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COMPENSATORY EDUCATION - AN ANALYSIS OF A PHENOMENON: IMPLICATIONS FOR FUTURE POLICIES.

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MASTER OF EDUCATION SPECIALISING IN EDUCATIONAL ADMINISTRATION, PLANNING AND SOCIAL POLICY

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ABSTRACT

This study focuses on the phenomenon of compensatory education in post-apartheid South Africa. Compensatory education programmes have been initiated by civil society in an attempt to bridge the gap in academic achievements between pupils from advantaged and disadvantaged backgrounds. Influenced by the "human capital" theory, many of these programmes have been sponsored by business as part of their social responsibility programmes, in an effort to create a more skilled and productive work force. Targeting high school pupils, these programmes have tended to emphasise Mathematics and Science subjects

The major concern of this research was to investigate

- whether compensatory education programmes were *effective* in contributing towards bridging the educational gap between pupils from disparate backgrounds
- whether compensatory education programmes continued to be *relevant* for the post-apartheid South African youth in a rapidly changing, transforming and globalizing society.

A brief review of the causes of the educational backlog in South Africa and a history of the emergence of this particular intervention provided the background to the study. As one form of educational intervention, it was necessary to contextualize compensatory education within the education reform debate, to understand the ideologies and assumptions that underpin the intentions, and the theories that have informed the practices. A review of the international literature in the field furnished an overview of the issues involved and the strengths and weaknesses that have been documented world-wide.

A constructivist methodology was used to build a case study of one particular compensatory programme, the Engen Educational Programme, which was

subsequently subjected to comparisons with other local programmes in an effort to elicit generalised findings about this phenomenon. The findings may be summarised as follows: Quantitative assessments of enhanced academic achievement were inconclusive while qualitative responses indicated that pupils believed that they were being helped. While the programmes may have been of supplementary assistance to those pupils who already embrace a learning culture, the pupils who are most at risk lack the basic skills and language proficiency in English to cope with the Scientific subjects and many lack the staying power to benefit from this type of intervention, in its current form. The teaching approach replicates that of the school, using out-of-date teaching methods to "give" pupils information. Scant attention has been paid to guiding pupils to become self-sufficient learners who are able to engage with the material and become resourceful, skilled workers who could cope with change.

Conclusions from this study are that educational interventions supported by business and civil society are still relevant in post-apartheid South Africa. However, sponsors and management of these interventions need to learn from the experiences elsewhere in the world and institute processes of on-going evaluation to ensure that programmes are effective and that valuable resources are not being wasted. Strategies emerging from this study that need to be considered are; the fostering of efficient delivery through improved organisation; the clarification of aims and achievable goals; the development of efficient internal and external evaluative procedures; the instituting of specialised tutor training and the identification of teaching approaches, different from regular schooling, that will excite a culture of learning, ensure pupil commitment and continuity and better prepare pupils for work and for responding to, coping with and even inspiring positive change.

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CHAPTER 1
INTRODUCTION

"Although education cannot transform the world, the world cannot be transformed without education" (Robinson, 1982:31).

1.1 Purpose Of The Study

This dissertation arises out of a concern with attempts in South Africa to "bridge the gap" between pupils from advantaged and disadvantaged backgrounds through compensatory educational programmes (CEPs). Through an exploratory case study of one compensatory initiative, the Engen Educational Programme, this study seeks to examine the influences, ideologies and issues that surround this phenomenon, to locate it in a particular educational discourse and to understand its aims, its claims, and investigate whether these claims can be substantiated. The study is shaped by two main questions:

i) Are compensatory education programmes effective?
ii) Are such programmes relevant in post-apartheid South Africa?

A central aim of this study is to initiate a discussion of the place of compensatory education in the reform agenda in South Africa. While local compensatory programmes have proliferated, in the last ten years or so, very little research has been conducted into their effectiveness as an educational intervention. The point needs to be made that the funds being spent on CEPs prevent that money from being available for other needs. Therefore, from a policy perspective, there is a need to ask *how* those funds are being spent. O"Dowd (1990:94) has argued that "(e)ducation has become too expensive to be conducted without regard for efficiency and too important to be conducted without regard to effectiveness"

As an exploratory study, the scope of the work is limited. It is with this limitation in mind that it was decided to conduct this investigation by means of a case study. The case study methodology, as Wells, Hirshberg, Lipton and Oakes (1995) argue, facilitates a process of developing new generalisations about how and why a phenomenon unfolds. Cohen and Manion (1980:99) elaborate:

> A case study observes the characteristics of an individual unit to probe deeply and to analyse intensively the phenomena that constitute the life cycle of the unit with a view to establishing generalisations about the wider population to which the unit belongs.

While findings of this study may not be generalizable to all educational interventions, they may be relatable. An understanding of and insight into the perceived strengths and weaknesses of compensatory programmes, their impact on performance and attitudinal changes, and an understanding about what they mean to the participants, may help to guide future policy decisions concerning the kind of educational support which both the state and the private sector may wish to promote.

It is important to recognise that approaches taken to the question of educational reform have been largely motivated by a need to remedy *pupils' deficiencies* rather than *deficiencies of the system.* Approaches have assumed many different guises, and have been referred to as *compensatory education*, *supplementary education, enrichment programmes* or *academic development* amongst others. The field is a complex one in which terms are used interchangeably. Programmes have varied in their intentions at different times and in different contexts. For example, what would be deemed to be compensatory in the USA would be understood as supplementary in South Africa because of the different nature of the problems being addressed. (This point will be further elucidated in Chapter 2.) Given the confusion in the use of the various terms in different countries and different contexts, there is a need to define each term. The meanings attributed to the terms are my own.

1.2. Definition Of Terms

Compensatory Education refers to educational intervention programmes which seek to compensate or make good the education of children who are educationally disadvantaged and culturally deprived because of unfavourable social circumstances, "to make up for those environmental deficits in society and school which retard and limit educational progress" (Chazan, 1973:3). Compensatory programmes are understood here as instruments of social reform. The focus is the failure of society or, as Limage (1988) says in one interpretation, the imperfections of a capitalist society. Local initiatives thus seek to assist children who, as a result of apartheid policies and capitalism, have structurally been locked into inferior systems of provision. Such initiatives are concerned with filling gaps in the syllabus and helping pupils to upgrade their knowledge and understanding, to pass their examinations and to improve their prospects for future training and work opportunities.

Supplementary Education refers to supportive programmes which seek to make up for what are perceived as individual pupils' or schools' deficiencies. Many children, including those who are not disadvantaged, need help due to individual learning difficulties. These may be due to a lack of concentration abilities, immaturity, bad teaching, personality or home problems or, as Tsukada, (1988) writing about Japan, says, the demands of a meritocratic employment system.

Enrichment Programmes refer to the provision of additional stimulation, and material that would inspire and motivate pupils, and enhance chances of tertiary study, through what is perceived to be high quality tutorial systems. The term is sometimes interpreted as referring to "creative skills programmes in Art, Drama, and Music which enable students to tap deeper resources and build self-confidence negatively affected by Bantu Education" (Sisulu, 1992: Foreword).

Before concluding this section, one final terminology issue needs to be stated. When writing about disadvantaged people in South Africa, one is faced with the problem of having to use terminology that is racially based and highly contested. For the purpose of clarity, in this study, when unavoidable, I use the terms "African" when it is used by a writer, "coloured" when necessary to describe a specific group or otherwise "black" to include all those who have been historically educationally disadvantaged.

The need for, and proliferation of, compensatory education programmes in South Africa has emerged as a result of the huge gap in educational achievements and standards amongst pupils from different race groups. The causes for this imbalance are well documented and provide the background to this study.

1.3 Background

Crippling government policies before and during the "apartheid" era deprived many children of an effective education through inequality of access, huge discrepancies in per capita spending, shortages of schools, facilities, equipment and books, and underqualified teachers. Prior to the apartheid laws that created "Bantu Education", education for Africans was geared towards serving the economic and political needs of the dominant groups in society. Hunt Davis Jnr. (1984) described African education policies in the 1920s as seeking to prepare "indigenous" people to work on the land and remain in a subordinate position. As he explained, the attitude was that "South Africa's future development depended heavily on agriculture and Africans could best contribute to the country's welfare through improved farming of their own small holdings or by working on white owned farms" (p.113).

During the apartheid era, the notorious Verwoerdian concept of African education came to characterise the Nationalist government's attitude. Verwoerd said, "There is no place for him (the African) in the European community above the level of certain forms of labour" (Molteno, 1984:92). Ramphele explains the long-term consequences of this policy succinctly:

> Deliberate anti-education through Bantu Education to produce nothing more than 'hewers of wood and drawers of water' out of Africans has succeeded beyond the wildest dreams of Dr H. F. Verwoerd, the architect of apartheid. The process has now gone full circle with products of this system of education constituting the majority of the teaching core with devastating consequences for the quality of black school leavers (1992:16).

Morphet, Schaffer and Miller (1986:28) substantiate these claims asserting that the factors that "act together to produce the characteristic weakness visible within Black classrooms" are the result of a downward spiral of competence and achievement derived from an accumulation of effects deeply rooted in the legacy of the past. These factors they argue are:

- the academic weaknesses and inexperience of the home backgrounds of teachers and pupils;
- the absence of adequate role models of quality educational practice;
- the low level of professionalism amongst teachers;
- the authoritarian and hierarchical structures of control;
- the fragility and inappropriateness of the administration system.

This line of thought was elaborated in a study by Lazarus (1983:74) who concluded that pupils considered the teachers, with their authoritarian styles of relating to pupils and cruel disciplinary methods, to be the key problem in the schools. Ismail (1993:86) shares this view and comments that teachers who were previously considered highly respected professionals within the black communities, have lost status due to strikes, boycotts, sexual abuse, laziness and drunkenness.

The point needs to be made, however, as Ramphele emphasised above, that the teachers are the victims of a poor quality schooling themselves (educated to be hewers of wood and drawers of water), poor quality teacher training, unmanageable teacher/pupil ratios and a lack of classrooms, books and equipment (Ismail, 1993).

The inadequacy of the teaching corps has also given rise to a weak administrative culture in schools. The fragility and inappropriateness of the administration within many schools has been described by Taylor (1995:11), who reports that much time is lost for effective education through practices such as;

- an inordinate amount of time given to timetabling and testing;
- early closing of the school day, week (and term) and no schooling on pay-day;
- lengthy preparation for athletics;
- violence and strikes;
- the doubling of classes.

The consequences of these policies have been dramatic and are evident in;

- the 2.5 million children who are not in school (Soudien and Pease, 1994:4);
- the high drop out rate; for example, Taylor claimed that of every 100 Black pupils that entered the first grade in 1980, only 49 reached Std 5 by 1986 (in Soudien and Pease, 1994:4);
- the high rate of illiteracy - according to the Adult Basic Education report of the National Educational Policy Investigation (NEPI) "(a)t least a third of the adult population of South Africa do not have effective reading and writing skills and do not have a basic education" (1992:1);

- poor matriculation results - in 1993, 39% of black pupils passed Matric compared with 95% of white pupils (Lemon, 1995:134);
- the lack of a culture of learning;
- the very high rates of African unemployment.

Furthermore, the socio-economic conditions created by past policies, have resulted in a breakdown of family life, the destruction of communities, alienation, gangsterism and high levels of crime and violence. These in turn have led to political and economic instability and uncertainty, a reduction in enthusiasm for investment in the country, a perception of low productivity and a lack of global competitiveness.

A whole host of reactions to this situation can be identified. One of the most striking has been the attempt by communities to take control of their own education through "People's Education" (Kruss, 1988). This attempt has not, for a variety of reasons which are beyond the scope of this work, survived with time.

Other attempts which have proven to be more durable include initiatives sponsored by business. Concerned about the effects of instability on the economy locally and internationally, business corporations and international aid agencies have initiated or funded educational intervention programmes. These were established in the hope that a highly skilled populace would increase productivity, provide a growing consumer market (Chisholm,1984:387) and ensure a disciplined, peace-loving and stable society. O'Dowd (1990:94), an Anglo-American representative, talking in this language of business, commented, for example, that "it is now conventional wisdom that education is a necessary condition for economic growth". But companies' motives have also been political and altruistic. Ismail (1993:24) maintains that donor organisations saw the upliftment of black education as a social responsibility, or in the case of the private sector as a means to supply manpower needs and to maintain

stability. Hartshorne (1987) and Ashley (1987) noted that many companies sought ways to give money away in a manner that enhanced their company image, or as a response to overseas criticism.

In the Western Cape, there have been a number of educational interventions sponsored by the business community (see Appendix A). In addition to the larger projects sponsored by business, there are private after-school programmes, some of them run by individuals, for commercial reasons, while others are run by Non-governmental organisations (NGOs). All of these initiatives tend to have a *Mathematics, Science* and *Technology* emphasis.

Within the range of interventions, the Engen initiative has been one of the larger programmes and seems to be the *only one that classifies itself as compensatory education* (the others classify themselves as enrichment, outreach, academic development and supplementary programmes). Established in 1988, primarily as a service for the children of the employees of what was then called the Mobil Oil Company, this Programme was initiated, according to Programme Co-ordinator Des Roberts (interview, Feb,1995), as a result of an internal evaluation of the long term impact of the company's bursary support for the children of employees. The evaluation showed that very few employees' children were entering the company. In analysing the causes for this, Mobil learnt that the high school curricula followed by most students were tracking them away from careers in Science and Technology. In response to this the company decided to launch a compensatory programme to enhance high school achievement in Mathematics and Science.

In summary, the **intentions** of the Engen Educational Programme were;

- to serve the needs of the most needy;
- to enhance high school achievement in Mathematics and Science;
- to track pupils towards careers in Science and Technology and

- to contribute to the development of a skilled work force.

According to the CEP representatives interviewed, these intentions seem to be common to all the local compensatory initiatives (see Appendix A and D). Research is very limited about whether these intentions are efficiently implemented, whether they continue to be relevant in the current educational climate and whether they are effective in bridging the gap.

1.4. Relevance Of The Study

It is against this background that the need has emerged for a study whose overarching purpose is to uncover the dynamics of educational interventions generally but concentrating more specifically on compensatory education in the South African post-apartheid context. With the imbalances of provision of schools, classrooms, teachers and equipment across the nine provinces, the expected rationalisation of teaching posts in some provinces, and the many other problems being experienced on the school site, state funded high quality education that will bridge the gap may take many years to materialise. Based on the current debates and informed by population growth and school enrolment estimates, teacher/pupil and teacher/classroom ratios, and estimated budget allocations (Lemon, 1995), it can be assumed that education support programmes will still be needed for many years. At present the government is unlikely to be able to, alone, provide educational support or bridging programmes. As observed by Ilon (1995:18), "(e)ducational programmes aimed at increasing quality will be secondary to maximising access at the basic level for critical numbers of students". Increasingly, it may be essential for civil society to take responsibility for this task, or to participate in partnerships with government to address the problems of fragmented services and inequalities in service provision. The challenge will be to find strategies and develop policies that will ensure that the funds allocated are efficiently and effectively spent. This study is, therefore, an analysis of the phenomenon of compensatory education,

with an emphasis on the question of effectiveness and relevance, rather than a critique of the concept.

While I began this study with a reserve towards compensatory education, and would argue that there is a danger of reifying categories of disadvantage by locking the poor into programmes of compensation, and into an attitude of victim-consciousness, I am aware of the argument that, given the opportunity, people are able to become agents of personal and communal change. As is pointed out in the Schools Council Working Paper No. 27(1970:7), the fact that thousands of people have risen from humble origins to positions of responsibility and public esteem, justifies the goal of providing extra nurturing and encouragement to those who need it.

Furthermore, the expectation of large and definite solutions to complex problems, that has been a characteristic of the 'modern' era, is being replaced in recent times with humbler expectations and an understanding that gains on a smaller scale should not be underestimated. As Fullan (1993:viii) says, there is value in setting (and resetting) small goals - "introducing a seemingly small change (may) turn out to have wild consequences".

1.5 The Organisation Of The Dissertation

The study is divided into 6 Chapters. Chapter 2 constructs a theoretical framework and reviews the local and international literature in this area from the different educational reform perspectives. Chapter 3 deals with the methodological framework adopted and describes the methods used and the problems and limitations experienced. Chapter 4, the core of the study, takes the form of a case study that focuses on an evaluation of the Engen Educational Programme. Chapter 5 concludes by making general observations about the area of study, and Chapter 6 suggests implications to be considered for future

policy decisions in the area of compensatory education, and further areas to be considered for research.

CHAPTER 2
COMPENSATORY EDUCATION IN A THEORETICAL FRAMEWORK

"What we see depends on our angle of repose" (Richardson, 1994:522).

There are few formal publications available on the subject of compensatory education in South Africa. What has been written has tended to focus on evaluating a particular intervention. Many of these evaluations are commissioned by funders, business and NGOs and are not made available to the public. Very recently, South African literature has begun to emerge on the process of evaluation itself (Vinjevold, 1996). By contrast the North American literature is rich, reflecting thirty years of debate and practical experience in the compensatory education field.

The phenomenon of compensatory education emerged as a concept primarily in the USA during the 1960's, and was frameworked by liberal theories of educational reform. The first critiques of this development came from neo-Marxist (critical) writers in the 1970s. In the 1980s the concept was uniformly rejected by neo-conservatives who were becoming increasingly powerful. This critique notwithstanding, in the 1990s, large budgets continue to be allocated to compensatory education programmes in countries such as the USA, Britain, Australia and The Netherlands (Connell, 1993:21).

Compensatory education has been seized upon by a number of organisations in South Africa as a means of levelling the playing fields. It is not clear how this development has been informed by the experience and insights of initiatives and their critiques elsewhere in the world. Although much of the research in this area was conducted in the 1960's and 1970's and the literature is outdated, there are still important lessons that can be learnt from it (Well et al., 1995:19).

A consideration of different perspectives that have influenced the debate serves to locate compensatory education within the educational reform discourse. The first part of this chapter therefore seeks to contextualize the study of compensatory education within this discourse. The theories of the **neo-conservative, liberal, critical** and **change agentry** schools of thought form a starting point towards understanding what writers are saying about the concept of compensatory education.

The second part of this chapter examines the scientific orientation of compensatory education practices, the third part outlines the issues from the various perspectives that constitute the debate and the fourth part examines **what works** and **what is wrong** in compensatory education as suggested by authors in the field.

2.1 Compensatory Education Theory

Internationally, the field of compensatory education is dominated by writers who support a liberal viewpoint. As the major advocates of the concept of compensatory education, these writers have come to provide the underlying arguments for this form of intervention. Liberal theorists have also been most prominent in promoting the factors which are supposed to demonstrate the effectiveness of compensatory education.

By contrast, conservative and critical thinkers have generally rejected the whole concept of compensatory education. Bernstein (as quoted in Karabel and Halsey, 1977:67), a leading critical theorist, in his criticism of compensatory education, argued that there was a need to examine the social assumptions and power relations "underlying the organisation, distribution and evaluation of knowledge" in compensatory education. Building on Bernstein's caution, it is appropriate to examine the assumptions, and the ideologies that underpin different approaches to the concept.

2.1.1 Liberal Perspective

A **liberal** view point, according to Limage, holds that "the capitalist system is basically a sound one but that action is required to compensate for the social consequences of 'imperfections' in the capitalist economy" (1988:62). Spaulding (1988), interprets the liberal perspective as a belief that individual intelligence is influenced by the socio-cultural environment, and therefore failure can be explained through problems such as irrelevant curricula, poor teaching methods and a lack of facilities. Feinberg and Soltis (1992:31) report that liberals justify compensatory programmes "on the strictly ethical grounds that fairness dictates that handicaps be compensated if a just society is to be achieved". Morphet, Schaffer and Miller (1986:72) see compensatory education as a reformist measure whose key positive feature is its ability "to penetrate areas closed to the sponsors and to stimulate processes of action which will, of themselves begin to change the situation in the desired way".

Finding its roots in the period of the Enlightenment, liberalism promotes the idea of freedom of the individual and links education to economic growth. According to Ismail (1993:86) implicit in the liberal philosophy of education is the idea that "education is a leveller in society and a way out of poverty". Assumptions that underpin the liberal philosophy of education, according to Limage (1988), are characterised by the following lines of thought;

- that poverty is causally linked with under-education and this deficiency can be remedied, making it possible for the poor to participate effectively in the capitalist economy;
- that the criterion for success is academic merit; personal income and occupational status depends on one's productivity as a worker; this productivity is, in turn, derived from one's stock of 'human capital' which includes basic education, attitudes and job skills;

- that increased technology will require increased education and literacy levels throughout society and
- that poverty perpetuates poverty and the deficiencies that characterise the culture of poverty can be remedied by interventions which should come from public resources and initiative.

Encouraged by the civil rights movement and President Lyndon Johnson's "war on poverty" (Ornstein & Levine, 1985:411), this commitment to equal opportunity prevailed throughout the 1960's and 1970's in America. It generated efforts to ensure greater social equity but was criticised by conservatives and critical economists who claimed that it had yielded few results (Limage, 1988). It was also criticised by politicians and scholars on the left who claimed that it drew away attention from the real deficiencies in schools and focused instead on alleged deficiencies in the community, family and child (Chazan, 1973:15).

