UNIVERSITY OF THE WESTERN CAPE

FACULTY OF EDUCATION

AN ACTIVITY-BASED APPROACH TOWARD DEVELOPING CRITICAL THINKING IN THE GEOGRAPHY CLASSROOM

A mini-thesis presented in partial fulfilment of the requirements for the Degree of

MASTER OF EDUCATION

by

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November 1990

ABSTRACT

This thesis deals with an attempt to employ the research methodology of action research to focus on classroom strategies involving a range of resources, including indigenously generated ones, as a way of enhancing critical understanding and thinking. This necessarily also involves an examination of what critical thinking might be.

Each of these areas of concern arose from an initial concern about the need for the creation and effective use of indigenous resources to maximise Senior Secondary students' ability to relate to Geography curriculum content and to interrogate it for its own assumptions. By using a systematic action research methodology of planning, action, observation and reflection, I realised that I needed to be more focused and thorough regarding my understanding of critical thinking, and that I needed to extend my understanding of resources that can enhance accessibility and the problematizing of material.

My readings and reflection in critical thinking made me realise not only the complex and contested nature of critical thinking, but also that in order to move toward critical thinking, my emphasis would need to be on adopting a critical pedagogy. The type of process, rather than a particular paradigm, needed to be the emphasis. The focus needed to be on how knowledge is produced, internalised and disorganised. I thus attempted to highlight aspects that need to be included in an activity-based approach that may facilitate a critical pedagogy.

With this shift of emphasis, my second project acknowledged that indigenous materials are only one way of enhancing accessibility to the student's world and the South African socio-political context. I then explored more fully styles and strategies of problematizing the course work to contribute toward an eventual changing of student consciousness.

Out of the many elements that had emerged in the second project, I chose to examine the strategy of conflict as a resource, to engage students in the underlying issues rather than to accept the syllabus content at face value. A deeper and far more nuanced understanding of the different dimensions of conflict arose and therefore the potential use of conflict in a transformative educational context.

Finally, the thesis highlights and reflects upon the value of an action research approach towards deepening one's understanding of classroom processes and the issues that arise.

CONTENTS

ACKNOWLEDGEMENTS

I wish to express my appreciation to Owen van den Berg and Zubeida Desai for their insight, guidance and painstaking perusal of this work.

I also wish to thank Sue Davidoff for her participation in my projects, her wisdom and enormous encouragement and fresh perspectives, and Ruth Versfeld for her enthusiasm and ideas shared during the first project.

And finally, thank you to my students who embarked on these projects with such spirit and offered so many new directions and possibilities.

CHAPTER ONE

THE EMERGENCE OF AND RATIONALE FOR AN ACTION RESEARCH APPROACH

1.1 Introduction

I have been teaching Standard (Std.) 8, 9 and 10 Geography for the past thirteen years at the same school. On many occasions I have been part of organising and contributing toward resource workshops and have continually found a severe lack of creative, experiential and indigenous resources in the Geography field. This is particularly true of resources that begin to promote critical and diverse thinking in the South African context.

I teach with a variety of teaching styles and methods that are characterized by a focus on the interaction of students with one another and with the curriculum, but struggle to find ideas, worksheets and simulation exercises that are related to or contextualized in the South African context. It is for this reason that when two action research projects were assigned as part of the Masters course in Action Research at the University of the Western Cape, I began my first project by focusing on the use of indigenous Geography resources as a way of shifting consciousness. My understanding of 'indigenous resources' at that point, was those resources that are related to the students' world, but preferably with a South African content and context.

My understanding of 'shifting consciousness' was to develop thinking more deeply and laterally about all issues and that students needed to participate more actively in their learning process to have a growing sense of themselves as located within a community/country and their role therein.

There are probably many ways in which this kind of movement of consciousness to a more enquiring, lateral thinking is achieved, but this study began by choosing to focus on indigenous material as a way of making the content more accessible, thereby allowing a process of involvement to occur. Without that process of involvement, I believed that empowerment to integrate and understand issues would remain at a limited level.

I believed that Geography teaching needs to move away from compartmentalized views of 'knowledge' and begin to make links between various fields, e.g. the relationship between urban Geography and climate, ecology and population Geography, etc. Through an understanding of these links, Geography as a subject would continually be related to and placed within the 'real' world, rather than being confined within a limited theoretical study. For instance, in studying the factors affecting an industrial location, I would need to focus the classroom study on a factory in an area familiar to students. This would serve as a basis from which to begin to make meaning of the theories regarding industrial location.

Therefore, to evaluate the first project, it was necessary for me to assess the nature of the material used and to ascertain whether it

encouraged the students to think in a broader inter-connected framework. The students' insight, questioning and/or understanding of the material covered would facilitate evaluating whether the material had enabled students to link the topic with other issues adequately. It would also be necessary to assess whether links with a known or real situation have emerged. This was, therefore, my task in the first project - to promote a particular kind of consciousness.

In attempting the first project, it was also necessary to establish some sense of the action research process and how I would be adopting it in my own classroom. Action research is understood and practised differently by different people. My understanding and consideration of various aspects of action research has developed over the past two years, but the following description outlines the basic understanding of the action research process and its characteristics that I employed in planning my first project.

1.2 Understanding of and rationale for an action research approach

Broadly, action research focuses on our own educational practices and our understanding of those practices, of the situations in which they are practised and of the potential for transformation of those contexts. It will be necessary for me to outline the process of action research, before I outline some of the key characteristics and concepts that would inform my own action research projects. Lastly, I will look at some of the possible risks and problems that can arise in an action research approach. Many of the characteristics overlap

with each other and so they should not be interpreted as existing independently and separately from one another.

Action research is an approach to encourage teachers to be aware of and reflective about their own practice, to be critical of that practice, to understand the situations in which their practices are carried out, and to be open to changing their practice and the situation. The following type of approach by McNiff (1988:5-6) governed my own research:

> Action research is not just teaching. It is being aware and critical of that teaching, and using this self-critical awareness to be open to a process of change and improvement of practice. It encourages teachers to become adventurous and critical in their thinking, to develop theories and rationales for their practice, and to give reasoned justification for their public claims to professional knowledge. It is this systematic ENQUIRY MADE PUBLIC which distinguishes the activity as research.

The approach involves a spiral of planning, acting, observing, reflecting and re-planning. These moments are retrospective and prospective, retrospective in making meaning from the past and prospective in future action. Planning involves collaborating with the participants, which involves being focused on their problems, needs and the broader realities. It also means clarifying and diagnosing a problem situation for practice and formulating action strategies for resolving the problem. Planning also entails consideration of the current practice, the rules and the principles it actually embodies and the knowledge, beliefs and principles that the teacher employs in characterising that practice and deciding what shall be done. It is only from these descriptions and principles that critical planning, action and reflection are possible. Concrete

experiences form a basis for implementing action strategies, observation and reflection. 'Acting' needs to move beyond experiential learning in and of itself, but should be 'interwoven' as part of the emancipatory process, i.e. taking control, critiquing distortions, etc. Action feeds back to influence and amend decisions previously made about the overall plan.

Reflection is not limited to the participants' self-reflection, as our understandings are distorted by ideological constraints. Action Research argues that reflection provides an opportunity for learners to reflect on their ideological constraints and to generate critical theories, and that this can stand in the service of the development of a critical understanding of their context, and thus of emancipation. Reflection occurs within the context of its particular social and historical framework, and "The knowledge gained is reflectively assimilated and tested for authenticity by the participants." (Lazarus 1988:13)

1.3 Characteristics that I have attempted to incorporate in my own action research projects

I wanted the project to be PARTICIPATORY, in that it involves me, the teacher, and not an 'outsider', in my own enquiry. Action research provides an opportunity for teachers to be involved with their own practice and to view themselves as researchers, so that they can begin to understand and transform that practice. This will involve research with the group, rather than on the group. I as the researcher/teacher, need to be theorizing my practice within a

critical framework of understanding which facilitates appropriate action. This also involves bringing theories about the social construction of the participants' realities to the notice of the group for the purposes of reflection. In so doing, I am more likely to promote critical skills.

Disagreements between the interpretations of the teacher and of the groups will be a particularly rich source in ascertaining what the disagreement underscores and how it could be resolved. As Mathison (1988:15) puts it, "We do, in fact, utilize not only convergent findings but also inconsistent and contradictory findings in our efforts to understand the social phenomena that we study."

I, as teacher, should not be an external agent who is needed to stimulate development, but rather a facilitator who helps encourage the action research process so that it takes place in a coherent manner. This leads to a second dimension with which I would want to characterize my action research projects, that the research is not an individual exercise by the teacher, but a joint enterprise of the whole group/class.

Action research should be COLLABORATIVE in that it needs to involve other people as part of a shared enquiry. Transformations of social reality cannot be achieved without engaging the understanding of the group involved. Action research demands sanction for the investigation and an accountability to the students. There is the imperative of feeding back to, and clarifying research findings with, the participants of the research. Because people can be unconscious

of, and therefore mistaken about their perceptions, intentions and motives, it is necessary to establish collaborative research in order to minimize errors of this type and to develop understanding, critiques and explanations. We also understand only certain aspects of our reality, while others understand other aspects. This also emphasises the need to share our knowledge collectively. McNiff (1988:7) argues that

> It is this conjoint experiencing, this mutually supportive dialogue, that is the action of research that brings people together as explorers of their own destiny, rather than alienates them as operators and puppets.

This will involve creating an atmosphere in which people believe that everyone has a contribution to make, thus promoting the broadest and most active participation of people in order to facilitate and promote collective control of the action research processes. This is well illustrated by Carr (1986:200) when he states that

> The collaborative nature of action research thus offers a first step to overcoming aspects of the existing social order which frustrate rational change: it organizes practitioners into collaborative groups for the purposes of their own enlightenment, and in doing so, it creates a model for a rational and democratic social order.

Therefore in action research, dialogue and the active participation of all the members of the group are indispensable. Rather than focusing on the 'individual good', it is a means of realising the 'common good': it strengthens and sustains a sense of community. This leads to a further feature I would want to incorporate in an action research process: the social/historical context in which the process occurs.

Action research helps participants understand how their PRACTICES ARE SOCIALLY CONSTRUCTED AND HISTORICALLY EMBEDDED. Action Research in education needs to be understood in a social, cultural, political and economic context. The research focus either arises out of, or is directly related to, particular community needs. It attempts to make sense of the reality of immediate situations in order to grasp their patterns as manifestations of the broader context. It pitches the study at the micro-level to understand the macro-level of the society. Critical reflection aims to expose dominant-group interests and ideological distortions, and highlights contradictions within understandings, practices and situations. In this way we can, therefore, begin to become aware of what shapes and informs practice, and so can begin to look at the possibilities of alternatives, of how things might be different. The appropriateness of ideas and knowledge drawn from various disciplines will depend on the extent to which they are viewed by the teacher/researcher and the group as speaking to the concrete practical reality. We are researchers of our own reality because we live this reality and to some extent we understand it.

This means that action research cannot be separated from real life. By becoming more aware of our situation, we can go about transforming it to meet the needs of the community so that our action is socially useful. Through the action research process, participants can then be more than simply products, but rather attempt to be transformers and agents of history. Action research, focused in an actual context, can aim at being socially useful as well as theoretically meaningful. Foster and Whitehead (1984:41) say that

> ... to bring together theory and practice it is necessary to view educational theory as a "critical and systematic reflection on practice" ... and that such theory must be developed using procedures which hold educational practice as a unity. We suggest that this can be achieved by basing the research upon the conscious lived experiences of individual teachers and their attempts to develop valid and objective explanations for the part they play in sustaining or improving a process of education with their pupils.

THEORY provides some form of criterion against which, or in relation to which, insights and interpretations can be viewed and critiqued. Action research needs to encourage participants to develop theories and rationales for testing and improving their practice, and for providing a sound rationale for what they are doing. The focus is therefore on developing theories, rather than consistently or mechanically applying general theories. Theory offers the possibility of extending us beyond our existing practice. It also has the potential to be generative and organic insofar as new understandings arise that can be applied in differing situations.

However, reflections also benefit from the meanings derived from a variety of sources, which might include various disciplines. For example, a particular teaching method could be reflected on in terms of its ecological, social, economic and political ramifications. As Shor (1980:114) states

> The problematic study of social practice stretches out not only in time and space but also across the boundaries separating academic departments.

Freire (1978:117-118) elaborates a series of contexts that may arise from dealing with a theme in everyday life. By making these connections, we connect and extend a specific item or curricula

material to its broader cultural milieu. In understanding our own reality, there are times when we can apply theories from other realities with similar elements, to orientate ourselves and to help us understand and transform our own reality. In these cases, these theories can provide a means to understand how self-understandings have become distorted by broader ideological conditions. Theoretical accounts also offer possibilities of how these constraints may be overcome.

Action research does not simply focus on understanding the patterns and significance of the past and the present, but also aims "to transform the present to produce a different future." (Carr & Kemmis 1986:183) Action research therefore needs to be committed not only to understanding the social world, but also to helping to TRANSFORM it. Although there is a real gap between school curricula and political change, action research can seek to establish the conditions under which it can identify and expose those aspects of the social order which frustrate rational change, and provide a basis for action to overcome irrationality, injustice and deprivation. This is not a romanticized belief that educational change will liberate South Africa, but a belief that even though schools offer limited prospects for change, they have a serious role to play in the liberatory process. It is, therefore, a deliberate strategy for emancipating practitioners from the often unseen constraints of assumptions, false beliefs and ideology existing in our society, and is a challenge to the established authority. In this process, participants can gain skills which enable them to distance themselves from manipulation, to focus on liberation and to take control of

their lives by removing false assumptions and eliminating the adverse effects of hindering organisational arrangements.

Action research is not simply concerned with the transformation of our own immediate situation, but also with viewing education within the South African social, economic and political structure in which it is found. In this way, action is not simply focused on the classroom/school, but on the wider social system in which we live. Situations themselves can be transformed by changing the practices that constitute them and the understandings that make them meaningful. As Lazarus (1988:17) puts it,

> This process focuses on enabling people to develop a sense of control over their own lives, (the development of personal power) and to develop strategies for gaining access to particular resources in society, thereby gaining realistic control over situations that affect their lives (political power).

This is particularly pertinent in the South African context as it will involve transforming oneself and the social relations in the school, and mobilizing links with the broader community, rather than simply reproducing existing relations. As Walker (1988:150) states, action research "will be highly political". She argues that this also necessitates raising questions regarding the interests that are served in our teaching and research:

> I would support Stephen Kemmis (1986) in his assertion that action research and critical reflection on the part of oppressed teachers is not only about changing their teaching practice but also about the progressive transformation of schools by linking teachers within schools to broader oppositional forces. (Walker 1988:151)

This is a particularly pertinent issue as it is rare to find teachers who are both innovative and progressive in their teaching practice and also actively involved in community structures and struggles outside the classroom. Even though political action will transform education, "action research may well be the means for those of us involved in education to develop a coherent social and political perspective adequate to the task". (Kemmis 1986:52)

The transformative feature of action research is most often not immediately realisable, but should be viewed as enabling one to begin to live out the future in the present. Therefore the action research process can be adopted as part of a democratic, challenging process in the present to realise a future and different education structure in South Africa.

The 'outcome' of the action research process may suggest the need for further problem clarification and for subsequent modification and development of action hypotheses. This means that in the action research process, evidence can be given regarding why a practice was viewed as unsatisfactory, how it was changed, and what the researchers' and the participants' observations were regarding the process and the change. These need to be documented as faithfully as possible, whether through audio, visual and/or written means to explain the process and present evidence to back up claims of change. McNiff (1988:6) notes that "Action research resolves to give reasoned justification to claims to professional knowledge." Criteria for movement or change need to be jointly decided. The action research process is systematic, and although it allows for unpredictability

and is not prescriptive, it is not ad hoc and random. It requires researchers to be very aware of process and to be focused and directional in their activities.

