

**AN INVESTIGATION INTO WHAT INFLUENCES ACTION  
COMPETENCE-ORIENTED TEACHING AND LEARNING  
PROCESSES IN A SCHOOL ENVIRONMENTAL CLUB**

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By

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November, 2009

**DECLARATION**

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and has not previously in its entirety or in part been submitted at any university for a degree.

**Signature:** .....

**Date:**.....

## ABSTRACT

This interpretive case study sought to determine what influenced action competence-oriented teaching and learning processes in a high school environmental club. The goals were to describe a year of activities, within the TALON environmental club at Hudson Park High School in East London, South Africa and to identify how pedagogical, contextual and relational factors influenced action competence processes amongst club members.

I explored how action competence theory and praxis have helped in other school education settings with the aim of establishing better environmental practices. The IVAC model of pedagogy (Jensen & Schnack, 1997) was used as a framework to operationalise action competence processes within the TALON Club. This entailed carefully examining investigative, visioning, action and change processes unfolding through the four themes of the club: plants, animal welfare, waste issues and our community outreach programme at Bongulethu High School.

Using questionnaires, interviews, observation and a journal as the main methods of data collection I was able to make five analytical statements that related to the influence of pedagogy, the influence of context and the influence of relational dynamics within the TALON Club.

The *pedagogical* processes were affected by the TALON members wanting to avoid any activities that were 'too much like school'. However this served to compromise the action and visioning phases within the club, resulting in superficial and poorly-informed action-taking.

The influence of *context* served to both enable and constrain action competence processes. The club and school structures therefore shaped the form that fledgling actions took as the TALON members participated in the meetings and outings and fulfilling the traditional expectations of the school community.

*Relational* dynamics and a desire for fun took precedence over the action competence processes. Although the Club members were motivated by a sense of moral responsibility they were unable to articulate this concept into the club activities. In addition there were the power gradients between the educators and members to consider as determinants of the extent of participatory, democratic interactions.

This complex interplay of factors influenced the action competence processes in the club. Recommendations were made on how best to work with the concepts of participation and democracy towards improving the reflexivity and knowledge base of both the educators and learners. In this way action competence processes will be better supported within the club in future.

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## LIST OF ABBREVIATIONS AND ACRONYMS

<b>IVAC</b> .....	Investigation, Vision, Action and Change – acronym for pedagogical frame work for developing action competence
<b>KFC</b> .....	Kentucky Fried Chicken
<b>MUVIN</b> project....	Acronym for environmental education in the Nordic countries
<b>NEEP-GET</b> .....	National Environmental Education Programme – General Education and training
<b>SANBI</b> .....	South African Biodiversity Institute
<b>SPCA</b> .....	Society for the Prevention of Cruelty to Animals
<b>TALON</b> .....	Teenagers Actively Learning about the Outdoors and Nature

## CHAPTER ONE: SITUATING THE STUDY

This chapter introduces the investigation into what influences action competence-oriented environmental learning processes in a high school environmental club. I position myself as a researcher, introduce the research question and give a brief overview of each chapter.

### 1.1. INTRODUCTION

I am a Natural Sciences High School educator, based in East London, Eastern Cape, South Africa. I teach learners in Grade 8 and 9, that is ages 13 - 15. The school where I teach is a co-educational, multi-racial school, Hudson Park High School. It is a typically large urban school with about 235 learners per Grade. It is a government school that is well-resourced, with parents paying approximately R1 200 per month per learner for school fees.

This study started in January 2007 and concluded in May 2008. I conducted my research around the TALON (Teenagers Actively Learning about the Outdoors and Nature) Environmental Club. The club consists of about 25 members who meet on a regular basis either at school or on environmental outings that are arranged by them and their club's co-coordinating educator. Attendance at meetings is voluntary, although points are earned towards service awards. This is elaborated on in Chapter Four (4.4.5).

The school ethos is based on the four pillars of academic, cultural, pastoral and physical participation. The TALON Club falls under the pastoral mantle and specifically within the community service portfolio. Initially it was known as the Enviro Club, but it was renamed as 'TALON' in 2004. The new name was seen as a rebirth of the club and reflects the image of the eagle, which is the Hudson Park High School emblem.

Environmental education at Hudson Park High School has been offered to learners for the last twenty years, initially as a life-skills course, called the 'Ihlanza River Nature Trails'. This initiative was conducted during school hours, on a twice weekly basis. Each rotation of learners took six weeks to complete the course; which included plant identification, alien plant eradication, trail building and river cleanups.

The Ihlanza River runs below the school, in a valley filled with indigenous bush and trees. It is gardened on its banks by the retirement home residents of Berea Gardens. This has created a space where in summer musical concerts sometimes take place. Today, besides still being involved in the valley, the TALON Club has extended its activities to include the SPCA, the Zoo, the Aquarium, the local beach, the Nahoon Estuary nature Reserve and Hudson Park High School sister school, Bongulethu Secondary School, which is situated about twenty kilometers east of East London on the N2 highway near Brakfontein.

Hudson Park High School is the only high school in East London that I am aware of that has an active environmental club where members meet on a regular basis. Other schools that I contacted had either no designated clubs or else they met on an *ad-hoc* basis. At Clarendon High School for Girls, for example, the geography educator, Ms Jordaan (Pers. Comm. May 2007), had run an environmental awareness campaign with her learners on global warming during school hours. At Merrifield College environmental issues were dealt with by Mrs Schwartz (Pers. Comm. May 2007), who would get a group of learners together occasionally, when necessary. The last time had been to construct a trail on their property through the bush.

## **1.2. MOTIVATION FOR THIS AREA OF RESEARCH**

As an educator I am a part of a team of up to five other educators who teach Natural Science in the Grade 8 and 9 learning areas. It is therefore difficult to introduce a new pedagogy into a system as the only protagonist; therefore I was looking for a place where I would not be restricted by curriculum requirements. I believed that the TALON Club would be a suitable place to work with the concept of action competence as it was independent of these conditions.

The Hudson Park High School has recently received a considerable bequest with the proviso that it be used for the advancement of environmental education. We have identified a building to use that is situated between the school and the Ihlanza Valley. The idea would be to use this venue as a permanent environmental centre for our learners. With this in mind I hope that my research might guide the implementation of this new project so that positive outcomes are obtained. Action competence in particular would be relevant as I believe it contributes to an educational ideal that promotes participatory social change rather than top-down authoritarian control.

I was interested to work with an action competence approach to environmental education, namely action competence, which would involve young people as active partners in their own learning. It has long been a concern of mine that learners are not being equipped with skills that will help mitigate the larger environmental problems such as poverty, over population and decreasing natural resources that they are bound to face in the future. I wondered how developing action competence might enable young people to cope with a deepening global environmental crisis. Muller (2000) feels that such a person will need to be self-directed, skilled and patient. Chisholm (2004) states that even though we have adopted many changes in our education system in South Africa, we will need to build a more democratic, intellectual and educational culture so that learners are equipped to take appropriate (environmental) action. I support the general orientation of this statement as the focus of action competence lies in strengthening democratic processes in particular, which was one of my aspirations for the TALON environmental club. I was introduced to the work of Jensen and Schnack at the Royal Danish School of Education Studies on action competence during one of my Masters of Education workshops. Although it is idealistic in theory, it appears to have a practical application as well that would be possible to introduce to the TALON Club as a way of deepening their

engagement with the environment. Such an approach has the potential for positive outcomes for both the educators and the learners in the TALON Club.

A strong concern for me was that many learners who I have taught over the years have shown an aversion to any mention of plants. I wanted to use plants as a focus with the TALON members to portray how important they are in our lives. I intended to expose these learners to a wide variety of encounters with plants: learning to grow them, looking after them, preparing them for sale, selling the plants and using the money they raised towards a project of their choice. I also intended to introduce them to careers and livelihoods that plants support.

From personal experience and the literature, many learners find plant studies boring (Kiberige & Van Rooyen, 2006). Care of plants has also been viewed as a chore, especially when children see it as being imposed upon them by someone else (Mc Ivor, 1999). The orientation towards plants as a learning focus in schools has been strengthened by the National Environmental Biodiversity Act of 2004 (SANBI 2008). One of the stated aims is to involve civil society (e.g. schools) in the conservation and sustainable use of indigenous biological resources and in the rehabilitation of ecosystems. To this end, schools that are situated near botanic gardens have the benefit of participating in curriculum-based plant projects. This is not yet the case in the Eastern Cape as there are no official botanic gardens, so plant education is often left to be taught by educators who may not have an interest in plants. Roleen Ellman, assistant director in the Biodiversity Education and Empowerment directorate at SANBI stated that they were aware of the problem and that suitable land is being identified near East London to establish a botanic garden (Pers. Comm. 18/2/09).

I was interested to see whether the TALON group would show similar results to those described by Bebbington (2005) on the ability to name plants. His study showed that most students enter secondary school with a poor knowledge of the organisms around them, especially plants. In his view learners did not regard plants as important. He suggests that if we aim to teach students to be responsible citizens who care for the environment they need to be knowledgeable of at least the common organisms around them. He views this as a part of environmental literacy and a foundation for understanding ecological concepts. Linnaeus, the father of plant classification, as cited by Glen (2004) stated more than two hundred and fifty years ago that if the names of plants were neglected then the knowledge of them would also die.

Schools are also not places that children usually identify as places to learn about plants (Tunnicliffe, 2001). Although plants are critical components of the environment many people suffer from 'plant blindness' (ibid., p. 27) which she describes as the inability to recognise how important plants are, especially in human affairs. In particular, many people do not appreciate plants either for their aesthetic value or their unique biological features, believing them to be inferior to animals (ibid.). Sanders (2007) stated that an informal environment, such as an environmental club, might

be a better place to encounter plants. She confirmed the view that plants are presented in a very unexciting manner at school, and that teaching about them was a pedagogical challenge. Most children, in her study, learnt what they knew about plants from their homes. Blair (2009) reports that any studies of plants and gardening that involve high school students is rare, but in those that have been done, skills, self-esteem, test scores and behaviour were improved.

My research effort to include plants as a vehicle for action competence learning was further motivated by the originator of the Eden Project in Cornwall, Tim Smit (2002) who was looking for “beguiling, amusing and memorable” ways of alerting people, and particularly children, to the message that without plants there is no future or life on earth. His way of doing this, on a far grander scale, was to find stories about plants that would fire the imagination and present them in a pioneering way towards exploring our possible futures with them. To this end, a derelict clay pit in Cornwall England has been converted into two biomes, now forming two of the world’s largest plant conservatories. South Africa has its own fascinating indigenous plants that I wanted to introduce TALON learners to through action competence-oriented teaching and learning processes.

### **1.3. CLUB STRUCTURES AND MY ROLE IN IT**

Mrs Selkirk, who managed the TALON environmental club, agreed that I could be a participant-observer in the club for 2007 with the aim of exploring what influences action competence-oriented environmental learning processes using the theme of plants and their value to humans. Thus, in January 2007, I attended the first of many committee meetings, general meetings and outings in my capacity as an educator who would be working with TALON members and Mrs Selkirk, with the aim of investigating action competence processes.