2.1.2 Critical Perspective

While both the liberals and the conservatives saw poverty and unemployment as a result of deficiencies of the individual, the **critical** school of thought supported the view that it was not the children who were deficient but the system. In an article appearing in 1970 entitled "Education cannot compensate for society", Bernstein (quoted in Karabel and Halsey, 1977:65) attacked the concept of compensatory education which he argued "misleadingly direct(s) attention away from the failings of schools onto the alleged deficiencies of children and their families". Points of concern from this perspective are;

- that the structure of the labour market and free market economic forces require the education system to prepare students for adaptation to a fundamentally inequitable capitalist-based society which has an interest in a significant segment of the population remaining poor (Spaulding, 1988);

- that the liberal meritocratic approach to equity is a device of the elite to give children of the rest of society the impression that they have had a chance. Once such children fail, their aspirations 'cool off', they assume it is their fault and are then prepared to accept an inferior role in society as their due (Spaulding, 1988, Tsukada, 1988);
- that intervention programmes will not have long-term effects because all the aspects that affect children such as their home environment, the school system and the market orientation have to undergo radical change before any real development can take place. Ornstein & Levine(1985) mention the critical writers' conviction that only major social and economic changes in basic policies dealing with full employment, affirmative action and income redistribution can give the poor a meaningful opportunity. Chazan (1973:9) illuminates this perspective saying that:

  > if a deep and meaningful change is to be expected (in society), only a long-range, comprehensive and systematic attack on the value orientations of the community, a reform of the structure, content and mode of operation of the entire school system, and active participation of the entire society in a process of transformation towards a differently organised life pattern, can bring it about.

- that "catch-up" initiatives, which only serve a few people by inducting them into a modern system, defined by corporate capital "bosses", and privileging western culture, are elitist and ineffective. The same opportunities must be available for all, according to this viewpoint, and all stakeholders must participate in constructing or designing the system;
- that "intelligence is largely a cultural phenomenon, is influenced by private and public environments and cannot be fairly measured" (Spaulding,1988:6). This perspective asserts that apparent ability

should not be a barrier to access, that each person is special and important; that the system must be adjusted to suit the needs of each person, who will then be better equipped to serve the system.

While most critical theorists seem to reject the notion of compensatory education, Jeevanantham (1993:127), writing from a critical perspective in South Africa, believes that the inequitable distribution of resources can only be rectified through the mechanism of compensation. His philosophy is that education is a human right, that everyone is entitled to an equal education. He rejects the liberal and conservative "fallacy" of *equality of opportunity* as meaningless on the grounds that not all potential educands "have the power to use the opportunity". He makes the argument that one sector of society, the injured party, "excluded from the educational conversation because of the over-consumption of the educational resource by another group", should be compensated by the responsible party.

2.1.3. Neo-conservative Perspective

The **neo-conservative** perspective challenged liberal and critical thinking and has come to dominate the debate in the western world, in the newly industrialised countries (NICs), and also in many of the economically dependent, developing countries. This viewpoint, Limage explains, assumes that "a capitalist economy offers rewards for ambition, ability and hard work. An unsuccessful individual is thus deficient in one of these areas" (1988:64).

While the liberals consider that the environment plays a role in the individual's ability to compete in the economy, the conservative viewpoint holds that the individual's fate is his/her own responsibility and that there is, therefore, no justification for public investment in compensatory programmes. The conservative approach, according to Spaulding (1988) is closer to the way

traditional education systems operate. Assumptions that underpin this perspective are;

- that aptitude and intelligence are innate;
- that schools act as a filtering system, separating students based on merit (Spaulding, 1988);
- that children's achievements are influenced by their class and their culture which can not be changed through schooling;
- that compensation is a welfarist notion that contributes to a culture of entitlement which perpetuates poverty and dependence;
- that increased educational attainment in large populations creates 'credentialism' in the labour market whereby higher diplomas are required than are really necessary for the work being done, leading to a demand for higher wages. This results in employers limiting their labour force numbers causing an increase in unemployment;
- that liberal and progressive education had led to schools being distracted from the emphasis on the transmission of basic skills and the pursuit of excellence with consequences of wasted resources and a drop in standards. Linked to this thought is the 'cutback mentality' which maintains that intervention should be marginal - if people want to improve their lot in life they must find ways themselves.

While each of these perspectives has some points of validity, they also have certain weaknesses. The impact of the conservative view, as pointed out in the Schools Council Working Paper No. 27 (1970:8), may be that the poor will get poorer until the only alternative is despair and revolt leading to crime, violence and instability. The liberal view according to Ismail (1993) neglects to give sufficient regard to efficiency and is a recipe for a "culture of entitlement". The critical view, according to Chazan (1973:9), requires a radical change from a free market system to a socialist system which, as I see it, is unlikely to happen

in the near future given the state of play of the economy. In particular, the ever-decreasing resources available for social services such as education would limit the possibility of a quality education for all. Furthermore, as Chazan says, history has drawn attention to a debilitating passivity that seems to develop when social services provide for all one's needs and people are no longer motivated by an incentive for survival. These perspectives inhibit faith in the potential of compensatory education. To counter this discouragement, a different perspective is offered by the change agentry approach.

The three perspectives described above all fall within a **modernist** ideology that presumes that the future can be controlled and predicted, that growth of the economy will generate security and prosperity, and that education will accelerate economic growth. Spaulding (1988:14) outlines the prevailing attitude:

> The more a nation produces, the more it will have to distribute. For this reason, governments of all ideological persuasions are concerned that education produce young people who can contribute to productivity and development, however defined by each society.

The fourth perspective rejects this modernist approach of control, predictability and large solutions in favour of more tentative, solutions that may be partial, temporary and location specific.

2.1.4. Change Agentry Perspective

Suggested by Fullan (1993), this perspective interprets the needs of education in a changing, globalizing world quite differently. Fullan defines this perspective, which he calls change agentry, as "being self-conscious about the nature of change and the change process" (p.12). He makes a number of points to illustrate this approach. He explains;

- that change is a constant in life, with complexity, dynamism and unpredictability considered to be normal. Therefore, "the moral

purpose (of education) is to make a difference in the lives of students regardless of background, and to help produce citizens who can live and work productively in increasingly dynamically complex societies" (p.4). Vedder (1994) supports this attitude, when he states that individuals need to be helped to become self-supporting in a society which becomes increasingly demanding;

- that individuals change systems *together* and conflict is a necessary part of change. Usher and Edwards (1994) claim that in the post-modern moment, "norms have to be struggled over and in this struggle everyone must assume a personal responsibility" (Fullan, 1993:27);
- that a new mindset about educational change is needed. Educational change should be seen as a journey of unknown destination and a constant search for understanding, knowing there is no ultimate answer" (p.20);
- that while change is mandatory, growth is optional; "(the) ability to manage change is an essential skill in post-modern society" (p.135). People can be educated to respond to and cope with change or they can be challenged by, and learn from, each experience;
- that with education, knowledge and learning being the issues of the day and with the growing importance of the "knowledge" workers, interventions are required that are dynamically connected to the changing environment and that will produce an informed, skilled and compassionate citizenry.

Fullan (1993) declares that this ability to cope with change and learn from each experience, is the "generic capacity needed for the 21st century" (p.136). This will require the combined effort of people - change agents - such as teachers, parents, corporate sponsors and service workers who will have to begin with changing themselves before they can expect their students to become change

agents. Korten (quoted in Hofmeyr, 1987:121) suggests that we are all in a "learning to become" state and Godsell is reported to have stated that "in the real world of ethical action, people have to deal with ambiguity and second best solutions. However they must act; paralysis by analysis must be avoided" (quoted in Hofmeyr, 1987:123)".

Fullan (1993) suggests that a big vision with small building blocks can create consensus and progress and develop generative capacities that can anticipate and cope with changes as they occur. The School Council Working Paper No.27 demonstrates a similar attitude to Fullan's approach when they say that "this world is a most unfair place and ... some children in our society are luckier than others ... we can only, at best, put partly right what is fundamentally wrong" (1970:43). This is not something that can be mandated from the top. It is part of a long process. The state and business need to provide a facilitative environment that enables and encourages people to develop themselves as change agents. Support is needed for innovation and experimentation in content, methods and educational structures, and as many opportunities as possible should be provided with the hope that these may have a ripple effect. Limage (1988:72) draws attention to increased focus on small-scale initiatives that are self-reliant but says that "initiatives flourish best in an overall context of encouragement through public finance and political will".

While the change agentry philosophy may provide a better ideological motive for compensatory education, clearly the concept of compensatory education to date has been underpinned and driven by a contested liberal educational philosophy. This philosophy is based on a certain set of values concerning the *purpose* of education and is characterised in South Africa by a dominant approach, that emphasises preparing pupils for bettering their economic condition rather than success in living, which H'Doubler (1940) claims is quite a different goal. This approach has gained dominance due to the funding practices of compensatory

education in South Africa, where such initiatives have been funded privately, mainly by business.

2.2 The Dominant Discourse

In South Africa, the response of business to the crisis in education, induced by apartheid, has been strongly influenced by the "human capital" theory (Chisholm, 1984; Gilmour & Soudien, 1994; Hofmeyr, 1987; Ismail, 1993; Randall, 1987; Taylor, 1996), which asserts that people are potentially a resource, or as Roxborough (1979) puts it - a commodity, and should be developed to be productive contributors to the economy.

While reform discourse in the 1920s promoted practical and agricultural education for Africans, in the 1990s "relevant knowledge" is widely understood to mean technological education - developing humans as resources in an economy that privileges scientific and technological progress and Western cultural norms:

> If technology has been at all times the basis of the society's progress, its role in shaping the destiny of nations is even more crucial in modern times. Since the beginning of the capitalist era, the technical level of any country has directly determined its international position. World military, economic and political competition forces the technically backward countries to adapt or perish, and technical maturity appears more and more clearly not only as the basis of the country's prosperity and power, but also as the condition of the preservation of its cultural identity (Yachir, no date: 1/2).

South African CEPS are strongly influenced by this approach (Hartshorne, 1987; Norenius, 1994; SAIRR Report, 1994). Their argument, in essence, is that technology paves the way for progress. This argument has come to be known by the terms *scientism* and *economism*. Scientism refers to the belief that the scientific method is the only valid approach to knowledge (Capra, 1982) and that technology and technicism are the only means by which the problems of society may be solved. Economism could be explained as a belief in the veneration of

material wealth as being essential for the overall well-being of society (Schools Council Working Paper, 1970:7) .

Within this argument, subjects such as Mathematics and Science, as the tools in trade of the scientists, engineers and skilled technicians of the "Information Age" society, are elevated to positions of dominance. Lyotard, linking the principle of educational performance to the requirements of efficiency within the social system, made the forecast that training in "telematics" (Computer Science, Cybernetics, Linguistics and Mathematics) would most likely come to receive priority in education (Usher and Edwards, 1994).

Singapore, which is known as one of the economically successful "Asian Tigers" provides an example of educational reform that was influenced by this approach. Prime Minister Lee Kuan Yew initiated educational policies that were intended to expand the proportion of engineering majors who would be able to "increase the things that people want to consume" (Chang,1995:459). At the same time, enrolment in the Arts and Social Science fields was discouraged. It was not considered a priority to produce innovators and research leaders because most of the major technologies were being introduced by multinational corporations or purchased from other countries:

> The basic role played by the education of Singapore has been to provide an adequate skilled labour force and a sufficient number of economically productive professionals to ensure highly effective use of the imported advanced technologies (Chang, 1995:460).

The same attitude has predominated in Japan since the 1970's when education became a national preoccupation driven by industrial need rather than intellectual curiosity (Pettersen, 1993). As an educationally stratified society, career opportunities, status and self-esteem were strongly related to educational attainment. Under strong pressure to perform, Japanese pupils attended after-

school supplementary education classes in the afternoons (called Juku or Gakusha Juku). In these classes, they reviewed school texts and learnt examination techniques in Mathematics, Science and English to improve their chances of acceptance into tertiary education. These classes, offered in small and individually owned establishments, were attended voluntarily by large numbers of pupils and were funded by parents (Tsukada, 1988). Rapoport (1990:140) observes, however, that "Japan is changing and no longer needs legions of worker bees. Rather, the country now requires more thinkers, creative people and students who can question established ideas, not merely memorise them".

While local educational interventions have been sponsored by NGOs, in contrast, whether they are compensatory, supplementary or enriching, in countries such as the USA, Britain, Israel and Australia, interventions have been initiated and funded by their governments. For example, during the 1960s in the USA, the "Title 1" (later called "Chapter 1") bill of legislation was passed providing for compensatory education for children of low income and immigrant families (Miller, 1967). The objectives of these programmes, often operating in situations where the demand for unskilled labour was rapidly declining, were to reduce and even prevent high school drop-out and to re-integrate drop-outs into the formal educational system. Ornstein & Levine, (1984:416) draw attention to the tendency of the programmes in these developed countries to focus on *language and communication skills, and basic skills,* (this refers to mechanical skills of spelling, decoding of words and simple arithmetic computation).

In line with the economic/scientific approach mentioned above, in South Africa Mathematics and Science have been targeted as areas of need because of a shortage of qualified Mathematics and Science teachers in the black schools, a lack of Science laboratories, equipment and books and the extremely low number of pupils studying or passing these subjects (SAIRR report, 1994). For

example, Malherbe (1994) reported that in 1993, 4% of pupils in ex-DET schools studied Mathematics on the higher grade; of these only 1 in 6 passed. Of the 3.5% of pupils who took Science on the higher grade in 1993, only 1 in 9 passed. This has led, further down the credentialling process, to a severe shortage of graduates in the technical and engineering fields.

There is no doubt that there is a need to provide extra assistance in the scientific subjects. As it is written in the 1995 White Paper on Education and Training,

> An appropriate mathematics, science and technology education initiative is essential to stem the waste of talent, and make up the chronic national deficit, in these fields of learning, which are crucial to human understanding and to economic advancement.

At the same time, other subjects that help to develop children's innate knowledge, independence and interdependence, creativity, resourcefulness, self esteem, and ability to communicate and relate to others, and which are integral to facilitate an optimal learning environment, have tended to be marginalised in South Africa (Westag discussion document, 1995). Fullan (1991:23) provides a reminder that the most important questions of *what kind of human beings* and *what kind of society* one wants to produce, are often overlooked.

Despite my reservations about the prevailing "scientism-economism" emphasis in education, the research question is informed by an understanding that this is unlikely to change in the near future. There is a need to induct people into this dominant system of power, to enable them to perform in society. It is important, however, not to lose sight of the need to question what education is for and how to develop human beings who are creative and critical. The change agentry perspective offers an alternative way of thinking about educational reform.

Before one can begin to identify strategies that may contribute to the small efforts and building blocks referred to in this perspective, the issues that

dominate conservative and critical writing in this field and the strengths and weaknesses of the practices within compensatory education need to be examined.

2.3 Issues that Dominate the Debate

Responses to compensatory education in the past have been either dismissive, as in the conservative and critical viewpoint, or from the liberal viewpoint, constructive. Certain issues dominate the debate such as the influence of genetic inheritance (nature versus nurture), culture and cultural capital, social class, time period, selection procedures and target level. One of the most highly contested issues is that of inherited intelligence.

2.3.1. Genetic Inheritance

Conservative writers argue that intervention programmes have tried to change what cannot be changed to any great extent because genetic factors are more important than environmental factors. Feinberg and Soltis (1992:32) explain this point of view which they call the "intellectual impediments model", that people are born with or without natural ability, that different groups are endowed with different intellectual capacities and therefore compensatory education will not be able to close the gap in intelligence.

A key moment in the history of compensatory education was signalled in 1969 when Jensen questioned the assumptions on which educational programmes had been based and claimed that "compensatory education tried and failed because genetic endowment rather than the nurturing situation, was the primary culprit" (quoted in Stickney and Plunkett, 1983:288). Jensen (1969:3) stated that

> The chief goal of compensatory education - to remedy the educational lag of disadvantaged children and thereby narrow the achievement gap between minority and majority pupils - has been utterly unrealised in any of the large compensatory education programmes that have been evaluated so far.

Basing his opinion on IQ tests, Jensen claimed that "genetic factors are strongly implicated in the average Negro-white intelligence difference" (p. 82). Outraged responses followed his claims. Brazziel (1969) accused Jensen of using IQ tests based on white supremacy psychological theory. Kagan, (1969) accused him of inadequate evidence and illogical conclusions. Hunt (1969) accused Jensen of having a limited view of the learning process. Elkind (1969:319), influenced by the Piagetian description of intelligence, argued that "intelligence is 'an extension of biological adaptation' and is characterised by ability to assimilate ... and accommodate". Yinger et. al. (1977:6) deny the significance of inherited intelligence and argue that "socially shared knowledge and methods of training, more than inheritance, set the ceiling on intelligence". They claimed that it is more important to lift the base of shared knowledge than to dwell on the range of inherited differences.

More recently, genetic arguments have surfaced once again in what Apple (1995:27) calls conservative restorational politics. Writers Herrnstein and Murray" (1994:91) make the argument in their best-selling volume, "The Bell Curve", that intelligence is inherited, that it is differentially distributed among ethnic and racial populations, that intelligence accounts for the successes and failures in life and that education cannot overcome intellectual deficiencies. They claim that there is no proof that compensatory education has had any effect in bridging the educational gap (p. 399). House and Haug (1995:263-271) dispute this point of view calling it "convenient scapegoating", - a means for the conservatives to put the blame for social stratification and the deterioration of society on the unintelligent, especially minorities and immigrants.

2.3.2. The Influence of Culture

Counterpoised to this intellectual impediments argument is what Feinberg and Soltis (1992:32) call the "cultural impediments argument". This argument places less emphasis on natural ability and native intelligence, in favour of culture and family background as factors that limit children's motivation and self-discipline. Many writers approach this argument from the other side. Meijnen (1991), for instance, advances the position that schools attempt to impose a foreign dominant culture and fail due to an inability to influence the home culture. He claims that education is an organised and professionalized transmission of culture with "relevant knowledge" defined by the school or programme, but argues that culture appears to be resistant to manipulation by institutions such as schools. Bernstein says that "patterns of power and control penetrate the educational process at every turn" (quoted in Karabel and Halsey, 1977:68). He blames poor academic performance on a "culturally induced backwardness transmitted by the linguistic process"(p:65).

Blaming cultural differences for the failure of educational interventions in South Africa, Dostal (1989:ix) wrote that " up to the late 1970's education was hailed as the panacea of development. Since then it has become increasingly obvious that educational expansion does not necessarily lead to social and economic advancement". She was strongly criticised by Bennel & Swainson (1990:8) for claiming that disadvantaged people could not gain understanding from education.

Yachir (no date:17), on the other hand, insists that embracing the dominant culture is essential, that traditional cultures need to move with the times:

> African countries are facing a formidable dilemma: they must find the means to promote a technically innovative culture through a double movement of technical progress and cultural change, or they will continue to suffer both from technical dependency and cultural degradation.

Extending the importance of culture in children's ability to succeed academically, Bernstein (quoted in Karabel and Halsey, 1977) and Meijnen (1991) emphasised the importance of *cultural capital* in the learning process. Cultural capital was defined by Chang (1995:470) as "cultural potential which can be utilised for educational attainment, for example, education-related values, aspirations, knowledge, sensitivity to differentiation and analysis, language skills". He alleges that cultural capital is obtained through family socialisation and unequally distributed along class lines with upper class children having an advantage. Notwithstanding this, his research on education in Singapore, indicated that the *polarising effect* of class and culture can be reduced by the *equalising effect* of ensuring financial affordability and preferential aid to disadvantaged groups.

Troyna (1988) criticised what he called a cultural deficit perspective, on the grounds that culture is dynamic and ever changing and culture is often connected by writers with ethnicity. He cited as an example the view commonly held that Asians and Jews are high achievers because the two groups show a powerful belief in the value of hard work and a zealous regard for the role of the family. He dismisses this view on the grounds that ethnic groups are not necessarily culturally homogenous. He sees this perspective as enhancing cultural generalisation and prejudice.

This view is consistent with that of Stahl (1987), who, when comparing the educational achievements of famous Jews in the sciences over the last two centuries, stated that: " (w)hen Jews are prominent or absent in some field of endeavour there must be reasons for it other than some innate or cultural quality" (p.158). He claims that Jews succeed in the sciences in developed countries where universities open doors to them and where there are role

models in their communities. He contends that success should not be attributed to culture but to educational opportunity, urbanisation and time.

2.3.3. Social Class

Along with cultural background, social class is also blamed for educational under-achievement and intervention failures. Class is defined by Chang (1995) as large scale groupings of members who share a similar power base, similar power relations with other groupings and subsequently similar material and social returns. Based on Kohn's theory, Meijnen (1991) describes how social class is thought to determine a person's stance towards social reality and thus his/her response to education;

- upper class people are thought to revere abilities of initiative, occupational competence, independent judgement, creativity and self direction, and to attribute success in life to individual abilities and effort (empowered);
- lower class people are thought to believe in social conformity (parents stress obedience), gender role behaviour, externally imposed standards and to believe that they are at the mercy of forces beyond their control and understanding. Changes in occupational position and success at work are thought to be determined by external factors (disempowered).

While conservative writers believe that educability is determined by social class and educational interventions are therefore doomed to failure, a change in class stratification has been targeted and achieved in Singapore. According to Chang (1995) and based on the belief that job status affects class membership, this has been done in two ways; firstly by facilitating economic development to create the functional imperative to expand the proportion of upper class and, secondly, by equipping the disadvantaged to qualify *to respond* to the imperative to join the upper classes. By promoting industrialisation and by the popularisation of

secondary education and the training of lower middle and middle levels of skilled labour, more people achieved improved occupational status as professionals, technicians, executives and managers, and the size of the upper class increased. In this way, Chang believes, education performs a double function. It is used as a vehicle for social change as well as for social reproduction (p. 472).

