. This will severely limit their ability to read the environment around them as a text.

> These stories are the "selected fictions" which form the substance of cultural transmission – the narratives, myths and rituals that are passed from one generation to the next and that we call, in English, "education".
> (Gough 1991:32)

In the present situation the learners who cannot read into the positivist world-view that typifies the curriculum in practice, gradually fall behind in terms of their ability to interpret and make sense of the world compared with those who can. The use of only one world-view as means of interpreting the environment is handicapping those who struggle in this regard. Alternative world views/languages/philosophies need to be developed and used if all learners are to benefit educationally and personally. This is where the flexibility of subject choice is so important. The exposure to subject areas through which there are alternative philosophies and world-views would extend possibilities for these pupils. It could help create conditions in the learning experience for a more complex and meaningful interpretation of the environment.

CHAPTER 3: RESEARCH METHODOLOGY:

3.1 Introduction

This chapter covers the methodology and methods used during the course of the research as well as a description of the process of the research. At the end of the chapter the problems and limitations encountered are detailed.

3.2 Methodology

3.2.1 A case study.

There were several reasons for choosing to do a case study.

The research paradigm within which I had framed my research was very much a post-positivistic one. By postpositivistic I mean a paradigm according to which data collection and interpretation are done in a manner that "is characterised by the methodological and epistemological refutation of positivism" (Lather 1986: 259). Postpositivism is marked by approaches to inquiry which recognize that knowledge is;

> Socially constituted, historically embedded, and valuationally based. Theory serves an agentic function, and research illustrates rather than provides a truth test (Hendrick 1983: 506).

The qualitative nature of research within such a paradigm lends itself to investigating a particular scenario in-depth rather than trying to look at wider scenario from which generalised findings may be found. Looking at the specific circumstances and practices at one institution is from the outset a case study. As a form of research, case studies have certain strengths and perceived weaknesses, based upon their characteristic way of operating.

According to Rose (1991: 191), one of the key characteristics of a case-study is placing the area of study within a "specific social, economic and historical context". This is exactly what this case study is doing, examining one school of a particular kind within the context of internal change as well as the milieu of change on a national scale. The advantage of this is the in depth analysis of an institution with the aim of exploring change rather than a comparative study of a positivist nature which, would exclude a lot of the value of placing an institution in context. Some of the criticisms against case

studies are that they do not produce findings, which, are generalisable, or that the group studied is not randomly selected or representative of the population. These criticisms do not hold, as most case studies, including this one, were never intended for purposes of comparison, but for in depth analysis for the purpose of effecting change.

The qualitative in-depth nature of such a research process in which the participants contribute to the research process in an interactive way is also more likely to create awareness within the environment of the research and more likely to bring about some form of change within that environment. This is one of the key features of the type of research that I chose to use, namely Participatory Action Research (PAR). This will be covered in more detail in section 3.2.2.The creating of awareness among people regarding their immediate environment, problems that occur in that environment, and more importantly, that these problems can be minimised or even overcome, is part of the empowerment process associated with PAR.

A case study scenario is also a practical way in which to investigate the development of particular capacities among the researched in a non-threatening way as it involves the researched in the ongoing process. By this I am, referring to the development of the capacity of the teacher as a designer of learning programmes and materials as required by C2005. McKernan (1991:6) comments that research of this nature in which the teacher plays the role of teacher-researcher "is that it has been turned into a vehicle for the effective in-service education and training of practitioners…"
 This capacity building is crucial for the success of any OBE based programme. This process can be threatening, particularly as the traditional view of curriculum is one of prescription rather than process, and challenging these norms disrupts the comfort zone of the known. The inclusion of the teacher in the ongoing process can hopefully change this stress of transformation into excitement for transformation.

A case-study of curriculum development in the field of EE such as this would provide insights into the process for others who embark on a similar initiative. The unique situation of exploring the process of curriculum development in EE using a 'Vision Statement' document as touchstone for monitoring what was taking place in the immediate environment of one particular school is another reason for using a case-study, it could not be done in any other way. The very process of reflection, discussion

and experimentation can best be recorded as a case study especially when the researcher is part of the process.

3.2.2 Participatory Action Research (PAR).

Participatory Action Research falls into the Action Research methodology. The origins of this type of research are according to Stapp and Wals (1993), to be found in John Dewey's philosophy of reflective thinking. "Dewey criticised schools for separating thought from action and thinking from doing" (Stapp and Wals 1993:170).

Action research was used in various settings besides education such as industrial environments. Kurt Lewin did much work in developing Action Research. According to McTaggart (1997), Lewin invented the term action research. The collaborative and cyclic nature of action research was emphasised by Lewin and his work has importance because it gave action research credibility in the eyes of social scientists of the day (McKernan 1991). Lewin stated that "research that produces nothing but books will not suffice" (Lewin in McKernan 1991:10).

 McKernan gives a definition for action research;

> Action research is the reflective process whereby in a given problem area, where one wishes to improve practice or personal understanding, inquiry is carried out by the practitioner- first, to clearly define the problem; secondly to specify a plan of action – including the testing of hypotheses by application of action to the problem. Evaluation is then undertaken to monitor and establish the effectiveness of the action taken. Finally, participants reflect upon, explain developments, and communicate these results to the community of action researchers. Action research is systematic self-reflective scientific inquiry by practitioners to improve practice.
> (McKernan 1991:5)

The decision to use a PAR process was taken in the light of the nature of the research to be done as this could be achieved by using a process such as PAR. Also the advantages of using a PAR system need to be taken into consideration. McTaggert (1997: 39) says that PAR "involves problem posing, not just problem solving". If you approach a situation with the intention of solving a problem, it implies that you already know what the problem is, but by posing a problem you are forced into a reflexive mode.

This necessitates a deeper exploration of the situation and all its complexities. When this takes place there is more chance of uncovering the subtleties of power relations and interpersonal relationships which, have bearing on the entire situation and institution. Another advantage of a PAR form of research is that because it is continually reflecting on what has gone before, it is helping to create a system that is self-critical (and socially critical), and plans can continually change. You can never be trapped by a plan, or into a plan of action.

The perceived weaknesses of PAR would in part be similar to those against case studies, namely, that the findings are not generalisable, and that the group or cohort would not be representative or randomly chosen. Again the research was never initiated with any such purpose in mind. Very real problems that I encountered were to do with the pace of the research and the complexity of issues that emerged. It is very slow in action and the issues that arise can be numerous and complex. More of this is dealt with in chapter 4 under discussions and conclusions.

Within the realm of action research, however, there are several models. McKernan mentions three models based on the manner in which they are carried out.

Type 1: The scientific-technical view of problem solving.
In this type of action research there is more of an emphasis on problem solving using a set procedure. Lewin was a forerunner in the development of this form of action research, using a procedure of planning, fact-finding, execution and analysis (McKernan 1991).

> Lewin believed that social science could effect general laws of social life. Knowledge of laws, was, however, insufficient for action; only through field experiments could individuals gain the situational practical knowledge to effect social improvements.
> (McKernan 1991:17)

McTaggart commenting on the guiding principles for participatory action research says the following regarding Lewin;

> Two of the ideas that were crucial in Lewin's work were group decision and commitment to improvement.
> (McTaggart 1997:28)

Type 2: Practical-deliberative action research.

The practical model of action research trades off some measurement and control for human interpretation, interactive communication, deliberation, negotiation and detailed description.
(McKernan 1991:20)

The practical-deliberative approach is more concerned with "the process rather than the end products of enquiry" (McKernan 1991:21). Peters (1966) argues in favor of an approach in which emphasises the "tasks of education rather than the achievements" (Peters in McKernan 1991:21).

Type 3: Critical-emancipatory educational action research.

This type of action research has strong links with critical theory based on the'Frankfurt School' of philosophy, especially Jurgen Habermas (McKernan 1991).

This model is based on…

> a critical theory linked with reconstructive action and is critical of both positivist and critical-interpretive theories in so far as they are passive – seeking to explain and are not linked with human action.
> (McKernan 1991:25)

> Critical action research is seen as a politically empowering process for participants; the struggle is for more rational, just and democratic forms of education. Thus the creation of theory is the business of all practitioners on this model; not the expert few who research education from outside.
> (McKernan 1991:27)

As stated in the above section on the reasons for using a case-study, namely, the uniqueness of the study and the process nature of the curriculum development being done, lent itself to a Participatory Action Research model in which there was continuous participatory reflexivity. McKernan says the following regarding curriculum;

> A curriculum is at base an educational proposal, or hypothesis, which invites a critical response from those who implement it.
> (McKernan 1991:4)

The concept of curriculum as process rather than prescription allows for PAR within present educational settings in which the emphasis is on critical response and effecting change.

In this situation there was a definite touchstone against which to measure and compare decisions taken and possible progress made. The religious nature of the 'Vision Statement' document provides an agreed upon moral framework within which to view the situation. This document is the educational proposal or hypothesis that McKernan refers to, and the teachers are asked to reflect upon their practice in the light of the document.

The VS document as a shared vision has great potential for long-term contribution to change at the school. Fullan (1993) comments on the importance of shared vision:

> The development of authentic shared vision builds on the skills of change agentry: personal vision building through moral purpose, inquiry, mastery, and collaboration. Collective vision building is a deepening, 'reinforcing process of increasing clarity, enthusiasm, communication and commitment' (Senge, 1990, p. 227). As people talk, try things out, inquire, re-try – all of this jointly – people become more skilled, ideas become clearer, shared commitment gets stronger. Productive change is very much a process of mobilization and positive contagion. (Fullan 1993:31)

The document itself, however, is not reflected upon in an ongoing manner, which is problematic in that the reflexive process does not question the educational proposal itself. The document was discussed during the drafting stages, but once it was accepted, in its present form it is pretty much inviolate. From a true PAR approach this may prove problematic as the reflexive process entails an ongoing tension between theory and practice and that the theory itself can change over time. If the theory is static, as is the case in this scenario then the process could grind to a halt.

Using a critical-emancipatory action research approach seemed appropriate for the situation as it included capacity building regarding reflexivity between the theory of the 'Vision Statement' document. This would be critical in nature, as it would be critiquing the existing practices in operation. The building of capacity with regards to the requirements of OBE namely developing the educator as a designer of learning programmes and materials would be emancipatory as it could help in breaking the CAP mindset so dominant. The very roles that an educator is supposed to fulfil within the C2005 framework (as a form of OBE), require that he/she act as a facilitator of transformation at a local level. This is only possible if the capacities for 'Change Agentry' mentioned by Fullan (1993), are developed.

3.3 Description of the method and the process

3.3.1 Initiating the process.

In a pressured environment such as a high school, the staff have a multiplicity of areas all screaming for their attention. The stresses of teaching and marking as well as pastoral and personal issues build up. This can sometimes become a huge psychological monolith, a hill to be climbed daily, the top of which is never reached. Competing for precious time within such an environment is difficult. I realised that in order effectively and meaningfully to utilise my immediate work environment as a research environment, I had to make the research relevant and beneficial not only for myself, but also for my colleagues. The process had to be seen as being a worthwhile pursuit.

Initially, I had no idea of which area of school life I would concentrate on for my research. At a Wednesday staff meeting in August 1999 several new portfolios regarding daily and ongoing operations in the high school were suggested and I volunteered for the portfolio of curriculum development.