The approach is also not static, for observable problems are often symptoms of deeper, underlying problems. If, for example, a particular group domination is the perceived problem, it may emerge that that is simply indicative of a deeper problem about class, gender, economic issues, etc. And so other problems may be explored as and when they arise without losing sight of the main focus of the enquiry. We may also enter an enquiry at any point with other questions of concern. McNiff (1988:43-45) believes that

> Action research should offer the capacity to deal with a number of problems at the same time by allowing the spirals to develop spin-off spirals, just as in reality one problem will be symptomatic of many other underlying problems ... Generative action research enables a teacher-researcher to address many different problems at one time without losing sight of the main issue.

These different 'phases' are held in dialectical tension, each informing the other through a process of planned change, monitoring, reflection and modification. In other words, the phases do not stand as separate, rigid entities, but exist in their relationship with each other.

It is important to have a realistic sense of the RISKS involved in the action research process, so that we can be sufficiently sensitized to try to prevent these possible deviations. What is more, these 'risks' are also necessary, for action research is not an 'absolute', 'purist' approach that is appropriate at all times and

in all places. The 'problem areas' of action research can become a constant critique and reminder to revise and reflect on action research itself, so that it does not become an end in itself.

For instance, it would be possible for me to follow the action research 'steps' slavishly, but by so doing, lose adaptability and sensitivity within the particular situation at hand. If I become prescriptive and inflexible regarding the following of particular steps and cycles, it is possible that I would limit my perceptions and thus the opportunities that might arise in a given situation. The action research process might guide and focus the teacher/researcher, but the latter needs to be consciously aware of the dangers of allowing it to become a rigid framework that limits or inhibits liberating action. The focus needs to stay with the enquirer rather than with the methodology, especially as the focus on 'method' could also inhibit the role the collaborating group, the context and critical theory might play in directing the course of action. (McNiff 1988:8)

It is also possible to focus on observation and description with technical explanations and actions, thereby focusing on school improvement rather than on an emancipatory mode of education. This is particularly important to note, as the action research process can be used to maintain and improve the existing status quo. I might, for example, observe that my students are not sufficiently involved in the day-to-day life in the classroom. My explanation for their lack of involvement may be that they are given insufficient material to work on. My action may involve the increased use of worksheets.

This type of process would be very different from a process that engaged with students to ascertain whether they felt involved, or in which another colleague assisted with her perceptions regarding the level of involvement in the class. If we were to look together at possibilities for enhancing involvement and were to assess jointly whether the action had actually constituted increased involvement, a much richer situation would arise.

The danger always exists, then, that the original aspiration of a new paradigm/action research project could be dissipated and its original meaning surreptitiously reinterpreted so as to accommodate continuity with the previous approach/style. Similarly, the original vision could be reduced from an alternative view of the nature of 'research' to a mere set of ideas and methods which could be accommodated within the broad requirements of the very paradigm it had originally promised to eliminate and replace.

The 'risks' of action research should serve as a continual challenge to the approach itself. The teacher/researcher's contribution lies in promoting a particular dynamic, and in putting at the disposal of the groups the 'technical' instruments that allow them to have an increasingly more focused and precise comprehension of their social and historical situation in order to begin to transform it.

Action research situates educational activities <u>within</u> concrete practice and a conceptual framework that allows the 'unveiling' of the learners' world and its causal structure. This is done collectively, with the objective of generating participation and

organisation for transformation on the micro and macro level of education and society.

It is with this understanding of action research in mind, that I will now outline my first action research project.

CHAPTER TWO

FIRST ACTION RESEARCH PROJECT: INDIGENOUS RESOURCES

When I commenced my first action research project, I had not seriously examined my understanding of critical thinking or the theoretical framework of my intuitive sense of the need for inter-active teaching as part of that process. 'Critical thinking' is used frequently in progressive education circles, but not usually decoded in terms of what it means in the educational context.

My understanding at that point was governed by the loose, generalized understanding of the term which particularly implies resistance in terms of content and method. However, my first project did not view that as a particularly pertinent issue, as it was almost a 'given'. Supposedly everyone who is a progressive teacher must know and understand what we mean by 'critical thinking'! I proceeded with this project by focusing on the issue of most immediate concern to my teaching, namely the absence or paucity of resources that were contextualized in or related to the South African context, and the development of indigenous resources as a way of shifting consciousness to a more critical, exploratory mode.

I chose to work with a Std. 9 Geography class of twenty eight students, partly because there is less time pressure than with a Std. 10 class, because I knew the students better than the Std. 8 students, and also because we were starting Economic Geography. My

own personal strengths and interests lie in the Humanities rather than in the Physical Geography section.

It would be helpful at this point to outline something of the ethos of the school within which this class is found, and the characteristics of the students. The ethos of this boys' school is Catholic, fairly conservative and located in Athlone, a so-called 'coloured' area. My knowledge of the school, its students and parents has been developed over a long period of some fourteen years as a teacher there.

While many of the students had come to a basic political awareness through growing up in a township which had faced unrest in the 1980's, their political understandings remained at an intuitive, rather than an analytical level. They also do not necessarily relate the broader political level to their own lives. The school generally has not encouraged them to analyze events. While they understood and experienced the implications of 'apartheid', very few had any sense of class structures or the machinations of government economic policies. Although the majority of parents work in the industrial and service sectors, the students had not generally placed their activities and experiences in the context of the wider economy. Their sense of inter-dependence and of the relation of the individual to the whole was limited. There was also little understanding of the school as a reflection of the wider society.

Students also did not seem to understand the part they could play in their own education, seeing themselves merely as passive receivers

in the classroom situation. (My perceptions sharpened in discussions with Ruth Versfeld, a colleague.)

I chose the issue and understanding of 'power' as the theme to introduce Economic Geography. I did this in order to provide a concept around which to examine and organise the relationships and dynamism involved in all aspects of Economic Geography, so that students would not study farming, industry, etc., as isolated structures, but would become more conscious of the economic forces that shape those activities and their inter-relationship with each other. That is, I wanted them to view economic activities in a particular light, according to their 'power-base'.

I also needed to structure a variety of sources to be used to evaluate and reflect upon the project. I spoke to my students about the project and asked them whether they would be willing to complete a daily journal, recording their responses to each lesson. Sue Davidoff, presently working in an action research project, agreed to work with me and I saw her role as an additional pair of 'eyes' and 'ears' in the process. The students also agreed to be interviewed at the end of the session and I repeated the introductory exercises at the end of the project to assess whether there were any changes in students' responses. This was both an attempt at using a broad spectrum to evaluate the project and to democratise the research. I have used quotations from the students' journals in this text to try to illuminate various aspects of this project.

Process

Initially, I made the students do an exercise to evaluate their overall understanding of economic issues. This was repeated at the conclusion of the Economic Geography section to assist me in evaluating any shifts that may have occurred in students' understanding of economic forces.

Students were asked to write down any question that occurred to them after examining two different photographs: a worker in a field of sugar-cane and a factory in Salt River, Cape Town.

Sugar-cane photograph: The questions most frequently asked were related to physical conditions, e.g. "What grows there?"; "What time of year was this picture taken?"; "How long does it take to grow?". There were few questions that related to structural issues, living conditions, distribution of wealth, ownership, etc., such as "Is he getting paid; if he is, how much?"; "Does the man own the farm?".

Factory in Salt River: Questions again related to function and place e.g. "Where and what is the name of the place?"; "What is done here?". Questions least frequently asked were those related to conditions and quality of life, working conditions, the nature of the product that was manufactured and the rationale for that product, e.g. "Is it run by machinery?"; "Do the people working in the factory earn enough?"; "What is its economic value?".

My observation and sense of the overall picture that emerged was one of the students' viewing their world in terms of apparent conditions, particularly focusing on physical causes and consequences. There is little evidence in terms of the nature and the frequency of responses made that students understood and/or even perceived some of the economic forces implicit in any given situation.

I required a second exercise of the students. This involved their writing down their responses to the question, 'Why are people hungry?'. Students were not given options and came up with their own original responses. Students first worked alone, then in pairs, and lastly in groups, to rank responses according to priority.

It was significant that physical factors, such as overpopulation, unemployment, lack of agricultural technology, drought, famine and food shortages, occurred in the top rankings. Issues that had been repeated by many students and were most common, were: weather conditions, droughts, floods, not enough money, no jobs. The overall thrust and picture was one that identified food imbalances as relating to physical conditions, and not to broader structural economic conditions.

Students then filled in a worksheet focusing on power in the school, work and social situation. I hoped that this evaluation of existing attitudes toward power would also help me to assess whether at the end of this section on the 'Introduction to Economic Geography' there had been changes in students' understanding of the dynamics of power.

Their overall understanding of power was to be 'in control' over others. They perceived power arrangements as linear, and there was a sense of satisfaction with existing control/ power patterns. The thrust of their understanding of power was that education is seen as a fairly key factor in the 'power-ladder'. It would be expected that without education, one's position in society would have a power in which one could not participate, exerted upon it. The students revealed no particular awareness of the relationship between economics and power.

I then introduced them to Economic Geography with a simulation game, 'Star-power'. The game is structured to give students a personal experience of the dynamics operating in our society and to raise questions about the various elements of power and economics. I hoped this kind of experience would give them a basis to begin to move to a deeper understanding regarding elements involved in Economic Geography. The basic structure of the game gives one group more wealth than others, but this is initially not known. Students trade with one another in order to try to generate the highest score (wealth). After two trading sessions the wealthiest group is allowed to make the rules. The 'power' group produced an extremely dictatorial structure with rules that protected and increased their interests and position. The 'middle-income' group would not trade with this group. Another set of rules was made to counteract this: 'if students didn't want to play, they must leave the room'. About 11 of the 28 students voluntarily walked out of the room. Outside the room, discussion ensued about whether they should pool their wealth and give it to one person, trade amongst themselves within the

old rules or 'beat up' the ruling group. Time didn't permit any of these options to be followed through!

Students were very involved in the actual activity. All of them participated with varying emotions and their journals recorded much enjoyment as well as frustration:

- "Very inspiring and interesting; it made me think about the world out there;"

- "I really enjoyed today's lesson because we were active. We could speak, move around as much as we liked. At the end of the lesson, I felt a little frustrated because the squares group made rules that were totally unfair."

There was little sense of achievement when the ruling group declared themselves the winners. By this time no one was particularly interested in the 'winner'. This in itself deflated the ruling group's sense of power and was one of the critical features noted in a later reflective lesson.

I felt that the activity had served as a context within which to begin to explore the various aspects and dynamics of power. This occurred partly because of the activity and personal involvement of students and partly because it became something tangible to relate to - "The game gave us a sense of reality". Interestingly, although I had intended focusing on indigenous resources, the game was not created in South Africa and has fairly universal implications. It

created a space for them to become involved because it helped them relate to their own reality and world, even though it was not originated or located in a particular South African context. This issue will be reflected upon in more depth in the last chapter.

After this activity, I gave a set of questions to groups of three students (composed of someone from each of the wealthy, middle-income and poor group in the 'star-power' game) - in order to 'unravel' the game. An example of one of the questions was, 'Who do you think the circles, squares and triangles represent in the school, work and social environments?' Animated discussions, with much gesticulating, arguing, high pitched voices and excitement, ensued. Quotes from students' journals:

- "People were very participative and responsive";

- "Interesting discussion, especially regarding the distribution of power in a hierarchy of a political structure. I think the way the game was integrated with reality was really very good and interesting too; it is amazing how much you can get from a seemingly simple game."

The nature of the groups served to promote interchange between students; each group was composed of all three groups, so all viewpoints were represented. Because of the experience, students were beginning to see power in new ways and also beginning to relate the game to the broader context. As one student put it,

- "We had an interesting discussion about management and unskilled labour, unions, strikes etc. - who has more power? Power has different aspects e.g. political, economic, education-wise."

This led to a plenary session on the game, looking at key issues that had been raised in small discussions: 'abuse of power'; 'people with most money usually have most power'; 'race is tied up with money -"whites" are rich and have power - "blacks" have lack of opportunity'; 'the apartheid system causes the maintenance of existing power'. The students also looked at the possibility of one's own inner power and that collective organising and grouping together could enhance power. An argument developed between a minority feeling that we are responsible for our own lack of power and can work toward improving our situation, and a majority feeling that structural forces create an imbalance of power. Some interesting interchanges arose as students examined their own activities and practices and contextualized them in a broader framework.

The class then moved to examining and understanding what actually constitutes wealth. This involved examining resources and differentiating between renewable and non-renewable resources. It was therefore important that students knew which resources were renewable and non-renewable, and that they were also introduced to an understanding of their ecological and political significance in today's world. I gave groups of three a set of cards naming twenty different resources. Groups were asked to divide the pack into two groups according to any criteria, after which groups then read out

their divisions and the class needed to establish the criteria that had been used. I then read my division; students slowly reached criteria such as 'scarce'/'non-scarce' and eventually 'renewable'/ 'non-renewable' was solicited. A discussion of the differences between renewable and non-renewable resources ensued and it was agreed that the terms related to that which was/was not replenishable.

Initially, groups focused on sorting their cards. They tried to find a way of ordering and making sense of a range of seemingly unrelated specifics. Some groups discussed their criteria before starting, while others set out their cards and moved them to try to find a way of categorizing them. As one student said:

- "It was difficult to decide which criteria to take in choosing groups because each person had their own ideas".

This task helped act as a focus in introducing renewable and non-renewable resources. Students' understanding of 'things that we use', helped them arrive at a definition of resources.

The following day students completed an exercise in categorizing resources and itemizing certain conservation /ecology issues and practices needed to prevent renewable resources becoming non-renewable. Students also discussed which resources would be regarded as of a high value and a low value to South Africa, relating the value of the resources in 'star-power'. I wanted different sections of work to interconnect, rather than to stand alone as

separate issues. This felt particularly important in terms of my wanting to encourage students to think dialectically and not in a compartmentalized fashion. A comment from a student's journal: "I can see now that what we have done is being tied up and it makes it clear what exactly we are doing."

The students began tentatively to move some of the renewable resources to the non-renewable resources column. The more they moved the renewable resources and examined the reasons that they could become non-renewable, the more they evidenced curiosity and some shock at realising that all the renewable resources could actually become depleted. By problematizing these concepts, students were exposed to the problems of applying theories to specifics.

I felt that the actual movement of cards promoted a sense of thought and enlightenment in the understanding of the delicate and unstatic balance of resources in the face of present exploitation. Some comments from students' journals: "Very enjoyable; made me realise that there is a delicate balance between renewable and non-renewable resources and that it should not be exploited"; "The importance that we cannot do things indiscriminately because it can affect the future of the human race".

To conclude this introductory section, students again filled in the same worksheets on power that they had completed at the beginning of this section.

In reviewing these I could see that there had been a shift away from viewing power as simply 'the ability to control things and people', to seeing it as authority given to someone, that it can be helpful or abused, and that even with minimum power one can still assert oneself. As stated by a student, "Even if one has the least power, you can still use it to make up your own mind about what you want to do with it".