2.3.4. Time Period

Chang's research may provide a glimmer of hope for South Africa's very large proportion of educationally deprived people. However there seem to be no "quick-fix" solutions and an extended length of time seems to be a requisite for change. Unlike the local "short-term programmes from which immediate benefit was sought" (Hartshorne,1987:40), the improvement in educational achievement of disadvantaged pupils in Singapore, as indicated by the expansion of upper class membership, has shown results over a 30 year period since independence. Moreover, experience in the USA points to a similar conclusion. Early reports from the Title 1 CEPs tended to dismiss them as unsuccessful. According to Kagan (1969) this was due to inadequate development and evaluation of the programmes. Ornstein and Levine (1985) explain that the failure of the earlier programmes (pre-1975) were blamed on a watered down impact due to the large number of children served, overly large classes, and teachers that were inadequately trained. Over time these mistakes were rectified. The fact that current funding (30 years later) is still allocated to these programmes in the USA, suggests that these programmes are still considered beneficial. Similar problems to those experienced in the early years of American CEPs have been recorded in the local programmes (Ismail, 1993).

Stahl's (1987) study reinforces the view that 'length of time' is vital to enhance achievement. He asserts that although a total reduction of the gap takes a long time, it is possible to help in the advancement of the individual by making opportunities available to assist them in preparing themselves to take

opportunities (p.157). Speaking about the ripple effect of individual achievements on others, he claims that:

> The rise of the few affects the self-perception and directs the efforts of many others. Although it may not lead to a statistically demonstrable closing of gaps, it will open paths of upward mobility and educational achievement for many individuals belonging to disadvantaged groups and eventually cause the disappearance of a feeling of social marginality (p.158).

2.3.5. Selection

Another issue that has sparked on-going debate relates to the target group for these interventions. The concern is with the effect of a watered down impact, as mentioned in 2.3.4., due to the attempt to serve large numbers. Admission procedures are not the same for all programmes. Some programmes in the USA only ***select*** students with potential. Pupils are targeted who have been handicapped by economic, cultural and educational deprivations: "It seeks to rescue the youngster whose brains and ability may be lost to society, or worse yet, be directed against society unless he can be motivated to apply his talents and energies constructively" (Miller, 1967:170). Miller maintains that in order for compensatory education to work it is important to identify and select promising youngsters. In contrast, pupils in South Africa, according to the representatives of all seven programmes who were interviewed, are ***not selected***. Programmes target any pupils from disadvantaged backgrounds and pupils come by choice. Consequently, classes tend to be very large. Some writers are adamant that classes should be small and tutorial in nature, while others believe that large classes in the hands of excellent teachers are not a disadvantage.

2.3.6. Target Level

The debate about the age at which pupils stand to benefit the most from interventions, is just as unresolved. While the *secondary school level* is targeted for interventions in South Africa, in the USA, a variety of programmes target

different educational levels. Proponents of pre-school interventions such as the "Head Start" Programme argue that intervening at the secondary school level is already too late (Finn,1990, Stickney and Plunkett, 1983). In the USA, pupils who attend "Head Start", in order to sustain the benefits derived, can continue with the "Follow Through" Programme. The "Middle Start" Programme targets younger adolescents and the "Upward Bound" Programme caters to pre-college students. In the Netherlands, the *primary school level* is targeted to prevent repeats and to increase intake to secondary schools (Slavenburg, 1991).

Having established that despite the controversy about compensatory programmes, educational interventions of some kind must continue to be offered, it is important to identify what makes programmes effective and what specific problems are encountered

2.4 Strengths And Weaknesses Of Compensatory Education Practices

The strengths and weaknesses of programmes pin-pointed by the liberal authors in the field overlap a great deal and there seems to be a general consensus of **what works** and **what is wrong**.

2.4.1. **What works?**

Writers such as Miller (1967), Chazan (1973) and Ismail (1993), amongst others, have identified aspects of compensatory education which are effective. One of these is an improvement in pupils' feelings of personal worth.

a) Personal Worth

Miller (1967) reports positive outcomes from Compensatory Education, "a turnabout in students from an attitude of apathy, or even hostility, to an eagerness for learning and a new sense of responsibility in their own destiny" (p.171). While he believes that the responsibility for success of the academic venture should lie on the shoulders of the school system, he says of his

experience with the "Upward Bound" Programme that "watching them switch on their potential is one of the most exciting things that I've seen in my teaching career" (p. 174). He says that pupils show improvement in marks and personality, gain maturity, a sense of self worth, improved self image and confidence in making their own future. He attributes successes to factors such as individual attention, small classes, a freedom to pursue talents or concentrate on problem areas and an awakening of new cultural and creative interests. He claims further that the key that releases the student to develop his/her potential is the realisation of his/her personal worth and ability to succeed despite the deprivation of his/her background - that (s)he can succeed if (s)he tries.

While claiming all these successes, Miller also comments on the fact that very few programmes include evaluation. Admitting that projects are generally positively evaluated by their directors, it is unclear on what he has based his assessment of success.

b) Regular Attendance

Another aspect that has been identified as essential for effectiveness is regular attendance. The Langa Enrichment Project (LEP), serving pupils from the DET schools, recorded a substantially improved pass rate in 1993 amongst their matriculation pupils **who attended regularly**. Of their pupils, 62% passed, compared with the general pass rate of 38% in DET schools. Furthermore, two-thirds of the DET pupils in the Western Cape who achieved university exemptions, attended the LEP regularly (SAIRR Report 1994), proving, they believed, that with regular attendance pupils could enhance their academic performance.

c) Cost-effectiveness

Stickney and Plunkett (1983), in demonstrating that compensatory education has some measure of success, attest to the cost-effectiveness of CEPs on the

grounds of the long-term savings on special education costs and other special services through the lowering of delinquency rates, fewer arrests, better high school completion rates and higher employability. Chazan (1973:14), on the other hand, contends that many writers consider compensatory education to be a lost cause, that has not proven to be successful in achieving its aims and has been a total waste of money.

Summarising the positive aspects of compensatory education practices recognised by Miller (1967), Haywood (1982), Chazan (1973), Spaulding (1988), Stickney and Plunkett (1983) and others, the main strengths reported are that:

- pupils respond well to the more relaxed atmosphere that make the CEPs different from school and more conducive to learning;
- the voluntary nature of their attendance contributes to the development of a "culture of learning", with pupils committing themselves to making an extra effort in their free time;
- its accessibility in South Africa to anyone contributes to egalitarian principles;
- the teaching is usually better, teachers are more accessible and exposure to different teaching styles and perspectives makes the work more interesting.

2.4.2 **What is wrong?**

Far more has been written about the problems experienced in these programmes. According to Plunkett (1991:340) "mandating quality is easier said than done". Criticisms that have been levelled at these programmes target educational, evaluative, attitudinal and local specific aspects .

a) Educational aspects

Haywood (1982:293). claims that "in general, compensatory education works, but it does not work as well as it could". While the success of many CEPs

derives largely from the dedication, enthusiasm and ingenuity of individual teachers rather than generalizable strategies, or administrative structures, teachers are not adequately trained for this specialised type of teaching.

Hayword believes that there are no gains in tutoring in academic subjects in which pupils are deficient but that the emphasis must be on cognitive development. He claims that intrinsically motivated children achieve higher levels than extrinsically motivated children and therefore the long term effects of interventions are mediated by their effects on motivational systems. While he does offer suggestions, he also asserts that it is impossible to isolate methods and practices that work because classrooms are such a complex mix of individual differences in students, teachers, methods, goals, physical and social environments. This complexity makes it difficult to evaluate what is working and what is wrong.

b) Evaluative aspects

Despite some claims of success, evaluation measures of compensatory educational outcomes are neither uniform nor comparable, and in some cases, are non-existent. Increasingly there has been a call for accountability to prove that money being spent on educational intervention programmes produces a discernible effect on pupils (Taylor, 1996:1). Taylor, explaining that evaluation is essentially about accountability, claims that the methods employed in evaluation practice in South Africa "lie below the quality threshold required to inspire confidence in the validity of their principal findings" (1996:2). Jansen concurs noting that until recently, reports using people's perceptions in an untested way have tended to provide the major source for arriving at notions of success (Jansen, 1996:14).

Evaluation procedures and methodology are currently being vigorously debated, about how to construct measurable and quantifiable indicators that would be

scientifically acceptable (Morphet, 1996), the need to construct baselines for comparisons or the ethics of constructing control group studies and whether evaluation findings are, in fact, generalisable. Jansen's opinion is that designing evaluation studies to include a control group could blind the evaluator to complex and unpredictable classroom level processes and interactions which shape the learning outcomes and because evaluations are typically done with context and culturally-specific constraints, generalising information generated in evaluations is problematic (1996:17,18). Weingart (1996:24) draws attention to the need for baseline data on which to judge impact, effect or achievement and the difficulty experienced by evaluators in achieving this due to lack of data, funds or time.

Another problem pertaining to evaluation was highlighted by Slavenburg (1991) when he noted that the *programme-as-implemented* must be evaluated rather than the *programme-as-intended.* He says that only a sufficiently implemented programme can be assessed because otherwise it would be difficult to determine the effects caused by the insufficient implementation level from the effects caused by the programme itself. For Louw (1996:5), disentangling the various factors that contribute to making a project effective would require distinguishing between short-term effects which he calls 'outcomes' and long-term effects which he calls 'impacts'. Failure to disentangle these effects could distort the evaluation findings. Morphet et. al.(1986) point out that at the implementation point the project takes on a life and dynamic of its own. Objectives shift and it is difficult to track the long-term effect on the people helped. Adding to this the contending definitions of effectiveness, qualitative effects are said to be difficult to measure (p. 42).

Haywood (1982) finds that the inadequacy of evaluation data related to the effectiveness of educational strategies is a limitation and suggests that evaluation strategies need to be developed that take into account complex

interacting variables and criteria for purposes of policy formulation, monitoring and revision. These should include measuring strategies for attitudinal variables such as tolerance for change, enthusiasm for learning and willingness to subjugate other personal goals to the primary goal of enhancing one's education. Assessment procedures need to be designed which investigate whether pupils are taking responsibility for upgrading their learning outcomes or, conversely, passively expecting rewards without exerting personal effort.

c) Attitudinal aspects - A Culture of Entitlement

The major stumbling block that afflicts compensatory education recipients is described by Ismail (1993) as the "culture of entitlement" or Welfarism. This often develops when the intervention is perceived as charity. In the South African context, pupils receiving free assistance often perceive themselves as victims of the apartheid system who are entitled to assistance to redress the wrongs of apartheid. This leads to unrealistic expectations and dependency on others for resolving problems. This victim consciousness on the part of the students is inadvertently encouraged by staff when, for instance, rampant dishonesty is excused because the pupils are considered disadvantaged (p. 94). Ramphele warns of the corrupting influence of this welfarist attitude: "the articulation of white guilt together with black entitlement disadvantages blacks as it treats them as subhumans to whom different standards, structures and discipline apply ... limits the capacity of blacks to act as agents of social change" (Ismail, 1993: 94). The capacity to become agents of change, may be exactly what is needed to counteract the victim consciousness and, in line with Fullan's perspective, could become the guiding force behind future compensatory programmes.

The ways in which the culture of entitlement manifested itself in one compensatory programme - the LEP, as reported by Ismail (1993:84), were that:

- pupils expected to be "given" knowledge, preferring "chalk and talk" lecture methods that focused on the teacher and allowed them to be passive, rather than participatory methods that required their active input;
- students felt easy about asking for support but less inclined to give support - for instance not being prepared to pay fees or to help with cleaning up;
- students demanded rather than requested more teachers, more subjects, more study guides, more lunch and more transport money (Ismail, 1993:92).

Ramphele says that individual entitlement demoralises those on the receiving end:

> They begin to see society as the agent of change, rather than themselves. For example, black students are victims of wanton neglectful educational policies of the National Government, but they have to apply themselves individually to their studies and utilise whatever support programmes are put at their disposal to succeed. It would be futile to plead victimisation and demand special treatment, unless this is matched by a determination by the individual to take responsibility for his or her own success (quoted in Ismail,1993:22).

Ismail makes certain suggestions to diminish the corrupting influence of an entitlement culture. She suggests that pupils need to participate in formulating the aims and objectives of the programmes and enter into a social contract with the service providers. She suggests further that while equal access should be offered with clear criteria, financial assistance and remaining in the programme should take into consideration performance, attendance and helping others (p. 97).

d) Local Specific Aspects

Along with a culture of entitlement and victim consciousness, Ismail identified other difficulties experienced locally. These include:

- high drop-out rates;
- limited scope due to a lack of basic skills, basic concepts, terminology and language proficiency;
- negligible impact on the community;
- teacher burn-out - most teachers hold down full-time teaching posts and work in the CEPs in their spare time. Overloaded with work and operating in crisis management mode, they maintain that they cannot meet the student demands, and cannot solve all the problems of apartheid education in one morning per week;
- pupils' attitudes - most pupils come to pass the external matriculation examinations rather than to increase their knowledge, have unrealistic expectations, and often attend irregularly making it difficult for teachers to plan, monitor or evaluate. Pupils are often passive and resentful of being given written work and homework;
- a lack of networking with other programmes, a lack of liaison with teachers in the feeder schools and a lack of involvement of the parents.

Having explored the various dominant perspectives and practices which constitute the compensatory education discourse, the question arises whether this type of educational intervention actually serves to *affirm* rather than *undermine* the points of departure with which pupils entered these programmes. In other words, are children's learning patterns undergoing change from these interventions, or are they remaining the same? How much space is there in these programmes for people to develop as individuals and to make a difference? Could a change-agentry perspective applied to educational

interventions be more effective in igniting change and better prepare pupils for life in a world of uncertainty?

It would seem that the liberal, conservative and critical perspectives paint a rather pessimistic picture of compensatory education and that it is only when this phenomenon is considered from a change agentry perspective, that it offers a more positive outlook.

CHAPTER 3
RESEARCH METHODOLOGY AND METHODS

3.1 Methodology

How does one go about researching questions of whether a programme is able to bring about profound and lasting change in a pupil's attitude and ability? What methodology would be needed to interpret processes of change? How can one judge the effectiveness of an educational phenomenon?

The major assumptions that formed the basis for this research were that education functions as a leveller in society and a way out of poverty (O"Dowd, 1990:94); that there is a need to provide extra opportunities to groups formerly disadvantaged by apartheid policies; that the government will be unable to provide these extra opportunities in the near future and that civil and corporate society will have to take responsibility for this mammoth task alone or in partnership with government.

The approach that this study took was two-fold:

1) The first approach was to use an evaluation of a pertinent example, the Engen Educational Programme, in a case study, to generate information about compensatory education.

2) The second approach was to transform and develop the findings of the case study investigation to a generic study of the phenomenon of compensatory education. This was accomplished through research into the local and international literature, in an attempt to understand compensatory education in the context of post-apartheid South Africa, and its location in the education reform debate. It also required collecting data outside of as well as within the case study, as suggested by Wells et al (1995:19). The experiences of the Engen Programme were compared with those of other local initiatives around a limited number of questions, as a means to go beyond the findings of one

particular case. This cross case analysis illuminated commonalities that enabled tentative generalisations to be made about the phenomenon of compensatory education in different contexts.

Walton (1992:122) explains why a case study methodology is suitable: "the logic of case study research is to demonstrate an argument about how general social forces take shape and produce results in specific settings". Nisbet and Watt (1992) elucidate further when they describe case study methodology as a systematic investigation of a specific instance, identifying interactions of processes, factors and events and the relationships between variables, to illustrate general principles.

The use of one particular compensatory programme - the Engen Educational Programme - for this purpose, arose from the opportunity provided when faculty members of the Education Department at the University of Cape Town (UCT) were approached by the Engen Corporation to evaluate the effectiveness of their compensatory programmes in both Cape Town and Durban. The process of trying to make sense of this intervention provided not only data with which to conduct a case study, and access to a compensatory education intervention, but also served to throw light on a phenomenon that was displaying many problems but also great potential. The process of evaluation itself was extremely problematic but an evaluation of 'evaluations' procedure is beyond the scope of this study.

The central purposes of the Engen evaluation were identified through discussion with their social responsibility representative and members of the evaluation team as follows:

> (a) to assess whether the Programme as it presently operates is consistent with, and meets the objectives originally mapped out by Engen;

> (b) to evaluate, in the light of the changed social and political circumstances, whether the Programme remains relevant;
> (c) to make an assessment of the effectiveness of the Programme, in particular to assess whether and how the Programme impacts on the academic performance and the motivation of students to learn and,
> (d) to assess, given the diverse student community, whether the design, structure and delivery of the Programme meets the different needs of the different students who participate in it (Gilmour, Soudien & Van Papendorp, 1995:2)

It was agreed that the evaluation should provide Engen with the information it needed to decide whether it should continue to support the Programme or not. Thereafter, if it decided in favour of the former, to make decisions about the form the Programme should take, who the beneficiaries of the Programme should be, how the Programme should be administered and who should provide tutorial assistance.

Evaluating educational projects raises a number of methodological difficulties that need elaboration. The difficulty of "discerning change and attributing it to a specific intervention are the most problematic aspects of evaluation" (Taylor, 1995:9). Gilmour, Soudien and Van Papendorp (1995:8) elaborate:

> The first and most complex is to disentangle the Programme effects from other effects. These latter relate primarily to changes in the external environment beyond the control of the intervention itself. These include changes in the macro socio-political environment, changes in the school environment of the target group, changes in teachers, and changes in personal circumstances of individual pupils. All of these may impact on the personal performance of individual pupils without it being possible to accurately attribute causal factors.

Nonetheless, given a recognition of these constraints, it is not unreasonable to make judgements about certain significant factors within the programmes, which could influence its effectiveness and its relevance. These were;

1. its effectiveness regarding

a) the **organisation** of the Programme - efficiency of administration, record keeping, cost-effectiveness, planning in response to the environment referred to above, definition of the market in relation to perceived needs and alternatives;

b) the **operation** of the Programme - its operation, teaching methods and learning outcomes, its methods of assessment;

c) **the attitudes and behaviour of staff** - whether these are consistent with the aims of the Programme, and what they think works, what was wrong and what may work better?

d) **the attitudes and behaviour of students** - what they bring to the Programme, how responsive they are, whether they stay in the Programme, where they come from, what they gain from the Programme;

2. its relevance regarding

e) whether it was contributing to the liberal goals of developing a **skilled work force** and/or

f) whether it was contributing to the development of pupils as **change agents**?

These factors of analysis were not completely bounded or defined until the evaluation data collection and analysis were finished. A constructivist approach was used that allowed for the setting of boundaries during and after the data collection and analysis process. This type of research has been described by Wells, et al. (1995:18) as a move "away from positivistic models and toward post-modern paradigms that support a more tentative, inductive, and interpretative form of data collection and analysis". Rather than a traditionalist positivistic approach that begins with preconceptions and hypotheses, an interpretative approach searches for the theory or modes of explanation from the data (Cohen and Manion, 1980:26). The design of the research has elastic qualities and the design is adapted, changed and redesigned as the study proceeds. The defining of the boundaries of the case study is the catalyst that

brings together theory, methodology and analysis. In this particular situation, it was only after an initial period of observations and the conducting of an exploratory questionnaire, that it was possible to begin to construct boundaries defining factors for analysis.

A constructivist approach was selected as being more suited to the change agentry perspective than a positivistic approach. A positivistic approach that portrays humans in mechanistic terms and attempts to apply to the affairs of people the methods and principles of the natural sciences, would be hostile to this type of study. It would fail to take into account human agency and the ability to interpret and represent experiences. In contrast, a constructivist approach favours a research strategy that is open and unstructured, that begins with a loose notion of the focus of the study and what is being investigated, but that refrains from imposing prior frames of reference (Bryman, 1988:67).

From a change agentry perspective peoples' attitudes and opinions are of major interest. According to Schwandt (1994:128) a constructivist philosophy assumes "that what is real is a construction in the minds of individuals. It is also pluralist and relativist. There are multiple, often conflicting, constructions, and all (at least potentially) are meaningful". Ball (1993:15) talks about "needing more than one good theory to construct one half-decent explanation".

Taking into consideration the known dangers of the case study approach to validity, on the grounds of the researcher's subjective and preconceived notions, a self critical attitude as suggested by Lather (1986) was adopted throughout. To reduce the chances of distorted interpretations influenced by subjective judgements, findings were cross-checked through a use of contrasting methods and discussion. **Triangulation** techniques, as described by Nisbet and Watt (1992), Lather (1986), and Eisner and Peshkin (1990), were used to compare,

verify and validate the data through the use of multiple data sources and methods. Cohen and Manion, (1980:208,214) elucidate:

> Triangulation techniques attempt to explain the richness and complexity of human behaviour by studying it from more than one standpoint and, in so doing, by making use of both quantitative and qualitative data ... suitable when a more holistic view of educational outcomes is sought.

The various methods that were used in the case study included a study of all available documentation, classroom observations, a self-administered questionnaire and interviews.

3.2 Methods

A description follows of the methods that were used, why they were used and how sampling choices were made.