The new structures that were introduced were to involve the staff in decision-making processes of the high school section. Besides the curriculum development portfolio the other areas of attention were student leadership, public relations, out-reach, functions, discipline and marketing. The creation of these portfolios in which staff were to be integrally involved, was aimed at not only tapping into the existing expertise of the staff but also allowing staff to make informed group decisions regarding the areas mentioned. The weekly staff meetings were to be a forum for discussions regarding day to day activities as well as for the planning and evaluation of the various areas affecting the school.

The subsequent minutes from this meeting reflect part of the role of the curriculum development portfolio:

> Mr. X reminded the staff of the importance of recognising the need to develop the pupil holistically as set out in the Vision statement.
> (Staff meeting minutes August 1999).

Subsequent informal discussions and conversations with my colleagues from various subject areas revealed that there were some definite undercurrents in opinion regarding

the curriculum package at the school. Teachers from the human sciences were concerned at the emphasis on the subjects from the natural sciences, and felt that the pupils were not being educated holistically as was stated in the 'Vision Statement' document as an ideal.

At the beginning of the new term in January 2000 I suggested to the staff that I (within my portfolio for curriculum development) use the 'Vision Statement' as a touchstone against which to check our daily teaching, our traditions and procedures and our curriculum package in total. This was to see if we were living up to our recently stated ideals as put forward in the VS document. I explained to my colleagues that that I would like to include this as part of my work for my Masters degree and asked permission from them, to do so, and if they were willing to go along and participate in the process. There were no objections and I then set about planning how actually to set the PAR process in motion. At the same session I presented to the high school staff an explanation of the idea behind using a PAR process (Appendix 2). I emphasised the cyclic nature of the process and how it could be of ongoing benefit to the school, as we would be continually reassessing what we were doing in the light of the 'Vision Statement' document. The continual reassessment of our daily practices would allow us the flexibility to keep those practices which, were considered appropriate and beneficial, and to scrap or change those which, we considered outmoded or inappropriate to present reality of educational change in a rapidly changing South Africa.

Finding a starting point posed more of a problem than I had initially thought. While the content of the 'Vision Statement' included many educational ideals, the document as a whole was rather heavy. The statements tended to be idealistic and difficult to relate to the immediate environment of teaching. I eventually decided that using the entire document was impractical.

At this stage I had not yet finalised how I actually would initiate the PAR process by using the 'Vision Statement' document, as I had not yet decided on a suitable extract from the document.

I decided, only much later, on using one specific statement which linked to some key areas of concern, namely social and ecological sensitivity as well as pupils acting as

agents of change. This would tie in with the socially critical perspective according to which conventional wisdom is challenged in order to effect change within a situation.

The Wednesday staff meeting would serve as the venue and time for the discussion, planning and feedback sessions. The time allocation for the staff meeting was only one and a half hours on a Wednesday afternoon and tended to be filled with issues for immediate attention. I eventually decided to initiate the PAR process by asking the staff to respond by means of a protocol (Appendix 3), to one section from the 'Vision Statement' document. This was the end of March 2000.

3.3.2 The protocol

The section from the 'Vision Statement' document that was used as a starting point to initialise the process was as follows:

> Above all pupils at xxxxxxxxx are encouraged to be sensitive to social and ecological issues and accept their responsibility in and to society, and respond as agents of transformation.
> (Vision Statement document).

I chose this short extract because it stated quite clearly that our pupils were to be encouraged, through what we exposed them to in our daily personal and institutional ways, to be socially and ecologically sensitive, and to act as agents of transformation.

There is much confusion among people as to what an environmental issue is. To many environmental issues are to do with animals and rainforests. When I explained that issues like HIV/AIDS and poverty were environmental issues, there seemed to be more of an acceptance and understanding of what I was trying to do in using the immediate environment as an area of study. The critical link to forge here is that between EE and human social justice.

The realisation that the immediate school environment was the starting point for a wider environmental awareness proved to be a valuable breakthrough. Issues of social and ecological justice within the immediate environment are more urgent to those experiencing them than outside issues. There would hopefully, therefore, be more

chance of action in an attempt to solve these immediate issues. If change could be effected on a local scale then it would lead to empowerment at this level, or, more critically, probably be the result of some form of empowerment. This process is essentially one of capacity building. The development of reflexive competence, not only in the classroom with regards to subject areas, but in the classroom and the general school environment with regards to social justice in general.

Fullan (1993) refers to the work of Louis and Miles (1990) who:

> …found that the least successful schools they studied engaged in 'shallow coping'…- … while the successful schools went deeper to probe underlying reasons and to make more substantial interventions…
> (Fullan 1993:26)

Developing competence in this regard at one level, or any level for that matter could have far greater consequences than would initially seem the case.

The attitude change that arises in people, from the sudden realisation that individuals and groups of seemingly ordinary individuals can be instrumental in effecting significant change in their immediate environment is the basis of all social revolution. Developing these capacities among the educators is critical if there is to be any hope of developing socially critical education in a school environment.

Achieving this objective of changing the mindset of people regarding the concept of empowerment is difficult. There are several hurdles in this regard.

The concept of being an agent of transformation is, in my opinion, uncomfortable for many white South Africans. There seems to be some reluctance to challenge authorities or those in authority with regards to issues that do not directly and immediately affect us. This may be an indication of the insidious effectiveness of white apartheid education or else the apathy of the privileged. The changing of the *status quo* was not accepted under apartheid education, which sought to form citizens in a certain mould. Petrarch (not referring to apartheid education) said:

By citizens, of course, I mean those who love the existing order; for those who daily desire change are rebels and traitors, and against such a stern justice may take its course.
(Petrarch in Fullan 1993:14)

The exploration of the results of the protocol will be covered in the discussions in chapter 4.

The response was disappointing. Nine of the thirty high school staff responded. The sports staff, are always busy on Wednesdays and this involves about five or six of the high school staff, so they were not at the meeting. What was immediately noticeable, however, was that most of the respondents were from the humanities sections. Only two from the natural sciences responded.

At this stage the warning bells were already beginning to sound in this regard. My initial thoughts on this matter were that staff from the natural sciences had not involved themselves because they saw the process either as unnecessary or as a threat to their subject privilege. This concern is more comprehensively dealt with in the discussions of chapter 4.

Using a phenomenological technique, the main concerns from each response were lifted from the texts, in the precise words of the respondents. At this stage no attempt at analysis or interpretation was made as the responses were to be given back to the staff at a general staff meeting for comment. In addition to this feedback the staff were to be asked to prioritise issues from the protocol responses and to suggest ways in which we could address issues of concern in a practical way in our daily school activities (See Appendix 4).

3.3.3 The feedback
The feedback to the staff regarding the protocol responses took place in May as most of April was school holidays. The feedback took place in the form of a written summary of comments lifted directly from the original protocols that the staff had written (Appendix 4). No names were used and the subject areas of the respondents were not revealed either.

The feedback session resulted in a number of issues regarding daily activities being raised. One important issue was that of the pupils on Standard Grade Mathematics. The Mathematics teachers began commenting that the pupils who 'dropped' to Standard Grade often referred to themselves as 'Dof' (stupid). It was decided that any comments in this regard would be directly addressed, and that it should be emphasised to the pupils that academic performance was not an indication of personal worth.

I considered this spontaneous decision as the first example of how a problem could be identified, action planned, and later implemented. The educator concerned later reported that after continued reinforcement with regards to standard grade Mathematics being the standard or norm rather than some inferior alternative, the learners were more comfortable with the situation.

Once this example was spoken to I asked the staff to try to prioritise issues of concern that were forthcoming from the original protocols. In addition any other issues that they could think of and to suggest ways in which these issues could be dealt with in daily classroom activities. I again requested that this was done in writing as it enabled individual contributions to be made outside of the public forum in case there were any comments or opinions that certain people felt could not be raised in the open.

Direct comments regarding specific subjects being considered more important than others would be detrimental to the process as it could result in friction or conflict between subject areas. The idea was to expand areas of underemphasis within the curriculum, not to decrease those areas that were prominent. In developing holistic education the idea was to start to include areas of omission, and to increase the importance of areas of underemphasis. At no stage was the idea or plan to break down the levels of (academic) excellence that the natural science subjects were operating at.

Asking for a written response also saved time in the already tightly scheduled staff meetings.

3.3.4 The implementation

By the end of the second term at the end of August 2000 the time set for the research component of the curriculum development programme had come to an end. At this stage there was no overall plan of action for implementation, although a number of spin-offs had occurred.

In order to expose the pupils to a different socio-economic experience, albeit minimal, a tour of Soweto was organised for the entire grade 12 group. This is to take place from a cross-curricular perspective in which aspects of the English, History and Geography syllabi are to be included.

Following the discussion in the feedback session of the problem associated with self-esteem of the Standard Grade Mathematics learners, some development has occurred. The educator concerned has continually reinforced the notion that doing a subject on the standard grade does not imply that the learners are in any way inferior to others as people. This has, according to this educator been successful, as the issue is no longer raised by the learners.

What needs to be emphasised here is that I feel that it is impossible to formulate an overall plan of action regarding developing socio-ecological sensitivity in the curriculum. The nature of PAR as well as schools in general does not allow for such neat plans. Issues and processes are too piecemeal, spontaneous and unpredictable for an overall plan ever to be arrived at. It is only once the pathway of change has been embarked upon that any glimpse of a possible destination can be had. Even then by the very nature of change and PAR the situation redefines itself on an ongoing basis.

> If one tries to match the complexity of the situation with complex implementation plans, the process becomes unwieldy, cumbersome and usually wrong.
> (Fullan 1993:24)

3.4 Data analysis
In order to make sense of the data collected within such a qualitative form of research I decided to use a simple distinction between data collected informally and formally. The role of each type of data for the research, although complementary, was totally different.

3.4.1 Informal data
This essentially covers the data collected through informal discussions and conversations with colleagues. These discussions were ongoing throughout the research and the data collected by means of these discussions was critical for the ongoing

reflection upon the research process and progress. The effect of these ongoing discussions and conversations was to help clarify the nature of the research itself. The staff who engaged in conversation with me on the issue of relating the VS document with our teaching had a particular outlook on education in general and our type of education in particular.

Their inputs served to focus my use of the VS document. In this way the data gathered by means of these informal discussions and conversations was inductive in nature. These very important inputs allowed and helped me as "the field worker [to] cycle back and forth between thinking about existing data and generating strategies for collecting new-often better quality-data" (Miles and Huberman in Cantrell 1993:98). Their inputs were fundamental in my choosing the particular extract from the VS document as a starting point to check the reality of our situation against the educational theory of the VS document.

3.4.2 Formal data
This includes the data collected by means of the written protocols and the request for the prioritisation of issues raised from the protocols. Data derived from these sources was essentially used as feedback stimulus for the PAR process, although the data was also analysed in the light of theory, VS as well as other, and contributed greatly to the reflexive process of the entire research.

3.4.3 Data analysis techniques
(i) Extracting meaning
In order to ensure that the feedback to the staff after the initial protocol contained their actual intended meanings, I used a phenomenological technique to lift the meaning units in the exact words of the respondents. No interpretation on my part was presented to them, but my analysis and interpretation was used for my own reflection on the process. This interpretation is included in chapter 4. The reasoning behind using a phenomenological technique was based on what I believed to be the strengths of this method for this particular research. By presenting the comments of the staff back to them in their own words I was avoiding any influence on my part. Also when individuals came across their own words I felt that it was likely to help them remember more easily what they felt regarding the issues than if I had merely presented a list of themes of my

own interpretation. I used this technique as a method or tool to help with the initial feedback process.