There was also a much stronger sense of the relationship between wealth and power and less on education and power. Several responses considered a position of shared power between all parties. There was also more dissatisfaction with the set power structures in the school, work and social contexts and more than half of the responses did not view these patterns as fixed. The students now felt that to cause a change in a set hierarchical power structure in any environment would involve co-operation or unity on the part of the oppressed, rather than formal education. Some of the students' thoughts: "If people don't obey the people in power, the person in power has no power at all"; "Power balances could easily be switched because the people who are in power try to suppress others, so if the oppressed should stand together they could overpower those who are oppressing them".

The overall response on the part of the students was that doing things, being active and visualising issues helps them to clarify and concretise concepts. As some of the students stated: "Once you are touched and involved, the seemingly more abstract issues 'out there' become more concrete, because you see the scheme and can relate to

it more immediately"; "More involved because style of teaching demands more involvement". When Sue interviewed the students they told her that their liking for the subject also helped them learn. Their 'liking' is related to whether things 'touch' them so that they can get involved.

In evaluating this project it is necessary again to examine to what extent it has achieved its objective of moving toward a change in consciousness regarding power, by means of the use of congruent, indigenous materials. It would seem, according to the students' worksheets on power at the beginning and the end of the session, that there had been some changes in their thinking. They were thinking mostly about new dimensions of power and questioning existing power structures, and they were much more conscious of a wealth/resource power relationship than previously. However, I was tentative in assessing the extent of this shift in consciousness as it has not been tested by experience or over time.

The question that arose for me was whether indigenous resources should assume such a central focus in a liberatory education project. In this project, a worksheet was drawn up from photographs that were local and South African based and some of the resources were related to South Africa. However, 'Star-Power', although it had not originated in this country, had provided students with an <u>experience</u> that could be related to and grounded in their experience here. My sense was that there needs to be a flexibility in not 'latching' onto indigenous resources for their own sake, but creating and using them as <u>one method</u> of locating and contextualising a variety of

relationships. It seems to be more a question of accessibility to the students' world and/or relating things to the South African context. This would mean that my understanding of resources would need to broaden and I would need to examine more facets that could promote student involvement, curricula accessibility and problematizing the course work. In short, "to make the familiar strange and the strange familiar". (Giroux & Simon 1989:223) It seemed that it was not only indigenous resources that develop involvement.

The project had raised some tentative new areas for myself as a teacher. It made me far more self-reflective about my teaching, which renewed my sense of answerability to the students. I have also found that 'problematizing' is an important element in group work. It feels as though it should be an important element to include in resources to enhance the accessibility of issues. This would mean that facts, issues and events would be presented problematically to students, rather than as 'given'. For example, when dealing with the rationale of conservation of resources, it would seem probable that students would be more involved if the following type of scenario was given, rather than a mere elaboration of the need for conservation: 'Choose a casino or a reserve for a particular land area and support your choice'. The 'task' or 'problem' created in each group situation in the first project seemed to enhance students' individual participation and interest.

Although there are problems in assessing changes in students' perceptions and level of thinking, I found the practice of trying to

capture students' thinking about the topic before starting a section, and then re-doing that exercise at the end of the topic, particularly helpful in establishing whether there had been any additional thought, critique or dimension to existing attitudes and knowledge.

At the end of the first project I became more aware of the need to think more thoroughly about what it was that I actually meant by 'shifting consciousness', 'additional critique and understanding' and 'critical thinking'. If I wanted my education enterprise to be characterised by the above features, it seemed necessary to examine more closely the actual character and meaning of those terms. Before continuing a second action research project, I needed to think and read more about what it was that I actually wanted to do in teaching. Related to this, is my method of inter-active teaching which I have always adopted as a kind of 'given' to promote democratizing the classroom. The following chapter is a record of further reading and thinking about both critical thinking and the rationale for interactive teaching and how they relate.

CHAPTER THREE

UNCOVERING THE CODES: REFLECTION ON CRITICAL THINKING AND AN ACTIVITY-BASED APPROACH TO TEACHING AND LEARNING

3.1 On critical thinking

It seems that critical thinking is a complex, contested and probably only vaguely understood concept. In spite of this, critical thinking is generally regarded as 'the thing to do' in progressive education circles in South Africa. Critical thinking tends not to be examined in depth, but often merely indicates a reaction against or a rejection of the existing status quo. As Morrow (1989:156) states, 'counter-suggestibility' simply rejects without understanding what it is that is being rejected: in order to adopt a claim of moving toward critical thinking in the classroom, understanding is necessary. We cannot critique anything without understanding its basic core and framework and critical thinking equally enhances understanding.

Morrow (ibid.) argues in this regard that

> Critical thinking must itself be intelligible and it must embody an understanding of its object. In a way this double requirement is what lies at the root of puzzles about critical thinking.

This is particularly important as certain values, systems and ideologies tend to be universalized and upheld in progressive education circles, such as support for socialism rather than capitalism. Critical thinking would demand a thorough understanding

of capitalism and socialism in order to begin to critique both systems. Critical thinking would not necessarily mean a veering away from that which does not conform to one's notion of the 'ideal', but provides a challenge to begin to probe something in order to understand it.

Such an understanding of critical thinking does not imply 'objectivity', or the relativity or eclecticism of treating all viewpoints as equally valid. The danger, however, within critical thinking is that it often appears to encourage a genuine search for the truth whereas, in fact, a particular point of view is already embedded within such thinking. In other words, a framework for the appearance of critical thinking exists, but thinking is steered and structured toward a particular dogma or objective. This is what Giroux has termed the 'Internal Consistency' position where critical thinking is, in fact, not critical or self-examining:

> Traditional views on the nature of critical thinking have failed to support Nietzsche's call for a critical search for the truth. This is true, not only because textbooks and pedagogical approaches in the social studies have objectified prevailing norms, beliefs, and attitudes, but also because of the very way in which critical thinking has been defined. The most powerful, yet limited, definition of critical thinking comes out of the positivist tradition in the applied sciences and suffers from what I call the Internal Consistency position. According to the adherents of the Internal Consistency position, critical thinking refers primarily to teaching students how to analyze and develop reading and writing assignments from the perspective of formal, logical patterns of consistency. In this case, the student is taught to examine the logical development of a theme, 'advance organizers', systematic argument, the validity of evidence, and how to determine whether a conclusion flows from the data under study. While all of the latter learning skills are important, their limitations as a whole lie in what is excluded, and it is with respect to

> what is missing that the ideology of such an approach is revealed. (Giroux 1988:62)

Given this, critical thinking cannot merely be about analysing and examining the logical development of a systematic argument, the validity of evidence, or how to determine whether a conclusion flows from the data being studied. This kind of thinking is frequently in danger of being used to produce domesticity, reproducing and perpetuating dominant social, economic and political patterns. When education is used as a tool of social aspiration/mobility within a capitalist social structure and disguised as neutral, 'objective' and explored from all angles, it cannot be seen as a process of liberation. (Versfeld 1990:17).

This would be akin to Morrow's (1989:168) idea of 'Doctrinaire Thinking', where the thinker is isolated from other parts of her belief system, and is rigid and uncritical of unexamined formulae. Such a person would follow a particular ideology or 'leader' blindly, not being able to discern inconsistencies and inadequacies. In such circumstances one actually does not understand one's own position and therefore cannot take one's own words seriously. No education is ever neutral. The issue is rather <u>how control is exercised</u> and <u>how knowledge is developed</u> within individuals and groups. To what degree this type of approach is possible, and how to set about achieving it and to what end, remain urgent questions.

If critical thinking maintains that knowledge cannot be separated from human interests, norms and values, then it would involve making <u>problematic</u> that which had previously been treated as 'given'.

Facts, issues and events would be presented problematically to students. By learning how to move outside of one's own frame of reference and not remain in an 'internally consistent position', in order to look at similar information from a different reference point, students can begin to question the legitimacy of a given fact, issue or concept, thus treating knowledge as problematic and as an object of enquiry.

Critical thinking would therefore involve placing anything within a context and system of relationships that give it meaning, and so involve thinking dialectically rather than in an isolated and compartmentalised fashion. Shor (1980:114-115) elaborates this point:

> The interdisciplinary approach, in a liberatory framework, is the most potent means to free consciousness from the limits of the particular.

However, problems may be explored within fixed realities, solutions and courses of action only being perceived within that given framework.

Different groups may, for example, be exploring the issue of pollution in an area. They may all come to the conclusion that chemicals are the problem, but each may decide on different solutions or courses of action according to their world view. One perceived solution may be that chemical output should be reduced, another that filters should be installed to control chemicals and a third might look at the structure of that society regarding its priorities,

legislation, etc. Each group has adopted the problem-posing approach, none has been told directly what to do and each has decided upon a different course of action. None of these, however, necessarily challenges the status quo, although participants in each group may well feel that they have contributed to the solution as they have faced the problem together rather than being presented with a given course of action. (Versfeld 1990:24) Freire would argue that conscientization only occurred in the third of these groups as the others sought to reform rather than to transform reality. (Freire 1985:85)

There would probably be little dispute over the notion that education should be contextualized and relevant to the needs of the learner so that with understanding, greater control and self-direction occurs in learners' lives. However, tensions arise between self-directed learning and teacher influence, and between individual and group action. While educators may be radical to the extent that the content of their teaching is anti-establishment, they may have more difficulty in changing their teaching style. Freire (1972:66-69) maintains that

> ... in their desire to obtain the support of the people for revolutionary action, revolutionary leaders often fall for the banking line of planning a program content from the top down.

Freire (1973:125) therefore views the role of the educator as

> ... not to "fill" the educatee with "knowledge", technical or otherwise. It is rather to attempt to move towards a new way of thinking in both educator and educatee, through dialogical relationships between both.

Shor (1980:113) supports this view in stating that "Liberatory teachers are not doing things for the students or to the students, but rather are launching a process with them." Giroux suggests that, for the purposes of the argument, the educational left can be divided into two categories - those who focus on content and those who focus on process or strategy:

> Content-focused radicals have not yet moved beyond their static notion of knowledge as a set of radical ideas to be transmitted to students. Yet, if the notion of student as subject is not to be denied, what is needed is a definition of knowledge which recognizes it is not only as a body of conceptual thought, but also as a process which demands radical educational relationships." (Giroux 1981:68-69)

Classroom dynamics thus, according to Giroux, have to reflect the democratic and participatory society which education is seeking to build.

3.2 Critical thinking and critical pedagogy

As my reading and reflection continued, I realised not only the complex and variegated nature of critical thinking, but also that in order to 'arrive at' critical thinking, I would need to refine my critical pedagogy. The critical process may present the most real possibility of making critical thinking a 'lived event', rather than a theory or semantic argument that is difficult to 'pin down'. In fact, the contradiction would seem that as soon as I name and establish the exact nature of critical thinking, it is then that I change from being a critical thinker to an adherent of a particular set of objectives. But it seems that these thoughts about critical

thinking can offer some guidelines and parameters around which to plan a critical pedagogy. I would understand critical pedagogy to mean that I am not assuming that I have the ideologically 'correct' paradigm and simply need to find the most appropriate method to impart that thinking. (Freire & Giroux 1989:2) As Freire and Giroux (ibid.:3) state,

> The basis for a critical pedagogy cannot be developed merely around the inclusion of particular forms of knowledge that have been suppressed or ignored by the dominant culture, nor can it centre only on providing schools with more empowering interpretations of the social and material world.

A critical pedagogy is also not restricted to a method or technique that is congruent with my ideological position - for instance, non-sexist, non-racist and participatory. Its major focus and intentionality is, rather, continually to interrogate "how knowledge is produced, mediated, refused, and re-presented within relations of power both in and outside of schooling". (ibid.:2) As Giroux and Simon (1989:222) so aptly comment, it involves "creating experiences that will organise and disorganise a variety of understandings of our natural and social world". (my emphasis) This involves creating the kind of space and quality of conditions that will allow this awareness to occur so that students can begin to weave meanings and significant patterns in their lives.

Although I have generally characterized my classroom practice as focused on an activity-based approach, I had not thought about the motives or the various elements that would be important to include and be sensitized to in designing and participating in such a

process. My governing principle was to democratize the classroom, in the belief that learning was more effective and absorbing if it was participatory. Shor (1980:109) elaborates this view:

> Collective work is a bonding experience for people who live with a low level of solidarity. ... A cooperative style of work in the liberatory class locates decision-making among students who have reacted to orders all their lives. ... A class project which cannot get done without student cooperation structures a high level of mutual responsibility into the pedagogy.

Therefore, with these thoughts about critical thinking and arriving at the need for a critical approach, I will highlight aspects to be included in an activity-based approach that may facilitate a critical pedagogy. That is, it is "simultaneously about the practices students and teachers might engage in together and the cultural politics such practices support". (Giroux & Simon 1989:222)

3.3 Critical pedagogy and activity-based teaching and learning

Activity-based learning would involve a focus on student participation, decision-making and evaluation of the education process. Education becomes, then, not only a preparation, but itself a social process toward liberation and the creation of a post-liberation society. Freire, instead of focusing on 'final truths', writes of 'the process of knowing' and of the transitory nature of knowledge. Knowledge cannot exist as an independent entity nor can an individual think in isolation. It is not the 'I think' that constitutes the 'we think', but rather the 'we think' that makes it possible for me to think.(Freire 1985:99-100) Knowledge is thus a process of thinking together and continuing to

think together, it cannot exist independently of the learners and their changing realities.

With the breakdown of rigid, hierarchical roles and rules, activity-based learning provides students and teachers an opportunity to explore democratic relationships. Students will be able to assume leadership roles that were formerly reserved for the teacher, with the implication that this approach influences not only course content, but also methodology and structure. Students are therefore experiencing, rather than simply learning about, the dynamics of participatory democracy. If the importance of the socio-political location of knowledge is to be learnt, the method would need to be congruent with the purpose. The methodology can equip students with the tools to allow them to look beyond their own immediate microcosm to an understanding of the economic, social and political foundations and forces of the larger society. This would be particularly pertinent in South Africa because of segregated schooling and the narrow confines of the immediate microcosm. Coupled with this is the possibility of illuminating and understanding the macrocosm within the context of the 'known' of the microcosm. This method is also viewed as part of the process for participation in society. Fromm (1968:173) discusses this process as follows:

> As Marx once wrote, one must not only interpret the world, but one must change it. Indeed, interpretation without intention of change is empty; change without interpretation is blind. Interpretation and change, theory and practice, are not two separate factors which can be combined; they are interrelated in such a way that knowledge becomes fertilised by practice and practice is guided by knowledge; theory and practice both change their nature once they cease to be separate.

An activity-based approach therefore provides a way of demystifying the traditional role of the teacher as the only leader in the group, and most importantly, of creating a situation and context in which students actually experience social responsibility, decision-making, and group dynamics and processes.

In providing these experiences, students can also begin to acknowledge and value their own experiences and knowledge, and to respect the possibilities of learning from each other:

> Only by diffusing authority along horizontal lines will students be able to share and appreciate the importance of learning collectively. (Giroux 1988:39)

Dialogue would be crucial to this process, for it has the possibility of emphasizing co-operation rather than competition and individualism. In a keynote address to the National Education Co-ordinating Committee conference of December 1989 Eric Molobi indicated that People's Education

> ... seeks to address the created divisions between knowledge and reality, between the school/university and the workplace ... (aiming at) ...diminishing the chasm that exists between intellectuals that recreate and codify knowledge and the working people who implement that knowledge through production. (Molobi 1989:7)

Critical thinking cannot operate in isolation, but needs to be embedded in a web of classroom social relationships where students' linguistic and cultural capital is affirmed and brought into the classroom, for students' beliefs, values, and knowledge need to be affirmed as an important factor in the learning process. The

curriculum content and pedagogical practices will need to reflect and also to move beyond the life experiences of the students. This allows students an active voice in their learning experiences, but also in developing a critical vernacular that is attentive to problems experienced daily, particularly those which relate to pedagogical experiences connected to classroom practice.