3.2.1 A Study of the Documentation

Past and current records of attendance, performance, and materials were studied to gain a sense of the historical and current performance of the Programme. These included the following:

- **Registration forms** from 1990 to 1995 - these provided quantitative demographic information about gender, parental occupation (and whether parents were Engen employees), feeder schools, home location, and years of attendance in the Engen Programme. Some of these forms were accompanied by the previous year's school report. These records were invaluable for giving a picture of who the Programme was serving and pupil retention within the Programme.
- **Attendance records** - provided further information about attendance regularity and drop out rates. These were compared with the registration forms. In addition, examination symbols from the previous year were recorded on these attendance sheets on entry (in March, 1995), and

again after the June, 1995 examinations (as reported by the pupils). Because testing was not officially done within the Engen Programme, these school results gave an insight into the movement of performance of pupils over the first half of the year, whether their marks had improved, worsened or stayed the same. These indicators were the closest approximation available to a "pre/post test method" of comparison, as suggested by Taylor (1995:9). Where possible these symbols were compared with the previous year's report marks to assess whether pupils were reporting their marks accurately.

A combination of the registration forms and the attendance records were used to track the progress of a sample of ten pupils. The selection of the sample was based on the number of years in the Engen Programme (a minimum of two years) and the availability of a complete set of information.

- The **1994 and 1995 Matriculation results** - were scrutinised to find which of the pupils registered in the Engen Programme had passed. Comparison with the list of Engen Matriculants, compiled from the registration forms, generated performance data about the number of A aggregates (this information was available for 1994 but not for 1995), university exemptions, passes, and failures. This information formed the basis for selecting telephonic interviewees.
- **Other primary materials** - included Engen documents, administrative reports, budgets, memos to teachers, timetables, teachers' letters of application, and study materials in the form of worksheets. These gave an overview of the general working of the Programme. Langa Enrichment Programme documents, Protec documents and an evaluation, Diakonos Trust documents, Ethembeni Learning Centre documents, worksheets and an evaluation were also examined for information about those programmes.

The findings from the documents and questionnaires were tabulated under categories such as parental occupation, gender, schools of origin and so on and were used to substantiate or compare with findings from the other methods.

3.2.2. Classroom Observation

Classroom observations were designed to assess pedagogical styles (were the classes similar or different from school and had the intervention retained its tutorial intentions?), use of materials, student interest and learning, and the conditions under which the teaching-learning situation was taking place.

The evaluation team comprised three members who sat in classrooms and observed a number of lessons on six Saturdays - altogether, a total of 54 lessons were observed. Three of these observation sessions took place early in the year and three more sessions occurred in the second semester following the interviews with the staff and students. The advantage of this was that the team was able to see whether teaching styles had altered over a period of time and whether the initial high attendance rate had been maintained.

The sample of classes was randomly chosen with an attempt made to attend a class of each tutor and to observe teaching methods in all subjects. An observation schedule was used for guiding the lesson observations. Insights were discussed by the evaluation team and used to compile questions for the interviews and to cross-check findings from the questionnaire. (For observation schedule see Appendix D)

3.2.3. Student Questionnaire

Given the large number of students it was necessary to reach the majority of students via a self-administered questionnaire. These covered a range of areas aimed at establishing personal background data and performance, attitudes to

the Programme and towards education in general. (For an example of the questionnaire see Appendix D).

The questionnaire was compiled by Messrs Gilmour and Soudien of the UCT evaluation team. As an exploratory instrument it was quite extensive and incorporated both quantitative and qualitative elements. It was self-administered in both Cape Town and Durban to all pupils present on one Saturday (26th March). Of the approximately 500 questionnaires that were returned, 264 were randomly selected due to cost and time limitations for coding and analysis, 128 (48%) from Cape Town and 135 (52%) from Durban. Of these, 170 (64%) had joined the Programme for the first time in 1995. The data was entered onto a spreadsheet (Quattro) and frequencies and cross-tabulations were calculated through the StatGraf6 computer programme.

3.2.4. Interviews

These were designed to gauge the attitudes to and understandings of the Programme of the co-ordinator, the administrators, the staff, and the pupils. In respect of students, these included personal and telephonic interviews. Interviews with non-participating school teachers were designed to enquire into the views of outsiders in the profession about the Programme and its perceived impact. Representatives from other local CEPs were interviewed, some personally and some telephonically to compare and/or validate the findings with those of other initiatives. (For the interview schedules see Appendix D).

- 6 Cape Town staff members, from each of the disciplines - Mathematics, Science and English - and 2 administrative staff, were interviewed individually over two Saturdays. All the staff interviewed except for one, had taught on the Programme for a number of years, some since its inception. While the interviews were semi-structured, leading questions about the aims, the strengths and the weaknesses of the Programme

gave respondents an opportunity to lead the discussion in a direction of their choice. Tutors who had free periods were selected initially to minimise disruption of the classes and a few tutors had to be taken out of their classes to be interviewed. Ultimately most of the Cape Town staff including the tutors, supervisors and the co-ordinator were interviewed. Some of these interviews were taped.

- Fourteen Cape Town pupils, who had been in the Programme for longer than one year, were selected for interviewing on the grounds that they would have had time to ascertain whether the Programme was helping them. An equal number of boys and girls were requested but eventually more girls were interviewed than boys. They ranged in age from 14 to 18, and in standards from standard seven to standard ten. Apart from two, all had been at Engen for two or three years.
- Telephonic interviews were carried out with 18 out of the 83 pupils in the Engen Matric class of 1994. An effort was made to ensure equal gender distribution, and representation of a wide variety of schools in the sample. All three A symbol-achieving pupils were telephoned, five pupils who had achieved university exemptions, four who had passed and six who had failed. In three cases the pupils were out and the interview took place with the parent. In addition, of the 1995 pupils, seven who had dropped out and five who had remained for the duration were telephoned. This sample was randomly drawn from the registration forms that included telephone numbers. Pupils were asked how long they had attended the Engen Programme, whether they thought it had helped them, and if it had, in what way. They were also asked whether they had attended regularly, why others had dropped out or, where applicable, why they had dropped out.
- An effort was made to contact the school teachers, especially Mathematics and Science teachers whose names had been elicited from the pupil interviews.

- Two personal interviews were carried out with representatives of other CEPs to compare their experiences with those of the Engen Programme and to identify common strengths and weaknesses. These were:
    I. the Co-ordinator of the Langa Enrichment Programme, which is the oldest and largest educational intervention in the Western Cape;
    II. the Director of Ethembeni Academic Development Programme, which emphasises computer-aided learning.

  These interviews were also semi-structured and informal.

Certain common patterns began to emerge from the interviews which were cross-checked with the findings of the questionnaire. These have been grouped into categories such as teachers' perceptions of the Programme and pupils' perception of the Programme.

3.3 Ethics

Case study research is characterised by intense interest in people, their situations and their perceptions. People whose expressions are portrayed risk exposure, embarrassment, and a possible loss of standing, employment or self-esteem (Stake,1994). There is, therefore, a strong chance of a reaction to the investigation from those being investigated (Bryman, 1988). While it was important to maintain the transparency of the investigation, caution had to be exercised to minimise the risks to individuals. It was decided not to disguise the names of schools or institutions but to avoid the use of people's names. It was explained to the staff at the outset that the sponsor, Engen, wanted the project evaluated and had appointed an independent evaluation team rather than using members of their own staff. One of the tutors expressed his own and other staff members' uneasiness about the evaluation. They felt that their teaching methods were being judged under difficult circumstances and that their jobs were at stake. This was true to some extent and the evaluation team had to be very careful not

to minimise their very dedicated contribution. The respondents needed to be encouraged to see themselves as partners in the constructivist research process, engaged together with the investigators to make sense of the context (Punch, 1994).

Before tape recording the interviews, respondents were asked for their permission to be recorded and to allow for the data from the recording to be used. They were assured about the confidentiality of the data, that no names would be used and that any criticisms would be generalised. The questionnaires were also anonymous so that pupils could feel free to express their concerns without fear of reprisals.

3.4 Problems And Limitations

A number of problems arose that affected the research procedure.

3.4.1. Observations.

The initial classroom observations took place early in the term while pupils were still registering. As the registration process took time, teaching was constantly being disturbed by the movement of late arrivals. Tutors were extremely aware of being evaluated and the situation felt contrived rather than relaxed. Tutors expressed their concern that we had come too early in the year before their classes had settled down and were therefore getting a distorted view of the Programme. This was further complicated when later in the year, on the three consecutive Saturdays that we observed, it rained heavily and attendance was extremely poor. Conclusions that there had been a huge drop-out were rendered uncertain because attendance may have been partially affected by the weather conditions.

3.4.2. Records.

At various particular points, there were difficulties with the quality of the data. The records were very incomplete. Tracking pupils' progress was hampered by

the lack of continuity of information e.g. there were no reports for 1994. Attendance records were only available for the current year from April to August, so that it was, for instance, impossible to cross-check the previous year's matriculation results with attendance regularity. Moreover, the attendance lists were quite different from the list of registrations. All demographic information was incomplete. Statistics gleaned from one set of documents failed at times to tally with the data emanating from another.

Despite these difficulties, it was possible to gain a fairly accurate impression of what was occurring in the Programme. In some instances, data was consciously chosen from one set of data-sources rather than another because it seemed more reliable e.g. the gender break-down was calculated from the attendance registers rather than the registration forms because these seemed more accurate and up-to-date. In other cases, triangulation techniques increased the probability of accuracy. Where there were inconsistencies, the data was not used except to demonstrate a point about the weakness in the administrative backup. A greater reliance had to be placed on the qualitative data which gave an insight into the participants' perceptions than on the quantitative component which was less accurate and therefore open to misinterpretation.

3.4.3. Questionnaire:

Language presented a major obstacle. For the majority of pupils especially in the Durban returns, English is not their first language. It became clear that the level of functional literacy in English was generally very low and many of the pupils misunderstood the questions. Numerous answers were obviously untrue or confused; for example pupils gave impossible symbols for previous years' examinations such as 123% or 99%. Whether the language deficiency was to blame or whether the pupils were not taking the questionnaire seriously was unclear, but all questionnaires which were obviously inaccurate were discarded

(about 15 questionnaires were discarded but this did not affect the total number of questionnaires used in the study).

Interpretations of the questions were sometimes contrary to what was expected, probably because of a poor command of the English language. There were also obvious situations of groups of pupils and in some cases whole classes who answered the questionnaires together and gave the same answers word-for-word. Where this was recognised, these questionnaires were not used. Many questionnaires were only partially completed. This presented the danger that statistics may become distorted.

Another problem was that the questionnaire was given in March on a day which was the very first day for some pupils and the 3rd Saturday for the majority of pupils (most pupils were in their first year in the Programme). This meant they were asked questions concerning a Programme about which they knew very little. This may have caused a great deal of distortion of the data. The tracking of 2nd and 3rd year pupils was essential to cross-check these findings.

3.4.4. Interviews

The teachers interviewed reacted in different ways. Some were quite supportive of the evaluation while others were quite defensive. An awareness that their jobs were at stake may have led them to report rather positively about the Programme. I, on the other hand, being initially biased against the Programmes based on my classroom observations, expected to hear more complaints.

Pupils on the other hand, at least initially, tended to say what they thought I wanted to hear. Younger pupils tended to give monosyllabic answers and only a few were able to engage in a discussion about the Programme. Once these few pupils became relaxed and comfortable with me, they became an interesting source of information. However, due to the low number of pupils who had been

in the Programme for 2 years or more, it was difficult to find enough pupils to interview.

Telephonic interviews with teachers in the schools were disappointing. Making contact with them proved to be extremely difficult because they had to be telephoned during schooltime. After many tries and having left messages at many schools, I was successful in reaching and speaking to only two teachers.

Despite the problems experienced above, I believe that with the wide spread of methods used, it was possible to gain a fairly accurate evaluation of the Engen Programme. Subsequent feedback about the evaluation from the tutors, in the form of written comments and a presentation session, indicated their support of the findings, by and large. There was one tutor who felt that he had been left out of the interview process but there was a limit to how long one could exhaustively search for data.

My personal contact with the participants brought a different dimension to the evaluation. Where I had begun the evaluation with a negative attitude towards the Programme, the enthusiasm of the participants and their belief in what they were doing affected my attitude towards compensatory education. It also taught me to honour the complexity involved in trying to objectively evaluate an educational intervention.

CHAPTER 4
THE ENGEN EDUCATIONAL PROGRAMME: A CASE STUDY

As one of the responses to the educational crisis in South Africa, the Engen Educational Programme provided a suitable opportunity for a close evaluation of the practice and social context of what Atkinson and Delamont call "an instance in action" (1985:28). As suggested by Vulliamy, Lewin and Stephens (1990:19), it provided the opportunity to observe, and describe how a compensatory education programme operates, to discover and document what it is like to be participating in this Programme, to discern and discuss the innovation's most significant features and to identify some of its unintended consequences. The overarching goal of this case study was to determine firstly whether compensatory programmes were effective in achieving their aims and secondly, whether they continued to be relevant in post-apartheid South Africa.

The theoretical framework gave rise to a recognition of the need to question *what constitutes* ***effectiveness*** *and* ***relevance*** *and from whose perspective?* Wolcott (1994:37) suggested that an analysis of the data, to facilitate an understanding of what was going on, needed to take place from different perspectives. The procedure I use in presenting the case study, as suggested by Wolcott, is to highlight and display the findings, and then move beyond the factual data, through analysis and interpretation, drawing on these different perspectives. The conservative and critical perspectives reject this type of reformist intervention and therefore cannot be used to judge effectiveness. The liberal and change agentry perspectives, however, provide bases for exploring matters of effectiveness and relevance.

From the liberal perspective, which, as we saw, supplied the intellectual basis for this type of intervention, **effectiveness** could be measured according to the achievement of the intentions of the Programme, i.e. improved performance in Mathematics and Science of disadvantaged pupils, and also according to the pupils perceptions of their own

progress. From a change-agentry perspective, **relevance** could be measured by the extent to which the Programme was providing opportunities to previously disadvantaged pupils and preparing pupils for life in a rapidly changing world.

Analysing the information involved a comparison of the measurable and perceived impact of the Programme as against its original intentions. To assess the impact, clarity was needed about who was being served and whether this was the target group identified at the start - "the most needy". Secondly, an assessment was needed of the outcomes of the Programme, of how the pupils were *performing* academically. The main approach taken to this exercise was to hear how the pupils themselves perceived their progress. Their qualitative perceptions lent a different dimension to the quantitative analysis and gave an insight into the potential of the Programme from a change-agentry perspective.

As suggested by Taylor (1995:5), "in order to orient and locate the reader", the case study begins with a **description of the Programme**, its objectives (what the Programme was attempting to do) and its activities (what the Programme does). Thereafter, in an attempt to answer the questions raised in the early chapters, '**what works**?' '**what is wrong?**' and '**what can be done about it?**', the Programme is analysed with a focus on the following criteria:

- **Programme Organisation**: How efficiently is the Programme run?
- **Pupil Profile:** Who is the Programme serving?
- **Pupil Motivation:** Why do they come? Does it develop a change agentry mindset?
- **Pupil Attendance** What makes them stay in or drop out of the Programme?
- **Teaching Methods and Issues:** What and how do they teach and learn?
- **Pupil Performance**: How effective is the Programme in achieving improved academic results?

- **Participants' Perceptions of the Programme**: What do the pupils, and the staff think of the Programme? How do these perceptions compare with the experiences of the other local CEPs?

An analysis of the factors that affected the organisation, operation and outcomes of the Engen Programme was expected to generate an opportunity to learn about the phenomenon of compensatory education from this experience.

4.1 Description Of The Programme

Information about the establishment of the Programme was elicited during interviews with the Engen Representative and the Engen Programme Co-ordinator (Gilmour, Soudien & Van Papendorp, 1995). They reported that classes, provided on a Saturday morning, for Standard Six pupils were begun in Durban and Cape Town in 1988. In 1988 200 students were registered in the Durban Programme, over eighty per cent of whom consisted of employees' children. In Cape Town it was realised that the pool of parents on whom the Programme could draw was too small, and that community organisations could object to the exclusive nature of its admissions, and, as a result, the Programme was opened to the public. In 1989 Durban followed this example.

While only black employees were to make use of the opportunity provided by Mobil, the Programme was non-racial from its inception and was advertised as a service available to the entire Mobil community. The Programme also acquired the sense that it was serving the needs of the most needy.

The character which the Programme developed emanated from the understanding that students were experiencing difficulties in subjects such as Mathematics, Science, Biology and English. While the Programme was essentially conceived by the Programme leaders as a compensatory programme, it was always understood that the intervention which was being made was a modest one. The kind of intervention which the Programme

facilitated, that of providing an additional hour of assistance a week in key subjects, could not dramatically alter student achievement. This qualification notwithstanding, the Programme sought to focus on the areas of greatest need in the curriculum and used as a point of departure the entry levels of students in the assistance which was provided. The teaching approach which the Programme intended to use was that of tutorials.

Two centres were established for the delivery of the Programme. In Durban the Programme operated at the M.L. Sultan Technikon. In the Cape the Programme originally operated at the University of Cape Town but in 1994, to facilitate access, it was moved to Spes Bona High School in Athlone which is on a train, bus and taxi route. For a short period of time in 1992 a satellite Programme operated in Crossroads, Cape Town. The Programme was terminated in mid-1992 because of school disruptions. An attempt was made to revive the satellite operation for the children of the Khayelitsha and Guguletu areas in 1993 but had proved not to be cost-effective.

The Programme in 1995, which is the subject of the case study, was held over 24 Saturdays between March and October, for high school pupils from Standards Six to Ten. The *intentions* of the Programme were to help disadvantaged pupils with the scientific subjects, Mathematics, Science and Biology and improve their understanding of English, in the hope of attracting more pupils towards careers in Science and Technology and of generating a more skilled work force. Engen representative, Jackie Lange, in a meeting with the evaluation team and Programme staff, especially emphasised the need to produce pupils who would be eligible to receive the Engen bursaries for tertiary study in Engineering.

The pupils ranged in age from 12 years to 30 years. The majority (69%) were between 14 and 17 years, with the largest group being the Standard Tens. In

Cape Town the classes held at Spes Bona High School in Athlone had a registration of 365 pupils according to official sources (420 pupils were listed on the attendance registers) and in Durban the classes at M.S. Sultan Technikon had a registration of approximately 700 pupils (interviews with supervisors, 1995). The four subjects (Mathematics, Science, Biology and English) were taught in a total of 30 one-hour classes per Saturday session. Classes ranged in size from 35 - 70 pupils in Cape Town, (according to the attendance registers) with the highest number of pupils attending towards the beginning of the year and class numbers dropping substantially by the second half of the year (attendance in the Cape Town Programme over the three midyear observation weeks were 217, 222, 124) .

In Standards Eight to Ten the classes were split into higher and standard grades. Enrolment in a minimum of two subjects was required although most pupils seemed to attend three classes each Saturday. An additional one-week winter school for matriculants was held during the July holidays.

The tutors working in the Programme in both Durban and Cape Town were academically and experientially well-qualified. Almost without exception, they were all senior teachers either by dint of position or experience. All staff except one had university degrees - the one staff member had a Technikon diploma. Most of the staff had 10 to 20 years of teaching experience and a number of the staff had been teaching in the Programme since its inception (staff interviews, 1995). In the annual reports submitted by the supervisors and emerging from the interviews with the co-ordinator and the tutors themselves, the picture emerged of a cadre of deeply committed tutors. Reports about the actual running of the Programme were, however, contradictory. Some of the staff claimed it was extremely well run, while others complained about the authoritarian style of administration, the lack of consultation and the lack of resources.

4.2 The Organisation

4.2.1 Administration

For the entire period of its existence, the Programme had been co-ordinated by an employee of Mobil who reported directly to the Board of the Company. At each of the two centres, a supervisor was appointed part-time whose job it was to oversee the organisation of the Programme on site. It was their responsibility to register pupils, and keep track of attendance, convey information from the management to the tutors and attend to the administrative tasks on the Saturdays (interviews with Supervisors, 1995). In reviewing the issue of administration it was clear that there existed adequate procedures for the efficient operation of the Programme:

a) Record Keeping Procedures

Procedures had been instituted for the admission of students, the monitoring of attendance and school performance and for the submission of semester reports to Engen. Files were kept of attendance registers, students' applications and their reports. It would appear, however, that these procedures were, in the first instance, insufficiently exercised, and secondly, not exploited for the enhancement of the Programme's educational performance. In terms of the first point, while it was intended that students' report-cards would be collected at the end of each major examination cycle, the Programme's files indicated that the process of report-collection was conducted unevenly. With regard to the second, it was unclear how the results were made use of in the Programme, particularly with respect to what was taught and how it was taught. The lack of systematic year on year records and/or the non-availability of these made it difficult to track those students who stayed on in the Programme.

b) Reporting Procedures

Another task of the supervisors was to submit regular reports to the co-ordinator and the sponsors. Reports listed the subjects which were taught, the names of

tutors and numbers of students in the Programme. In the case of the Cape Town centre the supervisor also shared his perceptions of the success of the Programme. At the end of each year the co-ordinator submitted a report which was summarised in the company's annual report. Significant claims were made in some of these observations, such as the *good attendance record* of students and the achievement of a *good tutor-student ratio*, making possible what the supervisor referred to as "useful one to one correspondence."

Certain aspects of these claims have proven to be inaccurate according to the research findings, for instance, attendance registers indicated that the attendance of many pupils was, in fact, irregular, and there was a high drop-out rate. Secondly, contrary to the claims of a good tutor-student ratio, observations and interviews indicated overly large classes at times, and a lack of individual attention. These types of problems correspond with those mentioned by Ornstein and Levine (1985) in their review of early attempts at compensatory education in the USA. They asserted that the impact of the programmes was watered down by the large size of the classes.

c) Recruiting Procedures

One of the tasks for which the administrators were responsible was the advertising of the Programme to the public. To ascertain how well this was handled and how accessible the information was to the target group, pupils were asked how they found out about the Programme. Respondents claimed that they found out about the Programme through family (33%) and friends (33%). 14% of the students received the information from their teachers and 20% from their schools.