The perceived weaknesses of using phenomenological techniques are that they are more concerned with being descriptive and interpretive and do not really contribute to more socially critical forms of research (Campbell 1997). This is why the technique of lifting the comments from the texts was used as a tool rather than as an orientation. Another weakness is that even if the comments struck cords with regard to the memory of the author, it may not have had the same meaning to other staff members.

(ii)Themes

Data from both the formal and informal sources were divided into themes. Responses or comments from the staff regarding, for example, the lack of subject choice were ongoing and emerged at various stages of the research. I took the continued occurrence of particular themes as an indication of their importance.

(iii) Groups of themes

Some themes, which, superficially seem to be different are sometimes linked by a deeper underlying concern. These were grouped into an area of concern in order to help build an overall image of the situation.

3.4.4 Validity

The concept of validity is essential to any research. In experimental research the criteria for measuring the rigour and trustworthiness are less difficult to define than in qualitative research. Applying criteria from experimental research to qualitative research leads to inappropriate questions being asked about some fundamentals such as sample size etc (Cantrell 1993).

The traditional concepts of internal validity (credibility), external validity (transferability), reliability (dependability) and objectivity (confirmability) as used in experimental research can, according to Cantrell, be used but the correct procedures need to be followed in order to ensure that these criteria are met.

(i)Triangulation.

This "involves cross-checking data and interpretations by drawing upon different data sources" (Cantrell 1993:100). In this research the differing sources were the informal discussions, the protocol responses as well as the discussions in the feedback session.

(i)Face validity.

This entails presenting the initial findings or results to the respondents themselves to see if they agree with what is being said. In this particular case the feedback to the staff of the initial protocol responses was of considerable importance. The summary of responses was made up of the very words of the respondents themselves, as a phenomenological technique had been used to extract natural meaning units. At this feedback session the respondents' very words were presented back to them but, in an anonymous form. The respondents recognised their own statements and there were no problems in this regard.

(iii) Catalytic validity.

This form of validity is indicated by the degree to which the feedback of findings initiates some action on the part of the researched (Lather 1986). When the feedback session took place, the discussions around the issues raised in the initial protocol resulted in a number of issues being re-emphasised such as the learners' lack of respect for each other and the property of others.

(iv) Peer validation.

At various stages of the research, the findings, my interpretations thereof, as well as the write-ups forming the core sections of the chapters for this work were read by two colleagues, one in a different section of the school and one involved in the high school.

3.5 Limitations encountered
3.5.1 Initiating the procedure

Once it was decided to use PAR as the method to try and facilitate curriculum change the problem arose as how best to initiate the spiral. While the vision statement was already in existence it was too large and rambling to use in its entirety. The staff were, prior to the explanation of what PAR is not really familiar with any participatory methods of action or problem solving.

The positivist way of thinking that was/is so prevalent amongst staff would have made a survey or questionnaire a more comfortable tool to use than PAR. This may also be a reason for the less than spectacular contribution made by staff in that only a few regularly contributed anything of real significance. I'm sure that many were uncomfortable with the interactive process because suddenly they had to 'give of themselves'. School structures in general and curriculum in particular have for so long been operated in terms of top-down control that any exposure to new ideas was met with a combination of distrust or disinterest. Many people were more comfortable with sitting back and waiting for instructions.

The use of the term Environmental Education conjures up different images for different people, but most tend to think of the other than human environment. It took some time and several examples to bring about the realisation that issues such as AIDS and poverty are indeed environmental issues. Terms like 'the classroom environment' took on new meaning and one staff member referred to the classroom as a 'microcosm' of society.

3.5.2 Maintaining the procedure:

Once the PAR process was initiated the maintenance thereof was extremely difficult. Staff meetings were quite obviously dominated by issues of the day and curriculum development was not seen as immediately relevant. As is the nature of schools there were meetings cancelled, or emergency meetings that took up the whole session. This made regular feedback extremely difficult and many further informal discussions were held with colleagues regarding issues raised.

Slowly some of the staff realised that certain important issues were actually the result of daily classroom activities not allowing for social or ecological sensitivity. The example of the labeling of the Standard grade Mathematics pupils is one when suddenly 'the penny dropped'. Staff became acutely aware that discrimination as a social injustice was taking place under our very noses, but, more importantly, that they had the power to do something about it. The initiative with regards to this example came from the Mathematics teachers themselves and not from me, and I took this as a sign that people were beginning to understand how the PAR process could be used as a way of addressing issues.

Ongoing interactions between educators is critical to the success of the process. The time that the curriculum work has been underway is extremely limited. The staff meetings themselves as a forum for the process are, also not as conducive to change as first can be imagined. Staff meetings are compulsory and as such may be considered as 'contrived collegiality';

> Contrived collegiality does not evolve spontaneously from the initiative of teachers, but is an administrative imposition that requires teachers to meet and work together.
> (Hargreaves 1994:195)

3.5.3 Lack of participation:

At the initiation of the process the staff were asked to respond to an extract from the vision statement in the form of a protocol. Approximately a third of the staff who where present responded to this request. At subsequent meetings there were always the vociferous few who held definite opinions regarding issues, whichever way they tended, but by far most were rather passive and even disinterested in the process and more sadly, in the issues discussed. I think that for those, whose subject was privileged there seemed to be no problem, or else they did not perceive a problem with regards to producing pupils who viewed the world as they did.

Educators are generally used to working in groups, either departmentally or as a staff, it is far easier to sit back and be passive when contentious issues are being discussed than dare be heretical by voicing an unpopular opinion.

> People who have experience a lot of groups, who perhaps have observed their own behaviour, may agree that the hardest thing in the world is to stand out against one's group, a group of one's peers. Many agree that among one's most shameful memories are of saying that black is white because other people are saying it.
> (Lessing in Fullan 1999:35)

There may also have been some Balkanisation on the part of the natural science educators, who may have found the PAR process either as irrelevant or threatening.

> Balkanized teachers belong predominately and perhaps exclusively to one group more than any other. Teachers' professional learning occurs mainly within their

own sub-group, and the nature of that professional learning – what teachers
come to know, think and believe – varies considerably…
(Hargreaves 1994:213)

The issue of lack of participation and the possible reasons for this are dealt with in the
discussions in chapter 4.

3.5.4 Time:

The time taken to move from one phase of the cycle to the next was slower than
expected for various reasons. The responses to the protocol took several weeks to
collect. Some staff meetings were cancelled, some were dominated by immediate issues
such as exposing staff to computer generated report card formats; at others we simply
ran out of time before I could say anything. The concept of the staff being a 'captured
audience' proved to be not really accurate even in this case and I wonder how an
outside researcher might have coped with a similar situation. In retrospect it was
probably because I was in daily contact with the staff that there seemed less urgency in
the situation.

More time is needed for the PAR process to evolve as a mechanism for bringing about
change.

> Whether innovations are external or internal, the more the teachers can interact
> concerning their own practices, the more they will be able to bring about
> improvements they themselves identify as necessary.
> (Fullan 1993:132)

3.5.5 Research diary.

The ongoing recording of comments from colleagues was, in retrospect not
comprehensive enough. Most of the comments made by the educators were recalled
from memory. While the chronology of events was accurately recorded much of the finer
informal information was not recorded in writing. The familiarity with the field setting as
well as the pressures of daily teaching contributed to this.

CHAPTER 4: FINDINGS AND DISCUSSION

4.1 Introduction

This section covers the findings of each step of the research progression as well as some discussions regarding these findings. A key feature is the development of a better understanding of the underlying issues as the informal and formal data informed the ongoing process.

4.2 Initial informal discussions

At a staff meeting in August 1999 a new management structure was proposed for the high school section. This entailed involving the entire high school staff in decision-making processes regarding both the day to day running of the school but also regarding key aspects of ongoing development. One of the new portfolios created was that of curriculum development. I volunteered for this task and was accepted. One of the points raised at that very staff meeting was that we should look at ways in which to develop our pupils in a balanced way as set out in the 'Vision Statement' document.

This formed the basis for informal discussions that I had with a number of my colleagues over the next while. There were many differing opinions as to what the concept of a balanced education meant, but a general opinion was that is was a form of education or included components of education that went beyond present classroom practices. The responses in this regard varied greatly, and reflected numerous views on the issue. For some the role of religious education was paramount. For some it included exposure to art and theatre, while to others the role of sport was important.

As a result of these discussions a wide range of concerns were mentioned by staff with regard to the way that they viewed the situation at that time.

These included:

❑ The lack of exposure to the Fine Arts such as Drama and Music. Teachers from the Human Sciences, especially the language teachers, held very strong opinions in this regard. The neglect with regard to exposing pupils to theatre and art for example, was mentioned by a number of staff as an example of how we were failing to develop the pupils in a balanced way. Many pupils are matriculating,

with good results, but have never been exposed to and hence have no experience of these important components of our culture. This was, according to some people, evident in the lack of refinement and sense of occasion that some of the pupils displayed.

- ❑ The lack of alternative subjects for pupils who were struggling with subjects like Maths and Science. There will always be a certain number of people who will struggle with these subjects. The fact that these subjects are compulsory and that there are no alternatives to them makes the situation problematic. Pupils who clearly have limited ability in some of these subject areas would most definitely benefit if alternatives were available.

- ❑ The lack of sensitivity that pupils display when dealing with others who may be different in some way. While I have seen very few physical fights at this school in the years that I have worked there, there are frequently incidents of discrimination between pupils for various reasons. In my experience in education, teenage boys tend to be intolerant at times towards what they perceive to be variations from the norms of their group. There is an ongoing need to work on the issues of tolerance and respect for others at all levels of society, not only in schools. I feel that the levels of tolerance displayed by people of any age, are a reflection of that displayed by the greater community. Comments that reflect sexist, racist, homophobic, xenophobic or any phobic attitudes are rife in our society. This does not mean, however, that we have to accept these standards. After all, we expect our pupils to act as agents of transformation in society, and not merely to slot into existing structures.

- ❑ The pupils will only do something if it is in their own interest. To what extent this is typical of all people is difficult to establish. The world is not filled with

philanthropists and altruists. Selfishness and self-centeredness are very much part of the human condition. It remains an integral part of being alive to work on this aspect of ourselves for as long we are living. In a society such as ours the capitalist ideology of accumulation of wealth is essentially a selfish principle. The accumulation of wealth at the expense of others is what capitalism is based on, and most of the pupils come from this background.

❑ The ongoing problem of litter. The ongoing despoliation of our immediate and greater environment by litter is something that is extremely frustrating. The littering of the school grounds is in the opinion of many of the people that I spoke to, a result of a lack of identification with or ownership of the school property. Few pupils are likely to throw away packets and cans in their own houses or yards but have no problem doing this in a classroom or in the schoolyard. The lack of ownership issue was seen as the main reason.

❑ The lack of respect for others and their property. Some staff felt that some pupils did not respect them because of the lack of socio-economic status that teachers have in typically white communities. The lack of respect for property was according to some because most of the pupils had never had to work for anything.