It is important that students play a significant role in the evaluation process of their learning, and it can be argued that:

> If classroom social relationships are to be compatible with a pedagogy designed to further critical thinking, students must be given the responsibility to evaluate and correct their own mistakes. Using this approach, unsatisfactory performance is treated as a vehicle to promote a learning experience, one which can be shared by other students. (Giroux 1988:72)

As Shor (1980:112) states, "The ideal is for evaluation to be a learning activity consistent with the process". An activity-based approach can mean an approach beginning to be consistent with the long-run goals of a unified, democratic, economically just, non-racial and non-sexist society.

A critical pedagogy goes beyond making experience relevant to students by interrogating such experience for its hidden assumptions. Such an activity also calls for a dialogue and critique that unmasks the dominant interests that such knowledge serves for, as Giroux (1988:72) notes of the U.S.A., "A large part of our social studies curricula universalizes dominant norms, values, and perspectives on social reality".

This aspect of critical thinking involves understanding the connection between stated facts and values. It means understanding how information is selected, arranged and sequenced to construct a reality and to represent a particular viewpoint, beyond merely understanding its epistemological framework. This aspect of critical thinking constitutes, therefore, an attempt to understand how forms of subjectivity are regulated and transformed through the structured character of social forms such as language, ideology and history. Critical thinking involves a critique and theoretical understanding that will allow participants to begin to unmask the distortions that constructed the basis for the hegemony of the dominant order and to explain why the conditions under which this order operates are frustrating. A critical pedagogy would therefore demand a continual and critical questioning of the 'taken for granted' - making the commonplace strange. It stands in contrast to the 'banking' system where the teacher gives and the student receives, in order to give the same material back at an examination without critical reflection. It brings to the classroom a different set of questions, experiences and values.

That is why it is necessary not only to understand the assumptions embedded in the form and content of knowledge, but also to transform the processes whereby knowledge is produced and appropriated within the classroom. Speaking of teachers and students, Freire (1972:44) asserts that

> Teachers and students (leadership and people), co-intent on reality, are both Subjects, not only in the task of unveiling that reality, and thereby coming to know it critically, but in the task of re-creating that knowledge.

> As they attain this knowledge of reality through common reflection and action, they discover themselves as permanent re-creators.

By understanding and relating one's own experiences to the wider context, Freire (1976:3-5) argues that a person moves from being a passive object in society to an alert subject and so an agent of change. As long as people are uncritical objects they, like animals, adapt to the outside world through reflex. They are not thinking participants. Freire also asserts that useful or critical education enables people to participate in the 'transformation' of their society. Thinking that is critical thus helps people to become aware of immediate realities and the underlying reasons for social problems. In education this would mean that "School teaching was to embrace the problems of everyday social and economic life", and that "Theory and practice were to be linked". (Castles & Wustenberg 1979:121) Within teaching, then, an activity-based approach can facilitate a critical pedagogy by instilling a critical consciousness, and it can empower people politically, enabling them to analyze, interpret and begin to transform their social reality within the context of re-constructing a post-Apartheid South Africa.

As I reflected on the relationship between critical thinking and a critical pedagogy, I felt able to locate myself in a far more focused way within the practice of progressive education. With this kind of understanding of and rationale for a critical pedagogy and inter-active teaching, I also felt clearer about the kinds of elements and characteristics to be included and noted in my next action research project. In starting the second project, and having reflected on the

first project, I felt that I needed to explore more fully the rationale for the new project. I wanted to look more broadly at the use of resources and the involvement of students in the creation and evaluation of those resources. I wanted to democratize the whole concept of resources further in an attempt to create a process that would be closer to my renewed and more honed understanding of critical thinking.

CHAPTER FOUR

SECOND ACTION RESEARCH PROJECT: EXPLORING AN ACTIVITY-BASED APPROACH AS A RESOURCE

4.1 Rationale and planning for the project

My reflections on my first action research project and the additional reading I did on critical thinking, critical pedagogy and an activity-based approach, led me to change the emphasis of my second project. I now wanted to explore more fully ways of enhancing students' participation and interest so that they could come to a mode of thinking and consciousness that moved beyond the realm of the classroom and the school situation.

The rather narrow emphasis, in my first project, on the use of indigenous resources as a central focus in a liberatory education project needed to become more flexible to allow for a richer understanding of the value of these types of resources. There are many ways of focusing on this involvement, indigenous materials being only one way of enhancing accessibility to the student s' world, and of relating concepts and issues to the South African socio-political context. What emerged from the first project was the need to explore more fully methods/styles of involving and engaging student s in their learning and problematizing the course work (as outlined in the third chapter). The second project would need to focus this engagement so that it could eventually contribute toward changing consciousness and bringing about a clearer understanding of the

intimate connection between the micro-educational context and the macro-social/political context. The process needed to help to develop the type of skills, understanding, knowledge and attitudes necessary to deal democratically and critically with issues at a macro-level.

Because of my readings on critical thinking, I had a much clearer sense of what I wanted to do in the classroom to enable the students to grasp the connection between knowledge and power and to understand how knowledge serves very specific economic, political and social interests.

Therefore, in beginning the second project it was necessary for me to be more reflective and thorough about the view of knowledge that informed the project and to elaborate the view of change that I had taken as the underlying basis for the project.

There are many understandings of the elements that may help to precipitate change, but I focused on the view that change is most likely to occur when it is based in an experience that is related to a reality that is accessible. An appropriate starting point for considering change, it seems to me, is to move from the existing reality. For students to participate in their society, they must participate in their learning. I also wanted to involve the students in reflection and critique of their experience in this project. I was conscious of the fact that change takes time, and of the concomitant difficulties of assessing the extent of changes in consciousness when there has not been an opportunity for these to be

tested out by experience or time. The view of knowledge that was informing the project was that Geography is not something abstract but something that is contextualized and created in a social, economic and political context. Deepened understanding can facilitate critical awareness and vice versa. Once students have some sense of how structures work, they are less likely to be meekly accepting of their oppressive machinations. This is particularly highlighted by the fact that the very concept of Geography is about inter-relationships between elements such as climate and farming use, and population distribution and economics. It is particularly not static, but an experience of knowledge that is open to change. This action research project therefore needed to allow that flexibility, process and 'discovery' to occur.

I also recognised that Geography is profoundly political and must be acknowledged as such if it is to be clarified rather than mystified. Therefore, to politicize and problematize an issue is to define it as appropriate for student and eventually public decision-making, whether it be Ecology, Settlement, Economic Geography, etc. This focuses on developing an awareness of and an interest in the controversy inherent in 'knowledge'. As Stenhouse (1975:94) explains, "The pedagogical aim ... is to develop an understanding of social situations and human acts and of the controversial value issues which they raise". This means "that knowledge must be speculative and thus indeterminate as to student outcomes if it is to be worthwhile". (ibid:93)

In order to extend and further explore resources and the accessibility of material and experience within the classroom context, I examined the feasibility of students creating resources (as distinct from my doing so), using them and then reflecting on their value. My understanding of the word 'resource' had also broadened to include anything that might be used actively in the learning experience, thus moving beyond thinking of resources only as materials, but also thinking of people, situations and strategies, as resources. By focusing on a different perspective and direction in interactive teaching, I hoped to develop some hunches about the kinds of dynamics and elements that would be maximising all resources, in order to move toward a more oppositional, emancipatory education process. Although these would not be universal to all situations and times, some elements might well emerge that could be illuminating or illustrative for people in other settings.

Sue Davidoff and I discussed more fully than we had done in the previous project what exactly her role in the project would be. For the purposes of this project I called her a 'triangulator'. By this I mean that I felt the need to have an additional pair of 'eyes', 'ears' and a general sensitivity to the process in the classroom: I wanted her to provide an additional perspective on what we were doing. Both of us sat with groups while they were working and we spoke to small groups at the end of the project about their experiences. A colleague, Megan Riley, played the same role for two out of the five lessons.

I planned the lessons between 15 August and 21 August 1989. The focus was looking at those factors that affect industrial location. I particularly wanted students to move beyond simply 'knowing' the factors that could affect the location of an industry, toward an awareness of the possible conflicts within some of those factors. For example, depending on whose perspective/position is paramount, whether it be ecology issues, class issues or wages, differing needs and options would be considered. I hoped that students could begin to think both inductively, from their experience to the wider social context, and deductively, from the macro-situation to their particular task, so that they could relate their discoveries to their broader perceptions and their generalised ideas to personalised experiences. I saw this ability to move between the macro situation and the micro situation in the classroom as a key to understanding.

I spoke to the same Std. 9 class about participating in the project. We discussed it and together we came up with more direct questions to respond to in their daily journals:

1. What was my overall feeling about the lesson?
2. Did I participate fully? Why did I participate? If I did not participate, why?
3. Did it help me to come to grips with the factors that affect an industrial location by working on the hand-out by myself?

4.2 Outline and sequence of the project

The following is a brief chronological outline of the project to facilitate an understanding of the flow of the process.

Day 1: 15 August 1989

Students worked in groups of three and chose the people with whom they would work. Each group chose a particular type of factory and drew a map with whatever variables they wanted to include. They needed to mark FIVE possible locations on the map and mark them A - E, but choose and record the site that they thought most suitable and give their reasons for their choice.

Day 2: 16 August

Students worked at home on their own sketch map showing their factory location at home and brought it to the lesson. The lesson was spent discussing the various maps and the issues that arose, and then collating their individual efforts and creating one map that would represent the view of the group. The groups remained the same throughout this cycle.

Day 3: 17 August

The groups exchanged their maps depicting FIVE possible sites for their factory. Each group now examined the map and had to discuss

the feasibility of each of the sites and choose the site they thought most appropriate, stating their reasons.

Day 4: 20 August

The groups' original maps were then returned with a written statement by another group. Each group now evaluated the response to their map.

Day 5: 21 August

In the final lesson, groups reviewed the most suitable site they had chosen for their factory and listed all the problems regarding its location.

4.3 The process

Day 1

Most of this lesson was spent deciding what type of factory they would choose and what elements and issues they would begin to consider in siting their factory. They did not actually tackle the task of drawing a map in this lesson. Megan, Sue and I discussed the lesson afterwards. I find it interesting that both Megan and Sue's perceptions were different from mine. I felt that the students were fairly interested and tackled the task set, but without any particular fervour. Both Sue and Megan felt that the students' participation was immediate in that discussion began without delay

or that students went to sources to consult about particular needs for certain factory-types. Sue and Megan also felt the small size of the group helped to promote a contribution from each student as it is more difficult to remain 'anonymous' in a group of three compared to, say, a group of 5/6 members. This emphasized the value of having someone play a triangulator role, as one's day-to-day involvement with a class sometimes does not allow a 'freshness' to perceive proceedings, or because one has a particular perception about the character of 'involvement' in a lesson that needs to be challenged by other views. Not that there is any one 'correct' perspective, but as Mathison (1988:15) states, "the value of triangulation lies in providing evidence - whether convergent, inconsistent, or contradictory - such that the researcher can construct good explanations of the social phenomena from which they arise".

During this discussion, it emerged that it might be useful for individual students to think through some of the issues themselves before working out the map as a group. I therefore informed students to plan their own sketch map with varying locations on it as a point of discussion for the following lesson. They worked on their own sketch map at home that evening. This was also done to avoid domination by any one person and/or a lack of thinking about the issues by each member of the group. In certain groups deeper underlying issues began to emerge - such as, from whose perspective the siting should be viewed, the right of the workers, whether it should be profit or people-orientated, and the ecological issues for present and future generations. The task also gave some room for

self expression as well as collective expression because, although there was a task, it was flexible and open-ended, so students could choose their own factory-type and elements they considered important regarding its location.

Continual reflection helped to adapt the original plan to 'fit' more closely to the needs and situation in the classroom. I had not planned that students would work individually on the map at home, but on hindsight, feel that it was an important reflection and adaptation, so that more thorough thought had preceded the group discussion the following day.

I am quoting students' comments to the questions in their journals at some length, as they highlight some of the elements and process as experienced by the students. The quotations I have chosen are a broad representation of varied ideas and responses to the lesson:

- "The lesson was fun as well as serious. I participated because I felt like expressing my feelings."

- "I did participate because I think it is important for us not to lose sight of the injustices in our society. My part in the discussion was debating for a labour-focused factory, while the other two members wanted a strict capitalist, profit-orientated factory just because most factories operate like this."

- "I am coming to grips with understanding some of these factors affecting location. I seem to get into the role of the owner

and can see everything as a means to a profit no matter who suffers - as long as I benefit. Thereafter I realised what sufferings this would bring about for the employees. From this, I understand more fully the reality of the capitalist system operative in our country."

- "I felt a bit excited because a project was put before me and I could plan it the way I wanted to, to a certain degree (thinking of group members)."

- "Sort of adventurous, trying to decide where to locate our factory."

- "Was fully involved because I viewed my point as to where the factory should be."

- "Each group member had to put a lot of thought into what they were going to do."

- "I found it quite challenging being told to draw a map and say where you would locate your factory."

- "We could not come to a conclusion about whether our factory should be profit or people-orientated. We spent the entire period arguing."

- "I do think I participated fully. At first we decided what the factory would make; after which we listed various components

which were needed and then began to do a rough sketch of an area. I participated because the group had a specific objective to attain."

- "I am coming to grips with these issues because one has not only to look at what is there, but also what is not, and always to question the statements given."

- "I participated because I felt that if one member of the group does not participate, then the whole group suffers in the end."

- "Very interesting, made me think a lot."

Several aspects that influenced students' participation, understanding and critique seem worth commenting on. As in the first project, students again referred to their enjoyment enhancing their participation in the lesson. I feel that there is a connection between students' interest and concerns. I mention it because 'enjoyment' repeatedly emerged in discussion with students, from their journals and our perception of them in the groups. It clearly makes a difference when students are enjoying their learning. Shor (1980:117) illuminates this issue with an interesting perspective:

> The liberatory class can disrupt the routine of life by experimenting with comic styles of pedagogy, by not accepting the liquidation of fun from study, by constructing an integration of thought and feeling.

The experience of simulating a position or perspective also allowed students to acknowledge the links between the micro and macrocosm.

The issue of allowing students their own initiative, creativity and responsibility is also one that emerged. It seems important for students to have the space to think, express their own opinions and to be answerable to each other. The fact that there was a choice regarding the type of factory and priorities evoked differing responses within groups. This resulted in arguments which may or may not have enhanced students' ability to listen to a different position, but on the basis of their journals and interviews, it seemed as though it stimulated their involvement in the task. The element of choice seems crucial in attempting to maximise student participation, so that they can be involved in the issues and can attempt to think and act with greater depth or differently than previously. I also feel there were certain 'losses' by giving students total freedom of choice. For instance, if some groups had worked on the same type of factory, i.e. had not chosen their factory-type, there would have been the possible benefit of comparing their responses to the same scenario as a way of critiquing and extending their own responses. If several groups had worked with a furniture factory, they would have had a common reference point with which to work. Therefore, when considering invoking 'choice' in a task, it has to be considered what level or extent of choice would be most beneficial, both in terms of involvement and ultimate grasping of the issues. The task was seen by some students as a challenge, which brought their interests to the fore.

Day 2

The following day the students brought their individual maps and used them as a basis to draw one collective map representing the group. It appeared that students were either talking, drawing or debating about the appropriateness of certain locations and the factors that affect their situation. As some groups spoke they felt that their map was inadequate as insufficient depth or criteria had been considered. The lesson was very much a working session where the groups were discussing the issues that arose and what form their collective map would take.