TALON operates in the following way: a committee meeting is held on the first Monday of the term, and then bi-weekly, where the five or six elected members plan the activities of the club. These meetings can last from one to two hours and are held with Mrs Selkirk in her classroom. Her role is to give support and guidance to the committee members as they plan for the general meetings and the outings. The meetings are formal in that they follow an agenda which is written on the board by the chairperson. Members then take it in turns to lead the discussion on various elements, such as welcome, apologies, and the activities that are being planned (Appendix 1). Minutes are taken at these meetings and circulated to all the committee members. Each member has a turn to take these minutes, which are later filed for future reference.

The general meetings, which all the club members attend, are held on the first Wednesday after the committee meeting. Mrs Selkirk does not always attend the start of this meeting, but joins it as soon as she has attended to other school activities. A similar agenda is followed, starting with an ice-breaker, and then any matters arising, signing-up

for the following outing and often there is a short follow up activity, for example, creating posters for a dog-food collecting competition.

In the week following each general meeting, there is usually an environmentally oriented outing such as visiting the Zoo, the SPCA, the Aquarium, the beach or Bongulethu Secondary School (our outreach school). Sometimes these outings are held on a Tuesday, so that those learners with sport commitments on a Wednesday can attend. Other logistical reasons may also necessitate changing the day to a Tuesday, such as the availability of buses, staff meetings, etc. It was emphasised at every meeting that members should keep checking the notice board for any changes in the programme. Other communication to the school at large was made by way of inter-com announcements or at 'lines' where each Grade meets for relevant information pertaining to their specific Grade.

#### **1.4. RESEARCH QUESTION AND GOALS**

The research question of this study was: **What influences action competence-oriented environmental learning processes in a school environmental club?** Towards answering this question, the study had the following goals:

- To describe a year of activities within the TALON Environmental Club.
- To identify how pedagogical, contextual and relational factors influenced action competence processes amongst TALON Club members.

#### **1.5. AN OVERVIEW OF THE THESIS CHAPTERS**

Chapter Two introduces the action competence approach to environmental education which has the potential to support youth and educators in the TALON environmental club to develop a holistic understanding of local environmental issues and possible action strategies to mitigate them. (Significant selected) examples of how this approach has been adopted globally and in Southern Africa are presented. The meanings of 'action' and 'competence' are clarified as they relate to conventions in environmental education. The importance of democracy as a context for action competence is discussed. The IVAC (investigation, visioning, action and change) framework is introduced and explained as a pedagogical framework that supports the development of action competence. Aspects of youth culture in South Africa and internationally are examined as contextual factors in developing action competence processes.

In Chapter Three the research design focus is described in relation to the research question and goals of the study. This research is of a qualitative and interpretive nature and conducted as a case study. Various research methods used in the research are discussed, namely questionnaires, individual and focus group interviews, participant-observation, document analysis (learners' work), a research journal and archival records. The data were coded and

organised into themes that were developed into the analytical statements presented in Chapter Five. Concerns for the ethics, validity and trustworthiness of the research processes and findings are also considered in this chapter.

Chapter Four contains a detailed description of the teaching and learning processes that occurred through the various club activities. This is followed by a description of the contextual and relational factors that appear to have influenced action competence-oriented learning processes in the TALON Club.

Chapter Five reviews and discusses the perceived development of action competence-oriented learning processes through the themes of plants, animals, waste and community outreach. The findings from Chapter Four led to the five analytical statements relating to the pedagogic, contextual and relational aspects of action competence-oriented learning processes in the TALON Club. Each statement is discussed in relation to the data presented in Chapter 4 and wider theoretical perspectives. The analytical statements are:

1. Club members avoid activities which 'are too much like school' but this often leads to superficial and poorly informed action-taking.
2. School and club structures and mechanisms enable and constrain action competence-oriented processes.
3. Social dynamics and a desire for fun take precedence over investigation, visioning, action or change processes.
4. Most club members are motivated by a sense of moral responsibility but this is poorly articulated in relation to club activities.
5. Power gradients between educators, committee members and general members determine the extent of participatory, democratic interactions.

Chapter Six commences with a summary of the main findings of the research. These findings are presented and reflected upon in relation to education and environmental education in particular. Some recommendations are made that might improve the teaching and learning in the TALON Club. The chapter includes critical reflections on the overall research process and my role as the researcher, and concludes with some suggestions for future research.

## CHAPTER TWO: LITERATURE REVIEW

### 2.1. INTRODUCTION

This chapter examines the theoretical background of action competence and some aspects of the social context in which the development of action competence in a South African school occurs. It begins with an overview of why such an approach to environmental education could be regarded as beneficial for young people growing up in a globalised world of increasing environmental risk. Some aspects of youth culture are included as this theme emerged as an important contextual issue influencing action competence. This is followed by the historical and philosophical underpinnings influencing the concept of action competence. The associated meanings of *action* and *competence* are discussed. The IVAC framework is introduced as a way of operationalising the development of action competence. Thereafter, the possible influence that TALON members may have on their families and the community is examined. This is followed by examples of how the notion of action competence has been introduced to inform environmental school projects in other countries. Some practical examples of educators applying the action competence approach are presented, as well as the role of the educator in action competence-oriented learning processes.

### 2.2. YOUTH IN A GLOBALISED WORLD OF ENVIRONMENTAL RISK

Growing up in South Africa today presents a picture of complexity – statistics from the South African National Youth Survey (SANYS, 2000) point to extreme poverty, lack of employment opportunities, poor schooling, broken families and HIV/ AIDS as some of the issues that South African youth will need to address as they become adults. Human vulnerability extends beyond our borders, into the global arena where uncertain socio-ecological and economic impacts add greater complexity to the South African context (Soudien, 2004; Nelson Mandela Foundation, 2005).

Research has investigated how negativity can emerge when young people are exposed to problems over which they have little or no control. Mabelis (2005) found that children in Holland were pessimistic about the future of their country and what they perceived to be a loss of the natural environment. A similar study of teenagers in Australia by Connell, Fien, Lee, Sykes & Yencken (1999), found that in addition to pessimism they also felt powerless to do anything about environmental problems. For the first time youth today believe they may be facing a future that is not better than the past (Heilbroner, 1995).

Not only did Mabelis (2005) encounter negativity in his research, but indifference as well. His research concluded that teenagers do not think often about the problems of the environment and if they do acknowledge them, they might reject the information by selecting only certain observations, by trivializing or disregarding negative information and by

transforming information to fit their own worlds (Unterbrunner, as cited in Mabelis, 2005, p.132). Another observation by Loughland, Reid, Walker & Petocz (2003) in New South Wales, Australia, was that young people view the environment as “something out there” and do not have a personal relationship with it.

In an international study on young people Schreiner, Henriksen & Hansen (2005) have uncovered some fears for the future that young people have. Although young people have positive outlooks for their own futures they are less optimistic about the global position. Within their own families and communities they feel empowered to create a good future for themselves but pessimism generally increases as they relate to national issues that include crime, unemployment, and pollution. On a global scale they are truly fearful for the future, with ecological catastrophes being one of their main fears along with war, over-population and famine. In particular they recorded that older girls were more pessimistic than boys about their futures.

These findings resonate with what Beck (1992, 1999) calls living in a Risk Society. He describes how humans have always faced environmental risks, but that the ones facing us today are different to those from previous generations. In the past, droughts, earthquakes, volcanic eruptions and floods were unrelated to human activity. Risks today are not the same – they are often human-made with consequences that are unforeseeable. Globalisation, new technologies and economic development have contributed to this ‘risk society’, which now has to face threats that are liable to affect all our futures. This means that previous assumptions about the way we live can no longer be taken for granted and everything we do has now attained an element of doubt.

In his book Postmodern Ethics, Bauman (1993), expands on Beck’s notion of Risk Society with the idea of humanity living in an age of moral uncertainty. In his view we have lost the knowledge of the effect of our actions and their unanticipated consequences. Those ethical tools that we have are no longer able to cope with the present reality. It is a time when no one person claims responsibility, and therefore there is no feeling of individual guilt. Even our roles are split, ensuring that our actions and our real selves are kept apart. He believes that we are living in a post-modern moral crisis.

This sentiment is well expressed by Soudien (2004, p. 59) in his comments about the confidence that is lacking in South African youth about their past as they contemplate their futures:

*Certainty has been replaced by uncertainty and the speed of change is accelerating constantly. Moral authority is no longer clear and values and traditions are in flux. Global and local ideologies are increasingly interwoven. In essence, South African youth identity is under construction.*

Martin Ashley (2000, p. 278) voiced similar concerns about young people in Britain who will have to adapt to live with risk as a constant backdrop to their lives:

*Preparation for adult life in the 21<sup>st</sup> century has to include an element of risk literacy. It has to include*

*an education in the philosophy, values clarification and citizenship skills that will be needed for competent and responsible participation in a risk society.*

More recently, Arjen Wals (2007, p. 35) has called for a new global ethic that is “consonant with humanity’s place within the biosphere”. To achieve this will need a reform of educational and process systems in the short term and a new kind of education for the youth of the world in the long term. In his opinion environmental education is showing little evidence of “creating a more reflexive society that is able to critique and overturn existing routines, values, norms and interests” (ibid., p. 43), despite countries commitment to the Belgrade Charter and the Tbilisi Declaration in the 1970s.

### **2.3. YOUTH CULTURE AND ENVIRONMENTAL LEARNING**

This section sought to uncover how young people see themselves in relation to their peers, their families and their communities. This understanding deepened my insights into the interactions within the TALON Club and the subsequent environmental learning possibilities that developed.

The concept of youth has been difficult to determine. Strelitz (2002) places South African youth in the age group between fifteen and thirty years. Fornas, as cited by Strelitz (ibid.) additionally identifies three discourses that frame the concept of youth. In the first instance it is a particular stage in physiological development; secondly it is a social category framed by social and institutional rituals; it is also culturally determined by music, visual and verbal signs.

From a psychological perspective, adolescence is a dynamic, unstable phase where individuals are learning skills for their adult lives and searching for identity (Strelitz, 2002). According to him, it is during this time that people are formed self-consciously and become aware of their possibilities for the rest of their lives. Walsh-Daneshmandi and MacLachlan (2006, p. 22), maintain that this is an age when levels of altruism and an interest in philosophy are heightened. So motivating factors leading to environmental consciousness may be different in adolescents when compared with other age groups. The above points serve as a reminder that the TALON Club members, who are all adolescents, perceive experiences (in this case environmental experiences) in a different way to adults or young children.

The peer group of youth this age is also a highly influential factor, more so than at any other time. They enjoy spending their free time with friends, either outdoors, or, increasingly at home, indoors (Percy-Smith, 2002). Three researchers, Malone & Hasluck (2002) and Percy-Smith (2002) report that many youth feel threatened outside of their homes and that for safety reasons they stay indoors, connecting with others on their computer chat-lines.

Chalwa (2002) cites how young people rate their environments in either a positive or negative light. The positive indicators of where young people want to be and to grow up include social integration, freedom from social threats,

security, a variety of activities, freedom from danger, freedom of movement and places to be with friends. This is in contrast to what they see as negative indicators: lack of activities; lack of meeting places; boredom; sterile, littered environments and political powerlessness.

Malone and Hasluck (2002) further comment that many children have limited experiences of their environments and that this results in a sense of disconnection. They interpret 'environment' to mean their natural surroundings. Young people feel marginalized in society as there are few opportunities to engage with others in discussion about their needs, concerns and aspirations. They want to have their views listened to and acted on, yet are unsure of how to find a space where their concerns are heard. This is confirmed by Percy-Smith (2002) who has recorded that there is a lack of knowledge in young people on how to access help for their concerns. They feel that they are not heard, not acknowledged and not taken seriously. Their view is that supposedly democratic structures and processes exclude them. This can lead to further apathy and cynicism.