As these concerns were raised during informal discussions with various staff members either individually or in groups. I had no idea, which, of the issues could be considered the general feeling of most of the staff as opposed to the opinion of an individual. The informal discussions were sometimes initiated by me, and sometimes by other staff members, or in groups. The nature of these comments reflects the nature or personalities of the staff members concerned. At this stage I was concerned that these discussions could turn into gripe sessions.

4.3 Narrowing down the focus

It was at this stage that I had decided to use one particular extract from the 'Vision Statement' document rather than the entire document. To use the whole document was too cumbersome and practically impossible as the range of areas covered in the document varied greatly.

Using the comments that had arisen during the informal discussion I decided on one extract that was straightforward yet covered a number of issues raised during these discussions.

> Above all pupils at xxxxxxxxx are encouraged to be sensitive to social and ecological issues and accept their responsibility to and in society, and respond as agents of transformation.

The matter of social sensitivity is central to civilised society as it underpins issues like political, cultural and gender tolerance. There are very real differences in ideology and culture in South Africa and tolerance of difference is critical to peaceful co-existence. Areas of the world and South Africa where there is little tolerance towards people and groups from distinctly other political or religious sectors are rife with social injustice ranging from discrimination to genocide. Acceptance of differences must be part of the educational process, both at schools and in the home environment.

Ecological issues tend to be seen exclusively as biophysical issues relating to conservation-related topics such as like the plight of an endangered species, pollution or habitat destruction. Visiting game parks and supporting wildlife organisations are seen as demonstrating ecological awareness. While this is indeed the case, this is only part of the bigger picture. There seems to be little realisation that an issue like HIV/AIDS is a human environmental crisis. Socio-political issues like poverty, and unemployment tend to be considered purely political or economic in nature. The links between social justice and ecological justice are, simply put, not part of the everyday rhetoric of many of the pupils. The comments that they pass in class reflect this. The environment continues to be something 'out there'. This display of a lack of critical thought by adults and children is testimony to the lack of critical thought development, which has characterised and still characterises much of schooling in this country.

Responsibility to society is another area of concern that was raised both in informal discussions as well as in later findings. The point raised by one staff member to the effect that the pupils did not consider themselves part of the greater South Africa is a key point. If individuals do not consider themselves part of a society, be it consciously or not, then they will have little or no inclination to commit themselves to that society and the issues that are pertinent to it. The attitudes of the pupils in this regard it can be reasonably assumed are influenced by a combination of the attitudes of their parents and other significant others, maybe even some of their teachers. The lack of identification with the wider society may result in a lack of identification with the problems that the society is experiencing, and if the problem is not yours then you are not likely to act upon it.

This brings up the next part of the extract from the 'Vision Statement', namely that of encouraging the pupils to be agents of transformation in society. In order to be an agent of transformation one needs not only an understanding of the problems being experiencing by the society but, more importantly, an empathy and sense of mission regarding the issues.

People from the affluent echelons of society in which, there are less immediate environmental problems such as a lack of running water or electricity are, less likely to be concerned, if these problem are being experienced by others, unless it is brought to their attention in the classroom or through the mass media or some other forum. This awareness however, does not mean that any action regarding these issues will be forthcoming. Action will only be forthcoming if there is identification with the problem, a definite opinion regarding these issues and an intention and commitment to effecting change.

The starting point however, is the initial awareness, and this is where the role of education and educators are crucial. A socially critical education through which the status quo is critiqued with the intention of effecting change in the environment is required in this regard. The action component of socially critical education is the most difficult and most important component. Merely creating awareness of a situation in which there is social injustice is not enough. There must be attempts to rectify the situation by whatever means.

4.4 The initial protocol

A summary of the responses from the initial protocol which was used to provide feedback to the staff is included as Appendix 4. This summary revealed that the staff members who responded were aware of the potential within their subjects for creating socio-ecological awareness as well of the limitations of the curriculum package on offer at present. They also mentioned a number of concerns.

These can be categorised into definite themes or areas of concern. While there were numerous positive comments as to how the various subject areas could be utilised to increase socio-ecological awareness, these will be dealt with separately in chapter 5 under Recommendations.

I will initially deal with the main themes of negative comments that were forthcoming.

4.4.1 Themes of negative comments

❑ Lack of respect for one another, teachers, property etc.

❑ Time constraints within the school structures limiting efforts with regard to developing social and ecological sensitivity.

❑ Litter and graffiti.

❑ Inadequacies of syllabus with regard to allowing social and ecological sensitivity.

❑ Lack of responsibility for actions.

❑ Lack of commitment to action in Outreach programmes.

The actual summary as given back to the staff was as follows:

RESPONDENT 1:

❑ XXX has the ability to raise awareness..

❑ This is very difficult…as the boys do not even accept responsibility for themselves…

❑ The school is lacking in social awareness classes where children are asked to reflect on their society past and future, as well as their role in that future.

❑ … the lack of interest in this regard is due to the fact that boys do not view themselves as part of the greater South African society.

RESPONDENT 2:

❑ relate well

❑ ecology is a major theme

❑ pupils are taught to be aware of each others' worth

❑ litter…they believe that others are employed to pick up after them

❑ social level…some pupils treat others badly…don't fit, ostracised and bullied.

❑ Push comes to shove, however, pupils will go the extra mile e.g. Chong incident.

RESPONDENT 3:

❑ Poems which express ecological and social themes

❑ As an xxxx teacher I have occasional opportunity to explore topics

❑ Buckminster Fuller – spaceship earth: co-operation = survival. Selfishness = death

❑ Discussion and debates on litter poverty etc "sensitivity training sessions"

❑ Students are poorly informed about life on the other side of the tracks

❑ Have snobbish opinions based more on prejudice than fact.

❑ Within each syllabus there are life skills areas where such sensitivity may be encouraged.

❑ Time constraints on forming caring future citizens of the universe.

RESPONDENT 4:

❑ Not sure that I consciously do

❑ I discourage them (laughing at each other)

❑ I have been challenged…about…copyright laws.

❑ Projects could have a social/ecological tone to them.

- The syllabus doesn't have much of a lean in that direction.

- Social implications of computers makes for an interesting debate.

RESPONDENT 5:

- Above ideals are not being achieved.

- Social issues and responsibility involve pupils respect for one another, as well as respect to their teachers.

- Respect lacking with regard to homework; bunking detention; bullying; intimidation.

- Respect for others' property and littering, someone will pick up after me.

- Graffiti and damage to the desks is nothing short of appalling.

- The package itself does allow for social and ecological sensitivity, but that does not mean that follow up is done.

- Litter duty – no one will really check.

- Detention – follow up is not taken seriously.

- While on the whole everyone strives for the above, it is the little things that need to be given attention.

RESPONDENT 6:

- Environmental concerns are dealt with in most sections.

- Role playing on issues discussed and social implications.

- IGCSE is quite sensitive on environmental issues, but to a much lesser degree on social issues.

RESPONDENT 7:

- Pupils are encouraged to be sensitive to social issues through xxxx e.g. life's sufferings, difficulties and challenges.

- Their response is mainly theoretical or imagined, but their awareness is heightened.
- Practical; few boys become committed; visits two a year!
- The praise and recognition they receive far outweigh the effort made.
- They become saints for blisters on hands.
- I don't believe the boys are particularly interested in the ecology e.g. litter.
- RE definitely focuses on social needs, but is incidental and not "holy writ".
- Certain subjects relate to social and ecological issues.
- Practical involvement in our school is restricted to grade 11 and 12.
- Syllabus must provide curricular opportunities for the pupils to grow in world awareness.

RESPONDENT 8:

- Try to teach ….every action has a reaction.
- It is so important for them to take responsibility for what they do or don't do.
- Most of them are on a mission to have a good time and do as little as possible.
- They are quick to blame others for their failures.
- They show little self control + have virtually no respect for their teachers.
- If we start with minor changes……the more major issues will be resolved more easily.

RESPONDENT 9:

- Much of what we study deals with these very issues so we are ever able to confront the students morally and spiritually.
- Great writers represent societies' conscience.
- Although no work of art can possibly reform humanity, intelligent readings are didactic and often poignantly moving.

- Our work regularly involves discussions on religion, moral choices, the human condition, the earth, responsibility.

- Most senior students respond sensitively and are searching for answers.

- Very minimally since emphasis is on Maths, Science and sport.

- Most don't take RE seriously.

- We offer no third language/art etc.

- Community service is seen as a chore and very seldom continues beyond the Confirmation year.

- There seems little concern and respect for the environment in the school as a whole.

- Boys don't take litter and recycling seriously at all and what's more basic than that?

The summary of comments was made up of text lifted directly from the protocols. At this stage when these comments were given back to the staff I wanted them to be in their own words. A phenomenological technique was used to lift these text extracts to allow them to speak for themselves. I have included an interpretation and analysis of these responses, made at the time, below.

The staff that could relate their daily teaching to the extract from the 'Vision Statement' were all, except one, involved in the human and social sciences.

These subjects lend themselves to creating socio-ecological sensitivity as these issues can easily be woven into the learning programmes.

The problem is that although eco-sociological sensitivity can be effectively dealt with in these subjects, the subjects themselves have little status at the institution.

There is a skewed emphasis on Mathematics and related Natural Science subjects as they are the subjects 'needed' to get into prestigious university faculties like Engineering and Medicine.

The college feeds more pupils into the University of the Witwatersrand Engineering faculty than any other school in the country! The career paths of many pupils are only considered successful if they include some form of Engineering, Medical or Information Technology related training at tertiary level.

In a subsequent discussion in a staff meeting after the summary of responses was presented to the staff, it became very apparent that boys were under a great deal of pressure to perform, in Mathematics in particular.

Some of the boys who changed to Standard Grade considered this an indication of poor self worth and referred to themselves as the 'doffies'. The standard grade Maths classes are referred to as the 'dof' classes by the boys themselves and not by the staff.

The fact that out of the Matric group approximately ten to fifteen boys out of a total of sixty are on standard grade, compared to the national average of around seventy five percent, is no consolation.

It was decided at the abovementioned staff meeting to counteract actively the tendency of the pupils to label these standard grade pupils as inferior. Any incidents of this nature that occurred in class would immediately be addressed.

This labeling links to responses in the protocols to the effect that the boys have little respect for one another and/or for staff members.

People become the sum worth of a report card or a salary cheque.

Those from poorer socio-economic groups are labeled according to financial wealth rather than personal worth.

This is hopefully a result of ignorance rather than intentional bias, but in an environment where performance is erroneously equated with personal worth then others who are less fortunate are considered inferior in some personal way.

Responses indicate that pupils tend not to take Outreach programmes very seriously. The fact that they only participate because they are required to, indicates the separation between these pupils and their lifestyle from the greater social environment.

Socio-ecological issues are something 'out there' and the reality for these pupils is their own lives and how much they can get out of life. [is this not natural for all teenagers?] This most likely reflects the attitudes of the families of pupils who show these tendencies.

When the world-view of these pupils is so dominated by personal achievement then there is little time or energy left for thought or compassion for others, human or other.

There being no exposure to Art, Music or Drama or the exposure that there is being devalued, compounds the problem. There is little exposure to alternative world-views that can so effectively be portrayed by these media. Pupils have only one way [language] in which to interpret the world around them.