Students were informed that their completed maps would be given to another group and that each group would then choose what they considered the most appropriate site from the five given sites. The maps would then be returned and they would evaluate their neighbouring group's response and rationale.

The element of setting up various options for a factory site seemed to have challenged students to think more extensively about the issues involved in industrial location. I was a little unclear in the planning stages as to whether I should have given a particular factory for the whole class to locate, to give the same factory to two groups or to give them an open choice. I opted for the open choice, feeling that their own choice of factory and all the concomitant influencing factors would provide a wide and rich diversity of viewpoints, extending the usual thinking around these influencing factors. As already stated, I feel certain gains and

losses were made by this choice, but several students' comments in their journals reflected the following type of sentiment: "Found it interesting because each one had a different map and their own idea behind it."

The element of involving students in the evaluation procedure was an additional motivation to the group. They knew that another group would eventually receive their map and would have to make a choice of the most appropriate site for the chosen factory. They would then be evaluating their neighbouring group's response to their map. I felt that in this situation, it helped that students had first worked individually on the project, so they would have thought about some of the issues before discussing or arguing for certain positions. As one student put it, "We had to combine our maps in the group and we came up with something better."

The small number of members in each group was referred to by many students as a factor that enhanced their participation. Said one, "A group of 3 people works much more efficiently than a group of 4."

Another unexpected element that emerged was students' commentary about arguments and disagreements in the group. I did not plan an agenda around conflict, but, based on my reading of the students' journals and a class discussion at the end of the project, disagreement both enhanced participation, and their response to disagreement/conflict was positive. Some of their comments were:

- "I did participate because Raakesh and I were at each other over what factory we should establish."

- "The lesson went off quite well. Our group was very argumentative."

- "Because our ideas were so diverse, it highlighted some of the considerations to be taken into account when siting a factory... it's not that easy!"

The area of conflict is particularly interesting to me. We are normally taught to move toward consensus/agreement and to view conflict and disagreement negatively. It seems to me that there is potential for enormous learning here in terms of beginning to understand and use conflict creatively, and also as a possible 'yeast' agent in participatory learning. In this project, students have intimated the possible value of arguing in their group to enhance their own participation and interest. It might, however, serve to entrench their existing attitudes further and prevent real communication occurring. In spite of this danger, it seems like an element that is worth pursuing with more depth and focus to determine its possible effectiveness in interactive education.

Day 3

The groups then exchanged their maps depicting FIVE possible sites for their factory. Each group now examined the map and had to

discuss the feasibility of each of the sites and choose the site they thought most appropriate, stating their reasons.

On the basis of listening to group discussions, reading the students' journals and interviews, the first thing that emerged was the beginning of a discernment between what students thought important and not important. It is possible that a choice forced them to think through a range of options and provided a challenge. Some of their comments about this were:

- "It is not as easy as you think but very difficult in that you have to take into account all the best possible solutions."

- "I looked at the siting more, because I saw different points put across by other groups."

- "I participate because I am beginning to enjoy taking responsibility."

I sensed that working things out for themselves, both individually and collectively, rather than having them imposed, could have enhanced and integrated students' understanding of factors affecting industrial site locations. For instance, once they had argued, debated and foreseen the problems and the criteria for their own maps, they appeared to be far more sensitised in choosing a suitable location for a factory on their neighbouring group's map. This sensitivity was manifest both in the shorter time-span needed for asking certain questions and raising criteria, and in the way they

probed further than in their initial discussion. For example, they would now not just consider the accessibility of labour, but also repercussions of factory location close to residential areas, health issues, etc.

Because students created the worksheet, it had the potential to enable students to feel that their contribution was worthwhile and to provide a sense of control over the content and substance of their course curricula.

Day 4

The groups' original maps were then returned with a written statement by another group. Each group now evaluated the response given to their map. They were asked to consider the following issues in their evaluation: what they regarded as missing considerations in making the choice, any new points that had been raised that they had not considered, and anything they would challenge as being incorrect or insufficient.

Students acknowledged that other groups saw some points that they had not raised and that there were some problems with the location that they had chosen. As one student said,

- "As for the location of an industrial site, I am beginning to find out that from a worksheet, you will start off by seeing easy points, but as you look more deeply into the reasons, you

seem to come up with more questions than when you started, and even less answers."

Where feasible, it would seem important to allow students to be part of the evaluation procedure of their own and/or each others' work. My sense is that there will be times when students need more background or skills to be able to maximise their learning from this, which also seems to fit in with the notion of practice being informed by 'theory' as well as theory being informed by practice.

Day 5

Students now reviewed the most suitable site they had chosen for their factory and listed all the problems regarding its location. My intention was to try and extend further the issues regarding industrial settlement, as their chosen sites had focused particularly on supporting factors, and were not seriously critiqued or examined.

Lastly, they needed to write down a question that they had asked that they thought was particularly unique, and also a question no one in the class might have thought of asking.

These last two questions were particularly designed for students to attempt to push their own 'barriers' regarding what would be a 'usual' question to consider and those that are not so obvious or accessible. The purpose was to get them to think about issues that we don't normally consider, e.g. did we only consider dumping in the rivers or did our thinking extend to the ultimate effect on the

underground water supply, soil, vegetation, animal balance, etc.? Some of the responses were:

- "I found it quite different evaluating your own work, but I enjoyed it. I participated because I wanted to see what we could criticize about our factory."

- "I found the exercise about critiquing your own map quite challenging."

- "Today I can say that with new questions arising I'm not as positive as I was before, because with these new questions, new and more questions seem to pop up in my mind."

- "We had a little trouble in our group - disagreement, and I found it interesting."

- "We had a tough time dealing with this, but it forced us to look at issues of race, etc."

- "Interesting 'outside of the ordinary' thoughts were brought into the open. Nobody ever stops to seriously think about these matters."

- "I feel it is better to discuss in groups because certain people partake more in group discussions."

- "This lesson was challenging and fully tested our insight of all the factors that influence the siting of a factory."

- "Took part in discussion; found this easier to understand then if I was left to deal with this problem alone."

The sense I had from this session, based on students' and Sue's responses and my own observations, was that they found it had been a fairly difficult exercise in that it had forced them to look beyond the 'normal' factors and it had provoked questions rather than answers and had provided a challenge to criticise their own work. The critique provided a framework to move beyond their existing thoughts; it would seem an important element to consider incorporating as a way of extending and/or critiquing existing consciousness.

I am including a list of the questions that emerged from the maps that students had drawn as Appendix 1.

4.4 Student reflection on process

At the end of this cycle, I wanted to ascertain the students' responses and reflection on the process. At a subsequent occasion the class was divided into three groups; Megan, Sue and I each met separately with one group. We chatted fairly informally and asked the following questions:

1. Was it more helpful to draw your own map than be given one?

2. What did you learn doing it this way and what did you feel you lost doing it this way?
3. Comment on the size of the group.
4. If you were given the exercise again, how would you do it differently (either content or process)?
5. Were yesterday's questions difficult for you?
6. Did you find a teacher's presence inhibiting in your group?

The following responses were recorded from the three different groups:

1. Students felt that they would have taken elements such as transport, which side of a mountain, aim of factory, for granted and not thought through the issues if they had just been given to them. The experience of '<u>doing</u>' had made them more sensitive to issues and made them seem real. It would have been easier if they had been given a map, but not as enjoyable. They also felt they had been encouraged to think independently and critically. They felt that they had thought of all kinds of things they probably would not have thought of, thinking beyond the set criteria for the siting of a factory.

2. The class felt that this approach was more creative and helped raise issues. None of the groups felt that they had lost anything by covering the work in this manner, as all issues and more had been covered.

3. An overall sense that a smaller group of 3/4 members was more helpful than a larger group as you were forced to take responsibility and couldn't lose yourself behind others; some felt the size would depend on the task and also a small group could suffer more if one person did not 'pull their weight'.

4. Students felt that they would need to draw their map more collectively i.e. all contributions needed to be integrated. Also, for each location the positive and negative aspects needed to be considered.

5. The questions had been difficult for the students because, as they stated it, it "stretched us beyond ourselves".

6. A teacher in a group can increase students' feeling of inadequacy and fear of being 'wrong'; the quieter, less forthright students represented this view and felt somewhat inhibited by the presence of a teacher. The more confident students were not affected by a teacher's presence.

4.5 Concluding exercise at the end of the Economic Geography section

The following procedure was followed to conclude the Economic Geography section. The purpose was to examine whether there were any changes in students' responses to the same exercises completed in the first action research project.

Students were again asked questions relating to a photograph of a worker in a sugar-cane field and a factory in Salt River (they had seen these same photographs at the beginning of the course). This was administered on the premise that by getting them to generate questions, it would reveal their understandings.

Each student then read out any two questions they had asked about these same photographs at the beginning of the Economic Geography section. The majority of the questions then had been focused on physical conditions, e.g. "What grows there?", "What time of the year was the picture taken?", "How long does it take to grow?". They then read out any two questions they had now asked on these photographs. There was a much broader range of questions that related to some understanding of imbalances in distribution of resources, and an awareness of and interest in controversy inherent in 'knowledge', e.g. "Does the man own the farm?", "Is there only manual labour?", "Is he paid a living wage?", "Who benefits from this crop?".

I made no comment on the two different sets of questions, those asked before and after the course; instead I asked students if they felt they were similar questions - if so, in what respect, and, if dissimilar, why. Students all felt their questions were fairly different. Typical of the reasons given were the following:

- "Our questions are now more multi-dimensional".

- "We are going to the root of things".

- "We are seeing the human relationship with all aspects of life",

- "Nothing stands isolated but has ripple effects for many other things".

Even though these different questions may not be an indication of a far-reaching change of perception, but merely a reflection of the material covered, I felt that their evaluation, sensitivity and understanding of noting the change and the kind of changes in their questions were at least encouraging, in itself indicating some 'feel' for critique and depth.

4.6 In conclusion

Fundamentally, this project has highlighted that a way to involve students is to build on their interests and concerns. The notion of participatory, issue-based learning was central. It was not concerned with importing uncontested facts, but rather with setting up situations and dialogues from which conclusions and questions could be drawn. It was also concerned with understanding issues at the local level and moving to the global, broader implications of the material under discussion, for instance the ecological and political significance in our present context.

In evaluating the effectiveness of this project it was not my intention to test planning against outcomes, but rather to consider what actually appears in the classroom as it takes place to help one understand what happens in the learning environment. Without this

understanding, it is not possible to adapt and adjust to the needs of the students, school and community context.

The positive responses and differing questions at the end of the section may be a reflection of the material covered, rather than a far-reaching change of perception. The results may indicate a change, but one cannot be explicit about the reasons for this change.

Evaluation needs to be humble, accepting that it is one of the many ways in which people gain fresh insights. The results of an action research evaluation can never be absolute and should not seek to dictate what the future is to be, but they can serve as a guide and raise issues that can be used in differing circumstances. The project has provided some possible clues about aspects that could be important and should be included in an emancipatory interactive teaching style. While several of the elements would be worth focusing on with more emphasis and depth, the one I chose to look at in my third action research project was that of 'conflict'. I was particularly interested in pursuing this as I had not thought about it seriously before. What is more, it seemed pertinent in a society that is fraught with dissension and conflict in so many areas and at so many levels.

CHAPTER FIVE

THIRD ACTION RESEARCH PROJECT: VIEWING THE STRATEGY OF CONFLICT AS A RESOURCE

5.1 Introduction

Out of the many elements that had emerged in the second project, I had chosen to examine the strategy of conflict in more depth. In this way, students were to be encouraged to engage in the underlying issues rather than to accept the syllabus content at face value. I particularly wanted to examine whether this could be a useful element to incorporate in a group activity as a means of enhancing involvement and a real grappling with the issues, or whether it would entrench existing attitudes and positions. I worked with the same students as in the previous two projects, they now being in the final school year. This was particularly important in the light of the traditional attitude that critical education cannot happen in the final school year because of an enormous workload and examination pressure. Teachers tend not even to attempt 'progressive' lessons in this year because of the pressure to finish the required syllabi and to attain results from students in an external examination.

Sue Davidoff again attended the whole sequence of lessons, to critique, verify or expand my own interpretation of the events. The students also completed their journals on a daily basis. I asked them to be guided by the following:

1. Overall response to the lesson.
2. Did you feel conflict within yourself? Why? How did you deal with it?
3. Did you feel conflict between people? Why? How did you deal with it? Did it hinder or aid your participation? Why?

I did not choose a particular section of work, but merely continued with the syllabus topic that was being dealt with at the particular time. I built an element of conflict into my planning for the teaching of the topic.

At that point, my understanding of conflict was in those areas of disagreement with others and conflict within oneself. I had not thought about the possible nuances within conflict or differentiated between real tension and disagreement.

5.2 Background

The lesson objectives and content of the syllabus for the Senior Secondary Geography course emphasize a spatial organization paradigm. This paradigm is based on the philosophy of positivism, a philosophy strongly identified with science. Positivism regards knowledge as a given property of external reality amenable to study via value-free methods. The essence of this geography is then the emphasis on theory. Attempts are made to develop spatial concepts into various sorts of models, while an appropriate mode of enquiry is encouraged - that of hypothesis generation and testing. The stress on models implies that geography is less interested in the unique case, the

particular town, region, than in generalizations. Urban models are one such example. They are based on the social organization of western capitalist societies. They are normative in nature in that they seek to explain how landscapes should be organized and contain implicit value assumptions arising from specific social and historical circumstances in which they have developed. (Weber 1990:1-2)

In this project, the section being dealt with was three Models of Urban Structure. The models were designed in 1925, 1939 and 1945 respectively to explain the structure and influencing factors of urban settlements theoretically. The concentric model designed in 1925 particularly emphasises socio-economic differences that cause zones to arrange themselves in circles around the central business district. Transport routes are not incorporated. The sector model of 1939 locates all functions in relation to 'upper-middle' class housing and transport routes. Functions are arranged in wedge-shapes from the central business district. The multiple nuclei model of 1945 extends the nucleus away from the central business district to other nuclei. It has rectangular shapes and also incorporates more functions than just residential and the central business district.

The recall, recognition and inter-relation of these models was important, not only in terms of covering the syllabus but also in terms of providing the students with the language necessary for an awareness of the issues at hand. Information was therefore viewed as being functional rather than as an end in itself. I wanted the use of conflict to provide a forum to delve beneath the spatial

patterns and also focus on human motivations, perceptions and values that create and modify landscapes. This would demand an awakening realisation of the economic, social and political issues at stake.

5.3 Process

The following is a chronological outline of the project:

Lesson 1

Initially, I wrote the following statement on the board: "People must live where they can afford to live". Students were each given a 'badge' and asked whether they agreed or disagreed with this statement in the context of Cape Town. They individually made one of the following symbols on their badge:

++	strongly agree with the statement
+	agree
-	disagree
--	strongly disagree

They then found another student who had written down the same symbol as their own and shared their rationale for choosing that position.

Each pair of students then found another pair who had chosen the symbol opposite to their own. Time was given for both pairs to explain their position and then also to try to persuade each other to 'switch positions'. Students could change their 'badge' at this point. No students chose the ++ or -- badge. My sense on the basis

of the students' journals and discussions with them at the end of the project, was that the statement was potentially so controversial that they could not take any extreme response as they were conscious of the potential dilemma within the statement. As one student stated, "At first I felt unable to make a choice, there were pros and cons for both".