Uzzell (1999) adds that institutional barriers prevent local people and young people in particular from being involved in genuine participation and change opportunities. Municipalities, in his view, do not encourage young people to become involved in decision-making and when they do it is often reactive rather than pro-active.

The increasing fragmentation of family structures in modern western society has meant that young people are increasingly making important life decisions without the social stability that previously existed (Strelitz, 2002). In some British communities there has been a decline in traditional social groupings leading to breakdown of a common purpose (Klopper, 2005). Yet even when the traditional structures are there, they are not always trusted as they might impinge on young people's individuality and their hopes to succeed in the modern world (Soudien, 2004).

A basic profile of how young people learn is also illuminating, as it further explains the social aspects that dominated in the TALON Club. This generation, born between 1976 and 2001 are known as the Y generation - other names include The Net Generation, Millennials and Echo Boomers. Bennett, Maton & Kervin (2007) allude to this age group as "digital natives", because of their complete familiarity with information and communication technology. Although the members of TALON Club were not dependant on technology, these learners have been attributed with certain skills that generations before them did not have. These skills include the ability to "multiprocess" or multitask information, that is, they can and often prefer to do several things simultaneously. They can learn at high speed, they enjoy playing games and they like discovery-based learning (Bennett, et al; 2007). The drawback of this is that interaction with texts can be shallow and passive in character. Young people in this study also tend to show lack of critical thinking skills (ibid.).

From the educator's point of view, Feiertag and Berge (2008) sum up how the new generation learns when compared to previous generations. Generation Y is credited with learning as follows: they like to work in groups where they can receive constant feedback; they enjoy doing, not necessarily knowing; they show little interest in reading; they find it difficult to sit still and listen; they live in the present; they like structure and being micro-managed; and communication must be immediate. They do not respond well to being lectured to and they enjoy interactive experiences. The researchers add that the new generation wants to have a say in their education, they want to participate in hands-on activities and work in a collaborative manner with other learners. Feiertag and Berge (2008) caution that research in this field is still developing and that it is important not to stereotype learners into moulds that may not apply to them.

The following section outlines the potential role that school-based environmental clubs might play in responding to these features of youth culture and developing understanding and competence in youth to respond to feelings of helplessness and action paralysis they may encounter.

#### **2.4. SCHOOL-BASED ENVIRONMENTAL CLUBS AS AN APPROACH TO EMPOWERING YOUNG PEOPLE TO ENGAGE WITH ENVIRONMENTAL ISSUES**

There is not much available literature on what is happening at present in Southern African schools with regard to environmental clubs. Two studies that I am aware of are those of Louw (1996) and Botma (2000). In Louw's study, based in the Cape flats in Cape Town, a number of high school learners and their educators joined forces to work on environmental issues in the area. They did not meet at school, but rather at a community hall on an extra-curricular basis. The aim of their project was to propose an alternative to traditional education practices which were seen as 'top down' and authoritarian. It set out to uncover dominant ideologies with a view to determining the roots of environmental problems and promoting ecological and social justice. Despite some constraints, Louw concluded that there was the potential to enhance traditional education with this type of project.

In an extensive study undertaken in Namibia, Botma (2000) showed that nearly all the country's environmental clubs were linked to schools and co-coordinated by educators. 84 schools and their clubs were identified. Botma was also interested in the development of action competence; her insights are discussed later in this chapter (2.8).

Epworth Girls High School in KwaZulu-Natal offers an extramural environmental club similar to that of the TALON Club at Hudson Park High School. Mrs Dibben, who runs the club, said that one aspect of the club was to empower youth in a safe environment to address contextual environmental issues and to make learners more responsible citizens in the future. She commented that it was often the more 'nerdy' learners who joined as they did not fit in easily elsewhere and that it was important to make them feel special and to commend them on their commitment and

ability to stand out against the crowd. In her experience it is often only years later that learners come back and acknowledge what they gained as members of the club ( Pers. Comm. 28/02/09).

The environmental club activities outlined in the above examples aim to empower learners to engage in practical ways with their environments and to give them confidence in their own abilities. These engagements with real life environmental issues that are context-based are intended to prepare them in some small way for other challenges in their futures. It may also have the purpose of developing what Svedbom (2000) describes as a sense of resilience and coherence in the face of the problems and risks that face adolescents as they prepare for adulthood so that they feel their lives are “comprehensible, manageable and meaningful” (ibid., p.171).

## **2.5. PLACING ACTION COMPETENCE IN THE ENVIRONMENTAL EDUCATION LEARNING ARENA**

### **2.5.1. Descriptors of action competence**

The action competence literature reflects the varied understanding that authors have when describing action competence. I noticed that there were three levels at which authors engage with action competence. The first level focuses on what can be achieved by embracing an action competence approach and therefore looks at *aims* (Vognsen,1996), *goals* and *outcomes* (Tones,2005, Bishop & Scott,1998). Action Competence is viewed as something that can be worked towards by individuals in a democracy as they participate in the shaping of their societies (Bishop & Scott, 1998). A second level is concerned with *operationalising* action competence, that is, the practical, participative implementation of the action competence approach into meaningful investigative, visioning, action and change processes. In particular these authors refer to action competence as an ‘*approach*’ to environmental education (Agyeman, 2006; Tones, 2005; Jensen, 2004; Ferreira, 1996; Simovska, 2004). Action competence as a ‘*framework*’ (Uzzell, 1999) is a further attempt to concretise the concept. Vognsen (1996) entitled his paper ‘Action competence as *aims* and *means* in Environmental and Civic Education’, reflecting both of the above. On a third level descriptors focus on the *dynamic* nature of action competence (Schnack, personal communication, 16/5/07); as a ‘*concept*’ (Jensen & Schnack, 1997; Jensen & Simovska, 2005; Vognsen, 1996; Uzzell, 1999; Fontes, 2004; Carlsson & Jensen, 2006), and as a *notion* (Fontes,2004, Schnack,2000), *paradigm* and *educational ideal* (Schnack , 2000 p.107). I have referred to action competence on all three levels, as I feel they are all relevant.

### **2.5.2. Position of action competence in current trends in environmental education**

Sauvé (2005, p.11) has identified fifteen ‘currents’ or ‘chapels’ amongst the prevailing discourses in environmental education. A ‘current’ is seen as a way of both *envisioning* and *practicing* environmental education. Those currents with a longer tradition in environmental education that Sauvé (2005) identifies include the naturalist current, conservationist current, problem-solving current, systemic current, scientific current, humanist current and value-

centred current. Those that have emerged more recently are the holistic current, bioregionist current, praxic current, socially critical current, feminist current, ethnographic current, eco-education current, and the sustainability current.

The problem-solving current emerged in the 1970s when the severity of environmental problems came to light. It groups together those propositions that place the environment as a set of problems with its goal to “inform or help people to inform themselves and learn about environmental issues, as well as to develop attitudes and skills for solving them” (Sauvé, 2005, p.15). Sauvé recommends action competence as an approach here because it promotes the identification of environmental problems with a view to finding solutions. This would result in initiating student participation in some form of “collective democratic problem-solving action” (ibid., p. 16). Sauvé adds that if action competence is to be viewed within the problem-solving arena then a critical discussion of its merits must include questioning the following:

1. Does all environmental education have to solve problems?
2. To what extent can we expect learners to ‘solve’ environmental problems?
3. Is the process of learning to solve a problem more important than a successful outcome to the problem?
4. Is it ethical to teach about environmental issues without focusing on concrete problem-solving?

Using this placement of action competence within the problem-solving current as a starting point for a deeper understanding of action competence, I shall trace its emergence in the Nordic countries and how it has been taken up in Europe, internationally and in South Africa.

### **2.5.3. Origins of action competence**

Education philosophy in the Nordic countries and specifically in Denmark is closely allied with the concept of democracy. The aim of education should be for a learner to “transform him/herself into a critical, democratic and political human being” (Mogensen, 1996, p. 44). The term used to achieve this is ‘bildung’, which is aimed at far more than the educational process. It includes a vision for mankind and society as well as a context for attaining this ideal (ibid.). However, protagonists of the action competence approach did not see this happening. Schnack (1996) points out that in his opinion education in schools is too moralistic with behaviour modification acceptable as an outcome. For Schnack this approach is too narrow in its focus, leading to an oversimplification or individualisation of environmental issues. As a result he has become sceptical of modern pedagogy as it is practised. His stance has not changed and in a personal communication (16/5/07) he stressed that action competence is an educational approach that takes participation seriously as opposed to “top-down” strategies that miss the “spirit” of action competence. Uzzell (1999) confirms this critique: in his experience, conventional school-based environmental education is based on a teaching and learning model that is “top-down and centre to periphery” (ibid., p. 2).

A reaction to the above was the evolution of action competence as a way of engaging students in meaningful ways with environmental issues. Initially the ideal of action competence was used in health education, but in environmental

education it was taken up as an alternative to the traditional, science-oriented approach (Jensen & Schnack, 1997). Fontes (2004) recalls her first encounter of environmental action competence in 1993 where a project working with children as catalysts of global environmental change was discussed. She went on to say that although little was known about action competence by the British, French and Portuguese teams, the concept underpinned the earlier works of Breiting, Christensen, Lorring, Nielsen and Schnack (ibid..). Their work is influenced by German and Nordic pedagogical tradition. It was, however, the efforts of Jensen and Schnack, from the Royal Danish School of Education Studies in Copenhagen who pioneered, with other researchers, the concept of action competence through extensive projects in health and environmental education (Jensen, 2004; Jensen, 1994; Jensen & Jensen, 2005; Jensen & Nielson, 1996; Jensen & Simovska, 2005; Jensen & Schnack, 1997; Carlsson & Jensen, 2006; Schnack, 1996; Schnack, 2000).

In particular, the MUVIN project (1991 – 1996) stands out as a combined initiative by the Nordic countries with a focus on developing quality in environmental education (MUVIN is an acronym for environmental education in Nordic countries) (Breiting, 1996; Breiting & Mogensen, 1999). This project was of particular significance because it was cross-curricular and related to issues in the community. Special attention was also paid to the development of democracy. The findings were that action competence can be developed by exploring the learners' knowledge of their action possibilities; increasing their confidence of their own influence and committing them to wanting to act. In particular, the learners considered concrete action-taking directed towards solving an environmental problem to be an essential part of developing their action competence (Breiting & Mogensen, 1999).

#### **2.5.4. The meaning of 'Action' and 'Competence' in action competence**

'Action' for Jensen and Schnack (1997) does not mean 'activity'. An activity is something that one does in an environmental setting, but unless it contains the following two criteria it remains only an activity. Firstly it must be addressed at finding a solution to the problem being studied – for example; picking up waste on the beach, although praiseworthy, does not qualify as an 'action'. A better response would be to investigate the origin of the pollution and to understand what led to the problem in order to envision an action as a way to solving the problem. This means not looking at symptoms alone, but examining more deeply the hidden structures causing the problem, with a view to finding a solution. Secondly the students themselves must become involved in deciding what to do, either alone or with others. Their actions are not to be seen as counterweights to academic tuition, but as a result of a more complete understanding of an environmental problem. An action therefore occurs when knowledge is internalised and responded to in a conscious manner.