The situation is such that some of the high achievers are so obsessed with performance and so arrogant about their great natural ability that they display the self-centeredness of much younger children.

Bearing in mind that the protocol responses numbered nine of the approximate thirty staff members who regularly attend the meetings it cannot be claimed that these concerns are those of the majority of the high school staff.

4.4.2 Discussion regarding the Initial protocol.

At this point I feel that it is appropriate to include McTaggart's (1997) comments on the distinction between participation and involvement. All of the high school staff were involved in that they were mostly present at the meeting but only a handful participated. This apparent lack of interest in the process can superficially be linked with or compared to the views of Rogers as quoted in Fullan (1993) regarding how people typically react to change. Whenever change is brought about there are 5% enthusiasts. 25% supporters, 40% acquiescers, 25% laggards and 5% antagonists. Although the research was aimed at being Participatory action Research, the participatory component almost turned out to be a failure. McTaggart commenting on the principles of true participatory action research says that…

> Every participant, academic, and worker must undertake:
> ❑ To improve his or her own work and the way it is understood (theorized);
> ❑ To collaborate with others engaged in the project (academics and workers) to help them improve their work; and
> ❑ To collaborate with others in their own separate (academic and worker) institutional and cultural contexts to create the possibility of more broadly informing (and theorizing) the common project, as well as to create the material and political conditions necessary to sustain the common project and its work.
> (McTaggart 1997:31)

With regards to the first point, if only nine of the thirty staff present responded to the request for comparing their teaching and the curriculum package to the extract from the 'Vision Statement', then maybe the other twenty or more see no problem in this regard. The way that they understand their work compared to the VS document (theorized) is not problematic. The non-problematising of the situation by the silent majority makes the two following points made by McTaggart non-applicable. If there seems to be no reason

to improve the work being done in light of the theory (VS document) then there is no reason for collaboration in this regard. At this stage I felt that perhaps more time was needed for the acquiescers and laggards to buy into the idea of change in this particular context.

This situation can be seen in two ways;
Firstly: if there seems to be no problem with regards to daily teaching practice in the light of the VS document extract then these teachers do not regard the VS document extract or perhaps even the entire VS document as been a valid educational theory or hypothesis. If this is the case then it implies a lack of ownership with regards to the document.

Fullan (1993) comments on the role and timing of developing visions as part of strategic planning:

> …shared vision, which is essential for success, must evolve through the dynamic interaction of organizational members and leaders. This takes time and will not succeed unless the vision building process is somewhat open-ended. Visions coming later does not mean that they are not worked on. Just the opposite. They are pursued more authentically while avoiding premature formalization. Visions come later because the process of merging personal and shared visions takes time. (Fullan 1993:28)

The staff were party to the drafting of the document although the initial draft was presented and the final draft evolved, through discussion, out of this earlier version. The presentation of the initial draft may have been viewed as an imposition by some staff. If this indeed is the case there were no objections raised in this regard. With regards to the changes associated with the process of PAR McTaggart says "it is important to realise that these changes are not impositions:" (McTaggart 1997:31).

If the silent majority from the protocol responses are the same silent majority from the VS drafting discussions then perhaps there is another explanation.

The second possibility is that this silent majority is not just without opinion with regards to the VS document and the curriculum development, but opposed to the idea. Some of the undercurrents that were evident from the initial informal discussions were to the

effect that the hard science subjects were the 'holy cows'. Any talk of shifting the emphasis away from these subjects, although not with the intention of reducing their academic importance, would possibly be met with resistance, passive or otherwise.

This could be a manifestation of a form of 'balkanisation', wherein groups are insulated from each other due to differing world-views. Hargreaves comments on balkanisation with a political complexion.

> Finally, balkanised cultures have a political complexion to them. Teacher sub-cultures are not merely sources of identity and meaning. They are repositories of self-interest as well. Promotion, status and resources are frequently distributed between and realized through membership of teacher sub-cultures. These goods are not distributed evenly, nor are they contested by different sub-cultures on equal terms. Teachers of older students tend to receive more status and reward than teachers of younger ones; teachers of some subjects more than teachers of others. In balkanised cultures, there are winners and losers. There is grievance and greed. Whether they are manifest or muted, the dynamics of power and self-interest within such cultures are major determinants of how teachers behave as a community.
> (Hargreaves 1994:214-215)

These words by Hargreaves would be agreed to by a number of teachers in this school who are not involved in the privileged subject areas. Those in these privileged areas would balk at any suggestion that they were treated differently, either consciously or not.

As is the nature of PAR the problem central to the research can become redefined as a result of the ongoing interaction between theory and practice (praxis). At this stage of the process which, is still within the first cycle, the real problem seems to be increasingly apparent. This is that the lack of socio-ecological sensitivity which, is displayed in the learners is as a result of the lack of socio-ecological sensitivity with regard to the following;

❑ The home environment from which many of the learners come is economically comfortable as well as sheltered from some of the socio-economic realities that face much of the population of this country. The lack of exposure to areas of political, economic and social issues restricts the experience of the learners in this regard to what they hear from their parents, educators or see through the mass media. From all three sources they are being exposed to ready made opinions and do not get a

chance to formulate an opinion for themselves after being exposed to the actual situation and the people involved in that situation.

❑ The learning programmes that are in place at present have, in general, academic excellence as their primary aim. Pupils tend to be so obsessed, and encouraged, with regard to progression to tertiary academic institutions, that the educational product tends to outweigh educational processes. The more traditional form of OBE as used within the high school section does not lend itself to the creation of the necessary socio-ecological sensitivity. The limited subject choice restricts the exposure to fields of knowledge and ways through which to read and interpret the world.

❑ The educators too are under pressure to achieve results, but this is not the only problem. Beside the pressure to produce the academic results that the feeder group (parents) expect, some of the educators themselves still regard academic performances as an end in itself. It must also be said that the socio-economic background of most of the educators is similar to that of most of the parents. This has implications in that they may have similar socio-political views to the parents. The educators too may not have reconciled their personal visions with those of the institution as stated in the 'Vision Statement' document. Educators that do not display sensitivity in this regard are most likely part of the laggards or antagonists mentioned earlier but more importantly they have most likely not developed the skills needed for 'change agentry' as mentioned by Fullan (1993).

4.5 The feedback session

At the feedback session in May 2000 a summary of the comments from the initial protocol responses was given to each staff member present. I mentioned some of the comments. While this was happening the issue mentioned with regards to the self-esteem of the standard grade Mathematics pupils came to light. The standard grade Mathematics teacher concerned took it upon herself to confront any comments that arose in her lessons with regards to the issue of standard grade Mathematics and being stupid. I consider this example as the first instance of the PAR process in action and effecting change in the school environment. It was also encouraging that it was in a subject from the natural sciences.

I asked the staff to prioritise the issues raised from the initial protocols and to suggest ways in which these issues could be addressed in daily teaching in the classroom. This second feedback was again in writing. A summary of this feedback regarding prioritising areas of concern and suggestions re action is included as Appendix 5.

4.6 Prioritising of issues

The number of respondents at this stage was down to five. This small number of respondents was adding weight to the theory that most of the staff were not really concerned with the process. The reasons for this lack of interest could be, as mentioned earlier, the failure to problematise the situation or the rejection of the process itself. The possible lack of problematising, as opposed to mere apathy or teacher burnout, as well as the possible rejection or lack of ownership with regards to the VS may be symptomatic of a deeper malaise.

Mentioned earlier was the suggestion that the problem of a lack of socio-ecological sensitivity among the pupils was merely a manifestation of a similar lack among the teachers and parents. The type of language used in the VS is radically different from the type of language used in other educational documents as well as the daily forms of communication with the pupils through assessment, note and text-books.

If a poststructuralist perspective on the role of language is considered then there is a possible explanation of the problem:

> Language is seen as both carrier and creator of a culture's epistemological codes. The ways we speak and write are held to influence our conceptual boundaries and to create areas of silence as language organises meaning in terms of pre-established categories.
> (Lather 1991:111)

The positivist nature of the language in daily use is a hegemony that serves two functions. Firstly it restricts access to knowledge for those who cannot read into this type of language namely those that struggle in the natural sciences, and secondly it restricts the access of those who use this type of language to read into other world-views.
If we follow this line of view then the language that is being used will not result in action in the PAR process because it is inappropriate. According to Peters and Robinson "a

primary concern of discourse towards critical social science is how to generate knowledge in ways that turn critical thought into emancipatory action" (Peters and Robinson in Lather 1991:109).

In a nutshell, most of the staff either do not or cannot read into the language code of the Vision Statement document. The positivist language that dominates the learning environment through the various subject areas restricts the ability of the educators to interpret the VS document. Consider for example the following extract.

> Our primary academic intention is to develop the faculties of critical inquiry and informed scepticism. Constructive critique of received wisdom and consensus reality must become a life skill,…

I believe that many adults, including parents and educators, fail to read into what is being said in this extract, and that this contributed to the low staff participation in the PAR process.

The comments of the respondents, however, were valuable and insightful and I felt that they could be used in turn to help sensitise the staff themselves.

4.7 Most common areas of concern

Respect and tolerance.

The issue of respect was commented upon by one of the respondents as follows:

> Respect for (a) individuals and their property; (b) teachers and other authority figures.

> Respect (even in it's most basic form of non-interference) is the foundation of a civilised society.

> The boys need to understand the enormous value of respect as a tool for peace, production and peaceful change!

> Every violation of other-respect is evidence of a lack of self-respect. We
> harm others only if we have failed to respect ourselves and our own ethical
> values.

These comments are cutting but also very relevant. They were made by a History teacher. In a country such as South Africa in which tolerance of differences and respect for others is sometimes lacking these words ring true not only for this institution but for society at large. The role of education in developing such tolerance and respect cannot be underestimated.

Developing respect in its various forms is a critical part of social sensitivity. Social sensitivity, respect and tolerance are basic concepts or principles that need to be worked on in the classroom in order to prevent social injustice.

One of the other respondents (English) had the following to say:

> The classroom: it's a microcosm, after all. Boys must be made aware of what
> is acceptable and what is not if they are to be functioning members of any
> community.

Social sensitivity was also commented upon by one respondent, (Afrikaans) in the following way;

> Our pupils need to be made aware that social class does not have any bearing
> on how well off you are or not – They need to realise that money is not the
> only criterion for deciding whether you're a decent person or not.

These comments from the educators who responded to the process indicate in my understanding that they share the vision of the 'Vision Statement' document. In other words their personal vision for education and for the school is complemented by the VS document as opposed to those who by their silence, indicate a rejection of the VS document or a partial acceptance.