There was a brief report and rationale from the different groups of four about what their positions had been, from individuals who had chosen to change their badge, and from those who did not change their badge. The following are comments reported in this exercise:

- "By hearing others' points of view, I could sum up the pro's and con's of my decision and also had the choice to change it."

- "I changed by choice for plus because I did not open my mind wide enough for more issues, but instead limited my self to one thing."

I sensed that there was a high degree of participation in this lesson, particularly once the pairs of students had met with pairs of students holding opposing views. In the initial exercise when they explained to a person who had chosen a similar position to their own, they were fairly quick and methodical in the procedure, whereas I needed to intervene in the later process because of time pressure. Even though students had not completed their arguments and discussions, I curtailed the discussion in order to continue with the lesson plan. Ideally this was probably not the best way of

maximising students' involvement in the topic, but I felt restricted by time and the need to complete the syllabus.

A further indication of the students' level of participation was that the lesson ended at a lunch interval and clusters of students drifted around during interval continuing to argue or make their point more strongly. The students who chose to change their positions felt that the other group had a stronger, more convincing argument, or that issues had been raised that they had not thought of. Comments from students' journals:

- "I think the conflict made the lesson more interesting because each person wanted to stress what he believed was right."

- "I dealt with the conflict by best trying to bring across my own views and reasons so that it would change the other guy's views. I also looked at the other team's argument to see if I could change my view."

- "Listening to others' ideas gave one a new perspective."

- "The conflict did not hinder my participation, but made things more interesting."

- "Overall response was good within the group. We had some response from every member."

- "The conflict actually aided me in that it gave me a chance to air my viewpoints quite aggressively and this seemed to change at least two minds in the group. Conflict also gets you more interested as you are directly involved in the argument and are not an outsider who most of the time does not know what is happening and have a very biased view of certain events and situations."

- "I did have conflict within myself because I was not sure whether to take a + or a - sign because of the problem I found with the statement."

- "Conflict aided us because we had a broader view after we spoke more about it."

The motivation for this lesson was to begin to allow a process where students were thinking about the issues involved regarding the site location and needs of various people and land-uses. The urban models involve particular locations and land-uses in their formulation and the exercise was therefore aimed at beginning a process of thinking about some of the realities that might affect location, before theoretically examining the characteristics and rationale for the three different urban models. As one student stated, "I liked the idea of developing my own Cape Town." Apart from merely beginning a process regarding the issues affecting the various models, the exercise deliberately created a situation of potential conflict where a variety of responses could have been adopted to the statement. It was within this inherent controversy that I hoped to elicit thought,

response, involvement and also the ability to listen to alternative positions.

Lesson 2

In the following lesson the class was divided into groups of three and each group was given an envelope containing an outline map of the Peninsula, ten squares of coloured paper, a list and key denoting different land-uses for each of the coloured squares, scissors, and an outline of three shapes depicting the three urban models - circle, wedge, rectangle. The groups needed to decide whether a circular, wedge or rectangular shape would be the most appropriate basis for demarcating land uses in and around the Peninsula. They then needed to proceed to design and cut out the blocks after they had decided where the ten different functions should be located and to justify their choice of location. They were to stick them onto their Peninsula map to end up with a jigsaw-like model of the way they would structure the Cape Peninsula land area.

In order to arrive at their own particular 'models', they discussed which shape would be most appropriate and why; also what land uses they wanted to include in their model. The most controversial issue was where each land use should be located. The controversy was particularly evident when it came to deciding on the position of various class structures of housing. Residential areas are demarcated according to an economic class structure in two out of the three models and so this was included in their key of land uses. Much debate and arguing ensued.

Lesson 3

Each group met with another group to share their map with their particular development pattern. They explained why they had chosen a particular shape and had located it in a particular position.

They were also asked to re-examine the ten functions and to state which necessary functions they thought had been omitted from the list. They tried to come to a consensus regarding what might be the best plan for Cape Town.

Students' journals revealed a fairly strong bias toward feeling that their differing positions had enhanced their participation. There was, however, the occasional view that the conflict had initially been inhibiting:

- "Yes, there was conflict between us because, as before, we each believed we were correct and also the different reasons for ideas were equally valid. I am sorry to say that it did hinder the group for the first time ... because each one would bring up their own views, not compromise and reinforce why they were right. But in as much as it hindered, it did help because it was now possible to see the various possibilities of differences."

- "Working in collaboration with other can lead to solutions to problems. However, we did not agree on everything."

- "We had some conflict and so new points were raised."

- "Overall response was good within the group. We had some response from every member."

- "Having the responsibility of planning something this important was interesting and very challenging."

- "I enjoyed working with new people."

- "Good learning experience. Conflict did not hinder us; it actually helped. Group felt ready to change if change was for the betterment of the proposed plan of the city. If we had our way, we would definitely change some aspects of the way that the city is laid out at present. An interesting lesson. Enjoyable."

- "Conflict aided my participation because I wanted to argue."

- "I enjoyed the period because we could all discuss our own point of view on what we thought was right or wrong."

It seems that conflict helped force students to think through issues and their possible implications regarding the models, prior to hearing about the theoretical rationale for the models.

There was some element of wanting to persuade others to accept their particular point of view, but also an openness to different and new

possibilities. I feel unclear as to what contributed toward that openness, but suspect that it has more to do with a long-term intentionality and ethos in the class rather than any particular element that occurred in these series of lessons. It might, therefore, be important when deliberately creating conflict, to create structures that force groups to consider new and interesting points that another group has introduced.

Another element that arose in this session that I had not particularly planned for, was the experience of students working with a new group of students. At different times I have formally grouped students or allowed them to choose the people with whom they work. I have generally found that the students work more effectively and with more enthusiasm with people that they have chosen. However, there have always been inherent overriding problems and questions related to the possible entrenchment of existing friendships, attitudes and perceptions and to not exposing students to different styles of working and thinking. I think the exposure to different groups, particularly in this lesson, worked because it was task-orientated, but mostly because there was an inherent controversy. On previous occasions tasks have been set for groups of students who have not chosen to work together and they have generally tended not to work well together.

Lesson 4

In this lesson each group was allocated one of the urban models. Each group then studied their particular model and structured the

model according to the particularities of Cape Town. Students consulted their textbooks to understand the rationale and theoretical basis for their particular model. Some of the students' comments were:

- "The lesson was very good. There was more participation from more pupils in the class instead of just a few individuals."

- "It's a pity that for exam purposes we have to stick to the theory because our (the class's) analysis brings out many interesting points every day which are not included in the syllabus."

On the whole, I felt that the beginning exercises had been helpful in actually contextualizing the implications and rationale of the various models. If the models had been started without the introductory statement, it seems likely the students would have lacked a context, and most particularly a critical sense of their possible implications.

Lesson 5

Three students, each representing one of the three models, comprised a group. Each person needed to 'fight for' their particular model, irrespective of whether they actually supported it or not. I deliberately created this situation to create an inner conflict within students and also to get them to 'live into' the rationale and understanding of the particular model. We then had a general report

back period regarding the models' strengths and weaknesses and where the students felt the models failed to reflect reality. They also examined the similarities and differences between the models and considered which model would be most acceptable to urban development.

An interesting issue that emerged from this was the difficulty students encountered in defending something which they did not support or believe:

- "I do not think that conflict aided the discussion because at the onset of the talks, one of the other groups stated that my model was indeed better than his."

- "It was interesting, although I found it very hard to defend my model, because I know that my model was not perfect."

- "I had the concentric shape, but I found it very hard to defend because I felt it was totally inaccurate."

- "It was a struggle to defend my model because of it's many flaws and the omission of certain functions."

- "It's hard defending a model in which you don't believe."

This issue of defending something that one does not support, is probably an element that is important to keep in mind when planning a group activity with a structure of conflict. This exercise raised the whole area of inner conflict. The conflict can become defused

and less involving if students are presented with a position that they cannot support. It does, however, present individuals with a forum for coping with their own inner kind of conflict. The other possibility of defending a position that one has not chosen, is one of being able to empathize and understand another perspective. However, I would see that as an additional issue regarding possible empathy strategies, rather than as an effective way of utilizing conflict.

The other perspective that emerged was that some students and groups responded to the potential conflict by criticising other models, rather than by defending their own:

- "We seemed to be criticising the others and not defending our own."

- "They got through to me because they seemed to be attacking our pattern, rather than discussing their own."

An interesting issue that one student raised was related to the limitations in their disagreements and involvement because they experienced a lack of knowledge about the other models. This ties in particularly with my thinking about critical thinking insofar as it needs to move beyond simply rejecting something. As Morrow (1989:1560) states, it then simply becomes a refusal to argue, for when I do not understand something, I cannot be responding to it critically, as I do not know its essence. This is a particularly pertinent insight that I would heed in the future.

Lesson 6

An aerial photograph of an urban settlement was shown and students identified which model it most closely represented. The class reconvened in their original groups from the second lesson and considered the following questions:

1. What are your model's strengths?
2. Its weaknesses : where could you not defend it?
3. How does it differ from Cape Town's reality?
4. The similarities and differences between the three models.
5. What model is the most acceptable to you, if any?
6. Would you like to change your badge : "People must live where they can afford to live".

The group discussion was opened into a plenary session and a fiery and heated argument ensued. "Overall our diagrams were criticised by everyone, and interestingly enough, more points came up", said one student.

Members of the class were also subsequently interviewed by Sue and a school colleague. Students responded to the following questions:

1. Did you feel any conflict within yourself? How did you deal with it?
2. Did you feel any conflict with others? Could you deal with it?
3. Did conflict enhance or hamper your involvement? Do you feel you learnt more or less through conflict?

4. Did you find that conflict made you more fixed or open in your position? i.e. were you open to different points of view/examining yourself/shifting your position?
5. Your understanding of conflict.
6. Any general comments.

These interviews helped to unravel elements that had occurred within the conflict experience. Conflict does not always involve an 'either/or' situation. New elements and ideas can be introduced. Conflict also does not necessarily challenge the status quo, for the options given may remain within the framework of the given status quo. Also, unless we move from understanding the controversial nature within elements to asking why those elements actually exist, we are not operating within a critical framework. For instance, students might become involved in the controversy about whether working class residential land use should be in the outlying areas of an urban settlement, but they also need to ask and examine the rationale for the existence of residential zones based on class structures. There would then be the possibility of critiquing and challenging the very options that are presented, highlighting Freire's (1985:85) differentiation between transforming rather than reforming reality - 'reforming' meaning maintaining the status quo and 'transforming' meaning challenging the status quo. A sense of conflict between theory and practice also arose. One student stated, "I sometimes felt conflict between theory and reality." Theory cannot be generalized or universalized as each social site "provides diverse and critical insights into the nature of domination and the possibilities for social and self-emancipation". (Giroux 1988:119)

The element that emerged concerned coping with conflict and feeling that it does not necessarily mean aggression, but that it can be an integral part of learning and a necessary dialectic for transformation. As two students put it, "Without this lesson, I might never have learnt that conflict can be coped with, without aggression", and, "A broader perspective of others and their problems has enabled me to learn to cope less aggressively with conflict".

The experiences in these six lessons tended to make many of the students question their own views, because they felt answerable and were forced to listen to each other. As one student put it, "Other groups' views made a lot of sense and it made one more open and able to shift". Their general involvement was enhanced. To quote one view, "I don't normally take part in discussions - with conflict it is easier to get involved". And they also perceived themselves as co-learners honouring their own experiences and shifting the emphasis from the teacher as the source of knowledge: "Much better to work in groups than on your own; hear what other people have to say and can correct one another", was one response.

Regarding students' ability to cope with conflict within themselves and each other, there was a mixed response, from feeling that they were exposed to new and different ideas to accepting the validity of the views of others, but not necessarily changing their own view. They also felt that hearing other people's points of view helped them to clarify their own inner conflict. They felt that they could 'bounce back' their thoughts with other students, helping them achieve more clarity.

Their understanding of conflict was that it concerns differences in meaning, people, ideas and opinion, and conflict becomes more intense to the extent that people are prepared to push their differences and defend their own point of view.

There was a unanimous response that the conflict situation had enhanced their participation. They felt less isolated, that they had something to contribute and defend and that they were more open to evaluating others and their own attitudes. As one student stated in his interview, "People who have been 'dead' all year contributed, and became interested; this provides a stimulating atmosphere in the class".

5.4 In conclusion

I feel that this project has focused particularly on the understanding of conflict in terms of disagreement with others and tension within oneself. It is possible that there are other ways of viewing this dialectic, but it is within this framework that I have examined the possibilities for critical interactive teaching.

It would seem that the use of conflict in interactive teaching can play a crucial role in enhancing students' involvement, their understanding of issues and democratizing the education process, possibly beginning to question issues and think about new dimensions. The students definitely owned and gave worth to their individual and collective contributions, thereby helping to move away from a teacher-centred classroom. However, this approach can also simply

provide the framework for the appearance and sense of self-thought and involvement, but be steered and structured toward a particular dogma or objective. It would then be utilized in a positivistic type of education, rather than a critical framework. Radical education, by contrast, seeks dialogue rather than polemics, seeks causal principles and is open to continual questioning and revision of findings. It aims to increase the individual's capacity for choice and not to impose choices. Conflict can enhance students' involvement in a transformative process, but it needs to be clearly contextualized within the critical education framework.

It is now necessary to begin to unravel the 'threads' from these three projects and the concomitant readings in an overall reflection. This reflection will constitute the final chapter of this work.

CHAPTER SIX

EMERGING PERSPECTIVES

6.1 Intention

It seems necessary at this juncture to outline what I set out to do in this entire process, and then to examine what I actually did do, while also looking at and reflecting on certain issues that arose.

I initially explored the action research cycle as a research methodology to facilitate my reflection on my own classroom practice, and as a way of teaching transformatively. The basic understanding and framework of action research within which I chose to operate, was that of a spiral of systematic planning, acting, observing and reflecting. It is necessary to outline the characteristics that I attempted to incorporate in my action research process to ascertain whether these did feature in my classroom practice.

The major thrust of my intention had been that the research would be participatory, including myself, the students and additional colleagues to verify, critique and enhance my understandings. I wanted the project to have an accountability to and among participants, and particularly wanted to focus on my accountability as the teacher to the students. This would require asking for students' reflections, feeding research findings back to the students, and clarifying these with them. As Morrow (1989:153) states, "Very many students in schools are taught merely to react to

given stimuli;". I stressed this as in our present education structure the 'rule of thumb' is that teachers are not answerable to students: this power structure simply perpetuates existing norms and a very accepting and unquestioning response from students. The only time this issue is normally considered is during a crisis in the political and education sphere. As the NECC Press Release (1986) stated, we need "to re-conceptualise the role of 'schooling' in relation to the 'community' and ensure that it does not become a mechanical static relationship geared to 'crisis' alone". For instance, it would not be unusual to say something technically incorrect or highly contentious and for students to accept the point without question. For twelve years of schooling, students are taught by their experience in the classroom and in society that the teacher is 'right', an ultimate authority and certainly not to be questioned. Questioning the teacher is often viewed as being disrespectful or even simply as a waste of time and effort. This is not to deny the fundamental shifts that have occurred during the years of student protest and upheaval against apartheid education. However, the student 'voice' has still not become an integral part of the dynamics of a transformed education system.

I also wanted the process to highlight the underlying and inherent social, economic and political forces contained within any curricula covered. This involved contextualizing the micro situation in the macro context and also creating a situation where underlying assumptions could be revealed and questioned. It was within this premise that I believed that, by becoming more aware of our situation, we can begin to think differently and so ultimately

contribute to the transformation of our situation. Transformation would involve a different style and content in the classroom with a focus on change in the broader society.