	Students pushed to do something	Students involved in deciding what to do
Activity solely as a counterweight to academic tuition		
Activity targeted at solving the problem		<b><u>ACTION</u></b>

**Figure 2.1. Criteria for an action: The action competence approach (Jensen & Schnack, 1997, p. 169)**

The above-mentioned criteria that separate actions from activities are summarised in the above Figure 2.1. The horizontal dimension concerns the boundary between behaviour and action and therefore the question of whether the learners themselves have decided to “do something”. The vertical dimension concerns the difference between activity and action and whether “what is done” is addressed to a solution of the actual problem or not (Jensen & Schnack, 1997, p. 169).

Furthermore there are two different kinds of actions – those that are related to responding to problems in the environment and those that are investigative. Investigative actions can be either scientific or social in nature. They do not, however, fall within the environmental action group unless they are geared towards solving a specific environmental problem (Jensen & Nielsen, 1996; Jensen, 2004).

Environmental actions, according to Jensen and Schnack (1997) can be of two kinds: direct and indirect. A *direct* action is one that aims at directly solving the problem being worked on. For example, if a group is investigating electricity wastage at school, they will personally switch off unnecessary burning lights or close doors to retain the heat. An *indirect* action occurs when the purpose is to influence others to contribute to solving the problem at hand. In the example of the aforementioned problem an example of an *indirect* action would be to put up information posters around the school about saving electricity. From the Danish school’s research it would appear that *indirect* actions are more common in schools (ibid.).

Action-oriented environmental education is becoming important in schools for the following reasons:

1. In the first place it is a move away from the dominance of scientism which results in action-paralysis, towards a societal perspective of examining the root causes of environmental problems (Jensen, 2004). Science tends to individualise problems and to ignore the fact that environmental and health problems are also cultural and economic realities. To make desirable changes in societies of the future, the humanities must also be drawn in to find solutions.
2. There is a realisation that behaviour modification in learners does not lead to the intended change in behaviour – it is too moralistic and narrow in its focus.
3. There is a move away from the priority given to academic teaching as opposed to a more practical approach.
4. There is a demand for authenticity when dealing with environmental issues – learners need to be engaged with society in genuine actions that have meaning for them.

(Jensen & Schnack, 1997).

'Competence' in action competence refers to the orientation of the participants to being able, willing and qualified to engage in the above actions (Jensen & Schnack, 1997). Schnack (2000) calls such a person a "qualified, reflective agent". To become such a person one needs to think critically, which Schnack describes as the ability to move between the self (on an individual, personal level) and the social or structural level. This ability to change perspectives leads to a better understanding of one's own life and where it is placed in one's social context (ibid.).

Fontes (2004) reminds us that in Jensen's 1993 paper presented at the First International Workshop on the project Children as Catalysts of Global Environmental Change, he used the word *ability* to mean competence. Fontes further defines competence as a "complex of many different resources integrated in dealing with a complex situation" (ibid., p. 159). Sociologists are now tending to separate competence from ability: Fontes (2004, p. 154) quotes the Swiss sociologist Perrenoud (1993) as follows: "Competence does not merely consist of possession of resources, but their mobilization in situations where they are pertinent and efficacious". Competence goes further than 'knowing' about something to include 'wanting to' or commitment to change (ibid.).

### **2.5.5 IVAC principles for developing action competence**

A practical, pedagogical, framework has been developed by Jensen and Schnack (Jensen 1994; Jensen & Schnack, 1997) that promotes the development of action competence. The acronym given to this framework (IVAC) has four key components – Investigation, Vision, Action and Change that reveal the possibility of "radical and empowering" education (Tones, 2005, p. 38). These four components do not occur in a linear manner, but rather develop alongside each other, in conjunction with the context of the problem under discussion (Jensen, 2004).

**Table 2.1. The IVAC Model of Pedagogy (Investigation, Visions, Action and Change) (Jensen, 1994).**

<p><b>A: Investigation of a theme</b></p> <ul style="list-style-type: none"> <li>- why is this important to us?</li> <li>- its significance to us/others? – Now/in the future?</li> <li>- what influences do life style and living conditions have?</li> <li>- what influences are we exposed to and why?</li> <li>- how were things before and why have they changed?</li> </ul>
<p><b>B: Development of Visions</b></p> <ul style="list-style-type: none"> <li>- what alternatives are imaginable?</li> <li>- how are the conditions in other countries and cultures?</li> <li>- what alternatives do we prefer and why?</li> </ul>
<p><b>C: Action and Change</b></p> <ul style="list-style-type: none"> <li>- what changes bring us closer to the visions?</li> <li>- changes within ourselves, in the classroom, in the society?</li> <li>- what action possibilities exist for realizing the changes?</li> <li>- what barriers might prevent carrying out these actions?</li> <li>- what barriers might prevent actions from resulting in change?</li> <li>- what actions will we initiate?</li> <li>- how will we choose to evaluate these actions?</li> </ul>

### **2.5.5.1. Investigation**

Investigation refers to looking for knowledge to gain a deeper insight into a problem and thus creating a willingness to act (Jensen, 2004). The investigation is not based on scientific methods, but rather *in* societal concerns and structures, where traditions, habits and cultures are taken into account. This would also include the ‘history’ of the issue under discussion, its origin and development. This interdisciplinary approach is illustrated by eight dimensions or steps that are used to help the students to develop their action competence, four of which fall under investigation:

- 1) Which topic or theme should be worked on?
- 2) Which problem within the topic should we work with?
- 3) What are the causes of this problem?
- 4) Why did it become a problem?

Jensen further explains that these dimensions do not occur in a logical sequence, but should be looked at as a spiral where steps are retraced for better insight and commitment. Optimal results occur when the learners themselves are exploring these dimensions rather than the educator “dispensing cold, hard facts” (ibid., p. 409).

As the students investigate and gain knowledge, a desire should develop to become committed, not as an individual only, but as a member of a group that is finding common ground (Carlsson & Jensen, 2006). Being committed as an individual only could lead to an individualisation and oversimplification of problems (Jensen & Schnack, 1997) and a failure to address the complexity of the problems with their origins embedded in the societies in which we live.

### **2.5.5.2. Vision: finding another way**

The fifth dimension of action competence asks what alternatives can be imagined when working with environmental issues (Jensen, 2004). This involves the ability to have a personal vision of the future and deals with the development of students' ideas, hopes and dreams about their lives and the society in which they live. In the introduction to a workbook on ethics in environmental education, Jickling has written about the possibilities that arise when people are encouraged to 're-imagine' their lives and the 'status quo' (Jickling, Lotz-Sisitka, O'Donoghue & Ogbuigwe, 2006, p. 3). In this workbook the authors encourage the development of critical thinking (looking beneath the surface); awareness of self-validating reductionism, that is, where something is reduced in a negative way; and uncovering the hidden curriculum to find what has not been included. In this way 'thinking outside the box', leads to creating new possibilities for the future. Even though decisions and actions are taken, our position must remain open for discussion, re-examination and revision (ibid.).

Added to the idea of visioning is the ability to negotiate and justify the choices that may become imaginable (Fien, 2000). To do this, learners need to develop a set of valuing processes through reflection upon their own life-style choices. This must include values that may be held by other communities and cultures and how these may impact on their daily lives.

Visioning includes the ability to confront tradition and the habits that develop from it (Jensen & Schnack, 1997; Schnack, 2000; Payne, 2000). Habits and other taken-for-granted behaviours lie at the heart of many environmental problems. By considering our habits, practices and experiences we might uncover ignorance and 'set' ways of doing things. This will lead to better understanding of how everyday forms of experience can be interrogated more critically to clarify roles and relationships as they impact on environmental issues (Payne, 2000).

### **2.5.5.3 Action and Change**

For Jensen and Schnack (1997), action competence is presented as an alternative response to mainstream environmental education, which teaches behavioural change as an end goal for environmental education. As long as people come to behave in an environmentally sound manner, the educator's goal is seen to be accomplished. For Jensen, Schnack and others, there are important differences between changing environmental behaviour and taking environmental action. Along the way learners should be faced with decisions on how to achieve the sixth, seventh and eighth dimensions of action competence:

- 6) How do we act to secure our visions?
- 7) What barriers will arise through my/our actions and
- 8) What actions will be initiated and (by implication) what changes will arise from these actions (Jensen, 2004).

Learners need to be empowered to make up their own minds on what actions and changes they want to undertake (Carlsson & Jensen, 2006). They must have gained knowledge about the problem under consideration and be committed to its resolution. This is far removed from a string of activities that simply engage with the environment. To be characterised as competent actions, activities must be aimed at solving the problem being addressed.

An important aspect of action competence is that it empowers learners to avoid being trapped by “action paralysis” which Jensen (2004) described as a powerlessness that manifests itself in introverted, narcissistic behaviour. Instead, educators should work from a more holistic perspective that gives the ordinary citizen the confidence to work with experts and their own common sense, to engage with environmental issues (Schnack, 2000). This is endorsed by Nagel (2005), who believes we should emphasise a philosophy of environmental education that promotes autonomous thinking. In this way “learned helplessness” and apathy (ibid.) can be avoided.

There is a close link between action and change, the two often evolving as a result of the experiences that individuals encounter. Dewey (1938, cited in Schnack, 2000) calls this the “continuity of experience”. For action competence it is important that change is not merely a type of behaviour modification, but one that has evolved out of critical thought processes that oppose oppression and imposed ideology, leading to maturity and responsibility within an atmosphere of liberal education and democracy (Schnack, 2000).

## **2.6. THE MULTIPLIER EFFECT - INTERGENERATIONAL KNOWLEDGE**

When action competence is developed as an educational ideal, it has the potential to become embedded in the social milieu of the community that supports the school. This is because action competence leads to learners becoming involved in community issues either as individuals or as part of a group. Research by Kruger (1992) on the “multiplier effect” by children on their parents/guardians in the Eastern Cape found that with younger children the impact of child to parent influence was minimal, but she concluded that different cultures and older children might see different results.

Further afield in Australia, Ballantyne, Fien and Packer (2001) have researched the effect that learners have on their parents’ environmental attitudes. They concluded that students do take home “environmental messages” and have environmentally focused dialogues with their parents. Parents reported that this has brought about positive changes in household practices.

Uzzell (1999) adds that his research found that there was a catalytic effect by children in their homes when the following conditions were met:

1. There was a good communication between the parent and child;

2. The environment was regarded as an appropriate topic for discussion within the home;
3. The parent was able to value the child as an 'expert' in the discussion process; and
4. The parent assumed the role of the pupil in deference to the knowledge of the child.

Another study in the Caribbean by Mc Ivor (1999) showed how parents were positively influenced by their children when they took the time to open up a meaningful dialogue with them. In this instance, mutual trust and respect developed, leading to discussions beyond the environmental issues of the project.

Closely related to the above is the concept of *social capital*, which has the potential to enable a community's involvement in decision-making processes, in this instance with environmental issues. A close relationship exists between action competence and social capital through the democratic values to which both adhere to (Colquhoun, 2000). The intersection of the two concepts occurs in the home where families are influenced by the schools their children attend and by the communities in which they live.

All of the above concepts are positive ramifications of how the practice of action competence principles at school, such as thorough investigation, democratic actions and reflective discussion can be integrated into learners' home circumstances.