4.8 Discussion regarding the identified problems

The diagram below is based on the work of O'Donoghue and McNaught (1989).
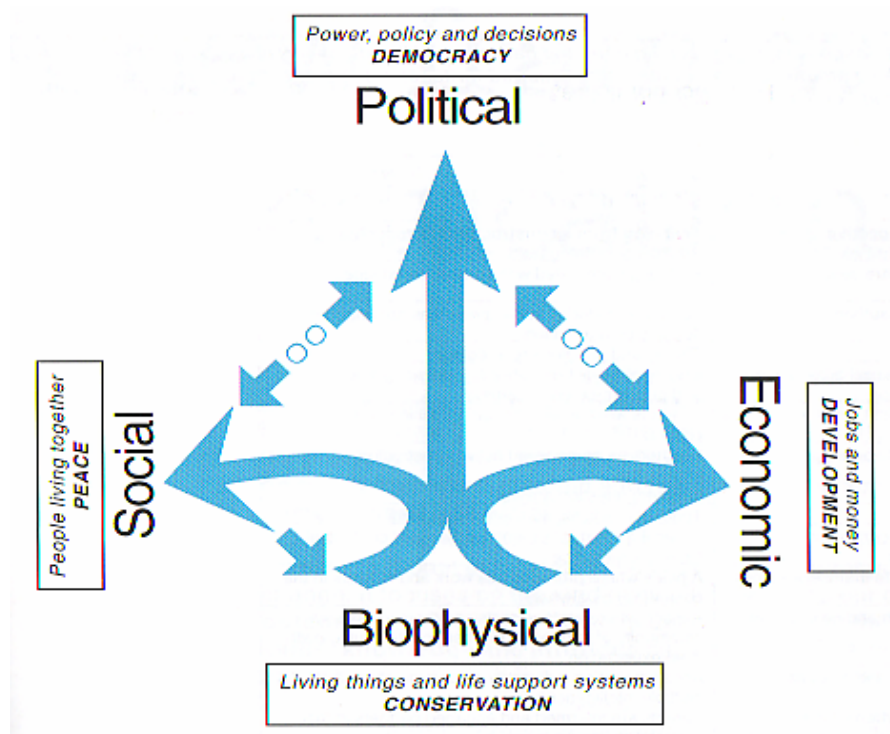
Source: (du Toit and Sguazzin 1999:9)

The diagram deals with the scope of the environment and environmental issues. Each of these four areas depicted is needed to contribute to creating a suitable conception of what the term environment means.

❑   Political
Every action and decision has political implications, where politics is seen in its widest sense as power and decision making processes within international and civic structures.

❑   Economic
Economic realities are decisive in any environment: Unemployment and poverty promote as much environmental destruction as monopolies and uncontrolled growth.

❑   Social

The organisation of social space and relationships between people are key environmental considerations that influence economic, political and biophysical quality.

❑   Bio-physical
Earth resources, ecosystems and life-support processes underpin and are influenced by all of the other key environmental factors.
 (O'Donoghue 1993: 33)

Using this idea that these four areas contribute to the overall perception of environment, it becomes clearer as to why there is the lack of socio-ecological awareness among learners in this case in point. Political transformation in South Africa over the last decade has seen political power shift dramatically. The political power shift may have been perceived by many to be racial power shift. The socio-economic policies of the new democratic government has, may be viewed as having an impact on the socio-economic position of the previously advantaged. A lack of identification with the political and economic changes taking place within the South African scenario results in a lack of identification with these aspects of environment for those unable or unwilling to face the reality of change in this country.

If this indeed is the case for some people, then the lack of acceptance of the political, economic and social components of the environment, then the environment to them is only the biophysical. The environment remains something out there to be seen in a game park, and has nothing to do with informal settlements, poverty and HIV/Aids.

This limited interpretation of environment is being transmitted to learners by parents and educators alike who fail to see the more complete and complex environment. The affluent nature of most of the feeder culture does not allow for interaction with people from less privileged communities. The lack of contact and interaction in this regard results in a lack of awareness of and sensitivity to the plight of these people. The lack of comprehensive Outreach projects is where the school fails in regard to the above problem. Because of the specific circumstances of the home environments of the pupils, they are not very likely to come across someone from a radically different socio-economic class on a long-term basis. The school needs to bring all the pupils into contact with other children from these types of backgrounds. This problem was identified by several of the staff who offered feedback. The suggestions varied from trips to

Soweto to adopting orphans for a period of time. Recommendations in this regard will be covered in chapter 5.

The unintended effects of competition in the school environment as well as the society that most of these pupils come from can also contribute to this problem. Those who do not perform in prestige areas of academia are labeled, sometimes even by themselves, as being stupid and inferior. The materialist trappings (such as motor vehicles and houses) are seen as signs not only of success but also of worth. To be rich in the western world-view is almost equated with being successful. When this is the case what chance does a beggar or street-child have of being considered a worthy human being? The poor may come to be stigmatised as 'less worthy'.

The problem of poor discipline on the part of the pupils was also mentioned. I do not wish to diminish the value of this contribution but I do not perceive a general lack of discipline at this institution. Teenagers will always be testing the limits of their environmental control structures. As developing people and emerging personalities young adults question the conventions of society and the associated conventional wisdoms. This may sometimes be in the form of direct conflict with adults in authority, be it parents or educators, who are seen as the proponents of those conventions.

What is not clear but which is relevant is the possible connection or correlation between discipline problems and pupils who are low achievers. If there is such a correlation then it may be the result of frustration caused as a result of the lack of ability to read the dominant code of the hegemony in power.

Hodgkinson says that of America's one million prisoners, 80 per cent are high school drop outs. (Fullan 1993). If these statistics are correct and relevant to most societies then it is a sad testimony to failed education systems.

The inability or limited ability to read into or even accept a world-view as proposed by certain conventions can result in conflict between the learner and educator, a lack of interest in the learning process, and poor performance. If this is the case then it is precisely here that the value of subjects alternative to the Natural Sciences becomes

apparent. If the learning programmes, especially the methodologies and content, are inappropriate for the level of the learner then alternatives need to be explored.

The term 'environment' must be seen to include the political, social, economic and biophysical components. If this is not the case then 'environment' is reduced to the biophysical and can be idealised, doted upon and treated separately form the social, economic and political issues that surround us. This will serve to continue the dominant social paradigm which sees nature as subservient to the needs of mankind and economic development.

4.9 Summary

The two main areas of concern that emerge are;
 Firstly- the lack of socio-ecological sensitivity displayed by the learners and
Secondly- the lack of participation in the PAR process by the educators.

Although the study was intended to explore ways in which the curriculum could be made more socio-ecologically sensitive, the findings indicate that the problem is more complex than it initially seemed. Using the 'Vision Statement' document as a touchstone for monitoring progression too revealed some hidden complications that were initially not perceived.

The connections between the various components of the pupils' environment, of which the educators are but one sub-component, are complex and dynamic. The way in which the social, economic, political and biophysical components all interweave to form the reality that the learners experience, if nothing else, indicates not only how complex the problem is but how complex the solution is too.

Various components of the environment such as the political and economic milieu in which the learners find themselves are beyond the control of the learners and educators. The attitudes towards and perceptions of these components, however, are not dictated. Developing skills of critical inquiry and agency are not only required by the dictates of C2005, but well within the capabilities of the school concerned.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS.

There are several conclusions that can be arrived at from the findings and discussions made in the previous section. Some of these conclusions as well as the recommendations are specific to the case study, but at the same time some may be applicable to the greater educational scenario in South Africa.

5.1 Conclusions
The conclusions that could be drawn from the research were as follows:

5.1.1 Lack of socio-ecological sensitivity
The lack of socio-ecological sensitivity displayed by the pupils is symptomatic of that of the wider environment. This encompasses the schooling environment, including educators; home environment, including parents, and the influence of the greater society.

It may not be any great revelation that the levels of social and ecological sensitivity displayed by the learners is a reflection of what they are exposed to at home or in the classroom. What is really important to note here is the effect of these areas on the attitude formation process. The home environment specifically is the primary learning environment, not for subject content and academic performance but, more importantly, for the transmission of culture and values. In this particular case, the home environment of many of the learners is a socio-economically privileged one.

The attitudes and values transmitted in the home environment of the reasonably affluent, differ considerably from those in the previously disadvantaged (and still disadvantaged) communities. The pathway to tertiary institutions is the expected progression for these learners and the school is seen as the means to achieve this end. These young people do not experience many of the environmental issues that face the majority of people in this country. Crowded classrooms and dusty playgrounds and, more importantly, mere economic survival, are not part of their everyday world.

Developing an understanding of the reality facing the majority of people their own age in this country would allow for expanding the concept of environment beyond the biophysical to include the other aspects as suggested by O'Donoghue (1989).

The development of the capacity for critical inquiry will complement the wider interpretation of environment as it will allow for a better understanding of the causes contributing to social political and economic issues. This should result in more meaningful and sensitive understanding of the greater South African environment.

5.1.2 The term 'environment'

The ongoing misunderstanding of what 'environment' means by people from a wide range of socio-economic backgrounds. For many in South Africa the term 'Environment' is equated with the realm of conservation and game parks. The idea put forward by O'Donoghue (1989) that the environment is made up of political, social, economic and biophysical components is useful as it include human components in the overall concept of environment.

It was suggested in the previous chapter that the ongoing failure to interpret the environment, using this four layered approach, by many from advantaged backgrounds is contributing to the ongoing failure to develop socio-ecological sensitivity among the youth from this sector of society. As long as their understanding of the environment is limited to the biophysical only, the human aspects are neglected and the situation remains problematic.

5.1.3 Findings

The finding from this case-study are not exceptional; this is probably the reality for most schools from the formerly privileged sections of education in South Africa. As indicated by the extract from the editorial quoted in chapter 2, schools which have a community from the previously advantaged sectors of society many of the changes that have taken place in education and in general over the past decade have mistakenly been associated as a lowering of standards. Political and economic changes introduced by the democratic government since 1994 have not always been in the interests of the previously advantaged, and this predominantly white group may associate some of the changes implemented as a threat to their former privilege. Developing a critical understanding of environment as to include the political, social and economic components as well as the biophysical may help create awareness as to why these changes are necessary and help place the local environment within the context of the greater South African environment.

5.1.4 Lack of participation

With regards to the PAR process, at least part of the reason for the lack of participation by many of the educators was the inability to read into the language code associated with the PAR process in general and the VS document in particular. The inability to read into and understand the world-view as coded in the language used in the VS document results in the document becoming, although not meaningless, less meaningful that it otherwise could be. The VS document, although finalised through discussion, may have needed more time. The document is forwarded as the group vision of the school but may not be compatible with the individual visions of many of the educators. The lack of participation in the PAR process which used part of the VS document as the starting point is evidence of this. The staff who participated and contributed so insightfully give an indication of the potential power and significance of using a shared vision which has been timeously formulated. Other possible reasons for limited participation are that the 'laggards' and 'acquiescers' have not yet been convinced to get on board, or that the 'antagonists' are displaying balkanisation.

5.1.5 The classroom environment

The importance of the school and classroom environment needs to be emphasised in developing socio-ecological sensitivity based on the notion that the classroom is a microcosm of society.

Using the concept of the classroom being a microcosm of society, if the individual is to be competent in functioning in this mini society then the human and interpersonal skills required need to be developed and nurtured. The developing of learning programmes which allow for this to take place can only happen if the educators display practical, foundational and reflexive competence with regards to developing learning programmes which meet outcomes such as SO7 for the 'Human and Social Sciences' namely;

> Address social and environmental issues in order to promote development and social justice
> (Independent Examinations Board GETC 2000: 5)

The importance of the classroom as a microcosm of society is acknowledged by the fact that the specific and critical outcomes as stated in the OBE documents can only be

achieved if the development of human and interpersonal skills are achieved. The very notion that these outcomes can and indeed should be demonstrated by pupils exposed to certain learning programmes indicates a confidence in the classroom as a venue (microcosm) in which social justice and other issues can be explored.