The theory and structure of the work needed to help students think beyond their own framework, but also to critique theories rather than simply apply them as blueprints to given particularities. Theories also needed to be diverse, representing differing positions to extend existing limitations of thinking and values.

The action research process is systematic. Although not rigid, as a focused enquiry of planning, acting, observation and reflection, I felt it would facilitate the processes I was attempting to set in motion.

I also set out to explore my hunch about the necessity of using indigenous resources to enhance student involvement and the accessibility of their course work. My intention throughout was for the educational context to move toward what I regarded as critical thinking. After completing the first action research cycle I realised that I had been fairly limited in narrowing myself to perceiving indigenous resources as an isolated key factor in transforming the education process.

I also reflected that I had been fairly vague regarding my understanding of critical thinking, which had been the fundamental paradigm and framework for my education process in the classroom.

I proceeded to examine and understand critical thinking with more depth to see how it related to my activity-based methodology.

With a broadened understanding of the complexities of critical thinking, I moved into the second cycle of my project. I wanted to extend my understanding and use of resources to illuminate the controversy inherent in any material so that it would be both more adaptable and effective in involving students to link the classroom with the wider context and so to move toward a transforming educational process. I particularly focused on encouraging students to create resources, to use them and to evaluate their effectiveness in their learning.

From this project conflict had arisen as something that seemed to encourage student participation. I therefore explored the strategy of conflict as a resource in the third and final cycle of this particular project.

In essence, then, this project intended to use the research methodology of action research to focus on the use of indigenous resources, expanding to focus on resources more generally and the notion of conflict in particular as ways of enhancing critical understanding and thinking. My action research involvement also led me to examine and problematize the notion and practice of critical thinking.

6.2 Execution and reflection

It is now necessary to examine what the project actually did in relation to its stated objectives and to highlight certain key issues that emerged. In relation to the objectives of the action research methodology, it would seem that as a broad statement the projects did attempt to be participatory, to include an element of shared answerability and to create situations where the material on hand was probed further for dominant interests and links with the macro context. However, the following key issues arose:

6.2.1. Accountability

First, I will focus and reflect on the aspect of accountability. I choose this area of reflection because of all the characteristics incorporated I feel that it had the most profound effect on me as a teacher. I felt the whole action research approach increased my own answerability to my students. Although I had always 'considered' students' viewpoints and had the appearance of a fairly democratic classroom, I had not intentionally or consistently checked out procedures or processes with them. I have never actually incorporated them in a formal evaluation procedure.

I found this particularly interesting as I have always been conscious of not wanting to emulate the power structure of the teacher as 'the authority' and the students as the acquiescent subjects. Previously I saw this traditional authority structure as being eroded by my being fairly participatory in my teaching methods - for instance,

group work, simulation games and debates. I also created forums for inviting criticism and questioning regarding what I as the teacher might be saying. However, apart from attempting to be intuitively 'fair' in matters of dispute, I did not embark on a systematic style that allowed students a 'voice' and a critique of what I was doing, that is the very style and process of the educational scenario.

It seems to me that in an on-going teaching process it is imperative to create a formal structure, time or place whereby students are given the space to respond seriously to and critique their involvement, procedure and content in the classroom. The journals, kept throughout the course, proved useful as students viewed them as their personal records. As one student stated, "The sight of these books immediately got my interest". Although I had discussed the project with them and they knew that I would read their journals, they saw them as separate from their notebooks and fairly open-ended, and so these records revealed a high degree of freedom of expression. If any kind of reflection can occur to re-plan a process in my teaching, the reflection must be collective in terms of involving all the participants.

I have found that since doing these projects I am now consciously including students in lesson content and procedure evaluations. This has also had an effect, on an on-going basis, on my consulting students about appropriate dates for testing and quantity of work for homework preparation in the light of other subject workloads. This is in juxtaposition to imposing dates and quotas without consultation. This day to day process has involved students having

to examine their workload seriously, to set priorities and to take decisions. In short, I find that I am formally and informally much more consciously making a space and context available to actually consult with students in the processes that they are part of.

I have also found that students are now generally better prepared for tests, when they have had some 'voice' regarding when that test will be written. My overall style also now focuses more on questions rather than answers. When starting a section on mining, for instance, students surrounded photographs depicting different aspects of mining with written questions drawn up after they had examined the scene in the photograph. That exercise immediately became a forum to deal with the topic in relation to immediate concerns before moving beyond that.

After completing the second cycle, where students created resources and were involved in their own evaluation procedures, they had control over both the content and substance of the material. Fundamentally the students felt accountable to each other and began to question their own views. Allowing this responsibility and creativity has the potential to shift ownership of the classroom experience to a conjoint experience between teacher and students. I have also now included students more formally in an on-going conjoint evaluation procedure regarding their work. A Std. 8 class answered a variety of questions on their geomorphology section of work. Instead of giving the answers, I divided the class into groups. Each group tackled a particular question, sharing their individual responses and discussing the most appropriate response.

This was then reported in a class plenary session, in which further opportunity was given to debate the groups' responses. Apart from students coming to grips far more thoroughly with the issues at hand, I found the practice also respected their own knowledge and moved away from the central focus on the teacher. Shor (1980:105) aptly describes this in the following way:

> The teacher's conviction that she or he can learn important things from the students is a keystone of this process. Without that belief, the educator will be rejecting student reality as a rich resource for thematic problems. Also, the teacher who does not seek to learn from the class will not listen carefully to what students offer, and hence will condition students into non-speaking.

Most of all, I have realised that democraticizing the classroom involves more than a general ethos of allowing the students a 'voice' in critiquing the content of what is said by the teacher. It needs intentionality, structure and focus on process.

My reflections regarding democratizing both the process and the content of the classroom confirm my view that schools are sites of struggle regarding both content and process. Progressive education generally stresses that the content, rather than the style of teaching, should be transformative. In order to reveal dominant interests and ideology and to link continually the classroom situation with the larger community, formal links need to be nurtured between the school and community organisations. For instance, in dealing with pollution it would be important to problematize the content and to create an experiential, democratic approach, but it is equally important to align with organisations involved in

campaigns around pollution. Too often content, method and organisational links are viewed as separate entities, and equally often only one or two of these aspects are explored.

The concept of triangulation is an additional aid regarding these issues of answerability. An additional person serves as a 'reality check' regarding one's own and one's students' perceptions of events. The triangulation in these projects raised the whole issue of the triangulator also being answerable and the benefit of the action research cycle as a way of approaching the process of triangulation (Appendix 2). However, until there is a restructuring of the education and school programme in South Africa, the use of a triangulator would be limited to colleagues sharing their free lessons to observe lessons in other classrooms. We have started this on a small scale at the school in which I work, and it represents the beginnings of employing the action research process at school level to promote teacher co-operation and direction.

The practice of trying to capture students' thinking about a topic before starting a section, and then re-doing that exercise at the end of the topic, also helped meet the challenge of answerability to my own stated intentions regarding whether additional thought, critique or dimension to existing attitudes and knowledge had occurred.

6.2.2. Resources

My view that resources needed to be regarded as something tangible and thus as necessarily having to originate in the South African

context, meant that I sometimes lost flexibility regarding my own innovations and resources. I have since extended the whole concept of resources and have acknowledged that they are not limited to materials but can include strategies and materials that may not have originated in South Africa or be directly focused in this context. However, they need to provide a basis for students to relate to their own context, to validate their lives and create spaces to invent options for themselves. (Shor 1980:156) It means not slavishly following one method or approach. My whole idea of resources has moved from that of being a fairly static notion to one requiring a far greater adaptability to new situations. Too often progressive resources are focused on worksheets. While there is a time and place for these, they can become both limiting, unimaginative and one-dimensional as a teaching approach. Apart from my focus shifting away from needing to have resources that are located in South Africa to strategies that can involve and situate students, I have also become more innovative in utilizing the vast array of possibilities that exist for increasing students' accessibility to the material covered.

6.2.3. Critical thinking

The third area of reflection involves the problem of clarifying and specifying the notion of critical thinking. Although I had not seriously examined the concept before, I had in some way alluded to a particular type of thinking, and hence had that as a particular 'objective' in mind. This in itself becomes problematic and possibly a contradiction in terms, as the very idea of critical education

moves away from the positivist style of having set objectives, i.e. a prespecified type of thinking that needs to be 'achieved'. Therefore the focus on a critical pedagogy and the kind of elements that could be included in such an approach seem to be more congruent with a critical education approach. It is the approach rather than the 'end product' that serves to illuminate critical thinking. This project has, therefore, enabled me to clarify more precisely the character of an activity-based approach if it is to attempt to serve a critical pedagogy. A key characteristic of such a pedagogy is that it needs to problematize the curricula. By problematizing I mean exposing and developing an awareness of and an interest in the controversy inherent in any 'knowledge'.

There were some strategies that arose that allowed the problematic nature of material to be revealed. Simulation presents the students with possibilities and realities that are in the macro situation and asks them to cope and make decisions at the micro-level. Apart from linking the material in the classroom with the wider context, the act of simulation allows work to become problematic. This is because all the variables, contradictions and questions can be seen to exist in specific situations rather than as generalised theories. In fact, by moving away from models and theories and by presenting particular situations and scenarios, it is more likely that a course will move away from its normative character and reveal inherent differences. This also avoids the risk of presenting knowledge as static and 'given'.

The concern with providing a choice also enhanced the issues in the project. It forced students to extend their existing framework as, for instance, when students were asked to think of questions they thought nobody else would have asked.

Creating an agenda where a group is deliberately structured so that all points of view are represented in one group augmented the awareness of the possible controversy contained in any topic.

6.2.4 Conflict

The last point of reflection I wish to deal with here is the key issue of conflict that arose from my attempt to problematize material and make it accessible to students. On the basis of students' responses and evaluation, there seems little doubt that conflict, as I had perceived it, had enhanced student involvement and had revealed the variegated nature of topics. In this regard Morrow (1989:153) comments that:

> Human beings differ from each other in countless ways, but only some of these differences can be said to be disagreements, and it is in the field of disagreements that critical thinking has its home.

However, since completing the project and subsequent discussion, I have realised more clearly that conflict is not simply conflict within oneself or disagreement with others, but that it might represent fundamental differences. I found that when students were not involved in existential issues or their own personal paradigms and values, their degree of conflict would remain at the level of

disagreement. They could enjoy this, they felt that they wanted to participate, and they did not feel fundamentally threatened or compelled to defend their positions.

When something touched the students existentially, however, they coped differently. When they needed to defend a position they could not support, they found this difficult and sometimes impossible to handle. The conflict in this case rendered them largely impotent and did not enhance their involvement. There were odd cases where students understood a situation better because they had had to adopt that position, but mostly they found they struggled to defend a position they did not support. There was one student who felt a fundamental difference regarding the whole issue of urbanisation, let alone models of urbanisation. As a result he felt that he did not need to be 'emotionally involved' as the issues before him were not being 'taken to heart', and so he was able abstractly to 'defend' something he did not support. As he stated,

- I disagree with having to plan future urbanisation because I don't believe urbanisation is the answer as it promotes capitalism. As it is a set task I shall however, even though against my principles endeavour to as efficiently as possible (sic).

When a fundamental difference was felt, students were less open to changing their positions or understanding the opposing position. Perhaps this distinction is important when attempting to utilize conflict to interrogate knowledge. What had been a fairly

superficial view of conflict has now become far more nuanced. I feel that this is particularly important in the light of a society and schools that are conflict-ridden. To begin to utilize conflict as a creative strategy would involve a consciousness of whether to utilise disagreements to enhance involvement and an engagement with the issues at hand or to set in motion an understanding of the fundamental differences evidenced. This would need particular sensitivity and care because of the potential explosive nature. This would highlight Morrow's (1989:156) point regarding the necessity of understanding to begin a critical process.

The distinction between what constitutes disagreement and fundamental differences is of itself sensitive and has a problematic nature. However, a discernment of this differentiation can help one begin to utilize conflict in a way that creates growth and openness, rather than entrenching existing positions. This reflection has deepened my own understanding regarding the complexities of conflict and so has enabled me to utilize it more effectively. The kind of characteristics that emerged in the cycle examining conflict as a strategy also highlighted several other issues. In a disagreement, issues that were not initially thought of or presented can arise. The disagreement can extend the set parameters given or preconceived ideas. The realisation that conflict does not need to involve aggression is illuminating in the light of the deeply rooted prevalence of conflict in the fabric of our society. A potentially conflicting situation also enabled students to work with people they do not normally choose to work with. The differing positions

provided a stronger motivation to work together than a particular task would have done.

It is necessary to conclude this reflection regarding conflict on a sobering note by acknowledging that conflict will not necessarily challenge the status quo. It can provide the facade of democratizing the classroom and challenging authority by involving students. It can also be utilized toward attaining a given preconceived objective effectively, because it might make students more willing to move toward that objective because they feel that they have 'steered their own course'. Again there is not a prescription to delineate what constitutes a challenge to the existing order and what does not. Rather, it is a consciousness to reflect continually on the process and nature of conflict so that it actually constitutes a critical pedagogy and not merely a style of involving students to meet set objectives.

6.3 Epilogue

This project has been humbling. I viewed myself as continually striving to be a progressive teacher in the South African context. I teach with a variety of styles and focus on being student-centred. I participated in this Masters programme in Action Research because I felt the need to re-energize myself and to reflect critically with others on my teaching experience. In many ways any outsider stepping into my classroom two years ago and again today might superficially assess that I am a 'creative', 'relevant' teacher with relatively the same teaching style. However, I have felt a vast qualitative

difference in my approach, my thinking and the rationale for my actions and activities. I am far more disciplined and focused in my self-reflection, more intentional regarding student participation and the elements thereof, and more determined to create forums to make provision for accountability regarding content and my teaching method. The action research methodology has provided me with a resource to critique my work and grow within my teaching arena. It has not been confined to the parameters of this academic course and time, but will continue to influence my work and thinking. Probably most importantly I have become sensitized against being complacent about the nature of transformative teaching. Once we think we 'have it all together', we have 'lost it'!

"We shall not cease from exploration
The end of all our exploring
Will be to arrive where we started
And know the place for the first time."

(From "Four Quartets" by T.S. Eliot)

BIBLIOGRAPHY

Alexander, N. 1988: 'Ten Years of Education Crisis: The Resonance of 1976' in Education for Affirmation: Conference Papers. Johannesburg: Skotaville Publishers.

Apple, M. 1977: Ideology and Curriculum. London: Routledge & Kegan Paul.

Beard, P. & Morrow, W. 1981: Problems of Pedagogics. Durban: Butterworths.

Boud, D. (ed.) 1981: Developing Student Autonomy in Learning. London: Kogan Page.

Carr, W. & Kemmis, S. 1986: Becoming Critical : Education, Knowledge and Action. London: The Falmer Press.

Castles, S. & Wustenberg, W. 1979: The Education of the Future - An Introduction to the Theory and Practice of Socialist Education. London: Pluto Press.

Christie, P. 1985: The Right to Learn. Johannesburg: Ravan Press.

Flanagan, W., Breen, C., & Walker, M. (eds.) 1984: Action Research : Justified Optimism or Wishful Thinking? Cape Town: University of Cape Town.

Foster, D. & Whitehead, J. 1984: 'Action Research and Professional Development' in Holly P. & Whitehead, D. (eds.) Action Research in Schools: Getting it into Perspective. CARN Bulletin No. 6, Cambridge: CARN Publications.

Freire, P. 1972: Pedagogy of the Oppressed. Harmondsworth: Penguin Education.