## **2.7. DEMOCRACY AND PARTICIPATION IN ACTION COMPETENCE-ORIENTED LEARNING**

Reflections on Danish education and action competence by Lotz-Sisitka (2004) after attending a conference in Denmark are useful in reviewing the notion of action competence in relation to the South African context. A Danish political scientist presented an overview of Danish democracy that highlighted the particular meaning of democracy in Denmark. A common language and culture have tied Danish people together for a long time, resulting in a close relationship between the government structures and the common citizens. Danish democracy is a people's democracy - created by close collaborative frameworks in the form of co-operative farms and dairies that were responsive to changing European markets. Furthermore, "folkeskole", or "people's schools" were established, aimed at strengthening their democracy by stressing language and cultural ties (Lotz-Sisitka, 2004, p.14).

As a result, environmental issues have usually had a good press in Denmark as they have a long tradition of support within that society. The concepts of empowerment and participation by all citizens have been part of their governance for a long time. Danish society is more homogenous in South Africa making it easier for Danish citizens to find agreement on sensitive issues. This might be a challenge in the future as, without a multi-cultural society critical debate could tend towards atrophy if there is no plurality of ideas. In this respect the ideal of action competence could well have a different flavour when practised elsewhere. In South Africa, for example, which is a new democracy; the environmental focus may not be the same as that of a well-developed country like Denmark.

I think that because of this special relationship with the ideal of democracy in Western society there is a lack of critique around the concept of action competence. To negatively critique the *ideals* and *outcomes* of action competence would be to challenge the pillars of democracy. Commentary thus focuses on practical issues of pedagogy and how contextual differences may influence action competence processes. For example, the substantial critique of Bishop and Scott (1998) focuses on the need to embrace the contributions of science into action competence practices.

There is a close link between democracy and participation – to the point that “democracy is participation” (Schnack, 1996, p. 11). The metaphor of a ladder has been developed by Hart (1997) to explain the different levels of participation. Token participation that is reflected in manipulation and authoritarianism occurs on the lower rungs. As participation becomes more genuine, the top of the ladder can be accessed. His meaning of participation is characterised by “child initiated shared decisions with adults” (ibid., p. 41). Democratic decision making is thus characterised by consensus building, as opposed to shallow, superficial discussion.

‘Participation’ by students in the action competence approach has a specific meaning and is of a certain quality (Nilsson, 2005; Simovska, 2000; Simovska, 2004; Simovska, 2007; Simovska and Jensen, 2003). They identify three components that are incorporated in participation: it must be active, it must involve choices and these choices must be able to be actualised. This type of participation develops greater self-awareness, enables decision-making processes, increases collaboration with others, and improves communication, especially dialogue. Participation must not be of a token nature, which focuses on content, consequences of behaviour, and their effects. Token participation, furthermore, relies on ready-made, convergent outcomes based on tradition. It also targets the individual as the focus of change and does not adopt the more holistic view that an individual is influenced by his/her context. Genuine participation is therefore reflective, must have personal meaning, is open-ended, is divergent in nature, and stresses the intersubjectivity of individuals in their environments (Simovska, 2000).

Jensen and Simovska (2005) carried through their meaning of participation within an action competence framework in a web-based international project called ‘young minds’ that included the Czech Republic, Denmark, Netherlands and Scotland where the ideal of action competence in general health education was explored. The authors worked together on issues concerning youth, culture and the issue of food and nutrition. Here the focus was on developing democratic values that would bring about positive change as opposed to moralistic education that aimed solely at changing behaviour. In particular three themes were explored: genuine student participation and action; working with other cultures in a collaborative manner; and using the ‘virtual’ classroom to transcend the limits of space and time. Their insights are especially pertinent for the educator. He or she needs to be able to “provoke, stimulate and support pupils in the development of their own visions of a healthy life” (ibid., p. 327). To do this an educator must be able to

work with knowledge that is sourced from many disciplines. Knowledge of the Internet and computer technology was especially important in this study.

## **2.8. FACTORS THAT INFLUENCE THE DEVELOPMENT OF ACTION COMPETENCE-ORIENTED LEARNING PROCESSES**

Practitioners of the action competence approach expressed a variety of comments on what they found influenced their ability to carry through the action competence steps as described by Jensen & Schnack (1997). Ferreira (1996) researched the pedagogical challenges that a primary school educator (Grahame) in Brisbane, Australia, experienced using the action competence concept and specifically the IVAC framework to monitor progress of health issues. Ferreira reported that Grahame found that teaching in a new way involved taking risks, something that not all educators wanted to do, “for fear of losing control in the classroom” (ibid., p. 72). He also had a belief in himself as a social agent to promote the development of “active and informed citizens” (ibid., p. 73). He used his own skills and life experiences to make suggestions to his students: “I open the doors for them, but they choose which ones to go through” (ibid., p. 77). Some of the educators at his school preferred to remain within the academic boundaries of teaching reading, writing and arithmetic and therefore had a narrow role for themselves. They could not understand that Grahame felt a sense of moral responsibility to teach the children to become “active and informed citizens” as well (ibid.).

The type of educator has been reported by other researches as critical to the development of action competence. Jensen & Simovska (2005) reported that the educator trying to create an environment conducive to the development of action competence needs to have a high level of knowledge, and skills to match this knowledge. New demands and challenges have emerged for educators, for example “stepping back” (ibid., p. 324) to enable genuine student participation, but also being on hand to help work through the subject matter. This calls for an educator to stimulate learners to develop their own visions for a better lifestyle together with strategies for attaining these goals. Furthermore this needs to be achieved in an interdisciplinary manner (ibid.). New skills to develop for educators include non-linear learning, critical selection, reflexivity, experimentation and playing. Or, as the Danish psychologist Larsen says: being able “to choreograph the educational process” (Larsen, 1998, p. 22, cited in Jensen & Simovska, 2005 p. 326).

The concept of ‘stepping back’ but being involved was experienced by Barrett (2006) and Botma (2000). Both reported the dilemma of the teacher who wants to teach with an action competence approach, but who faces the existing educational discourse that supports the maintenance of the *status quo*. Botma concluded that most of the clubs functioned on an authoritarian level, where learners did what they were told.

Grahame (Ferreira, 1996) further observed that there was a marked difference in context between a school in Australia and a similar one in Denmark. He commented that classes in Denmark were much smaller in size and that the learners often had one educator for their entire primary education, whereas in Australia, class sizes were bigger, and the educator changed every year. Although he had the support of the school for using the IVAC framework, the actual implementation was hindered by the school structure and curriculum constraints.

Bishop & Scott (1998) are concerned that there is a tendency, when focusing on action competence processes, to undervalue the place of scientific knowledge in the understanding of environmental issues. This has resulted in the unwarranted impression that science is disempowering and unrelated to the learners' everyday lives; they propose that a dialogue is developed to integrate both a social *and* scientific approach into environmental issues.

Bishop & Scott (1998) make particular reference to the narrow meaning of 'activities' in action competence. These fall short of being an 'action', as discussed in 2.5.3 and are viewed as being limited tasks with limited environmental value. Bishop and Scott propose that these limits are too restrictive and that many activities have effects on others and have the potential to inspire and motivate them. So direct actions and indirect actions cannot be only viewed separately, but often lead into each other. They propose a third category of environmental action with the twin purposes of influencing others and solving the problem in hand. They also take issue with the two different forms of actions – social investigative actions and scientific investigative actions (2.5.3), saying this may be an artificial divide. Many social actions, for example, are based on scientific evidence and it is not easy to separate the two. The authors point out that it is often by doing (taking part in an action) that knowledge is advanced and that theory needs to have a practical focus as well. There is a need by theorists of action competence, therefore, not to shut out science but to have a more pragmatic view.

## **2.9. INDICATORS OF ACTION COMPETENCE-ORIENTED LEARNING PROCESSES**

One of the concerns with the notion of action competence is its evaluation. How does the educator know that he/she has the appropriate orientation to developing this ideal in learners? Carlsson (2000) stresses how action competence is a complex ideal to evaluate and that it is difficult to assess changes in knowledge so that learning does not amount to only measuring changes in behaviour. This has meant that educators need to develop ways of evaluating action competence processes. Carlsson (2000) identifies three key elements in the evaluation process: reflection, participation in democracy, and dialogue. These are complex ideas that need to be evaluated from multiple perspectives and highlight the many choices that have to be made.

Other researchers place more emphasis on the learning of skills (Grant, 1997; Agyeman, 2006; Fien & Skoien, 2002). Grant offers practical advice on what he considers being evidence of developing action competence in learners – for example:

1. Are they able to work in groups?
2. Are they developing reflexive thinking?
3. Is knowledge serving the task and not the other way round?
4. Is a learner's input valued by other learners and their educator?

These would serve as good pointers for the reflective phase of action competence as investigations are being selected by the learners for action possibilities.

Agyeman (2006) felt that their project had had the benefit of teaching the learners transferable skills (e.g. report writing, group work and debating issues) that could be applied in other situations. Learners had also increased their awareness and confidence while working on a problem within their own environment. They picketed a bus company for polluting the air with noxious fumes while buses were idling for unnecessary lengths of time. The learners saw very positive outcomes to their action which diminished the feelings of powerlessness of those students involved.

Skills development was seen as a similarity between the development of action competence and social capital (Fien & Skoien, 2002). By focusing on knowledge and skills development individual and collective action processes are enhanced. Uzzell (1999) concurs that when children are equipped with skills they become adults who are competent citizens with civic responsibilities.

Reflecting on the development of action competence in relation to the TALON Club themes was difficult due to the ephemeral nature of action competence. Schnack (2000) states that action competence is hard to quantify and can at best only be reviewed in terms of observations about what learners did and what characterised that process. He further notes that action competence cannot be converted into observable phenomena. However, for analytical purposes, I found that before being able to identify what *influenced* action competence-oriented teaching and learning processes through TALON Club, I needed to have some sense of the extent to which action competence processes were present in the first place. I approached Simovska (pers com. 3/02/09) for her view on these potential indicators. Guided by her additional comments, I synthesised the work of several leading authors on action competence to identify what I call 'indicators' of action competence (Appendix 2). These eight indicators that were common within the action competence literature were useful to help interrogate the data in Chapter Five (5.2.1 and Appendix 18). Using these indicators I was better able to identify pedagogical, contextual and relational factors that influenced the development of action competence processes.

### ***Indicators of action competence*** (from APPENDIX 2)

- The learning process was democratic and participatory.
- The learners did not draw on knowledge that is only science based, but included social and cultural 'knowing' as well.
- The learners demonstrated a sense of moral responsibility, commitment and motivation to act.
- Learners persisted in the face of difficulties, overcoming barriers and developing strategies.
- Learners developed a sense of agency and the ability to make choices towards enacting change processes.
- Learners displayed critical engagement and reflexivity towards the problem being investigated.
- Learners engaged in a creative, generative, open-ended manner to the problem under investigation.
- Learning is situated within a wider social sphere of concern and responsibility.

## **2.10. CONCLUSION**

This chapter set out to show that young people are living with increased environmental risk and that interventions are necessary to mitigate negativity in their attitude towards the environment. Adolescents have particular needs which educators should be aware of for effective environmental learning to take place. One way to achieve this is through a school-based environmental club. Action competence was chosen by me as a framework to work with the learners in the TALON environmental club at Hudson Park High School. I examined the principles that support action competence and how they have been taken up in health and environmental education in other countries. The IVAC model of pedagogy was explained as a way of operationalising the action competence processes, stressing the importance of democracy and participation. Indicators of action competence were identified to help me as I worked with the learners in the TALON Club.