While it is not known how well information distributed to school principals was disseminated and circulated amongst teachers and students, there is reason to believe, as teachers at schools attended by students in the Programme

suggested, that there is not much known about the Programme in schools. Generally, while the regular teachers might be aware of the Programme, of some concern is the fact that these teachers might not know that their students attend the Engen Programme. The problem to which this points is, in the first instance, the foregoing of an opportunity for designing a learning programme which meets the particular academic needs of the individual student. Secondly, flowing from this, recognising the considerable difficulties which go with tracking performance of individual students, is the tendency for teaching and tutoring to be targeted to a level presumed to be representative of all students.

From an organisational point of view, while the Engen Programme has maintained itself adequately, insufficient attention has been given to developing an innovative management approach to the issue of educational support. The small and part-time Engen administrative team has limited the establishment of a systematic record-keeping system. This has inhibited their ability to collect and use data for analysing attendance and achievement records and understanding the learning outcomes of the Programme.

4.2.2 Registration

There was a large initial intake of pupils in the first few weeks (in March). Pupils appearing in subsequent weeks, however, were not turned away. Judging by the attendance registers, there seemed to be another large intake in the second semester. Pupils were expected to apply in writing, fill in a registration form and submit their previous year's school report.

Cape Town registrations increased from 140 in 1991 to 365 in 1995. Apart from the decline in 1993, when registrations dropped to 173 students in contrast to the number of 214 who had been registered in 1992, (because of the relocation from the University of Cape Town to Spes Bona High School in Athlone), it is apparent that the Programme has grown in popularity with each successive year.

Increases have occurred in all the standard levels. Significantly, the focus of student interest has remained at the Standard Ten level, giving the Programme a distinctly matriculation character. Consistent with this, registrations in the Standard Six class have been smaller than in any of the other standard levels. The tables below, generated from official registration figures, provide a breakdown of the registrations in the Programme over the last five years.

CAPE TOWN REGISTRATION, 1991 - 1995

STD	1991	1992	1993	1994	1995
6	**17**	**25**	**22**	**27**	**47**
7	**31**	**44**	**28**	**38**	**65**
8	**32**	**47**	**34**	**41**	**77**
9	**29**	**47**	**47**	**55**	**66**
10	**40**	**49**	**42**	**91**	**110**
TOTAL	**140**	**214**	**173**	**252**	**365**

(compiled from Engen registration forms 1991 - 1995)

Durban registration figures for a similar period were not available. However, registrations for 1995 were:

DURBAN, 1995

STANDARD	8 APR 1995
6	**88**
7	**91**
8	**62**
9	**72**
10	**133**
TOTAL	**446**

(compiled from Engen documents)

to the opportunity and the last to the issue of representation of females in Science and Mathematics programmes.

4.3.1 Schools of Origin, Racial and Language Background.

In the Cape Town Programme, students came from 55 different schools (see Appendix C) with the largest group coming from Langa High School (39). Of the schools represented, 37 schools were from the ex-House of Representatives (HoR), 9 schools from the ex-House of Assembly (HoA) and 9 schools from the ex-Department of Education and Training (DET). Generally the largest groups came from feeder schools in close proximity to the area where the Programme was held (Athlone) with 28 pupils from Spes Bona High School, 21 from Athlone High School and 17 from Belgravia High School. There was also a close correspondence between the tutors' and pupils' schools of origin, i.e. many of the pupils came from the schools where the Engen tutors taught. It was apparent that in Cape Town many of the pupils were Afrikaans speakers - one of the classes observed contained 90% Afrikaans speakers and a great deal of the tutors' assistance to pupils was through the medium of Afrikaans.

The Durban pupils came from 96 different schools (see Appendix C). The largest number of pupils in the sample came from Ndukwenhle High (25 pupils), followed by 21 from Umbilo High. The ex-DET schools represent 58% of the feeder schools, with ex-HoR and ex-House of Delegate (HoD) schools together representing 42%. In Durban while the majority of pupils were Zulu speaking, the Indian pupils dominated the classes.

While the Engen Programme had begun with the objective of providing a service for the employees of Engen and the upgrading of Mathematics and Science in disadvantaged communities, it had shifted focus somewhat. The data confirmed that the Programmes were serving different population groups in the two different provinces. In the Cape, where the largest majority of the general pupil

population were in ex-HoR schools, participants in the Programme tended to reflect a similar configuration. This meant that the Programme was mainly serving so-called "coloured" lower middle class to working class pupils, providing primarily *supplementary* education. Of significance in the Cape was the fact that 11 schools within a 5km radius of the Spes Bona High School, where the Programme runs, produced 47 % (143) of the Programme intake. Thus, while there was a considerable spread of feeder schools throughout the Peninsula, if one concludes that schools in Athlone were *not* the most at risk, there was clearly a problem surrounding the location of the Programme. These findings reinforce what Scheerens (1992:38) observed that it was the "moderately disadvantaged in particular that benefited from the Programme, while the most educationally disadvantaged made the least progress, relatively speaking".

In Durban where the largest majority of the general population were in ex-DET schools, the Programme was serving a larger group of black pupils and may have retained a more *compensatory* focus. In this situation, the Engen Programme can be said to have reached its target market. Given the race composition of the Programme it is important to make the observation that there appeared to be few conflicts between children from different backgrounds.

4.3.2 Parental Occupation / Home Background

An examination of the parental occupations of the participants gave an insight into the pupils' background. The table below shows parental occupations for the sample as a whole (in Cape Town and Durban). While there were differences between the fathers' and mothers' occupations (mainly that the females had a higher percentage of unemployed/housewife duties), for the sample as a whole, 76% of occupations were in the skilled, semi-skilled manual range and below, with 25% of the parents not being economically active or being unemployed. Judging by the Cape Town application forms, approximately 19 parents were

Engen employees, and from the Durban questionnaires, 20 pupils said that their parents worked for Engen. This is quite a low number considering that the Programme began as a service for employees' children.

OCCUPATION	FATHER		MOTHER		TOTAL	
	NO	%	NO.	%	NO.	%
SELF-EMPLOYED, MANAGERIAL	27	14,0	9	4,2	36	8,9
PROFESSIONAL, SEMI-PROFESSIONAL.	25	13,0	35	16,4	60	14,8
SKILLED AND SEMI-SKILLED MANUAL	95	49,5	60	28,2	155	38,3
UNSKILLED MANUAL	23	12,0	30	14,1	53	13,1
UNEMPLOYED AND OTHER	22	11,5	79	37,1	101	24,9
TOTALS	**192**	**100**	**213**	**100**	**405**	**100**

From the aspect of parental occupation, there appeared to be little difference between the sample as a whole and those who stay in the Programme for more than one year, meaning that social class was not a discriminator. Whether parents were unemployed, labourers or professionals had no discernible effect on pupils' staying power. Furthermore, the pupils' aspirations seem to be completely unrelated to their parents' occupations. Whatever their parents' occupation, almost every pupil aspired to a professional career (Gilmour, Soudien & Van Papendorp, 1995).

4.3.3 Academic Level and Orientation

A picture gradually emerged of the type of pupil enrolled in the Programme. When asked to identify their usual position in class according to their academic performance, 43% of the respondents placed themselves in the top 25% of their

class. Only 6% considered themselves in the bottom 25% of the class. 79% of the pupils said that they had never repeated a standard. When asked to identify their best and worst subjects, almost half of the pupils in the sample cited Mathematics as their best subject (122). This was followed in popularity by English (88) and Science (67). At the same time Mathematics was cited as the most failed subject (54), followed by Afrikaans (25) and Science (24) (see Appendix B). These points may indicate that the pupils who chose to come to the non-compulsory Engen Saturday classes may have been an ambitious group and were probably not the pupils most at risk.

4.3.4 Gender Representation

Keeping in mind that not every registered pupil completed a questionnaire and that amongst the questionnaires received, all questions were not answered, it was only possible to compile approximate statistics for gender representation in the Programme. An interesting pattern that emerged was the predominance of female pupils in both Programmes (see Appendix B), and the perception that the females performed better (females placed themselves higher in their class position and more males than females placed themselves in the third 25% of the class). Females were more persevering (42 females and 26 males remained for more than 1 year) and more ambitious in their future plans (87 females and 62 males of the sample wanted to go to University). This also signifies a break with the past where more males than females chose Mathematics and Science as subjects. It may also mean that the Programme was helping to track an increased number of females into careers in Science and Technology.

4.4 Pupil Motivation

To understand the dynamics at play in the Engen Programme, and to discern its potential for promoting a change agentry mindset, it was important to investigate what motivated pupils to join the Programme. In what way did the pupils expect the Programme to benefit them and how was it relevant in their lives? Ogbu (in

Ornstein and Levine, 1985:419) had advanced the position that black children in poor communities were not likely to demonstrate adequate motivation to benefit from compensatory education. Evidence that emerged from the data contradicted these claims - some pupils were motivated and persisted in attending year after year.

Pupils were asked in the questionnaire and in interviews why they attended the Engen Programme, what they thought was important about education, and whether they were satisfied with their regular schools. This last question was included to see whether dissatisfaction with their schooling could be correlated with their motives for attending the Programme. They were also asked what they wanted to do when they finished school to assess whether there could be a connection between their after-school aspirations and their desire to participate in the programme. Contrary to Ogbu's claims, the evidence indicated that the majority of the pupils were self-motivated (81%) but many were also encouraged to attend by their parents and their teachers. The main reasons given for attending the Saturday classes were to improve their examination results (52%) or to improve their knowledge and understanding (35%). Other reasons cited included to achieve speed in Mathematics, to maximise potential, to supplement school work and to meet new people. The fact that the Programme was free was mentioned as an incentive for 44 pupils (17%).

An interview with one of the pupils illuminated the students' rationale for attending the Engen Programme succinctly. This pupil said that he attended because there were too many distractions at school, especially friends who did not want to learn, that at Engen everybody was more focused, the atmosphere was better and pupils were willing to learn. It was his opinion that his school was going down, with teachers going off to study or to go on pilgrimage, and that parents were taking their children out of the ex-HoR schools and putting them in "white" schools because they felt that the system was deteriorating. Adding that

at school the teachers were not good enough and classes were too crowded, he complained that teachers had no time to give extra help. Citing an improvement in his marks from a D symbol to an A symbol in Mathematics, he was confident that the Programme was helping him. He believed that the Physics classes had helped him the most because when he could not understand at school, he would "catch on" at Engen and thereby be in a position to compete with classmates who had private tutors.

The broader question posed concerning the importance of education sought to find out whether pupils were extrinsically motivated - by a need and desire for rewards, or intrinsically motivated by intellectual curiosity and moral purpose. Some of the answers could be interpreted either way so that my separation of the answers into one or other of these opposite poles is tentative. I have indicated what I think may be intrinsic answers as (i) and extrinsic answers as (e):

THE IMPORTANCE OF EDUCATION	**% of pupils**
to find a job (e)	31%
to broaden opportunities (e)	30%
to become literate, educated (i)	26%
to develop life skills (i)	8%
to obtain more knowledge (i)	3%
to keep children off the streets (i)	1%
to be a benefit to the community and society (i)	1%

These replies could be interpreted to mean that pupils were motivated primarily by the extrinsic need to secure their futures. This confirms Ismail's (1993:89) findings in the LEP that most pupils come to pass matriculation examinations not to increase their knowledge. A few seemed to be intrinsically motivated and

showed a potential to become change agents when they said they came to obtain knowledge (to change themselves) and to be a benefit to the community and society (to change others).

Investigation into whether problems in their schools were a contributing factor, drew responses of a lack of resources, especially books and equipment. (See Appendix B). It could be safely speculated that this was a contributing factor in their desire for additional assistance. It should be noted, however, that the Engen Programme did not, in fact, provide books or equipment and this may have disappointed the pupils' expectations. Only a few pupils identified their school teachers as being "a problem", but in the qualitative questions, many respondents attested to the fact that the teachers at the Engen Programme were better than the teachers at their schools.

The data concerning the pupils' after-school aspirations substantiated the findings that pupils were mainly motivated by a desire to secure their futures. The majority of the pupils claimed that they wanted to go to University when they finished school (59%). 32% of the pupils wanted to go to the Technikon, 5% wanted to go to College and 4% wanted to go straight to work. To assess whether any pattern would emerge regarding their ability compared with their aspirations, the 1994 Mathematics symbols were cross tabulated with after-school aspirations (See Appendix B) In some cases, judging by their symbols, hopes and ambitions of a tertiary education may be quite unrealistic.

Another pattern emerging from the data suggested that more pupils with a lower Mathematics symbol (E) were aspiring to a Technikon education and, interestingly, most pupils who were opting to become teachers had lower Mathematics symbols. Other patterns that emerged were that more females wanted to be teachers than males, more males wanted to go to a Technikon and

more females wanted to go to University. Very few pupils in the sample wanted to go straight to work after finishing school (three males and six females).

The speculation that pupils attending this type of Programme were ambitious and concerned about their futures was validated even further by the stated job preferences. 63% of the respondents wanted to be professionals, 14% wanted to be semi-professional and 14% wanted to be technically skilled. No-one wanted to be a housewife! When asked what they thought they would be doing in five years time, their answers indicated that they mainly aspired to professional careers, such as physiotherapy, medical technology, food technology, medicine, electrician, law and psychology.

4.5 Pupil Attendance

Attendance was seen as an essential criterion for assessing the effectiveness of the Engen Programme on two accounts, a) for continuity and b) to compare attendance regularity with progress in performance. There was a need to trace patterns of perseverance and withdrawal - to find out why almost half of the pupils dropped out during the course of the year. Unfortunately, attendance records prior to 1995 were unavailable. Attendance indicators were therefore elicited from Cape Town registration forms from 1991 to 1995 (which were incomplete) and from the Cape Town attendance records from April 29 to August 5. Durban continuity statistics were derived from pupil responses on the questionnaires and from a table of total attendance figures of the first 10 weeks of classes.

In this particular year, 1995, the majority of the pupils were participating in the Engen Programme for the first time (Cape Town 85% and Durban 59%). In the Cape Town sample only 17 students had been in the Programme for more than one year and in the Durban sample 53 had been in the Programme for more than one year. This points to the fact that although there was not a great deal of

continuity from year to year, the Durban Programme had been more successful at pupil retention than the Cape Town Programme.

The attendance records for 1995 showed a gradual drop out tendency. This is easily discernible in the following table which shows;

- the average Cape Town attendance rates per standard for part of the first term (April 29 to June 10);
- the average attendance for the first three weeks of the 2nd term;
- the accumulative average from April to August and
- the average attendance for one Saturday - August 5.

AVERAGE ATTENDANCE PERCENTAGE IN CAPE TOWN APR TO AUG

STD	APR - JUNE	JULY - AUG	APR - AUG	AUG 5
10	84%	59%	71%	46%
9	86%	55%	71%	36%
8	84%	50%	70%	20%
7	86%	50%	67%	37%
6	86%	49%	71%	34%
TOTAL	**85%**	**53%**	**70%**	**35%**

The gradually diminishing attendance average from 85% to 35% (a drop of 50%) matched the pattern observed in the Durban statistics. (See Appendix B) In Durban, attendance recorded in the first 10 weeks signified a peaking of attendance figures in the fourth week at 725 pupils, gradually dropping to 446 pupils in the 10th week (a drop out of 38%).

The fast turnover of pupils in the Programme provided a strong indication that achievements of the Programme could only be very limited. With 85% of the pupils in the Cape having been there for less than a year, there was an obvious

lack of continuity or long-term commitment. What was surprising, however, was that the "dropped out" pupils who were interviewed never blamed the Programme for their abandonment. Reasons given were personal (too early on Saturdays, too inconvenient or too lazy) or technical (lack of transport, other programmes at their schools). The problems with attendance regularity were reported by all the local CEPs and it was confirmed in the SAIRR report (1994) that the pupils who did attend regularly achieved higher marks than before.

4.6 Teaching Methods and Issues

How and what the pupils were being taught was another key issue. The dynamics of the processes actually occurring inside the Programme were linked to the outcomes. Whether the Programme intention of tutorial-type assistance was, in fact, occurring and whether issues such as language and curricula differences were limiting outcomes, needed to be investigated

4.6.1 Chalk and Talk

Lecturing, was the most commonly used teaching method. Mathematics and Science tended to be taught through lecturing methods while the English classes tended to be tutorial and participative. The general pattern was for tutors to introduce their topic, and in Mathematics especially, to demonstrate methods of solving problems on the chalk board. In some classes tutors used the entire period in a didactic manner, explaining and talking while pupils remained passive for the most part. In other classes, pupils worked on worksheets. Tutors explained that they had difficulty in drawing out student participation. The large numbers of pupils in the classes, especially early in the year when numbers were extremely large, contributed to the frustration of tutors' intentions of conducting their classes as tutorials. While large classes were a feature of both the Durban and Cape Town Programmes, the problem was particularly bad in Durban where the same number of tutors as in Cape Town were having to handle classes which were twice the size. As pupils dropped out, and class size

became more manageable, tutorial methods and individual attention became far more evident. However, it was apparent that not all tutors seemed to take advantage of this opportunity. In addition, the structure of the classrooms with rows of desks did not lend itself easily to tutorial or group work.

This method of teaching, referred to by Ismail (1993:84) as "chalk and talk", was also reported to be preferred by pupils in the Langa Enrichment Programme. They found it more familiar, and less threatening. Ismail argued, however, that it focused too much attention and dependency on the teacher and encouraged passivity.

Notwithstanding the above observations, innovative teaching methods, group work or tutorial methods were evident in a number of classes. The tutors were friendly, approachable, facilitative and relaxed. In evidence were good instructional skills. Tutors gave clear explanations, moved amongst the pupils as they worked on their worksheets, giving individual assistance and finding out whether pupils had understood the concepts.

4.6.2 Curricula Confusion

A difficulty the tutors appeared to be confronting was the variety of curricula and syllabi which pupils brought from their own schools. This difficulty was most evident in subjects such as English, but not absent from others, where students were reading a number of different texts. Pupils complained that they spent too little time focused on one setwork, that covering a different setwork each week was too fragmented and they would have preferred to concentrate on one setwork for a few weeks. Counterpoised to this argument was a complaint from the tutors that pupils came to the classes having not read the selected text. In many cases this was because their schools had selected different setworks and they did not have access to the literature.

4.6.3 Language Issues

Many tutors taught in both English and Afrikaans. At the same time, note must be made of the language difficulties encountered by Xhosa and Zulu speaking students. In Durban, the majority of the pupils were Zulu speaking. To facilitate the learning of the Zulu speakers, teachers sometimes spoke in Zulu. A poor command of English (highlighted by the difficulties pupils experienced in answering the questionnaire), was a further factor that limited progress. Bateson (1995:30) remarked on the same problem in his evaluation of the Science Education Project. Being taught subjects such as Mathematics and Science in English, a foreign language for pupils whose home language is Xhosa, Zulu or Afrikaans was formidable. Teaching these subjects in the mother tongue did not seem to be the answer either because as Joubert reported (interview, 1995) teaching Mathematics in Xhosa became a combination of English technical terms plus Xhosa prepositions. Besides, if the pupils were being prepared for a working life within the technological-scientific-economism paradigm, they needed to be functionally literate and able to communicate well in English. This draws attention to the need for intensive English training.

Of interest in reviewing students' perceptions of the Programme, bearing in mind the large number of Xhosa and Zulu first language speakers, is the small number of complaints about the use of English as a medium of instruction. While it was clear, particularly in Durban but also in Cape Town, that students were struggling with the medium of instruction, only a small number saw it as a factor in their experience of the Programme.

4.6.4 Examination focus

The focus of work in most classes, and this was confirmed in the Cape Town supervisor's reports, was on examinations and examination methods. This served to reinforce the extrinsic motivational aspect of the Programme. Towards the end of the year, according to one of the teachers interviewed, pupils worked

on old examination papers. In this and other respects, and this is confirmed by the classroom observations, the Programme seemed to replicate the school. Well intentioned as the tutors were in addressing the examinations and the difficulties students, both in and out of the Programme, appeared to have with examinations, the content and style of what they were providing differed little from that which the students were being offered in their regular schools. The Programme needed to ensure that it presented itself substantially differently to regular school. Otherwise, as one pupil pointed out, it was like going to school six days a week instead of five.

4.6.5 Evaluation of learning outcomes

In most of the classes pupils worked by themselves rather than in groups. Whether group work techniques were employed or didactic teaching, it was not easy to assess how much learning was actually being achieved, especially where pupils did not participate actively in the form of providing feedback to tutor questions and so on. A few of the tutors set homework and class tests for their students, and a few tried hard to encourage students to participate but there was no formal means of evaluation built into the Programme. Although there was variation in the way the various tutors handled evaluation, generally, they relied on post-event indicators such as the matriculation results, available school reports and their instincts to evaluate whether pupils were progressing. The lack of evaluation procedures was a major disadvantage for the evaluation team limiting our ability to assess the effectiveness of the Programme.