5.1.6 Partnership

There also needs to be a partnership between all stakeholders involved in the education process. Parents, educators, community and learners need to participate in developing learning programmes, which increase the sense of community. These various stakeholders largely make up the social, economic, political and biophysical environment that the learners experience. They contribute in the construction of the reality of the learners so it makes sense for this construction to be interactive rather than merely reflective.

The value of each of these groups in the total education of the learner needs to be recognised. The importance of the home environment as an area of learning specifically with regards to culture and values cannot be underestimated. It is critical, therefore, that the home and other learning environments be encouraged to cooperate in order to maximise the understanding and achievement of Critical and Specific Outcomes.

The shared visions of each group, be they conscious or not, need to be compared with the educational vision of the school as stated in the VS document. The shared vision of the school as an educational institution has to be considered in comparison to the visions of the other stakeholder groups or else there is the very real possibility of the various groups talking past one another. Parts of the VS document indicate that the vision of the school is indeed similar to that for education in the country as a whole. The ideals of C2005 are reflected in parts of the VS document.

5.1.7 Environment as a social construct

Taking all the above into account the main conclusion is that the environment is a social construct. The reality that is the environment of the learners, and educators, in this case study is one that has been constructed out of experiences that have gone before. The historical, cultural and socio-economic background that these individuals come from all contribute to their interpretation of the environment.

All stakeholders in the educational process, the educators, the learners, the parents and the community contribute in co-constructing their own and each others' reality around them. The use of different language coda results in people or group's talking past one another, and not being able to see the world from the other person or groups point of view. By developing and using the tools of critical inquiry the learner can deconstruct the local environment and compare it with another either chronologically or temporally.

The world-view and the explanation of this view from the perspective of someone living in a large suburban household as opposed to someone living in an informal settlement may be poles apart. The starting point in exploring these poles for each person starts with personal contact through which awareness may be created that there is another world in the first place.

5.2 Recommendations

The recommendations for the future of the ongoing curriculum development are as follows:

5.2.1 The use of subjects

Use the positive possibilities within subjects from the Human Sciences like the languages as well as History and Geography.

Response from the initial protocol indicated that educators working in these areas were well aware of the potential within their subjects to raise socio-ecological awareness. Appendix 4 includes a summary of the responses to the initial protocol and some of the comments were as follows:

Pupils are encouraged to be sensitive to social issues through xxxx e.g. life's sufferings, and challenges.

Much of what we study deals with these very issues so we are able to confront the students morally and spiritually.

Our work regularly involves discussions of religion, moral choices, the human condition, the earth, responsibility.

Appendix 5 includes comments from the educators on how to improve the social sensitivity of the learners:

…each grade could have a project i.e. sponsoring a childrens home – making toys …

By giving of themselves (not monetary) they would become aware of others peoples plights – They would learn responsibility and accountability.

Take pupils to shows/ theatres/ movies which make them more aware of social issues…

Adopting a long term project e.g. keeping an orphan for a year….Responsible for the upkeep of old age home's garden…supplying and running a soup kitchen…twinning with another school to help other pupils with Maths etc.

…pupil exchange programme… in a different socio-economic area.

Get them to understand consequences (their parents have protected them from consequences on many occasions…)

These comments from the educators indicate that there is much potential for developing and exploring sensitising experiences for the learners. This selection of comments clearly shows that the political, social and economic aspects of environment need to be explored in order to create a more complete understanding of what the term 'environment' means for these learners.

 The problem is that these comments came from only a handful of the educators in the high school section. In addition to the fact that these comments came from a minority of

educators, the subject areas that they represent are those that are considered less important than the hard sciences.

It must be acknowledged that subject areas from the Human Sciences offer greater opportunity for exploring social and ecological sensitivity than those from the hard sciences. What is even more important is the realisation that the development of fully human people in a diverse society such as ours is more important that accumulating marks on a report card. The role of the Human and Social sciences in education is clear: the development of humans as social beings. Developing the capacity for critical inquiry among learners in these subjects does not restrict the use of this capacity to these subjects only. It is a life-skill that can be used in all spheres of life and applied to all fields of knowledge. The inputs from educators in the HSS indicate that their individual (and subject) visions are indeed similar to that of the VS document.

The educators from the hard sciences do not as a group (though there are exceptions) display an educational vision closely linked to the shared vision as presented in the VS document. More time is needed for the two views, which are far apart, to merge than for two which are more akin to one another. The dynamic way in which change takes place must be taken into account. A lack of participation in the initial stages of the PAR process does not mean that these educators cannot or will not at some future stage begin to participate significantly in the curriculum development process.

5.2.2 Attitude change
Try to change the attitudes of educators and parents along with those of the pupils.
In order to get the silent majority of educators who were reluctant to involve themselves in the PAR process involved in the ongoing project of developing socio-ecological sensitivity in the learners, the concept of environment as suggested by O'Donoghue, needs to be developed.

A number of inputs need to be taken into account here:
According to the NQF document the framework needed for education in South Africa is one of an outcomes-based-education according to which citizens will need certain skills, attitudes etc if we are to be:

A prosperous, truly united, democratic and internationally competitive country with literate, creative and critical citizens leading productive, self-fulfilled lives in a country free from violence, discrimination and prejudice.
(NQF document du Toit & Sguazzin 1999: 11)

In order for outcomes-based-education to be effective, the ideologies from OBE need to taken seriously; namely that "the GETC curriculum is intended to be a participatory curriculum that is relevant and addresses local issues" (context and camera 13) and that curriculum is a "contextualised social process" (Cornbleth 1990: 5).

In this case study the curriculum development needs to take place using local inputs such as the 'Vision Statement' document as cornerstone for developing a form of OBE "in response to the need for rapid social change" (du Toit & Sguazzin 1999:11). There is need for rapid social change in this case study, for educators, learners and parents alike if they are to understand and accept their role in the greater community.

The role of the VS document in this regard cannot be underestimated. The VS document is a major contributor at local level. Although in both PAR and change in general the ongoing tension and interaction between theory and practice necessitate that both must change form, the cast-in-stone nature of the VS document may be to the long-term benefit of the school (and ultimately all stakeholders). From a socially critical point of view education is not value free. The ideology of the VS clearly states what is expected from education at the school. This overtly moral standpoint on behalf of the school could place the school on the moral high ground with regards to the interactions with other stakeholders involved in the school community. The vision of the school also reflects the vision for education of the nation.

The parent body too needs to be educated as to what the concept 'environment' includes. The home environment as the primary educational environment, needs to be sending the same messages as the school environment regarding social and ecological issues.
The educators and learners are in constant contact and interaction in the classroom. The contact among all groups concerned is less regular and only on occasions such as school functions when there is normally some fixed programme. There is the need for

ongoing interaction between the various groups and this is where the role of small, or not so small, community projects needs to emphasised.

Outreach projects which are ongoing, need to be expanded. These projects need to involve as many groups of people as possible.

5.2.3 Start small but think big

By starting with isolated instances that present themselves in the immediate school environment, educators and learners alike can be exposed to issues that reflect the greater environment. Dealing with these situations would act as sensitising sessions for all involved. It is here that the concept of the classroom being a microcosm of society is relevant. Instances within the small (physically) confines of the classroom reflect those that occur in the greater environment. Dealing with instances of social injustice in the classroom is a very important starting point. If this is not done, then trying to address issues beyond the classroom will be ineffectual.

5.2.4 Use the enthusiasm of others

If the school community, which includes educators, parents and learners alike, is to work at developing sensitivity towards social and ecological issues then specific instances and the enthusiasm of individuals involved with those specific cases needs to be acknowledged and encouraged. These instances need to involve all groups as mentioned earlier, in order to develop social awareness in educators, learners and parents alike.

5.2.5 Breaking the technocratic mindset

The technocratic mindset is one that reflects the dominant social paradigm "which views nature as subservient to human needs and economic growth" (Fien 1993:4).

In order to break this mindset a new approach to education is needed. The extract from the VS document used to initiate the PAR process says;

> Above all, pupils of xxxxxxxxx are encouraged to be sensitive to social and ecological issues and accept their responsibility in and to society, and respond as agents of transformation.

If this is compared with the following;

> What is needed is a fundamental transformation of people's attitudes and practices … Only a new world view and morality can change the basic relation of people to the earth. People's behaviour is a matter of choice based upon values… The need for a world ethic of sustainability – an ethic that helps people cooperate with one another and nature for the survival and well-being off all individuals and the biosphere – could not be greater. (IUCN, UNEP & WWF 1990, p.20, as cited in Fien 1993:5)

The extract from the VS document clearly states that the relationships between people and between people and the environment need to be characterised by sensitivity, social responsibility and agency. The very essence of the VS document is one of moral value in dealing with people and environment. If the essence of the document is drawn into didactics then we would have an ethics based epistemology. This would in fact be similar to the new environmental paradigm that Fien (1993) refers to.

Using a value based education system in which the environment is seen to include social, political, economic and biophysical components then we would in fact be engaging in "education for the environment (which) has an overt agenda of values and social change" (Fien 1993:16).

Within a South African context a good example of education for the environment would be the Learning for Sustainability Project (du Toit & Sguazzin 1999) which emphasises local contextual curriculum development and socially critical education with the intention of effecting change at the local level. Although this project is on a small scale, it reflects essentially what teaching is about. Education should be of such a nature that the moral purpose of the educator is overtly manifested. The machinations of state implemented policies are notoriously slow. The school in question has the opportunity to develop some unique curriculum innovations.

" In periods when fields are without secure foundations, practice becomes the engine of innovation" (Marcus and Fischer in Lather 1991: 116).

APPENDIX 1

VISION STATEMENT DOCUMENT

Revised Vision Statement

Xxxxxxxxxx College strives to be a place of integral education of the human person, synthesising culture and faith, faith and life and open to all who share its educational undertaking of which Christ is the foundation. It is a school for the provision of a humanising education and a solid Christian formation. Its primary goal is to develop a consciousness of God as a reality in human experience, of His presence in the midst of the world, and a sense of personal relation with Him.

Our vision is for our pupils, and ourselves to be fully human persons. We believe in the inherent goodness of people, tempered with an understanding that every person is a 'work in progress' and remains so this side of eternity. Our pupils have a right to a curriculum that develops within them a love of self, a recognition of self-worth and an appreciation of their own inherent value and dignity. We declare that teachers and parents need to affirm the essential goodness and giftedness of people, approaching pupils with an abiding attitude of affirmation. Accordingly, we devote ourselves to the promotion of the spiritual, emotional, intellectual, aesthetic and physical needs and wellbeing of our pupils. In this regard we affirm that parents have a particularly important part to play in the educating community, since it is to them that primary and natural responsibility for their children's education belongs.

At the same time, our pupils are guided and assisted in cultivating an understanding of the dignity and worthiness of others and to see the face of God in all men and women. They are educated to cherish, value, and defend their own and all life, and challenge all forms of fatalism and indifference in society. We are committed to the needs of the 'new poor'… those pupils who do not know the beauty of faith, who by living in situations of material abundance but spiritual poverty, are slaves to the new dehumanising idols of society. Above all, pupils of xxxxxxxxxxxx are encouraged to be sensitive to social and ecological issues and accept their responsibility in and to society, and respond as agents of transformation.