In the next chapter I set out a methodology that would help me, while working with the TALON members, to observe the development of action competence-oriented teaching and learning processes in their group. The literature reviewed in this chapter advanced my understanding of action competence and helped to orientate my planning so that appropriate questions were asked and more focused observations were made. These and other research design decisions are described in the following chapter.

## CHAPTER THREE: RESEARCH DESIGN

### 3.1. INTRODUCTION

This chapter describes the methodological framework that guided the research process. It describes the reasons for selecting an interpretive, qualitative case-study approach to address the research goals and question. It explains my own role as a researcher in the research process. The research process is described, explaining how data was generated and analysed. The chapter concludes with a discussion of research trustworthiness, validity and ethical considerations.

### 3.2. RESEARCH DESIGN AND METHODOLOGY

#### 3.2.1. Research question and goals

This study was designed to respond to the question: 'What influences action competence-oriented environmental learning processes in a school environmental club? This question was relevant to my professional context as a high school teacher concerned with young people's involvement in environmental concerns, and I hoped that the research would provide more understanding of the role of extra-curricula clubs in equipping learners to take appropriate environmental action (See section 1.2).

Towards answering the research question, I was guided by the following research goals. I wanted to:

- Describe a year of activities within the TALON Environmental Club.
- Identify how pedagogical, contextual and relational factors influenced action competence processes amongst TALON Club members.

Through an interpretivist case study, I set out to achieve these research goals and answer the overall research question. Justification of the research design and details of how it developed are described in the sections below.

#### 3.2.2. A qualitative, interpretive enquiry

The research question and goals described above require attention to be given to open-ended social interactions that are strongly influenced by social relations and context. It therefore seemed appropriate to approach this research in ways that would allow the multiple perspectives on such social situations to be reflected. Cohen, Manion and Morrison (2007) describe qualitative research as being based on the belief that the social world should be studied in its natural state and not be manipulated by the researcher. I wanted to uncover how the individuals within TALON were co-operating with each other towards solving environmental issues. This would provide a unique but fleeting understanding of how they viewed themselves and their environment at that particular time. I recognised that a

qualitative approach to this research project would be most appropriate and fit for the purpose of social enquiry which is not governed by general, universal laws (ibid.).

Qualitative research is regarded as being multi-layered and complex (Neuman, 2000). My study of TALON therefore placed an emphasis on verbal descriptions, observations and interpretation of learners' work that would help to reflect this complexity. I was interested in understanding how the students made sense of the club activities through their viewpoints, perceptions, ideas and actions, that is, to see the situation through their eyes, rather than mine. As is described in section 3.3, I used a multiperspective approach to data collection drawing on different qualitative techniques to observe the social interactions in the TALON members (Schurink, 1998).

The study was interpretive in nature, meaning that the main emphasis was on the process of understanding and identifying patterns of meaning. The basic assumption that guides interpretivism is that knowledge is socially constructed by people who are engaged in the research process (Mertens, 2005). Consequently, there are multiple realities and therefore multiple understandings and methods of interpreting them (Connole, 1993; Janse van Rensburg, 1997 & 2001). To identify such patterns of meaning and remain open to multiple perspectives, the researcher cannot be detached, but must be actively involved in the negotiation of meaning (Connole, 1993). As one of the educators leading this environmental club, I was fully engaged in the activities that I wished to research and thus hoped to give an authentic description of events. However this active engagement also meant that I interpreted the data from a particular vantage point; this consideration is discussed further in section 3.5.

### **3.2.3. Case-Study**

The investigation took the form of a case study of one group of learners in a high school environmental club over a period of 10 months. By conducting a case study I hoped to retain the characteristics of real-life events and thereby understand complex social phenomena (Yin, 1984). This method favours description over analysis (McMillan & Schumacher, 2006). This approach helped me to gain a deeper understanding of the social and contextual issues that were playing out in the club, as described by Terreblanche & Durrheim (1999).

Yin (1984) states that good case studies are hard to produce because they demand rigorous, unbiased research. They are also non-generalizable to other case studies or to large populations. They can take a long time to complete, resulting in masses of data that do not relate to the research question. To help minimize these risks I have followed three principles that he recommends: I have used multiple sources of evidence; I have created a case-study data base with evidence that is easily retrievable and I have maintained a chain of evidence that will allow an observer to trace the steps of development.

### **3.3. DATA GENERATION**

To generate data, six methods appropriate to qualitative case study research were used, namely questionnaires, interviews, participant-observation, document analysis, research journal and archival records (Yin, 1984). The initial data was generated over ten months in 2007 and included three school holidays as well as a general educator strike during the June examinations, when most of the interviewing took place. After reviewing this data in the light of action competence, I recognised the need to probe specific areas in greater depth. Hence I conducted a focus group interview in May 2008 with the TALON committee members.

#### **3.3.1. Questionnaires**

Questionnaires are accepted as reliable and valid techniques to generate data in qualitative research. They are also economical and offer anonymity (McMillan & Schumacher, 2006). Of most relevance to this particular study was the potential of questionnaires to give a researcher access to certain types of information in a rapid and standardised way.

I administered two sets of questionnaires to all the TALON members. The first one was used at the start of my introduction to the TALON group, in late January 2007 (Appendix 3; 4.3.2.2). The aim of this questionnaire was threefold:

1. To establish how much the groups knew about local plants in order to help me establish an entry point for my work with the learners in TALON. This was important as establishing their prior knowledge would help to determine their pre-existing attitudes, experiences and knowledge of plants. Roschelle (2007) likens prior knowledge to a disorganized collection of building blocks that have the potential, with experience, to be coordinated and integrated into something of meaning for the student. When probing for prior knowledge it is also possible to identify misconceptions that may exist (*ibid.*). Through this questionnaire-based interaction with learners, I hoped to develop my investigation of action competence processes in the TALON Club.
2. To arouse an interest in the chosen theme of plants. The questionnaire involved identifying and naming several physical examples of common plants found in many gardens in and around East London. It also sought to find out who was already caring for plants at home and whether they wanted to deepen their knowledge of plants.
3. To have some fun with the group who I did not yet know very well.

A second questionnaire was circulated in April (Appendix 4). In total there were 19 responses, not all collected at the same time, because at any one time not all of the signed up members were present at the meetings. This questionnaire aimed to identify the expectations of the TALON members: what did they want from the club, how could they contribute, did they enjoy the outings, etc. These were then looked at to discover what common themes were

emerging in relation to my research interest in environmentally focused action competence. I also used the questionnaires to help me frame more probing questions for the semi-structured interviews conducted in June 2007.

In addition, those members who wished to be elected to the new committee were asked to complete a questionnaire (TC 1-7) by Mrs Selkirk before the voting took place at the annual general meeting in May (Appendix 5). Its main aim was to establish why these particular members thought they were suitable candidates and what their visions were for the club. In all there were 8 applications for five positions.

### **3.3.2. Interviews**

In total, I conducted eight semi-structured interviews mid-way through the data gathering process, and one focus group interview at the end. Other more spontaneous and informal interviews were conducted throughout the research process with individuals either directly or indirectly associated with the project. These are referred to as personal communications in the thesis.

*TALON learner interviews* (Appendix 6): These six semi-structured interviews were conducted on a one-to-one basis. This less formal format allows more freedom to follow up on ideas and to probe responses (Arksey & Knight, 1999). These interviews were conducted during the June examinations either at school or at the learners' homes. The reason why some were interviewed at home was that the educator strike was in progress and there had been severe disruption to the examination timetable. It was easier to visit TALON members at home, where there were no noticeable time constraints or pressing school activities. I chose a mix of learners: one Grade 12, one Grade 11, one Grade 10 and 3 Grade 9s. Four were girls, two were boys.

*Parent interviews* (Appendix 7): I interviewed two parents, one at school and the other at her place of work. Research by Weare (2005) indicates that parents can be a potential source of information for educational researchers. I was looking for evidence of action competence possibly emerging in the home environment. To establish this, I drew up a series of questions that looked for signs of this happening. Had they, for example, as parents, changed any of their environmental behaviour since their child had joined TALON? Had they noticed that their child had gained confidence as a result of being a TALON member, or was asking more critical questions? Each of these interviews lasted about 20 minutes. As I worked through the questions I recorded their responses on the question sheet

*Informal interviews - ongoing in 2007:* Many people expressed an interest in my research and I was able to tap into some sound advice, especially from my colleagues. Mrs Johnston, a former TALON educator, was able to explain the history of the group. Mrs Schwartz from Merrifield College had commented that 'a certain type of child joins an environmental club'. I attempted to establish what that was as I interviewed the two parents. Mrs Selkirk was helpful as she always had a willing ear and acted as a sounding board for my developing understanding of action

competence. I was able to clarify ideas from the literature with other action competence protagonists by e-mail correspondence (Grant, 2007; Schnack, 2007; Dibben, 2009 & Simovska, 2009).

### **3.3.3. Direct observation – Observation Schedules**

To ensure that I had a reliable account of the pedagogical processes and social interactions that transpired during the club's activities, I prepared an observation schedule (Appendix 8) to record interactions between the TALON members. Arksey and Knight (1999) believe that if you want to know what people do, then observation is preferred over interviewing. I observed most of the activities of the TALON Club, including committee meetings, general meetings and outings. Where I was more involved in the actual meetings and activities and hence less able to complete the observation schedule, I completed it as soon as possible after the event.

I was aware that I could become biased in my observations and even inadvertently become what Yin (1984, p. 88) describes as 'a supporter of the group'. To help avoid this as much as possible, I tried to step back from what I had observed and recorded and asked myself whether this was fair to all concerned.

### **3.3.4. Document analysis**

The learners had said from the outset that they did not want to participate in 'school-type' activities in the TALON meetings. This meant that they did not want to generate reams of written work. So I was challenged to seek other ways to get TALON members to respond to what they experienced in the meetings and outings. Some of the following written responses have been helpful: the spontaneous name labels of the plants that were 'adopted' for care by the learners (Appendix 9); thank you letters (Appendix 10); agendas from meetings (Appendix 1); posters; and a scrapbook of photos and commentary made by the learners of their impressions of meetings and outings (Appendix 11). Using these sources helped me to catch what Cohen et al (2007, p. 201) call the 'dynamic situation' which would be lost if it was not recorded in some written way. They also provide more discrete evidence, as they were produced by the learners without the intention of being used as research data.

Some of the photos were taken by the learners themselves. On two of the outings – to the Nahoon Beach and to the Nahoon Estuary Nature Reserve they were encouraged to take photos with a disposable camera of the plants and the group. These were later collated into the scrapbooks and used as memory aids in the interviews (Appendix 11). Prosser and Schwartz (Prosser, 1998) suggest that such photos can stimulate discussion and dialogue as they have the potential to uncover subtle relationships. The learners generated two types of photographs - those which contained information (about the plants) and those that provoked an emotional reaction (pictures of each other; pictures of the club members enjoying themselves). Although Prosser and Schwartz acknowledge that images are not always recognised as substantial data (*ibid.*), I believe the photos helped both the TALON members and me in the interviews and contributed to our meaning-making of the club experiences.