4.6.6. Tutor Training

When the Programme began in 1988, the tutors who were recruited to assist were senior teachers who were already established in their fields. It was apparent that in the seven years during which the Programme had run, a core of consistent tutors had been established. However, an issue that emerged in discussion with the tutors, and frequently surfaced in the literature, was that of

specialised training for this type of work. Ornstein and Levine (1985), Haywood (1982), de Baca & Rinaldi (1991) and others all emphasise the importance of providing tutors with specialised training in compensatory education methods. It was apparent from the discussions with tutors that they had individually taken initiatives which had qualitatively enhanced the standard of tuition in the Programme but no tutor training was provided and they felt that this was a pre-requisite for improvement. While they believed that the Programme was succeeding in terms of the matriculation results, for example, both Durban and Cape Town claimed that they had students in the Top Twenty in the 1993 and 1994 HoR and HoD examinations, they believed that they could deliver a better product with the effecting of minimal changes to the Programme. The Durban centre had organised sessions when tutors discussed the Programme, but in neither centre was direct attention paid to pedagogic questions of teaching styles and approaches, subject content and the strategy for tutoring. It was felt that the Programme needed to provide opportunities for the development of tutoring skills, thereby giving substance to the claim that the Programme was a tutorial Programme, which it often, in practice, was not.

4.7 Pupils' Performance

In the attempt to discover whether the Programme was delivering results from the liberal perspective, and in the absence of evaluation procedures within the Engen Programme, a number of methods were used in an effort to detect a specific "Engen effect".

4.7.1. Matriculation Results

According to the 1994 matriculation results reported in the local newspapers, of the pupils registered in the Cape Town Programme, three pupils achieved A symbols, 25 pupils achieved university exemptions, 41 pupils passed and 14 pupils failed. Of the 14 pupils who failed, ten were from Spes Bona High School. Most of these were not regular pupils and did not attend the Engen Programme

more than a few times. Only two who failed were regular pupils. From the telephonic interviews with past-matriculants, it emerged that those pupils who passed and achieved A aggregates or exemptions attended regularly, while the pupils who failed had dropped out after one or two sessions. Pupils interviewed who achieved A symbols maintained that the Programme had helped them substantially.

A slightly different pattern emerged with the 1995 matriculation results. There was an increase in the number of matriculation exemptions as opposed to passes, but also more failures. With an increase of pupils in 1995 from the ex-DET schools, 74% of the failures in the whole Programme were pupils from these schools (20 out of 24 failures were pupils from the ex-DET schools). In fact, of the 21 DET pupils registered in the Programme (according to the attendance records), 20 failed the matriculation examination (according to the lists printed in the Argus). Of these pupils, 11 had dropped out after a few classes. While this percentage is much higher than the national average, it could be speculated that the Programme was attracting those ex-DET pupils who were at risk and that the Programme, in its present structure, was not helping them.

1994 & 1995 MATRICULATION RESULTS

	1994 No. of pupils	1994 per cent	1995 No. of pupils	1995 per cent
MATRICULATION EXEMPTIONS	28	34%	46	42%
SENIOR CERTIFICATE PASSES	41	49%	37	34%
FAILURES	14	17%	27	24%
TOTALS	83	100%	110	100%

It was clear that for these pupils, who required compensatory rather than supplementary assistance, the orientation and emphasis of the Programme was inadequate to make up for their environmental deprivation.

4.7.2 Tracking Pupils

Ideally pupils' progress needed to be tracked year by year, but this proved to be possible in a very limited number of cases due to a lack of continuity and the lack of previous years' records of attendance and marks. Of the Cape Town pupils who had been in the Programme for more than one year, a total of ten reports from 1994 were available for tracking performance. The reports were compared to June, 1995 examination achievements.

TRACKING TEN PUPILS

PUPIL No.	STD	1994 Maths	1995 Maths	IMPROVE?
1.	9	F	E	YES
2.	9	F	E	YES
3.	9	D	E	NO
4	10	E	C	YES
5.	10	F	D	YES
6.	8	A	A	SAME
7.	10	A	A	SAME
8.	9	E	E	SAME
9.	7	C	D	NO
10.	9	D	E	NO

The table *above* indicates that in **Mathematics**, four pupils improved, three achieved the same symbol as before and three pupils' marks dropped. In **Science** (for Science and English tables see Appendix B), three pupils improved, three pupils' marks remained the same while four showed no

improvement. In **English** three pupils improved, five pupils' symbols remained the same and two showed no improvement.

4.7.3 Movement of school symbols from first to second semester.

An analysis of the marks, reported by the students and indicated on the Cape Town **attendance records** at entry in 1995 and in June, were just as inconclusive. Mathematics marks from Standard Six to Ten indicated that 80 pupils (38%) had improved, there was no movement in the symbols of 59 pupils (29%) and 72 pupils (33%) showed a drop in their marks. Of the 261 pupils whose marks were recorded from entry to June, 1995, 4% showed improvement of two or more symbols (10 - 20%) and out of 110 matriculants, 12 (11%) showed improvement of two or more symbols. Whether these improvements were an effect of the Engen Programme or whether they were influenced by other factors was impossible to tell.

4.7.4. Movement of symbols over three years

The **questionnaires** of pupils who had been in the Programme for more than three years were scrutinised to assess whether school Mathematics, Science and English symbols had improved, had not improved or had remained stable. The number of pupils who had been in the Programme for three to six years was cross tabulated with the movement of their symbols over that period. It was found that of the pupils who had been in the Engen Programme for three or more years, 35% had improved, 40% had not improved and 26% had remained stable.

While these quantitative statistics are inconclusive, qualitative questions elicited a more positive response from persevering pupils (who had been in the Programme for more than one year), who were convinced that their performance and their understanding had improved due to the Programme. In response to a question in the questionnaire about whether attendance at the Engen classes had improved their performance in examinations at school, 67% claimed that it

had, 2% claimed that it had not and 31 % were unsure. This contradicts findings from the data gained from the symbols question, which shows that the majority had not improved. These statistics should be treated with great caution and not over interpreted because if one joins those who have improved their symbols with those whose marks have remained stable in a higher standard, then more pupils may be benefitting (52%) than not (47%).

All things considered, the attempt to distinguish a specific "Engen effect" from the various documents rendered inconclusive results. The lack of evaluation procedures within the Programme led to a reliance on school results which were not always forthcoming. This was aggravated further by a lack of systematic record-keeping by the administration. There seemed to be little difference in the number of pupils whose marks improved and those whose marks remained the same or got worse. Despite their marks, 80% of the respondents claimed that their understanding of Mathematics had improved, 71% maintained that their understanding of Science had improved and 80% of the respondents believed that their understanding of English had improved. It could be speculated from these contradictory and uncertain findings that the Programme intention of improving academic performance as required from the liberal perspective, can not be said to have been definitely achieved. But the pupils' confidence in their own improvement and increased understanding could be contributing to the building blocks referred to in the change agentry perspective.

4.8 Perceptions Of The Programme

4.8.1. Pupils' perceptions.

While the quantitative questions gathered evidence about the pupils background, their attendance and their performance, the qualitative questions sought to find out how they felt about the Programme, **what worked?,** and **what was wrong?** Pupils were asked what they liked and disliked, whether they would recommend the Programme to their friends, why others did not attend,

whether it was different from school, how it could improve and whether they would continue if their marks did not improve.

When asked **what worked?**, in general, pupils' replies were positive. Those pupils who remained in the Programme for successive years were adamant that the Programme was helping them. In the survey that was conducted, educational factors counted most heavily for why students liked the Programme. 69% of the explanations for why students liked the Programme were explicitly educational, while 25% were social. In the social category students explained that they liked the Programme because they met new friends, found the atmosphere enjoyable, fun and relaxed, and were able to come to classes dressed casually. Of significance in the list of "educational likes", was that the most frequently mentioned reason for liking the Programme was that it "improved ability and understanding". 36% of the responses which fell in the "educational" as opposed to the "social" category, were about the Programme enhancing ability and improving understanding.

A few pupils mentioned that classes were not as long and boring as in school and they did not feel trapped. It should be noted that all the pupils interviewed personally and by telephone, that had attended regularly, maintained that they had found the Programme to be helpful and they liked the fact that *all* pupils were helped. They could ask questions and get individual help that it was not possible to get at school. Tutors made sure that they understood the work and were prepared to take the time to explain. They also liked the extra practice and going through old examination papers. The very bright pupils felt that the Programme helped them to achieve their A aggregates. One of the pupils who had been in the Programme since Standard Eight was placed second in the Western Cape and this encouraged other pupils to attend because they saw his success as proof of the strength of the Programme.

When pupils were asked **what is wrong**?, interestingly, negative responses to the Programme were significantly smaller than the positive ones. The reasons which students gave for disliking the Programme, contradicted some of the positive responses and had little to do with the educational content of the Programme. The complaint registered most frequently, constituting 35% of the dislikes, was that the Programme started too early in the morning. A further 20% of the complaints centred on the fact that there were too few breaks. These are organisational rather than educational issues.

The lack of facilities for science experiments and the lack of text books was raised as a point of contention. As was indicated earlier, this deficiency bore a resemblance to similar conditions being experienced in the schools. As a lack of resources had disadvantaged the pupils in the past, this situation was merely serving to reinforce the state of affairs.

Further complaints emerged; pupils said that the tutors did not check or mark their homework and did not set any tests; in previous years there had been teacher assistants in the Engen classes with the result that pupils had received more individual attention; they found the administration was authoritarian, strict and sarcastic and they considered sitting in rows too formal and too much like school.

Despite these difficulties, 81% of the respondents claimed that they would recommend the Programme to their friends. 10% said they would not recommend it and 9% were unsure. Those who would recommend the Programme felt that it had helped them, had improved their results and their understanding. They felt that it was a good learning environment with good teachers (see Appendix B for table). When asked why others do not attend, they answered that others were either not interested, did not know about it or were not able to attend (see Appendix B).

One of the key issues was whether the Programme replicated school (as mentioned in 4.6.4). The need to make compensatory programmes different from school was also mentioned by pupils interviewed in Ismail's (1993:81) research. She reported that pupils did not want to go to school six days a week and appreciated being treated as adults. 63% of the Engen pupils, when asked whether they thought the Programme was different from school, replied that it was different, while 26% thought that it was not different and 9% were not sure. Some of the differences mentioned were:

DIFFERENCES	No. of pupils
better explanations	37
better teachers	19
more relaxed, less formal	17
more tutoring than teaching	12
different content	10
its free	7
work in groups	5
different teaching methods	5

When students were asked whether they would continue with the Programme if their marks did not improve, 79% said that they needed to persist until they began to improve and 8% said that it was not the classes which were at fault but themselves. This indicated a willingness to accept responsibility for their own success and reaffirmed the existence within some pupils of a change agentry perspective.

4.8.2. Tutors Perceptions

Tutors' perceptions of the Programme were shaped by their own experiences in classes and by the assessments of the achievements of the Programme

provided by the supervisors and the co-ordinator. While their perceptions were largely positive they were not without criticism of the Programme.

Tutors were asked various questions during the interviews such as; how and why they got involved, how long they had been involved; what they thought the aims of the Programme were; whether these were compensatory or supplementary in nature; whether they thought the aims were being achieved and if so, how did they know? They were also asked what they believed to be the strengths and weaknesses in the Programme.

The majority of the tutors became involved through their friendship with the co-ordinator, supervisor or one of the other tutors. Most of the tutors had been involved in the Programme for a number of years, some since its inception. The general consensus was that they were there because they wanted to make a contribution to improving pupils' chances, and they needed to supplement their teaching income. One tutor stated that he loved people and loved English and wanted to help while another said that he wanted to help those who, due to a lack of background, needed basics. The latter claimed that the Programme was necessary because the teaching at some schools was not very good.

The main aim was thought by the tutors to be to raise the standards of the three key subjects; for those who could, to strive for A symbols and for those who were failing, to help them to pass. The emphasis was on explaining examination issues e.g. positive marking, multiple choice questions, and "to learn how to do things that would earn lots of marks". As subject examiners for the *matriculation* examinations, through their matriculation marking, the tutors saw commonly recurring problems. No feedback mechanisms to schools existed so that the teaching mistakes were repeated year after year. Accordingly, the Engen Programme was seen by these tutors as a good opportunity for addressing and remedying the problems which were manifesting themselves in the final

examinations. In this sense, they were seeing the Programme as supplementing rather than substituting schooling.

The goals of both cognitive development and examinations were emphasised by one respondent as high priorities. One attitude was that the younger groups should be encouraged to study as broadly as possible and the Standard Tens should concentrate on examinations. It was suggested that the aims were more implicit than explicit and that, in fact, a great deal of education was being done.

There were conflicting opinions about the issue of the compensatory as opposed to supplementary nature of the Programme. Some of the tutors thought that the Programme was supplementary while others thought that, with the influx of pupils from the black schools, it had become increasingly compensatory. One respondent considered the Programme supplementary for first language pupils and compensatory for the second language pupils. Another responded that, with the advent of a single education department, their role should be adjusted to raising the standard of the black pupils through compensatory work, to give them a chance. On the other hand, it was argued, the pupils from the so called "coloured" schools were not receiving quality education and a lot needed to be done for them too. There was the contention that combining compensatory and supplementary teaching was not very successful, that it would only work if the groups were divided. This opinion was born out by the 1995 matriculation results in which 20 out of 21 of the black pupils in the Programme failed. Furthermore, it was felt that 1 hour per week would be too little to attempt to substitute or compensate for schooling - that the Programme should rather supplement school teaching, using the time well to remedy material that was not understood.

The consensus amongst the tutors, at the time of the interviews, was that the Programme was achieving its aims. This opinion, they said, was based on pupils' homework, their class participation and what they deemed to be the "tremendous

growth in the pupils". Evaluation was mainly accomplished by checking school test marks and matriculation results. They were especially proud of the fact that in the 1994 matriculation results in the House of Representatives schools, three of the top twenty pupils were in the Engen Programme. Whether they would maintain this opinion, given the current matriculation results, is questionable.

In answer to the question **'what works?'**, a number of positive aspects of the Programmes were identified by the tutors, such as:

- the fact that it catered for all, was open to all and was optional, therefore pupils who came were committed, willing and prepared to stay longer. Indeed, the pupils in Cape Town appeared to be well behaved and quiet, because, as they said in interviews, they came to Engen to learn and by choice;
- the social mix, considered one of the wonders of the Programme, with the relaxed atmosphere, interaction amongst pupils through group work and the sharing of notes from different schools. One respondent said that it provided an opportunity for the ex-DET pupils to become acquainted with a different culture and for shy pupils from black schools to become more integrated and more verbal. Of the seven teachers who were interviewed in Cape Town three mentioned the benefits which Xhosa-speaking pupils derived from working in a supportive environment. Another tutor reported a collaborative atmosphere which existed amongst pupils and that the pupils were very sympathetic and helpful towards one another;
- the fact that it was a new environment away from their schools - they felt that pupils wanted to go somewhere different. One of the ingredients for success in educational intervention was thought to be found in moving pupils out of their usual schooling environment. (Yinger, Ikeda, Laycock and Cutler, 1977:2). This seems to be an important factor for consideration in future planning.

Tutors claimed that the demand was so great that they had been forced in the past to curb entrance into the Programme. They thought that there would be a big gap if the Programme closed down. At the same time, some tutors indicated that the Programme could not actually cope with filling the gap.

Although the tutors were quite positive about the Programme, when asked '**what is wrong?**' they identified the weaknesses and problems that they faced such as:

- aims that were too wide;
- the mix of pupils, for instance, the new influx of pupils from the ex-DET or Transkei schools meant that the classes had to become so basic that the other pupils could no longer benefit. Many believed that while it was good that the Programme was open, at the same time it was difficult to teach across different ability groupings. This often resulted in the provision of a service based on the ability of the most needy which left many more able children bored;
- pupils' passivity - it was reported that pupils copied sums from the board and listened, but gave very little feedback and were quite unused to working in groups;
- the difficulty of evaluating whether the objectives of the class were achieved considering the lack of active participation and the lack of sufficient written work;
- transport problems which prevented pupils from coming or caused them to arrive late;
- irregular attendance with some pupils being there each week while others were not, which made it hard to plan anything. This together with the continual enrolment of new students and with the fact that classes were only held once a week made it difficult to maintain continuity. They felt quite strongly that they were trying to achieve results while teaching under difficult circumstances;

- the amount of time wasted taking attendance and recording the June school-examination marks;
- pupils were not always good about doing homework;
- pupils did not have to do three subjects on a Saturday and some pupils, often those who needed it the most, chose not to do English;
- not enough consultation between the management and the tutors;
- the lack of liaison with school teachers.

Other problems identified by tutors began to emerge as key themes that correlated with those which had been identified by the pupils. These were:

- the lack of resources such as a laboratory for Science experiments, overhead projectors, dictionaries and text books;
- the difficulty of teaching pupils who came from mixed backgrounds and languages. They reported that some of the pupils only spoke their mother-tongue language and broken English. This made it difficult for the pupils who were being taught by people from a different culture and in a different language;
- old style finicky, authoritarian pettiness in the administration;
- the frustration of teaching English setwork in a situation where the pupils all came from different schools which had selected different setworks;
- classes that were too big to allow for individual attention.

4.8.3 Comparisons with other CEPs

Many of the problems identified by tutors and pupils surfaced in discussion with the representatives of the other local CEPs (see Appendix A). These common problems, highlighted by the Engen study, included:

- overly large classes;
- the lack of basic skills;
- poor language ability;
- irregular attendance;

- a high drop out rate;
- a lack of continuity;
- the difficulty of evaluating whether objectives were being achieved;
- the examination orientation desired by the pupils;
- and a lack of responsiveness amongst the pupils.

Furthermore, it was reported that a certain naiveté was revealed in the pupils' belief that if they attended, and just sat passively they would learn. This naiveté, reported by all the CEPs, manifested itself in other ways. For instance, their attitude to subjects such as English displayed a lack of appreciation of the need for sufficient proficiency in English to be able to understand subjects such as Mathematics and Science. At LEP, an attempt was made to teach Mathematics in Xhosa. But this ended up being English Mathematics terminology with Xhosa prepositions. When LEP instituted English language as the only subject available on Saturdays during the third period, many pupils sat outside in the sun instead of attending. They did not consider English as important unless it related specifically to examinations.

This attitude, according to the Director of the Ethembeni Learning Centre, could be attributed to the way subjects were compartmentalised so that pupils could not make connections between them or relate them to the real world. He asserted that pupils were given a very compartmentalised world-view with the examination orientation, creating tunnel vision and preventing an opportunity for creative learning methods. Elaborating further on this line of thought, in the Diakonos Trust information brochure (1995:2), it was stated that:

> the method of education does not readily encourage creative and lateral thinking. Students end up being little more than reproducers of the information they have gathered from their teachers. They may pass examinations on the basis of what they remember but it would be wrong to assume that they are, therefore, able to apply that knowledge in a practical way.

Another problem identified by local CEPS was the difficulty of liaising with the regular school teachers who took it as a sign that their pupils' enrolment in a CEP Programme indicated problems with their teaching.

What this study seemed to be revealing is that there is a great deal of consensus amongst the pupils, the tutors and the other CEP representatives about what works and what is wrong with compensatory education practices. The tutors had a number of useful suggestions of **what could be done** to remedy the weaknesses. They suggested that:

- the administration needed reorganising; it was felt that a greater degree of joint ownership was needed and that tutors should meet and discuss and participate in decision and policy making, and be paid for the extra time spent on these activities;
- the Programme should become more focused and more selective;
- there should be a cut off point for registration after which no new pupils should be allowed to register;
- classes should not be bigger than 30 - 35 pupils.
- guidance counselling should be provided. One staff member explained that pupils were opting for careers such as teaching because they did not know of other options. They needed help with finding out what kinds of careers were available, where to apply and how to apply. Otherwise, according to one respondent, "they (would) end up in places where they don't fit".

Alternative ideas that were being discussed within the other CEPs locally about **what could be done** were that:

- access should be limited so that pupils could no longer come and go as they wished;
- that there could be incentives for attendance (LEP awards dictionaries to pupils with over 80% attendance);
- that the emphasis should be project-based rather than syllabus based;

- that projects should demonstrate the interconnectedness of subjects such as Science, Mathematics and Technology;
- that teachers should be hired who are passionate about teaching, with the role of tutor changed to facilitator rather than provider of knowledge;
- that to ensure parental support and participation, parents should have to attend a meeting before their children could be accepted into the Programme.

In concluding the evaluation of the Engen Programme, while it was difficult to assess a definitive "Engen effect" and say unambiguously that participation in the Programme enhanced school performance, my interpretation of its effectiveness is that in some cases it probably did help. Even though the data was inconclusive, it may have helped some of the brighter pupils to obtain A's and some of those at risk to pass. Moreover, although this was not a stated purpose, a benefit may have been the tracking of more females into the Mathematics and Science streams. But, perhaps not enough pupils are benefitting at present to warrant the expense.

This does not mean that a programme of this nature is irrelevant and should be discontinued, for two reasons. Firstly, if a few pupils are benefitting, the potential must be there for many more to profit to some extent. Secondly, the relatively small amount of funds being allocated to this Programme would not even make a dent if spent within the formal education system.

The evidence from this case study illuminates the strengths and weaknesses of compensatory education, and how these interventions function from the liberal perspective by providing opportunity. **Substantial** educational effect was not proven quantitatively. Significantly, however, the qualitative evidence from the Programme *recipients*, which is of more interest from a change agentry perspective, overwhelmingly supported and commended this Programme.

CHAPTER 5
CONCLUSION

> "People think of students as potential beneficiaries of change ... (t)hey rarely think of students as participants in a process of change" (Fullan, 1991:11).