We believe that there is no separation between time for learning and time for formation, between acquiring knowledge and growing in wisdom. So too do we assert that revelation and reason are partners, not antagonists, that both are gifts of God and in need of each other. Intellectual development and growth as a Christian are indivisible.

Within our College, caring finds its deepest expression through excellence in teaching and a commitment to academic rigour. It is also to be found in a curriculum, and in forms of instruction, which cater for the diversity of human talents, and where attention is paid to all. The curriculum should offer our pupils the means to acquire the knowledge, skills, attitudes and values they need in order to realise their full potential. Our primary academic intention is to develop the faculties of critical inquiry and informed scepticism. Constructive critique of received wisdom and consensus reality must become a life skill, enabling pupils to make their own judgements and decisions. We also commit ourselves to the constant reappraisal of rituals and traditions.

We acknowledge that it is only in community, in an atmosphere of right relation ships, and through them, that complete formation can take place. The high goals towards which we strive are attainable only in the context of relationships characterised by love, mutual respect and genuine reciprocity. It is our belief that the prime responsibility for creating this unique Christian climate rests with all staff, as individuals and as a community. Structures should reflect Gospel and Kingdom values by ensuring inclusivity, participation and communication. These values must be reflected in the exercise of governance that repudiates exclusivity and that empowers all to be more self reliant, yet interdependent.

APPENDIX 2

PAR AND CURRICULUM DEVELOPMENT

CURRICCULUM DEVELOPMENT PROGRAMME:

What follows are some ideas on curriculum that I have found useful in explaining what the role of a curriculum is. While dealing with these keep OBE in mind but more importantly your own ideas on education **and most importantly your own ideals regarding education.**

a) 3 curricula -   Explicit curriculum.

This is what is included in all goals, aims and objectives of education systems. (OBE)

-    **Implicit curriculum.**

The implications of our actions and normal operating procedures.
Equating academic success with human success. Honours classes!
Standing in lines, not questioning authority, socialisation.
Subject privilege – what good is art/sport for your future?
You have to pass higher grade XXX to get anywhere in life!

-    **Null curriculum.**

This is the most insidious aspect of curriculum.
What we do not teach sometimes says more than what we do!
What conventional wisdom is not challenged?
Gender equality.
The seven types of intelligence not just verbal and non-verbal.
It deals essential with the exclusion of options and hence potential.

b) Constructivism.

Knowledge is a personal as well as social construction. We make meaning of our world based on what we have experienced and what we are exposed to.
The power of education to help structure social reality.
What reality (and alternatives) would we like to help build?

c) Language hegemony and privilege.

The very nature of the language we use colours our reality.

CNE a plan to produce ideal (ideology 1) citizens.

OBE a plan to produce ideal (ideology 2) citizens.

Each privileges itself at the expense of other possibilities.

d) "Self-validating reduction"

This is the self-fulfilling prophecy syndrome and as teachers we are all aware of how it works. But this applies to all areas of our lives. We create the conditions necessary for prejudices to be realised: Race, gender, religion, subjects.

This applies to the curriculum too!

The above are merely tools to help us see if our curriculum is able stand up to some critical inspection.

EDUCATION CREATES THE CAPACITY FOR PEOPLE TO TRANSCEND CULTURAL, POLITTICAL, ECONOMIC AND RELIGIOUS LIMITATIONS.

APPENDIX 3
THE PROTOCOL

CURRICULUM DEVELOPMENT PROGRAMME:

Above all, pupils of xxxxxxxxxxxx are encouraged to be sensitive to social and ecological issues and accept their responsibility in and to society, and respond as agents of transformation.

(vision statement 1999)

This extract from the vision statement highlights an ideal in our vision for the development of our pupils, namely social and ecological sensitivity. The question is do we achieve this ideal or not?

Your response to the following questions is confidential, please feel free to be as open and honest as possible. If you are not prepared to write your name on the response then please write you subject area/s.

How do you relate your daily subject teaching to the ideal stated above?

How does the curriculum package offered at the college allow for the development of social and ecological sensitivity?

APPENDIX 4

SUMMARY OF PROTOCOL REPSONSES AND REQUEST FOR PRIORITISING
ISSUES

CURRICULUM DEVELOPMENT PROGRAMME:

The following is a summary of issues that emerged from the staff protocols:

RESPONDENT 1:

❑ xxxxx has the ability to raise awareness..

❑ This is very difficult…as the boys do not even accept responsibility for themselves…

❑ The school is lacking in social awareness classes where children are asked to reflect on their society past and future, as well as their role in that future.

❑ …the lack of interest in this regard is due to the fact that boys do not view themselves as part of the greater South African society.

RESPONDENT 2:

❑ relate well

❑ ecology is a major theme

❑ pupils are taught to be aware of each others' worth

❑ litter…they believe that others are employed to pick up after them

❑ social level… some pupils treat others badly…don't fit, ostracised and bullied.

❑ Push come to shove, however, pupils will go the extra mile e.g. Chong incident.

RESPONDENT 3:

❑ Poems which express ecological and social themes

❑ As an xxxx teacher I have occasional opportunity to explore topics

❑ Buckminster Fuller-spaceship earth: co-operation = survival selfishness = death

❑ Discussion and debates on litter poverty etc "sensitivity training sessions"

❑ Students are poorly informed about life on the other side of the tracks

❑ Have snobbish opinions based more on prejudice than fact.

- Within each syllabus there are life skills areas where such sensitivity may be encouraged.
- Time constraints on forming caring future citizens of the universe.

RESPONDENT 4:

- Not sure that I consciously do
- I discourage them (laughing at each other)
- I have been challenged …about….copyright laws.
- Projects could have a social/ecological tone to them.
- The syllabus doesn't have much of a lean in that direction
- Social implication of computers makes for an interesting debate.

RESPONDENT 5:

- Above ideals are not being achieved.
- Social issues and responsibility involve pupils respect for one another, as well as respect to their teachers.
- Respect lacking with regard to homework; bunking detention; bullying; intimidation.
- Respect for others' property and littering, someone will pick up after me.
- Graffiti and damage to the desks is nothing short of appalling.
- The package itself does allow for social and ecological sensitivity, but that does not mean that follow up is done.
- Litter duty- no one will really check.
- Detention- follow up is not taken seriously.
- While on the whole everyone strives for the above, it is the little things that need to be given attention.

RESPONDENT 6:

- Environmental concerns are dealt with in most sections.

- Role playing on issues discussed and social implications.

- IGCSE is quite sensitive on environmental issues, but to a much lesser degree on social issues.

RESPONDENT 7:

- Pupils are encouraged to be sensitive to social issues through xxxxxx e.g. life's sufferings, difficulties and challenges.

- Their response is mainly theoretical or imagined, but their awareness is heightened.

- Practical; few boys become committed; visits two a year!

- The praise and recognition they receive far out weigh the effort made.

- They become saints for blisters on hands.

- I don't believe the boys are particularly interested in the ecology e.g. litter.

- Certain subjects relate to social and ecological issues.

- RE definitely focuses on social needs, but is incidental and not "holy writ"

- Practical involvement at our school is restricted to G11 and 12.

- Syllabus must provide curricular opportunities for the pupils to grow in world awareness.

RESPONDENT 8:

- Try to teach…. every action has a reaction.

- It is so important for them to take responsibility for what they do or don't do.

- Most of them are on a mission to have a good time & do as little as possible.

- They are quick to blame others for their failures.

- ❑ They show little self control + have virtually no respect for their teachers.
- ❑ If we start with minor changes……..the more major issues will be resolved more easily.

RESPONDENT 9:

- ❑ Much of what we study deals with these very issues so we are ever able to confront the students morally and spiritually.
- ❑ Great writers represent societies conscience.
- ❑ Although no work of art can possibly reform humanity, intelligent reading are didactic and often poignantly moving.
- ❑ Our work regularly involves discussions of religion, moral choices, the human condition, the earth, responsibility.
- ❑ Most senior students respond sensitively and are searching for answer.
- ❑ Very minimally since emphasis is on Maths, science and sport.
- ❑ Most don't take RE seriously.
- ❑ We offer no third language/ art etc.
- ❑ Community service is seen as a chore and very seldom continues beyond the Confirmation year.
- ❑ There seems little concern respect for the environment in the school as a whole.
- ❑ Boys don't take litter and recycling seriously at all and what's more basic than that?

The responses shown indicate how some of the staff feel about their teaching and the curriculum of the school in relation to one small part of the Vision Statement document.

What do you think are important issues to start with wrt making our teaching more socially critical?

Suggest some practical ways in which can include social awareness or critique into everyday teaching!

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| |

APPENDIX 5

SUMMARY OF PRIORITISING ISSUES

The following is a summary of the responses following on from the feedback session on the responses to the initial protocol. The respondent numbers are not the same as those from the initial responses.

The first comments are regarding what staff felt were important starting issues with regard to making teaching more socially critical.

The second comments for each respondent are with regard to practical ways in which to include awareness or critique into everyday teaching.

RESPONDENT 1:

1.Our pupils need to made aware that social class does not have any bearing on how well off you are or not – They need to realise that money is not the only criterion for deciding whether you're a decent person or not.

They need to have respect for each other's differences and learn tolerance – very often in our school 'different' means you are alienated.

…each grade could have a project i.e. sponsoring a children's home – making toys, building …(etc)

By giving of themselves (not monetary) they would become more aware of other peoples plights. – They would learn responsibility and accountability.

2. Newspaper articles as comprehension to heighten awareness.

….poetry and various novels highlight social issues.

Take pupils to shows/ theatres/ movies which make them more aware of social issues…

RESPONDENT 2:

1.(teachers as role models) seen to be working for the greater community. (ie personally) 'walking the walk'.

 …..programmes of multi cultural enrichment…. attending cultural shows/ symphony concerts/ ballets…

Adopting a long term project eg keeping an orphan for a year…. Responsible for the upkeep of old age home's garden…supplying and running a soup kitchen…. Twinning with another school to help other pupils with Maths etc.

Making a 'big buddy' system work-…non – competitive… socialising.

2. By relating our subj. matter more closely to the life of each boy- …less generalisation… more individualisation.

Studying and reading books dealing with social issues………….

Not allowing pupils to litter in our classrooms or scribble on our desks-…

…pupil exchange programme… in a different socio – economic area.

RESPONDENT 3:

1. The classroom : it's a microcosm, after all. Boys must be made aware of what is acceptable and what is not if they are to be functioning members of any community.

Effective sex education with honest adults.

Fixing RE with reality…

2. literature deals with the human condition….discussions must take issues into our real world.

….freedom to take boys on day – trips to art galleries/ theatres…soweto etc.

Class and inter-house debates….

RESPONDENT 4:

1. Respect for (a) individuals and their property; (b) teachers and other authority figures.

 Respect (even in it's most basic form of non-interference) is the foundation of a civilised society.

The boys need to understand the enormous value of respect as a tool for peace, production and peaceful change.

Every violation of other-respect is evidence of a lack of self-respect. We harm others only if we have failed to respect ourselves and our own ethical values.

2. Discuss the concepts of right and wrong – the whole issue of consequences…

Get them to understand consequences (their parents have protected them from consequences on many occasions…)

(story completion exercises)

RESPONDENT 5:

1. Discipline

Litter and graffiti

2. (SOP wrt entering and leaving classes) ….leaving the desks and litter behind for somebody else to worry about.

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