Freire, P. 1976: Education: The Practice of Freedom. London: Writers and Readers.

Freire,P. 1977: Cultural action for Freedom. Harmondsworth: Penguin.

Freire, P. 1978: Pedagogy in Process. New York: Seabury.

Freire, P. 1984: The Politics of Education. Hadley: Bergin & Garvey.

Freire, P. & Giroux, H.A. 1989: 'Pedagogy, Popular Culture, and Public Life: An Introduction' in Giroux, H.A. & Simon R. (eds.) Popular Culture, Schooling and Everyday Life. Granby: Bergin & Garvey.

Freire, P. & Shor, I. 1987: A Pedagogy for Liberation - Dialogues on Transforming Education. Basingstoke: MacMillan.

Fromm, E. 1968: Beyond the Chains of Illusion. New York: Holt, Rinehart & Winston.

Giroux, H.A. 1981: Ideology, Culture and the Process of Schooling. London: The Falmer Press.

Giroux, H.A. 1988: Teachers as Intellectuals. Granby: Bergin & Garvey.

Giroux, H.A. 1983: Theory and Resistance in Education. South Hadley: Bergin & Garvey.

Giroux, H.A. & Simon, R.I. 1989: 'Schooling, Popular Culture, and a Pedagogy of Possibility' in Giroux, H.A. et al (eds.) Popular Culture, Schooling and Everyday Life. Granby: Bergin & Garvey.

Grundy, S. 1987: Curriculum: Product or Praxis. Barcombe: The Falmer Press.

Hope, A. & Timmel, S. 1984: Training for Transformation. Zimbabwe: Mambo Press.

Lazarus, S.: Learning through Action Research: Fact or Fantasy. Paper delivered at the Conference on Experiential Learning, University of Natal, Durban, August, 1988.

Mathison, S. 1988: 'Why Triangulate?'. Educational Researcher. March 1988.

Matiwana, M. & Walters, S. 1986: The Struggle for Democracy. Bellville: University of Western Cape.

McNiff, J. 1988: Action Research: Principles and Practice. Houndmills: MacMillan Education.

Morrow, W. 1989: Chains of Thought. Cape Town: Southern Books.

Molobi, E. 1989: NECC: Conference Reports and Resolutions. Johannesburg: NECC.

NECC 1986: The Road to People's Education. Press Release.

Shor, I. 1980: Critical Teaching and Everyday Life. Chicago: University of Chicago Press.

Stenhouse, L. 1975: An Introduction to Curriculum Research and Development. London: Heinemann.

Therborn, G. 1980: The Ideology of Power and The Power of Ideology. London: Versa.

Versfeld, R. 1990: Education and Political Action - A Case-Study of a Project. University of Cape Town (unpublished Master of Philosophy Thesis).

Vilakazi, H. 1988: 'Capitalism, Socialism and Education' in Education for Affirmation: Conference Papers. Johannesburg: Skotaville Publishers.

Walker, M. 1988: 'Thoughts on the Potential of Action Research in South African Schools'. Cambridge Journal of Education. Volume 18, No. 2.

Weber, F. 1990: The Senior Secondary Syllabus: A Critical Analysis. University of the Western Cape (unpublished paper).

Winter, R. 1987: Action-Research and the Nature of Social Inquiry: Professional innovation and educational work. Aldershot: Gower Publishing.

APPENDIX 1

This appendix is a list of students' comments, problems and questions regarding industrial location raised during the Action Research Project 2.

A : Comments when deciding on placing their own factory in the most 'correct' site and critiquing another group's factory position:

* Must be away from city because of pollution.
* North-facing slope to save electricity.
* No threat of toxic gases or substances which may endanger the worker's health.
* Anti-erosion walls to protect the land from flooding.
* We do not use coal because it affects the atmosphere.
* The railway line provides another distribution outlet and workers can get to work by train.
* Did not choose a site because it is inconvenient for workers regarding transport.
* They have contradicted themselves, are vague and not well elaborated e.g. 'create problems' .. what problems? for whom?
* They did not consider land cost.
* Pipelines are problematic - repair work is large-scale and expensive; they also scar the landscape.
* Poor map; no station, no roads leading to factory, no powerlines.

B : Problems they found with their own site

* Workers' health problem e.g. lung infection, spray painters.
* The pollution will later have an effect on the trees; by destroying the trees we limit our oxygen; also contributes to the greenhouse effect.
* Because of the distance that has to be travelled to the factory, travelling costs for workers are high.

C : Questions they thought they had asked that were 'unusual' or questions they thought no-one had asked :

* Who wants/needs this product?
* Are the labourers under a medical aid?
* Does the pollution affect the plant life that surrounds the factory?
* What do they do with the waste products and where do they go?
* Is the ground suitable to build on?
* Is it far to the nearest hospital if there is an accident?
* Will our pollution affect others? How will it affect the area in a number of years?
* The use of the river in our factory could affect the supply of drinking water for people and animals in the surrounding rural areas.
* How are we going to influence our ecosystem?

APPENDIX 2

This appendix is a report from my triangulator, Sue Davidoff:

I have worked with June Pym on three action research projects, since April 1989. Although I approached her formally to ask whether it would be possible for me to assist her in her action research project, the work contract between us was loose and informal. At no stage did I undertake to write a report for her, and up to this point I have not given June any written documentation of my perspectives in the process between us or of the projects themselves.

I am not quite sure how our working together evolved in this way - partly I think it had to do with the fact that we developed a relationship outside of our working relationship which tended to make the work we did together seem less formal. Partly also, I think that it had to do with a sense of June that I had of being so extremely competent as a teacher that there was very little that I could add that might be of any use to her.

Perhaps it would be good to explore this latter point somewhat: within the informality of our friendship I also had the perception of June being quite the most creative, balanced, skilful and artistic teacher I have yet encountered. She is so at home in her subject matter, without that terrible sense of being thoroughly bored by what she is teaching. Her 'at-homeness' enables her to be innovative, challenging, extremely stimulating and exciting as a teacher. There is a sense of neatness and order to her lessons - an almost aesthetic

sense of structure which encourages questioning and participation from her students in an active and supportive way.

Her skill at giving meaning and form to group work is something I have not experienced anywhere else. Given that the lessons are short - 35 minutes, lesson structure becomes very important. June managed to have various activities within this time frame, with little commotion or fuss. As a result, although lessons often felt frustratingly short, much seemed to happen, and it felt possible to have depth and meaning in spite of the time constraints.

Her relationship with the students bears mentioning at this point. She is warm, open, and authentic. By this I mean that she does not seem to slip automatically into the role of teacher and disappear as a person. She is there very much as herself, genuinely interested in her students, sympathetic, caring, gentle yet firm. I had the feeling of tremendous mutual respect between the students and herself. As a result, there are no discipline problems: June gives absolute attention to the work, and so do the students. The climate in the classroom is relaxed, yet with the tension of activity, give and take, and real learning taking place.

Because of all of this, I had the feeling often that there was little input that I could give to June that would be useful to her. As an imparter of information, an authority in the real sense, June is superb. As a facilitator of processes and encouraging participation and activity in her students, June is extremely talented. At the same time she is extremely sensitive to the needs of her students,

and never seemed to overlook anyone in the class, or miss the needs of any one student.

She seemed to know a tremendous amount in terms of the background of each student, and as such could contextualise behavioural problems, inattentiveness, or other minor problems that might have manifest themselves from time to time in her classes.

Beyond all of this, I think that June and I have very similar values as teachers. I felt an immediate congruence between her teaching style and the way in which I used to teach, and the processes that I used to (and still do) value. I felt that if I were teaching now, there would be little difference between our approaches and styles. We often spoke about this natural agreement between us of what a creative classroom ecology might be.

June is by no means a 'laissez faire' teacher - she is directive without being imposing. She holds the class together tightly, and my distinct impression with this was that it was this disciplined environment that made so much possible. June demands and commands a certain order, responsibility and respect. Yet she is not imposing, and never underscores the contributions students make. The balances that she creates in her class, seemingly so effortlessly and naturally, are unique contributions for the lives of the people she teaches. They are indeed fortunate in having (had) her as a teacher. Her talents are exceptional, and I felt as though each day I was with her I learnt an enormous amount.

I have gone into this detail as a way of explaining the lack of written reporting I gave to June. We spoke often, yet always I felt there was little new for me to share, and thus there seemed little point in writing anything. However, under these circumstances written records are important, and so writing now means that much of my immediate responses to situations will have been lost.

In addition, our original understanding of working together was in itself, relatively informal. June wanted 'an extra pair of eyes and ears' to lend a certain 'objectivity' to her action research projects. We never really articulated or explored my role beyond that, only insofar as I interviewed students from time to time.

I participated in three clearly demarcated action research activities in June's geography lessons. The first project was with a standard nine class, working in economic geography and looking at issues of power related to economic geography. Of prime concern to June in this first project was the development of indigenous resources which might facilitate interactive teaching as well as critical thinking. June planned and taught this section in collaboration with Ruth Versfeld, using the game 'Star Wars" as a way of exploring power issues.

Reflecting on this now, I realise that because of the ad hoc way in which June and I negotiated our working together, I never looked at the lessons within the context of an overall direction. Each lesson was reflected upon (at least by me) in and of itself. Clearly, there were two strands in this project - developing a critical awareness

of power issues in relation to economic geography, and also developing indigenous materials relating to this. Because the lessons worked so well, because their structure was tight and yet imaginative, I found it difficult to stand back and see whether the general ideas were being addressed, and if so how. There was also the question of whether the two strands could be looked at simultaneously within such a short time, or whether developing indigenous resources was best addressed by a classroom-based action research activity.

I think that our notion of what constitutes indigenous material was transformed along the way. I also think that our notion of power was broad - power relations between people, abuse of power over nature (in terms of renewable and non-renewable resources), strength and power from within ourselves ... Perhaps we did not differentiate sufficiently between these, or focus definitely enough on therefore wanting the experience to be ultimately and empowering one for the students; my own sense is that overall, we did not reflect adequately on the extent to which we had reflected on action in an ongoing way to allow the reflections to inform planning of the next lessons. The block was planned as a whole, and each lesson was built on what took place in the previous one. Time (or lack thereof) was the major determining factor in what was included or excluded. I seem to recall no recognisable adjustments that were made as a result of reflecting on the process within a broader context of intentionality.

I think what I am trying to say is that I experienced both Ruth and June as displaying great expertise in this particular area. Both of them are competent teachers, both had a sense of where they were going to with this section of work. My input seemed to take the form of commenting on what was happening in the small groups, noticing individual responses from particular students, but not really looking at the process more holistically. I think that the students did undergo some process of transformation - certainly I think that their understanding of power, and therefore their own individual and collective responsibility towards society, was enhanced through this experience. What I am not sure of is whether June developed a new understanding of resource development, and how this might inform future similar activities.

In the second project, June extended her concept of resource development to include the students. In a certain sense, although we did not talk about it then, I can see now that this development could easily have been seen as somewhere combining the two elements of the previous project. An aspect of empowerment (within this context) has to do with creating one's own materials, and making a contribution of materials for other's use. Power is related to knowledge, action, and independence. Enabling the students to find access to their own source of knowledge, and become less dependent on their teacher to provide for them, is empowering. June felt that looking at resource development from the point of view of the teacher only is limited, and needs to be broadened to encompass students too.

As with most of the work done with June, group work was encouraged, and the students were told that whatever they were to develop and produce would be used by other groups in the class. The exercise was also structured in such a way that there was individual work required to be done, to obviate the less confident students depending on those more confident.

The structure of this set of lessons was thorough, intense and neat. It was of short duration, and one of the issues that June wanted to explore was whether students felt that they had learnt more by producing their own resources as opposed to working with materials given to them by her.

The project related to location of industrial sites within an urban environment. Such an exercise involved looking at a range of interrelated issues - environmental, economic, class, socio-political, transport, etc, etc. Engaging the students in such a process intrinsically encourages critical thinking, collaboration, as well as active participation in a creative process. The design of the process was ingenious, and orchestrated particularly well by June. I was amazed by the creativity which would allow a simple project to fulfil so much.

Once again the structure was tight and demanding. My experience was that the students engaged in the issues with much interest and enthusiasm. June's perceptiveness allowed her to adapt the process in the moment to meet immediate needs, or where she sensed certain people were not engaging fully in the exercise.

There was room for dialogue with students from other groups to argue the best location for particular types of factories. This enabled the students to really grapple with the issues. Such an exercise could not work without clear direction and a disciplined structure. My sense was that it was enormously successful in terms of what June had set out to do.

The last project was once again developed from what had come before. June had been struggling with the question of whether conflict, used as a way of engaging the students in issues, facilitated the learning process, and if so, in what way and to what extent. June was also interested to discover whether the conflict that students might feel within themselves would make them less or more open to changing their opinions.

The area of geography that June used to explore this was Models of Urban Structure. Students were to argue particular models for town planning, giving reasons for promoting these models. In reflection, one of the major weaknesses of this particular project (which overall was very exciting and interesting for the students, I think), was that there was a level of simulation which did not necessarily tally with authentic feelings students might have had in relation to urban development. Promoting something you believe in is very different from having to promote something you do not believe in, and this level of differentiation did not emerge in the exercise, and was not considered as a factor in the debate.

When I interviewed the students at the end of this project, many of those I spoke to seemed to feel that the conflicts within and between groups facilitated their involvement in the process. Those people who normally find it difficult to participate, found that the conflict issues tended to draw them in. However, the issues the students were arguing did not necessarily cut close to the bone. The question of conflict over issues that really matter, that affect one's life in a practical and immediate sense, are an area not necessarily dealt with in this particular exercise.

As an intellectual exercise, conflict used as a way of facilitating participation and learning seemed to work well. Students felt that dealing with the issues in this way allowed them to internalise aspects of urban development in such a way that they would not have to go and study and memorise and learn these 'facts' from the textbook. Issues became alive and intense and found a living context.

However, I think that it might be dangerous to generalise these experiences and argue that conflict is therefore a useful learning tool. There are many levels at which one might feel conflict, and when this conflict encroaches on areas of our lives that are tender and real, sensitive handling of the situation is necessary and thus 'using' conflict can be manipulative and dangerous. Often teachers might not have the experience to handle potentially explosive situations without having disastrous outcomes.

It is interesting for me to note how, although each of the action research projects were complete and conceived of in themselves, in retrospect it is clear to see that they form a coherent part of an action research cycle, a developmental process. There are important lessons to be learnt from each project; one observation is that the nature of the projects required extremely skilled handling because of time constraints and the particular nature of the exercises.

Of importance always in such projects is how the ideas and resources can be shared with other teachers. Teachers who did come in to observe June's projects did, I think, learn a lot. However, the success of the product of the projects lay largely in June's skills, experience and sensitivity as a teacher. The challenge lies in sharing the development of these as well as the techniques for group work, interactive teaching approaches and time management. This then raises the issue of teacher development, an area largely neglected in action research literature and of fundamental concern and importance.

What I have learnt from this experience with June is the importance of writing and documenting all the action research work I do seriously, irrespective of the context in which I am working or the relationship I have with the people, or the perceptions that I have of their work. When I began to break slightly free from the coherence of the plans and structures of each lesson, and the enormous creativity that allowed for their design, I began to pick up more subtle cues. I think that I was, in a sense, overwhelmed and

dazzled by the brilliance of design and execution and lost a sense for the process in the context of the whole.

I hope that I am able to work with June again in this context so that, having reflected on these past experiences with her, that I can participate in a more critical and substantial way than previously.

Sue Davidoff

10 October 1990