The phenomenon of compensatory education, initiated by business and designed and implemented by administrators and teachers, was conceived and created to benefit pupils. The very word "compensatory" implies a giving, making amends, redress, a one-way process and this is perhaps where the endeavour breaks down. For those who have benefited most by these innovations are the pupils who meet the challenge half-way. They are the pupils who firstly make the effort to register and more vitally, who stay the course. They represent, at present, a very small minority.

This type of programme, at present, seems to work better for those pupils who need a little help than for those who need a lot of help. This could be attributed to the fact that pupils who need a little help are possibly already motivated, self disciplined and prepared to make the necessary sacrifices. Those who require a lot of help, need foremost to develop a culture of learning. The pupils, themselves, have an essential role to play in the equation. They need to be active, persevering and committed to improving their future prospects. However pupils may not be aware that they need to make this effort without the guidance of the "significant others" in their lives. The people who have a strong influence on the pupils' lives, such as parents and school teachers, are essential to the successful operation of the educational intervention. What this highlights is that the efforts of organisers of CEPs will be largely wasted unless they are combined with the efforts of the parents, the school teachers *and the pupils.* Without their combined effort, the intervention outcomes will remain minimal.

The number of children who register for these programmes is actually very large. But the drop-out rate is also very large. The lack of continuity limits the possibility of substantial achievements being realised through these programmes. This raises the question of why pupils drop out in such large numbers? Reasons given were social rather than educational, but this could be misleading. Would pupils be able to judge the educational merits of a programme? What could they compare it with other than their regular school?

Implications are that responsibility for ensuring the continuity in such programmes lies with all the stakeholders, from the pupils, themselves, to tutors with their teaching methods, and to the parents, school teachers, and programme management. Liaison with the parents and school teachers should be a priority for the CEPs and these parties need to be *actively* involved. School teachers need to identify the pupils who will benefit from this type of programme, encourage them to enrol, and liaise with the programme tutors as to their areas of weakness. Parents need to take an interest in what their children are doing, support their efforts and encourage them to stay the course. Pupils need to *actively* engage with the material rather than expect to be passively *given* knowledge. This may contribute to a lowering of the drop out rate.

This study began with two main questions of whether CEPs are effective and whether such programmes continue to be relevant in post-apartheid South Africa. My answers are tentative, based on the preliminary findings of the Engen evaluation, the interviews with the other CEPs and the literature.

5.1. Are such programmes effective?

Everything turns on what is understood by effectiveness. Self reported performance indicators were not helpful in assessing the effectiveness of compensatory education as a vehicle of educational reform. Certainly, the programmes were inappropriate for the pupils most at risk, for whom high school

level tutoring in Mathematics and Science was a waste owing to their lack of basic skills and language proficiency. The orientation and emphasis of these programmes and the teaching methods were clearly inadequate to make up for their environmental deprivation. However, despite the inconclusive quantitative evidence about performance outcomes, perceptions of the pupils, from a qualitative perspective, were overwhelmingly that their understanding of their school work had improved as a result of participation in this type of programme.

The data sets up a tension that needed to be resolved to understand the impact of compensatory education. What this tension may be implying is that some pupils benefit in ways that are not measurable quantitatively through marks and attendance statistics. Measures of effectiveness should take into consideration aspects such as the varying scale of disadvantage, the small gains that are change-enhancing, the significance of providing a glimmer of hope in an atmosphere of despair and the value of having successful pupil role models to emulate. The fact that pupils aspire to vocations beyond those of their parents, and willingly relinquish their free time on a regular basis, encourages a belief that compensatory education can contribute to the growth of a culture of learning. In this sense these programmes could be said to be serving *some* of the pupils in *some* ways. For those pupils who enrolled and who remain in this type of programme, the unintended benefits may be the development of the very qualities needed to become productive skilled workers, who may have benefited by developing qualities of determination and perseverance that would serve them well in the labour market, justifying the expenditure from a liberal perspective. For those few pupils who persevere it could be providing the small building blocks that develop generative capacities referred to in the "change-agentry" perspective.

Without losing sight of the original purpose of compensatory education, that of "bridging the gap", it could be asserted that while both perspectives need to be

served to make such programmes really effective and worthwhile there may be a valid argument for allocating more significance to the change agentry perspective for promoting effectiveness and relevance.

5.2. Are such programmes still relevant?

A shift in concern from the liberal perspective, which promoted the need for productive skilled technologically-adept human capital, to an interest in the change agentry potential of an intervention lies in the conviction that in the post-apartheid South Africa, education needs to prepare pupils for a variety of roles and challenges. Not everyone can be absorbed by the technologically dependent sectors of the economy. Nor will everyone be able to rely on a wage earning occupation. People will also need to be increasingly self-supporting, resourceful, innovative and adaptable, and able to deal with complexity and inevitable conflict in our rapidly transforming society (Fullan, 1993) To achieve this, future educational interventions need to find ways to shift the mindset of many more pupils away from a victim-consciousness, and to inspire an excitement about learning.

Furthermore, while it is the obligation of government to provide a decent educational service for young people, in the foreseeable future due to budget constraints, there will continue to be vast disparities in the quality of education provided for historically advantaged and disadvantaged communities. Although given the size of the problem the gains from compensatory education programmes might seem small at present, it should be said emphatically that initiatives such as the Engen Programme (albeit with major structural changes) remain profoundly relevant and there can be no doubt that some kind of interventions are needed. Schools provides one site of knowledge acquisition but many other ways and opportunities need to be created by civil society and business to assist previously disadvantaged pupils in upgrading their educational achievement.

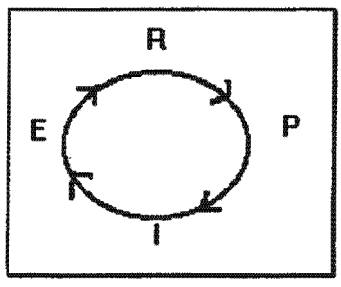
CHAPTER 6

FUTURE POLICY CONSIDERATIONS ARISING FROM THE STUDY

The goal for this final chapter is not to suggest policy consideration for the Engen Programme only or specifically, but for the field of compensatory education as a whole.

Having said that educational interventions remain relevant, and not forgetting the earlier conclusion that pupils bring something to the process, it is ultimately the responsibility of the management of these programmes to engage in a constant *cyclica*l search for regenerative strategies. Learning from the experiences gained in both local and international programmes, strategies need to be explored of an **organisational, educational** and **evaluative** nature.

A four step framework to guide this cycle should include:



- **R** - a consideration of the **resources** available (objectives, funds, people and materials) which would facilitate
- **P** - the selection of the **processes** (planning and organisation of the vehicles or the teaching methods to carry out the activities) which would be followed by
- **I** - the **implementation** of the strategy, the outcomes of which lead to
- **E** - an **evaluation** for regeneration (feedback that generates creative alternatives) which precedes the next phase of activity. (This idea was

inspired by and adapted from the RSVP process introduced by Halprin & Burns, 1974)

This would prevent a repeat of the situation where an initiative such as the Engen Programme runs continuously for eight years without an evaluation or conclusive evidence of its effectiveness. It would also contribute to the "journey of unknown destination and constant search for understanding" mentioned in the change agentry perspective described in Chapter 2.

Innovative ideas and alternatives that have emerged from the study and from the literature, form part of the **resources** available for consideration in the policy formation of a next phase:

6.1 Organisational Strategies

6.1.1. Administrative Structure

Providing an administrative structure that can plan effectively, facilitate vision and goal setting, and keep ordered records efficiently cannot be emphasised enough. This requires sufficient funds to ensure a suitable and efficient staff. Questions of how students are being helped by these interventions and why so many drop out, need to be investigated and managements should explore creative ways of ensuring student perseverance in these programmes.

6.1.2 Shared Vision-building

The aims of compensatory programmes, according to Chazan, (1973) and Haywood (1982) need to be revisited regularly. Staff and sponsors need to set clear policy guidelines for strategies that fit the goals, set concrete, immediate and measurable objectives while keeping in mind the size of the task. These aims and objectives need to be shared with the pupils (Ismail, 1993). While definitive programmes that are equally applicable to all are neither possible nor desirable, different approaches and different solutions need to be negotiated

between the pupils and the staff (School Council Working Paper, 1970:10). Fullan calls this "shared vision-building" (1993:12).

6.1.3. Location-specific Goals

The programme location will have a bearing on the student population. The current inefficiency and cost of public transport in South Africa will limit the poorest and most needy pupils from attending unless a programme is held in their community or transport is provided. The specific goals of each programme need, therefore, to be guided by its location and clarified in terms of the specific pupils being served (Haywood, 1982:289). If a programmes is located in a lower to middle class area, it should concentrate on supplementary or enrichment education. If it is located in a poor area, it should probably concentrate on improving basic skills, language proficiency and building self esteem, confidence, self discipline, and a culture of learning. Certainly the decision to orientate programmes towards the scientific subjects at a high school level should be preceded by an examination of whether the target pupils have sufficient cultural capital, basic skills and language proficiency to benefit from such a programme, or whether the funds may be more effectively spent at an earlier stage, building these necessary foundations.

6.1.4. The Name of the Game

The actual name of "compensatory" with its welfarist implications should be rethought and perhaps replaced with an alternative such as "complementary education" (designed to *complement* schooling and where it is a *complement* to be included), "equalising education" or an inspiring title like "Work to Win".

6.1.5. Selection

One of the urgent issues that managements would need to clarify is how students should be recruited and the criteria that should be used for *selection.* Ismail (1993:97) recommends that equal access should be available with clear

criteria for entry, but numbers should be restricted to prevent overcrowding. To prevent the corrupting influence of Welfarism, which was discussed in Chapter 2, she proposes that financial assistance for the future study could be linked to performance and to helping others (Ismail,1993:32).

6.1.6. Collaborative Work Cultures

Links need to be built with other projects, education departments and NGOs to share resources and prevent unnecessary overlaps (Hartshorne,1987). Fullan calls this the creation of "collaborative work cultures" (1993:12). For instance, dialogue between regular teachers and compensatory education tutors needs to be encouraged (Plunkett,1991) and parent involvement seminars or workshops need to be conducted with parents, teachers, community members and administrators (Stickney and Plunkett, 1983).

6.2 Educational Strategies

6.2.1 Not More of the Same!

One recommendation is to make these programmes distinct from school. A defining pedagogic character, which emphasises examinations and the syllabus, is not sufficiently flexible to address the diverse needs of students coming from different backgrounds with different orientations. There is a need to conceive of an environment and an approach which makes possible and encourages innovation. Rather than "chalk and talk" lecturing methods, which may not be appropriate for educationally deprived pupils lacking listening skills, the focus should rather be on getting the pupils interested and providing opportunities for experiencing success. Innovative teaching methods such as interdisciplinary discovery methods and problem-oriented approaches need to be developed and interactive techniques rather than what Randall (1987:41) calls "more of the same" teaching methods adopted. Beyond introducing more enlightened teaching methodologies, Taylor (1995:13) draws attention to the need for

teachers to require cognitive effort of the pupils and demand work of a high quality.

6.2.2. Flexible Modular Scheduling

According to Gilmour, Soudien and Van Papendorp (1995), programmes could be restructured around modularised themes and registration controlled to coincide with the offering of new themes. Ornstein & Levine (1985) describe a system of flexible modular scheduling with large group instruction by a particularly competent teacher, followed by small group discussion and independent study, with individualised assistance by paraprofessionals. Modularisation may also offer more opportunities for assessing and evaluating the impact of the intervention.

6.2.3. Tutor Training

Bottom states that "the most important cog in the education machine is the classroom teacher" (1970:17). Management should assist tutors in finding the appropriate training for working in the area of educational support. Teachers need to be trained especially for the job with theories and concepts of intellectual development, individual differences and processes of cognitive change (Haywood, 1982). Haywood suggests that pupils learn effectively when teachers are generous with praise, approval and warmth, balanced with a no-nonsense attitude. Plunkett (1991:342) proposes that changes in achievement occur when teachers set high standards and expectations; "student achievement and behaviour are affected by messages students receive about what is expected of them" .

6.2.4. Changing Attitudes towards Learning

Further suggestions in the literature for stimulating an enthusiasm for and changing attitudes towards learning may be through:

- experiential learning techniques such as socio-dramatic play, creative movement and peer stimulation (Chazan,1973);
- audio-tutorial methods where pupils learn by seeing and doing, collaborative learning, and focusing on building a positive self image (Roueche & Wade Kirk, 1973);
- emphasis on communication language and cognitive skills; De Baca, Rinaldi and Billing (1991) advocate the integration of language arts into all subject areas. In the South African situation this is very important, given the difficulties pupils experience with learning in English;
- basic skills acquisition, strong instructional leadership, and frequent monitoring within an orderly environment (Meijnen, 1991);
- activities such as Art, Music, Dance, or physical activities which may expand a child's personality and build up confidence in such a way that intellectual improvement comes more easily (The Schools Council Working Paper, 1970:9);
- guidance counselling for "personhood" development (Roueche, 1973:74) and to advise and assist pupils with subject choices and career possibilities.

6.3. Evaluational Strategies

A constantly recurring theme through this study has been the issue of evaluation both *of* and *within* programmes. External evaluations that measure educational quality for the purposes of scientific accountability, donor accountability and systemic accountability are essential (Taylor, 1996). The terms of these evaluations need to be negotiated between the various stakeholders backed by consistent academic research into programme design, and valid indicators of performance need to be constructed (Morphet, 1996). Morphet quotes Bisgard as saying

> let's agree, at the start of a project, on what counts as valid indicators, then we will be able to take one measure at the beginning and another at the end and we will be able to demonstrate the effects of the intervention with confidence" (p.47).

Within programmes, strategies need to be devised for managing and delivering a programme which is amenable to and capable of judging its own effectiveness. Ways of evaluating need to be built into the programmes so that they are on-going. These need to include both quantitative measures of sustained pupil performance and qualitative examination of classroom practices (Hartshorne, 1987).

Roueche and Wade Kirk (1973:63) suggest that teachers be challenged to evaluate themselves according to the learners' success. As there are different understandings of success, new evaluation strategies need to be developed that can take into account differing objectives while honouring complex interacting variables (Fullan, 1991:xiii). Achievements may be better assessed if compared with the academic progress of a control group (Haywood,1982, Taylor,1995). To evaluate the long term value of educational interventions, pupils need to be tracked longitudinally (Jansen, 1996) and compared with a peer group to ascertain whether gains are maintained, whether pupils become skilled workers and whether they develop into change agents in their adult lives.

Finally, as a long-term goal and a way to steer the "journey of unknown destination" (Fullan, 1993) that fuels educational reform in our inevitably changing world, Haywood (1982:295) suggests that *centres of excellence* could be created in which educational intervention strategies could be researched, tested experimentally, evaluated, refined and prepared for dissemination across the country.

APPENDIX A
INTERVENTIONS IN THE WESTERN CAPE

The following programmes are the largest and most well-known in the Western Cape:

The **Engen Educational Programme**, initiated and financed by the Engen Oil Company, operates in Cape Town (and Durban). Tutoring in Mathematics, Science, Biology and English is offered on Saturdays to approximately 300 secondary school pupils in Cape Town (and 700 in Durban) from Standard Six to Standard Ten.

The **Langa Enrichment Programme** (LEP) administered by the South African Institute of Race Relations (SAIRR), operates in Langa and Khayelitsha on Saturdays, emphasising Mathematics, Science and English, with an annual registration of 2,000 - 3,000 secondary school pupils primarily from the ex-DET secondary schools.

The **Goldfield Outreach Programme** at the University of the Western Cape busses pupils in from fourteen different secondary schools on weekday afternoons for computer based educational enrichment in Mathematics and Science. Approximately 570 pupils register for this course annually.

The **Step Programme** run by Shawco at the University of Cape Town (UCT) offers all matriculation subjects to about 600 township pupils who are bussed in to the campus on Saturdays and tutored by UCT students.

The **Standard Bank Programme** operates from Garlandale Secondary School on Saturdays and serves about 150 secondary school pupils primarily from the Athlone area. Their emphasis is also on Mathematics and Science.

The **Protec Programme** held on Saturdays at the Peninsula Technikon, presents a support programme in technologically relevant subjects. These include Mathematics, Science, Technology, Technical Drawing, English and "The World of Work" (Norenius,1994:1). Approximately 300 secondary school pupils enrol annually.

The **Diakonos Trust Programme** at the Mowbray Presbyterian Church Centre has been running modules in Mathematics, Science, English and Biology tutoring for matriculants from Thandokhulu and Esangweni High Schools, catering for about 60 pupils in each subject. According to the Director, the emphasis will change in 1996 to Academic Development programmes for Standard Seven pupils. This change of focus follows the realisation that their efforts were equivalent to "putting a Band-Aid on a gaping wound" (Interview with Brian Bird, 5/9/95).

APPENDIX B

TABLES

1. Attendance

ATTENDANCE NUMBERS FOR DURBAN FROM FEB TO APR, 1995

DATE/ STD	4/2	11/2	18/2	25/2	4/3	11/3	18/3	25/3	1/4	8/4
STD 10	207	200	201	221	209	186	192	136	146	133
STD 9	113	105	113	110	105	74	76	68	72	72
STD 8	68	78	98	98	90	90	68	68	65	62
STD 7	109	137	150	138	126	115	92	103	91	91
STD 6	108	138	158	158	131	127	125	94	117	88
TOTAL	605	658	720	725	667	592	553	469	461	446

2. Gender cross tabulated with Centre

The following table shows the breakdown by gender and centre of the *total* enrolment (not the sample).

GENDER	CAPE TOWN		DURBAN		TOTAL	
MALE	157	42%	135	36%	292	39%
FEMALE	215	58%	239	64%	454	61%
TOTAL	**372**	**100%**	**374**	**100%**	**746**	**100%**

3. Best subject and most failed subjects

BEST SUBJECT	NO. OF PUPILS	MOST FAILED SUBJ	NO. OF PUPILS
MATHEMATICS	122	MATHEMATICS	54
ENGLISH	88	AFRIKAANS	25
SCIENCE	67	SCIENCE	24

4. Pupils' Likes

There were many aspects of the Engen Programme that pupils liked. Positive aspects mentioned were:

POSITIVE ASPECTS	No. of pupils	% of pupils
improves ability and understanding	74	32%
better teachers and explanations	53	23%
meet new friends	29	13%
enjoyable, fun, relaxed	20	9%
free education and something to do	13	6%
revision	6	3%
makes me work harder	5	2%

5. Negative pupil perceptions about the Engen Educational Programme

NEGATIVE ASPECTS
the time it starts - too early
sessions were too long, breaks too short
periods were too short
there were not enough subjects
there was not enough personal attention.
language was a problem
transport was a problem
the buildings were cold
the teachers went too fast
people looked at your clothes
the lack of facilities for science experiments

6. Problems in the schools

Problems in the pupils' regular schools contributed to their desire to seek educational assistance. The question concerning problems in the schools generated the following responses:

PROBLEM	No. of pupils	% of pupils
not enough books	103 pupils	29%
not enough equipment	99 pupils	28%
no problems	65 pupils	18%
not enough classrooms	31 pupils	9%
teachers not qualified	18 pupils	5%
other	41 pupils	11%
Totals	**357**	**100**

7. Cross tabulation of Mathematics symbol with after school aspirations

MATHEMATICS SYMBOL x AFTER SCHOOL ASPIRATIONS	A	B	C	D	E	F
UNIVERSITY	78%	72%	65%	49%	38%	38%
COLLEGE	3%	0%	4%	10%	4%	13%
TECHNIKON	19%	19%	29%	37%	58%	37%
WORK	0%	9%	2%	4%	0%	12%
TOTAL %	100	100	100	100	100	100

8. Movements of Science and English symbols from 1994 - 1995.

PUPIL NO.	STD	1994 SCI	1995 SCI	IMPROVE SYMBOL	1994 ENG	1995 ENG	E SYMBOL
1.	9	D	D	SAME	E	D	YES
2.	9	F	E	YES	D	D	SAME
3.	9	E	E	SAME	C	D	SAME
4.	9	C	E	NO	D	E	NO
5.	8	C	E	NO	C	D	NO
6.	10	C	C	SAME	D	D	SAME
7.	7	A	C	NO	D	D	SAME
8.	10	F	FF	NO	E	D	YES
9	9	FF	E	YES	E	D	YES
10	10	E	D	YES	C	C	SAME

9. Academic Progress (or not) over three - six years

The following table is a cross tabulation of the number of pupils who had been in the Programme for three to six years and the movement of their symbols over these years :

(Yes = Improved, No = Not improved, Same = no change in symbol)

YRS AT ENGEN	MATHS YES	MATHS NO	MATHS SAME	SCI YES	SCI NO	SCI SAME	ENG YES	ENG NO	ENG SAME
3yrs	5	9	1	4	8	2	8	5	2
4yrs	0	2	0	0	2	0	1	1	0
5yrs	0	0	3	0	1	2	0	0	3
6yrs	0	0	1	0	1	0	0	0	1
Total	15	20	16	15	23	8	20	14	13

IMPROVEMENT (50) 35% NO IMPROVEMENT (57) 40%, REMAINED STABLE (37) 26%

10. Pupils recommendations for improving the Engen Educational Programme.

RECOMMENDATIONS	pupils	% of pupils
it helped me, it can help them	51	29%
improvement of results	37	21%
better understanding	24	14%
good teachers	13	8%
helps a bit	4	2%
good learning environment	4	2%
free opportunity	4	2%
for the future	2	1%
prevents boredom and waste	2	1%
only option	2	1%

11. Why do others not attend?

Attitude	No. of pupils	% of pupils
they think it is a waste of time	72	28%
they don't know about it	49	19%
have problems with the location and transport	35	13%
it begins too early on Saturdays	34	13%
they are too lazy	30	11%
they do not need it because they are too bright	17	7%
they think that the classes are too full	7	3%
they want to enjoy the weekend	6	2%
they had no access to admission forms	4	2%
they are intimidated by the different races	3	1%

12. Pupils' Suggestions

Pupils were asked for their suggestions for improvements to the Programme. The main suggestions were to:

Suggestions	No. of pupils
add more subjects	26
have more tutors and divide the classes	23
provide longer breaks and refreshments	21
explain better, slow down	6
shorter periods	5
better facilities	4
outings	4
change times of the classes	2

13. Pupils reasons for continuing in the Programme

REASONS FOR CONTINUING	No. of pupils
they needed to keep trying until they improve	123
it was not the classes that were wrong but themselves	12
it helped at times	7
it is important to their future	5
if they stopped their marks would get worse	3

APPENDIX C

SCHOOLS FROM WHICH PUPILS ARE DRAWN .