### **3.3.5. Research Journal**

I maintained a research journal (Appendix 12) throughout the study to informally and spontaneously record my interactions with the TALON group and my critical reflections on the overall process. This supported my reflexivity as a researcher as discussed further in the section on validity. The journal provided a much needed storyline that linked events to one another to form a cohesive overview.

### **3.3.6. Archival Records**

There were few records from the previous years of the TALON Club and as such this particular data source was limited. However, there was a comprehensive attendance register that had been kept by the standing committees for about five years. This was important as I was able to see how the club was growing in membership, as well as the gender and ages of past members.

### **3.3.7. Focus-group interview, May 2008**

After my first round of analysing the data collected in 2007 I concluded that some areas needed more depth and that I needed to take a more reflective look at the functioning of the club. By the time I conducted the focus group interview (Appendix 13), I was more familiar with the ideal of the action competence approach. So the questions I formulated could probe more carefully how the TALON committee felt the action competence processes had unfolded. This was a valuable data collection exercise as the TALON activities of the previous year were viewed holistically and in a reflective way. The earlier data (general questionnaires and parent and learner interviews) had not done this – it had been conducted as the processes were still being developed with less of the critical reflection necessary for better understanding action competence.

I interviewed the five TALON committee members as a group as they were the heart of the TALON Club. I followed the advice of Terreblanche and Durrheim (1999) on how to conduct such an interview. Points to consider were: that the participants were *au fait* with the interview procedure; that all the participants were included and not marginalised; that I as the facilitator was adept at initiating dialogue and listening in equal measure and that the recording process was as accurate as possible. I taped the interview, which lasted for about one hour, and transcribed it later. During the interview I made some notes and used them immediately after to fill in any gaps that the transcript might miss.

I structured the questions in the focus group interview around the common themes for activities that the TALON learners had engaged with in 2007. These were: plant activities, animal welfare, community outreach; waste issues, fundraising and meetings. In particular, I wanted to uncover how the processes of Investigation, Vision, Action and Change (IVAC) were developing within the TALON group (see 2.5.4). In this way, I hoped to gather evidence of action competence as it was being developed in order to address the environmental problems taken up by TALON.

### 3.3.8. Summary of the data that was generated

I have summarised the various data sources in the form of a matrix, as suggested by Maxwell (1996). This has proven to be extremely useful to show at a glance what data collection was done as with hindsight it was possible to forget what had been done and also the sequence in which the data collection took place. The matrix helped to sharpen my focus on what I hoped to gain from each type of data collected.

**Table 3.1. Matrix of data generated:**

Type of data	Source of data	Purpose	Date conducted	Code
Questionnaire/plant identification	TALON members No.: 17	To establish prior knowledge/interest in plants  Ice-breaker/fun	Feb 2007	<b>PAT 1-17</b>
General Questionnaire	TALON members No.: 19	Determine: wants/needs/attitudes	April 2007	<b>TQ 1-19</b>
One-on-one interviews	TALON members No.: 6	Further knowledge of above	May/June 2007	<b>TI 1-6</b>
Parent interviews	Parents of TALON members No.: 2	Evidence of change  Intergenerational knowledge	June 2007	<b>PI 1-2</b>
TALON committee application forms	TALON members No.: 7	Visions of future  Strengths/ why me?	June 2007	<b>TC 1-7</b>

Observation schedules	TALON members	Thick description Action competence	Feb – Aug 2007	<b>OS 1-21</b>
Research journal	My own writing	For self reflection	Jan – Oct 2007	<b>J/ date</b>
Documents from TALON members	Scrapbook pages/Photographs  Thank you cards  Agendas/planners	Other evidence of action competence	Feb – Oct 2007	<b>S 1-10</b>  <b>C 1-3</b>
Focus group interview	5 TALON committee members	To strengthen data  To establish evidence of action competence	May, 2008	<b>Name/ FG/ page number</b>
Informal interviews	conversations e-mails	clarification, depth	on-going from 2007- 2009	referenced as <b>personal communication, e-mails</b>

### 3.4. DATA MANAGEMENT AND ANALYSIS

#### 3.4.1. Open coding of the data

Before analysing the raw data, I labelled and filed it according to date and source so that it was easily accessible and organised into some basic order. From this, I commenced coding the raw data by organising it into conceptual categories as suggested by Neuman (1997). I understand coding to be the breakdown of data into smaller fragments that can be placed into these categories. In this way, patterns become apparent that can lead to meaningful

interpretation (Terre Blanche & Durrheim, 1999). Coding is viewed by Maxwell (1996) as the most important part of analysing data, as it helps to establish categories for investigation by 'fracturing' the data. This helps with data comparison and the development of new categories.

Using all the data, except the focus group interview, I identified what I thought might be emergent themes to place into categories such as: the meetings, the outings, plants, Bongulethu School, family, intergenerational knowledge, fun, friends, motivation, confidence, participation, being together, food, helping, learning, leadership, change, emotion, physical activity, female, be myself, commitment, vision, teacher involvement (see extract in Appendix 14).

### 3.4.2. Creating analytic memos

This list was further synthesised into broader categories in order to streamline the data. For instance, *initiative, independence, wanting to teach, personal development* could be grouped under the category of *leadership*. Similarly *family, friends, being together, being myself and food* were grouped under *social interactions* (see extract in Appendix 14). These were the basis for the analytic memos. Analytic memos serve the purpose of moving the research process forward (Ely, 1991). They can be thought of as conversations with oneself about what one has learned, what insights have been gained and how to move on to further action (ibid.). This synthesis served to 'build a dense web of support' (Neuman, 1997, p. 424) to increase the validity of my analysis. I worked with the data in a 'physical' way, for example I photocopied the coded written responses to the questionnaires and interview responses, cut them up and clustered them in the form of the analytical memos (see Appendix 15).

The following fifteen categories that emerged for the analytical memos of Appendix 14 were, in alphabetical order:

- action processes
- asking critical questions
- change processes
- club structures/mechanisms
- contextual issues
- emotions
- democratic processes
- helping
- intergenerational knowledge
- learning
- social interactions (fun, friends, food)
- personal development/ leadership
- participation
- teacher actions
- visioning

I was aware that this was a large number of categories, but I did not want to leave out any themes potentially relevant to the research question.

### 3.4.3. Coding of the focus group interview

I analysed the focus group interview in two stages: Firstly, I analysed the pedagogical processes using the IVAC framework (see 2.5) to code for examples of investigation, visioning, action and change processes. The pedagogy was looked at within the particular themes of plants, waste, animal welfare and community engagement (Bongulethu High School). These categories became the basis for the analytic tables of Appendix 16, an extract of which is provided. Neuman (1997) states that at this stage of consolidation some of the emerging themes can be dropped. In this research there was evidence that the categories of energy and healthy eating, for example, had potential as developing themes, but they were not substantial enough to pursue in this study.

**Table 3.2. CATEGORY LIST – Focus group interview May – 2008**

**STAGE ONE:** Data relating to pedagogical processes using IVAC as a framework

CATEGORY	CODE
PLANTS – INVESTIGATION	PI
PLANTS – VISION	PV
PLANTS – ACTION AND CHANGE	PAC
ANIMAL WELFARE – INVESTIGATION	AWI
ANIMAL WELFARE – VISION	AWV
ANIMAL WELFARE – ACTION AND CHANGE	AWAC
COMMUNITY ENGAGEMENT – INVESTIGATION	CEI
COMMUNITY ENGAGEMENT- VISION	CEV
COMMUNITY ENGAGEMENT – ACTION AND CHANGE	CEAC
WASTE – INVESTIGATION	WI
WASTE- VISION	WV
WASTE – ACTION AND CHANGE	WAC
GENERAL INVESTIGATION	GI
GENERAL VISION	GV
GENERAL ACTION AND CHANGE	GAC
KNOWLEDGE	K
PHYSICAL ACTIVITIES / ACTION	PA

The second stage of analysis of the focus group interview coded for those categories that were of a more contextual or relational nature and are reflected in the table below. A detailed example is provided in Appendix 17.

**STAGE TWO** – Contextual and relational categories

CATEGORY	CODE
STRUCTURES AND MECHANISMS OF A SCHOOL – BASED CLUB	S/M
SOCIAL/ECONOMIC INFLUENCES	S/E
ROLE OF TEACHER	RT
GREATER SOCIAL IMPACT	GI
PERSONAL DEVELOPMENT	PD

TRADITION	T
LEADERSHIP	L
EMOTION	E
HELP	H

### 3.4.5. Synthesizing analysis

Using the analytic memos developed from data collected in 2007 and from the focus group interview in 2008 together enabled me to identify three broad categories of factors that were influencing action competence-oriented processes.

These were:

- pedagogical influences
- contextual influences
- relational influences

These broad categories formed the basis of an extensive analytical table (see an extract in Appendix 18). In it, I reviewed each theme of TALON Club (plants, animal welfare, waste and community outreach) in relation to the eight indicators of action competence described in Appendix 2 that I had distilled from the action competence literature. At each stage, I noted the pedagogical, contextual and relational factors that appeared to influence that particular dimension of action competence-oriented processes. This was a summarising and synthesising process which would not have been possible without the preceding background analysis. From this table, I was able to develop a series of analytical statements which provide the structure for Chapter Five and a response to the study's research question.

## 3.5. RESEARCH TRUSTWORTHINESS, ETHICS AND VALIDITY

### 3.5.1. Trustworthiness and Validity

Validity refers to trying as far as possible to reflect accurately on and represent as accurately as possible the issue being investigated. Yin (1984) suggests using multiple sources of evidence that may show congruence (triangulation); establishing a chain of evidence that links each subsequent event so that there is a coherent flow from beginning to end; and allowing the work to be viewed for comment by the individuals involved (member checking). In this way, as described by Neuman (1997) there is a close fit between what is being researched and the indicators of it. He stresses that because one is working with abstract ideas there will never be absolute validity, but that as the researcher it was my duty to strive to achieve it as rigorously as possible.

*Triangulation:* I generated enough data to enable me to triangulate the results. This means being able to examine a social phenomenon from more than one vantage point in order to find regularities and irregularities in the data. It

supported the identification of patterns and themes in order to gain a better understanding of a phenomenon (Terre Blanche & Durrheim, 1999). In this study I interviewed the TALON members, their parents and other interested parties. I re-interviewed some members who were by then on the committee the following year to establish how their attitudes had changed with the passing of time. This diversity in approach to the data generated gave me greater confidence in its validity.

*Establishing a chain of evidence:* Throughout the thesis I have attempted to establish a logical flow that develops from the initial raw data to the analytic statements of Chapter Five. I grouped the emerging concepts into common themes by coding them and constructing analytic memos. In the discussion chapter I carefully worked with these analytic memos and the indicators of action competence. The five resultant analytic statements were further grouped into their relevant themes: pedagogic, contextual and relational processes that I could conclude were influencing action competence-oriented (environmental) processes.

*Member checking:* In consultation with the research participants, I verified the data in the following ways: I introduced my topic to the committee and general members early in 2007(15/01/07, 23/01/07); I related the findings of the plant and general questionnaires to the TALON members at one of the general meetings (23/05/07). On another occasion, at a committee meeting, I queried issues that had emerged from the initial data, such as what activities were wanted by TALON members and how the meetings were conducted (30/07/07). When a new committee took up office in mid-2007, I gave a report back at a general meeting on the progress of my research (01/08/07). I asked Mrs Selkirk (the other educator supporting this club) to be a critical friend, that is, one who would point out any obvious biases in my thinking (Bassey, 1999). She did not always concur with my thinking and, as the educator who had co-ordinated TALON Club for many years, offered alternative explanations that strengthened my interpretation of the data.