DURBAN SCHOOLS	NO.	CAPE TOWN SCHOOLS	NO.
A.J.MWELASE	1	ALEXANDER SINTON	8
APOLLO	3	ATHLONE	21
ARENA	4	BELGRAVIA	17
ASOKA	7	BELHAR	2
BHEKISISA	12	BRIDGETOWN	4
BIYATHUTKA	1	BONTEHEUVEL	1
BRETTONWOOD	1	CAPE TOWN	2
BRINDHAVEN	1	CBC	1
BURNWOOD	2	CEDAR	4
DABEKA	3	CATHKIN	2
DASSENHOEK	1	DE RUYTER	1
DALEVIEW	3	ELSIES RIVER	9
DLOKO	4	EXCELSIOR	1
DR.A.D. LAZARUS	4	ENKUNILEKWENI	1
DUMAHLAZI	6	FAIRMOUNT	1
DR JOHN DBE	7	GARLANDALE	8
DURBAN GIRLS	2	GRASSY PARK	7
EARLINGTON	2	GROENVLEI	3
EASTBARY	1	HABIBIYA ISLAMIC	7
EFFINGHAM	1	HAROLD CRESSY	5
EMBIZWENI	6	HEATHFIELD	14
EMBKWENI	1	IKAMVALETHU FINISH	18
FAIRVALE	9	IMMACULATA	2
GANGES	2	KENSINGTON	2
GREENBURY	2	LIVINGSTONE	21
GROSVENOR	2	LANGA	39
GROVE END	1	LUHLAZA	3
IGUGULABASHA	5	MONDALE	1
IMANDA	1	MUIZENBERG	1
INHLAKANIPHO	1	MATHEW GONIWE	8
INTERFELLOWSHIP CHRISTIAN.	1	NELSON MANDELA	1

INTSHISKELO	2	NED DOMAN	1
ISIBONELO	6	NTSHUKUMO	1
DURBAN SCHOOLS		**CAPE TOWN SCHOOLS**	
ISIKHWELO	1	OUDE MOLEN	2
JENDLOVU	2	OAKLANDS	6
J.E.NSCOVU	1	PELICAN PARK	1
KWAMGAGA	1	PLUMSTEAD	3
KWA-SHAKA	8	PRINCETOWN	2
LAMOTVILLE	4	PEAK VIEW	1
MEADOW	2	RONDEBOSCH	1
MEREBANK	1	RHODES	4
MENZI	2	RYLANDS	7
M.L.SULTAN	37	SACS	1
MQHAWE	5	SANS SOUCI	1
MOWAT PARK	1	SIBELIUS	10
MZUVELE	2	SOUTH PENINSULA	5
NEW FOREST	2	SPES BONA	28
NEWLANDS EAST	4	ST ANDREWS	1
NEWLAND WEST	4	SALT RIVER	1
NDUKWENHLE	25	THONDOKUHLE	1
NKOSINATHI	1	WOODLANDS	8
NILGIRI	1	VUYISEKA	2
NQABAKAZULU	3	WESTRIDGE	3
NOMBIKA	1	WESTERFORD	2
NTEE	2	WINDERMERE	2
OGWINI COMP. TECH	16	WYNBERG	3
ORIENT	1		
PALMVIEW	2		
PHEMBISIZWE	1		
P.R.PATHER	2		
PINETOWN GIRLS	3		
PHOENIX	2		
PHAKOMA	1		
RIVERDENE	2		
RISKCLIFF	2		
ROSSBURGH	1		
RYDALBARK	1		
SIVANANDA TECH	6		
SIYATHUTHUKA	12		

SOLVISTA	4		
SOUTHLANDS	2		
DURBAN SCHOOLS			
STANMORE	5		
SWELIHLE	2		
TNTSHISEKELO	1		
TSIBONELO	3		
UMBILO	21		
UMLAZI	3		
VELABAHLEKE	1		
VUKUZAKHE	1		
VUYISWA MOTO	1		
WESTCLIFF	2		
WESTRIDGE	1		
WINGEN HEIGHTS	6		
WOODVIEW	1		
WYEBANK	1		
ZIPHEMBELENI	2		
ZOPH DLOMO	2		
ZUZUMQHELE	1		
ZWELIBANZI	2		
TOTALS	337		245

1. Note: The total number of pupils in this list does not correspond with the other lists i.e. gender, attendance, registration, because pupils did not answer all questions in the questionnaire.

APPENDIX D

OBSERVATION AND INTERVIEW SCHEDULES

1. CLASSROOM OBSERVATIONS:

The Engen Saturday classes were observed on the following dates:

Cape Town: March 11, March 25, June 3, June 10, July 22, August 5

Durban: May 6.

2. MANAGEMENT AND STAFF INTERVIEWS

Engen Social Responsibility Officer, the Engen Programme Co-ordinator and the Supervisors from both Cape Town and Durban were interviewed.

Teaching Staff Interviews were held on May 6 in Durban and on June 3rd in Cape Town.

3. STUDENT INTERVIEWS

14 Students were interviewed in Cape Town on June 10. Besides 2 of the interviewees, they had all been in the Programme for longer than 1 year, and ranged in age from 14 to 18 years.

4. INTERVIEWS WITH REPRESENTATIVES FROM OTHER CEPS

4.1. 9/5/95 Derek Joubert, Co-ordinator - LEP

4.2. 5/9/95 Brian Bird, Director - Diakonos Trust

4.3 5/7/95 Sicelo Duze - Ethembeni Enrichment Centre

5. TELEPHONIC INTERVIEWS

40 people were interviewed by telephone:

- 18 pupils out of the 83 past matriculants of 1994;
- 3 parents;
- 1 Std 10 pupil who had been at Engen for 3 years but who dropped out in his matriculation year (1995);
- 7 pupils who dropped out;

- 5 pupils whose names were not on the attendance lists but who maintained that they attended all year;
- 2 teachers from feeder schools;
- 4 representatives of other local CEPs - the Goldfield Outreach Programme, the Step Programme, the Standard Bank Programme, and the Protec Programme.

For examples of Observation Schedules, Interview Schedules and Questionnaire see over.

Brazziel, W. (1969) — A letter from the South. Harvard Educational Review, Vol. 39, No. 2, pp 348 - 356.

Bryman, A. (1988) — Quantity and Quality in Social Research. London: Routledge.

Capra, F. (1982) — The Turning Point: Science Society and the Rising Culture. London: Simon and Schuster.

Chang, H. (1995) — Singapore: education and change of class stratification. South East Asia Studies, Vol. 32, No.4, pp 455 - 476.

Chazan, M. (1973) — Compensatory Education. London: Butterworths.

Chisholm, L. (1984) — Redefining skills: black education in South Africa in the 1980's. In: Kallaway,P. (Ed) Apartheid and Education: The Education of Black South Africans. Johannesburg: Ravan Press.

Cohen, L. & Manion, L. (1980) — Research Methods in Education. London: Croom Helm.

Connell, R.W. (1993) — Schools and Social Justice. Philadelphia: Temple University Press.

De Baca, M, Rinaldi, C, Billig,S. & Kinnison, B.(1991) — Santo Domingo School: a rural schoolwide project success. Educational Evaluation and Policy Analysis, Vol.13, No.4, pp 363 - 368.

Dostal, E. (1989) — The long-term future of education in South Africa. Paper no. 15. Institute for Futures Research, Bellville: University of Stellenbosch.

Eisner, E. & Peshkin, A. (1990) — Qualitative Inquiry in Education: The Continuing Debate. New York: Teachers College Press.

Elkind, D. (1969) — Piagetian and psychometric conceptions of intelligence. Harvard Educational Review, Vol 39, No. 2, pp 319 - 337.

Everatt, D & Sisulu, E.(1992) — Black Youth in Crisis: Facing the Future. Braamfontein: Ravan Press.

Feinberg, W. & Soltis, J. (1992) School and Society. New York: Teachers College Press.

Finn, C. (1990) A nation still at risk. Optima, Vol. 37, No. 3, pp 98 - 103.

Fullan, M. (1991) The New Meaning of Educational Change. London: Cassell

Fullan, M. (1993) Change Forces: Probing the Depths of Educational Reform. London: The Falmer Press.

Gilmour, D. & Soudien, C. (1994) The Mobil Foundation/Energos 1987 to 1993: A report. Unpublished mimeo.

Gilmour, D, Soudien, C. & van Papendorp, J. (1995) An evaluation of the Engen Educational Programme in Cape Town and Durban. Unpublished report.

Halprin, L. & Burns, J. (1974) Taking Part: A workshop approach to collective creativity. Cambridge: The MIT Press

Hartshorne, K. (1987) Private sector involvement in education 1960 - 1986. In: Randall,P. (Ed). Addressing Educational Crisis and Change. Relevant Private Sector Initiatives. Johannesburg: Centre for Continuing Education, University of the Witwatersrand.

Haywood, H. (1982) Compensatory education. Peabody Journal of Education, Vol. 59, No.4, pp 273 - 300.

H'Doubler, M.N. (1940) Dance: A Creative Art Experience. Madison: The University of Wisconsin Press.

Herrnstein, R. & Murray, C. (1994) The Bell Curve: Intelligence and Class Structure in American life. New York: Free Press.

Hofmeyr, J. (1987) Developing an education policy for corporate social responsibility: a process approach. In: Randall, P. (Ed) Addressing Educational Crisis and Change: Relevant Private Sector Initiatives. Johannesburg: Centre of Continuing Education, University of the Witwatersrand.

House, E. & Haug, C. (1995) Riding The Bell Curve: A review. Educational Evaluation and Policy Analysis, Vol 17, No. 2, pp 263 - 272.

Hunt, J. (1969) Has compensatory education failed? Has it been attempted? Harvard Educational Review, Vol. 39, No. 2, pp 278 - 300.

Hunt Davis Jr. R. (1984) Charles T. Loram and the American model for African education in South Africa. In: Kallaway, P.(Ed) Apartheid and Education: The Education of Black South Africans. Johannesburg: Ravan Press.

Ilon, L. (1995) The global welfare system and World Bank financing of education. Unpublished paper presented at CIES, Boston, Massachusetts

Ismail, S. (1993) The Langa Enrichment Programme: A study of students' perceptions of the performance of the programme undertaken to improve its functioning. Master's Dissertation: UCT.

Janesick, V. (1994) The dance of qualitative research design: metaphor, methodolatry, and meaning. In: Denzin,N & Lincoln, Y. (Eds). Handbook of Qualitative Research. Thousand Oaks: Sage Publications.

Jansen, J. (1996) Does teacher development work? True confessions of a hardened evaluator, in Vinjevold, P. (Ed) Quality and Validity in INSET Evaluations. JET conference report. Braamfontein: Joint Education Trust.

Jeevanantham, L.S. (1993) Does the notion of compensatory education make philosophical sense? South African Journal of Education, Vol. 13, No. 3, pp 125 - 128.

Jenson, A. (1969) How much can'we boost IQ and scholastic achievement. Harvard Educational Review, Vol. 39, No.1, pp 1 - 123.

Kagan, J. (1969) Inadequate evidence and illogical conclusions. Harvard Educational Review, Vol. 39, No. 2,.pp 274 - 277.

Karabel, J. & Halsey, A.(Eds)(1977) Power and Ideology in Education. New York: Oxford.

Kruss, G. (1988) People's Education: An examination of the concept. Bellville: CACE, University of the Western Cape.

Lather, P. (1986) Research as praxis. Harvard Educational Review, Vol. 56, No. 3, pp 257 - 277.

Lazarus, S. (1983) From alienation and estrangement to power and community in South African black education: A community psychology approach. Masters thesis, University of Cape Town.

Lemon, A. (Ed.) (1995) The Geography of Change in South Africa. London: John Wiley and Sons.

Limage, L. (1988) Prospects for adult literacy in a period of economic austerity. Comparative Education, Vol. 24, No. 1, pp 61 - 73.

Louw,J. (1996) Academic research, internal validity and Programme evaluation, in Vinjevold, P. (Ed) Quality and Validity in INSET Evaluations. JET conference report. Braamfontein: Joint Education Trust.

Malherbe, V. (1994) South African Institute of Race Relations, Cape Western Region. regional topic paper. Unpublished.

Meijnen, G. (1991) Cultural capital and learning progress. International Journal of Educational Research, Vol. 15, No. 1, pp 7 - 20

Miller, H. (1967) Education for the disadvantaged: Current Issues and Research. New York: The Free Press.

Molteno, F. (1984) — The historical foundations of the schooling of black South Africans. In: Kallaway, P.(Ed) Apartheid and Education: The Education of Black South Africans. Johannesburg: Ravan Press.

Morphet, A., Schaffer, A. & Miller, C. (1986) — Innovative policy study in education. An evaluation of the Science Education Project in South Africa. Cape Town: Department. of Adult Education and Extra-mural studies, University of Cape Town

Morphet, T. (1996) — Summary and conclusion: "Putting the stuff in place", in Vinjevold, P. (Ed) Quality and Validity in INSET Evaluations. JET conference report. Braamfontein: Joint Education Trust.

Mouton, J. & Marais, H.(1990) — Basic Concepts in the Methodology of the Social Sciences. Pretoria: H.S.R.C. Publishers.

Nisbet, J & Watt, J (1992) — Case Study. Rediguide 26. Nottingham University.

Norenius, I. (1994) — A proposal for partnership between Protec and Engen Limited (unpublished).

O'Dowd, M. (1990) — Foreword. Optima Vol. 37, No. 3, pp 94 -97.

Ogbu, J. (1978) — Minority Education and Caste: The American System in Cross-Cultural Perspective. New York: Academic Press.

Ornstein, A. & Levine, D. (1985) — An Introduction to the Foundations of Education. Boston: Houghton Mifflin Co.

Petersen, L. (1993) — Japan's "cram schools". Educational Leadership, Vol. 50, No. 5, pp 56 - 58.

Plunkett, V. (1991) — The states' role in improving compensatory education. Analysis of current trends and suggestions for the future. Educational Evaluation and Policy Analysis, Vol. 13, No.4, pp 339 - 344.

Postlethwaite, T.N. (1992) — Quantitative Research Methods for Educational Planning. Educational Research: Some Basic Concepts and Terminology. Paris: UNESCO, International Institute for Educational Planning.

Punch, M. (1994) — Politics and ethics in qualitative research. In: Denzin, N. & Lincoln, Y. (Eds) Handbook of Qualitative Research. Thousand Oaks Sage Publications.

Ramphele, M. (1992) — Social disintegration in the black community. implications for social transformation. In: Everatt and Sisulu. Black Youth in Crisis: Facing the Future. Braamfontein: Ravan Press.

Randall, P. (Ed) (1987) — Addressing Educational Crisis and Change: Relevant Private Sector Initiatives. Johannesburg: Centre of Continuing Education, University of the Witwatersrand.

Rapoport, C. (1990) — A look inside a Japanese School. Optima, Vol. 37, No. 3, pp 139 - 140.

Richardson, L. (1994) — Writing. A method of enquiry. In: Denzin,N & Lincoln, Y. (Eds). Handbook of Qualitative Research. Thousand Oaks: Sage Publications.

Robinson, P. (1982) — Where stands an educational policy towards the poor? Educational Review, Vol 34, No. 1, pp 27 - 33.

Roueche, J. & Wade Kirk, R. (1973) — Remedial Education. San Francisco: Jossey-Bass Publishers.

Roxborough, I. (1979) — Theories of Underdevelopment: London: Macmillan.

Scheerens, J. (1992) — Effective Schooling. Research, theory and practice. London: Cassell.

Schools Council Working Paper 27 (1970) — 'Cross'd with adversity': The Education of Socially Disadvantaged Children in Secondary Schools. Suffolk: Evans/Methuen Educational.

Schwandt, T. (1994) — Constructivist, interpretivist approaches to human inquiry. In: Denzin,N & Lincoln, Y. (Ed). Handbook of Qualitative Research. Thousand Oaks: Sage Publications.

Sisulu, E. (1992) — Foreword. In: Everatt, D & Sisulu, E. Black Youth in Crisis: Facing the Future. Braamfontein: Ravan Press.

Slavenburg, J. (1991) — Evaluation of compensatory education in Rotterdam, The Netherlands. International Journal of Educational Research, Vol. 15, No. 1, pp 21 - 43.

Soudien, C. & Pease, J. (1994) — Moving from the margins: A study of a child literacy development project in South Africa. Unpublished mimeo.

Spaulding, S. (1988) — Prescriptions for educational reform: Dilemmas of the real world. Comparative Education, Vol. 24, No. 1, pp 5 - 15.

Stahl, A. (1987) — Closing the educational gap: inferences from the educational experiences of European Jews. Comparative Education, Vol. 23, No. 2, pp 145 - 159.

Stake, R.E. (1994) — Case studies. In: Denzin, N. & Lincoln, Y. (Eds) Handbook of Qualitative Research. Thousand Oaks: Sage Publications.

Stickney, B. & Plunkett, V. (1983) — Closing the gap: A historical perspective on the effectiveness of compensatory education. Phi Delta Kappan, Vol. 65, No.4, pp 287 - 290.

Taylor, N. (1995) — Inset, NGO's and evaluation: a review. Paper presented at the Kenton-at-Settlers Conference, Grahamstown. Unpublished mimeo.

Taylor, N. (1996) — Evaluation and accountability, in Vinjevold, P. (Ed) Quality and Validity in INSET Evaluations. JET conference report. Braamfontein: Joint Education Trust.

Troyna, B. (1988) Paradigm regained: a critique of "cultural deficit" perspectives in contemporary education research. Comparative Education, Vol. 24, No. 1, pp 273 - 279.

Tsukada, M. (1988) Institutionalized supplementary education in Japan: the Yobiko and Ronin student adaptations. Comparative Education, Vol. 24, No. 3, pp 285 - 303.

Usher, R. & Edwards, R. (1994) Postmodernism and Education. London: Routledge.

Vedder, P. (1994) Global measurement of the quality of education: a help to developing countries? International Review of Education Vol 40, No 1, pp 5 -17.

Vinjevold, P. (Ed) (1996) Quality and Validity in INSET Evaluations. JET conference report. Braamfontein: Joint Education Trust.

Vulliamy, G. Lewin, K. & Stephens, D (1990) Doing Educational Research in Developing Countries: Qualitative Strategies. London: The Falmer Press.

Walton, J. (1992) Making the theoretical case. In: Ragin, C. & Becker, C. (Eds) What is a case? The Foundations of Social Inquiry. Cambridge: Cambridge University Press.

Weingart, P. (1996) Science under the spotlight, in Vinjevold, P. (Ed) Quality and Validity in INSET Evaluations. JET conference report. Braamfontein: Joint Education Trust.

Wells, A. Hirshberg, D. Lipton, M. & Oakes, J. (1995) Bounding the case within its context: A constructivist approach to studying detracking reform. Educational Researcher, Vol 24, No. 5, pp 18 - 24.

Wolcott, H. (1994) Transforming Qualitative Data. Description Analysis and Interpretation. Thousand Oaks: Sage Publications.

Yachir, F. (no date) Science, Technology and the Future of Africa. Paper from Mansci Management of Science and Technology for Development. Unpublished mimeo.

Yinger, J. Ikeda, K. Laycock, F.& Cutler, S. (1977) Middle Start: An Experiment in the Educational Enrichment of Young Adolescents. Cambridge: Cambridge University Press.

REPORTS

Department of Education (March, 1995) White Paper on Education and Training. Cape Town: Government Gazette

NEPI (1992) Adult Basic Education Report of the National Educational Policy Investigation

SAIRR (1994) Annual Report of the SAIRR Enrichment Programme. 1 April - 31 March, 1994. South African Institute of Race Relations Western Cape Bursary Department.

WESTAG (1995) Recommendations for the future of the Performing arts in the Western Cape. Second compilation discussion document of the Western Cape Provincial Arts and Culture Task Group. Unpublished mimeo.

PRIMARY SOURCES

The Diakonos Trust Pamphlet (1995)
Ethembeni Learning Centre brochures, worksheets, proposals and publicity materials
Ethembeni Learning Centre winter school evaluation
Protec winter school evaluation
Engen Educational documents:
- Programme Registration Forms (1991 - 1995)
- Pupils reports (1991 - 1993)
- Pupils letters of application (1991 - 1995)
- Teachers' letters of application
- Matriculation listings in the Argus, December, 1994 & 1995.
- Attendance records (1995)
- Supervisors' reports
- Teaching timetables
- Budgets (1995)
- Study materials
- Memos to teachers.