Through these processes of triangulation, establishing a chain of evidence and member checking, I was able to strengthen the validity of the research. I was mindful, however, that as I was so close to the participants (as their educator and as a co-ordinator of TALON Club) I was at risk of 'researcher bias' due to my own expectations, attachments, values and socio-cultural perspectives. As a participant in the research process, I tried to develop my reflexivity as a researcher. Reflexivity acknowledges that as researchers we are a part of the social world we are researching (Cohen, Manion & Morrison, 2007) and that there is no totally objective reality. We bring our own 'lenses' of interpretation to the research and the participants themselves behave in a particular way when we are present. This requires me to accept that as a researcher, I have affected the TALON Club processes and the responses of those involved with the club.

In my research I tried to closely monitor my interactions with the participants and to examine how I reacted to situations, the role that I played and how bias could affect my understanding of events. These reflexive elements are reflected in my journal records (Appendix 12). Perhaps the most important issues on which I needed to be reflexive

were my age and my professional training. In the first instance I am from a different generation to the TALON members and therefore do not share the same interpretation of, or responses to, issues as them. In particular, my understanding of youth and their specific social interactions were not familiar to me. From a professional point of view I have been trained to be a part of an institution that is rigid and authoritarian in its outlook. It would therefore be presumptive of me to claim that I was party to the intimate thoughts, hopes, wishes and expectations of the TALON members.

### **3.5.2. Research Ethics**

At all times I was aware of my responsibility as a researcher to be mindful of research ethics, described by Bassey (1999) as being a respect for democracy, a respect for truth and a respect for persons. These three 'respects' are particularly relevant for the research that I undertook in the light of action competence which is upheld by those same principles.

To ensure that my work was ethical, I aimed for transparency. I informed the learners' parents of the intended research project, and of the implications for the learners (Appendix 19). I also gained the permission of the learners to use our joint activities for research purposes (Appendix 20). They were informed that if they were unhappy or uncomfortable at any stage, they were free to withdraw from the research. This was done at the first meeting of TALON when I introduced my research to them (23/01/07). The school principal, Mr Hewett, endorsed my proposal as did Mrs Selkirk. Although the nature of this research was not one that should be controversial, I was mindful of any sensitive information that I was potentially party to.

In my study with the TALON members, I attempted to observe carefully the social interactions that transpired between the educators and learners. I tried to be mindful of not pre-empting the data or making any sweeping statements that would detract from the nuanced detail that became evident, and to understand and describe meaningful social actions and interactions (Neuman, 1997). I endeavoured to work closely with the learners by sharing my interpretations with them and seeking clarity from them (especially in the focus group interview) when I was unsure of meaning.

### **3.6. CONCLUSION**

An interpretive case-study was selected as it provided an appropriate framework within which to work. Qualitative research methods are most suited to case-study research. The data was gathered in a variety of ways: questionnaires, interviews, a journal, observation schedules, learners' work and e-mail correspondence. The data was then sorted and coded into categories with themes and sub-themes. The IVAC framework was a dominant method for organising the focus group interviews. To the best of my ability I attempted to work in a way that was trustworthy and ethical, thus enhancing the validity of my study.

The following chapter presents the data that was generated within this research design.

## CHAPTER FOUR: DATA PRESENTATION

### 4.1. INTRODUCTION

The bulk of this chapter (sections 4.3 and 4.4) provides a detailed account of what transpired in the TALON Club in terms of the study's research focus. This is presented in two sections: Section 4.3 describes the **teaching and learning processes** associated with the development of action competence, as they occurred through various club activities, and Section 4.4 describes **contextual and relational factors** that appear to have influenced action competence-oriented learning processes in the TALON Club.

The data in section 4.3 is organised according to four main themes: (i) Plants (ii) Animals and animal welfare (iii) Community outreach and (iv) Waste issues. Jensen and Schnack (1997) note that action competence should be developed in response to an authentic, relevant, environmental issue of concern. TALON Club activities focused on *several* environmental issues during the school year but, as evidenced in Appendix 17, these overlapped significantly and were not sequentially planned. For this reason, a chronological account of club activities (beyond the brief overview provided below in 4.2) would not enable me to trace the development of action competence and its associated teaching and learning processes whereas a thematic grouping would. (I emphasise, however, that this arrangement is not indicative of a conscious thematic approach in the TALON Club and it is used here purely as an organising framework). Activities such as tree planting, litter cleanups and caring for animals are well established in the club, with similar excursions and action projects taking place each year, but these have never been recognised as distinct themes to guide planning or reflection on TALON's overall activities .

To facilitate later discussion of the data in relation to action competence-oriented learning in Chapter Five, TALON's themed activities are presented in section 4.3 using Jensen & Schnack's (1997) IVAC framework, as outlined in section 2.4.4. Each theme is presented in terms of investigative processes, visioning processes, action and change.

Firstly, however, the following section (4.2) provides an overview of the TALON Club activities as they transpired during 2007. This chronological, summative description helps the reader to gain an overall understanding of the broad functioning of the club during the data collection period, serving as a backdrop to the more detailed pedagogical and contextual descriptions to follow in 4.3 and 4.4.

### 4.2. OVERVIEW OF TALON CLUB ACTIVITIES

The TALON Club activities described in this chapter occurred from January until October 2007. As described in Section 1.1, TALON Club is regarded in the school as a pastoral club with an environmental focus. To this end, club activities in 2007 included litter cleanups, community outreach to Bongulethu Secondary School, nature-based

outings and plant propagation. Appendix 17 provides a tabular chronology of these activities. It includes the date of the activities, who organised, led or initiated the meeting, who attended, an indication of what was achieved at the meeting and the themes we worked with. The table does not include minor interactions that took place at school, for example the intercom announcements, the occasional meeting at break or visits to classes to advertise TALON events. In the main text, I have included the date of the reported event in brackets, for example (15/1), for the fifteenth of January 2007, when the first committee meeting took place.

We started off the year with the plant theme which was the dominant theme in the first six months of 2007. I introduced the theme with a set of questions highlighting interesting facts about twelve plants from my garden. Our first activity outside the classroom was to plant succulent cuttings so that they would be well established in time for our plant sales in March. This was followed by a visit from a traditional healer who showed us various medicinal plants. A walk and litter cleanup at the Nahoon Beach and a visit to a health shop continued the plant theme. Other activities in Term One were the making of SPCA posters at the general meetings, a club social and a trip to the SPCA by the committee to deliver the tins of food that had been collected.

In Term Two we extended the plant theme to include a visit to the Nahoon Estuary Nature Reserve where we looked at the exotic vegetation. We planted more succulent cuttings to sell in May, as the first sale had been very successful. A visit to Bongulethu Secondary School was unsuccessful as we could not access their school grounds at the scheduled time. A fundraising event was held on one of the school derby days where the TALON members sold fried (slap) chips to spectators. A new committee was elected towards the end of the term at the Annual General Meeting. Further club activities were curtailed due to an educator strike and mid-year examinations.

In Term Three we visited Bongulethu Secondary School where the plants were attended to (watered, weeded and staked where necessary). Five pepper trees were planted and surrounded with chicken wire to protect them from visiting goats. Visits to the Zoo and the SPCA took place and a cleanup in the Ihlanza Valley with the Grade 8s was organised. To commemorate Arbour Day, TALON members promoted trees at the general school assembly and later planted plants in the school quad. Two TALON members and staff attended a conference on waste issues with a view to introducing a recycling theme to the club the following year. The Grade 12 TALON members left the club as they would soon be writing their final examinations.

In the final term of 2007, the activities related mostly to animals. Some members collected money outside a shop for the SPCA. We later delivered more tinned food to the SPCA and presented a cheque to the Aquarium. We revisited the Zoo and made enrichment toys for some of the animals. We weeded the plants we had planted in the school quad. As this was a short term, we were unable to plan any further activities.

It is evident from the table in Appendix 21 that there was a great diversity of activities during the year. However, there was limited continuity or coherence in the holistic planning of club activities and few connections were made by club members or educators between the activities and the stated club aims. For instance waste-related activities were sometimes included opportunistically at short notice within other outings and the focus of activities changed from week to week as new opportunities arose or as interest levels fluctuated.

### **4.3. TEACHING AND LEARNING PROCESSES WITHIN CLUB ACTIVITIES**

#### **4.3.1. Introduction**

Section 4.2 provided a summative overview of the TALON Club's main activities during the year. This section now focuses on the main teaching and learning processes within the Club that appear to have influenced the development of action competence. The section is arranged thematically (plants, animals and animal welfare, community outreach and waste), with each theme being considered in terms of the pedagogical dimensions of investigation, visioning, action and change (IVAC). This IVAC framework (Jensen & Schnack, 1997) - see 2.4.4 - provides a structure for making learning processes within club activities more explicit.

It was difficult to decide at times what constituted an investigation, a vision, an action or a change, as they are concepts that are interwoven with each other (Jensen, 2004) – see section 2.5.4. For example, within the theme on plants, the planting of the cuttings could be viewed as both an investigative experience where new knowledge was sought and gained, or as a direct action that was addressing the issue of growing plants for the fund-raising initiative. Recognising such overlaps, I present here what I consider the most predominant or influential dimension of each activity in terms of the club members' developing action competence.

Data presented in this section derives from my research journal, the club attendance register, the TALON interviews and questionnaires, my observation schedules, the learners' work and the focus group interviews.

#### **4.3.2. Plants as a thematic focus**

##### ***4.3.2.1. Summary of plant-related activities***

Activities related to the theme of plants constituted the majority of TALON Club activities during the year, especially in Terms One and Two. In Term One, TALON members propagated plants from succulent cuttings which I provided from my garden at home. The aim of this activity was to prepare plants for sale at a later stage and to use the money for other projects. It also served to introduce the TALON members to indigenous and waterwise plants. To increase the number of plants for sale, I asked one of my Grade 9 classes to complete planting the cuttings. The general care

of the plants was left to me as I could not persuade any of the club members to be responsible for weekly watering. Some of the potted plants were later taken home by TALON Club members as gifts on Valentine's Day in February and were sold to raise funds at the Grade 8 open evenings in March and May.



**Figure 4.1. TALON members planting succulent cuttings**

In February TALON members cultivated spinach from seed with the intention of donating the seedlings to Bongulethu Secondary School. Unfortunately, only one member reported success with the seed growing and the established plants were thus never donated. We did, however, visit the same school later in the year to plant succulents (once again cut from my garden) and to install chicken wire (donated by a parent) around the established plants to protect them from being grazed by goats in their school grounds. We also planted six Brazilian pepper trees (*Schinus trelbithifolius*) donated by the East London municipal nursery.

Club members benefited from the plant expertise of two parents in the school community: Mr Onions, a traditional healer, shared his knowledge about the medicinal uses of some local plants, and Mrs Kruger hosted an outing to her health shop where she pointed out the plant origins of many of their health products. We also ate vegetarian food prepared by Mrs Kruger and me.

Two excursions that were successfully implemented were a visit to Nahoon Beach where I explained the importance of dune vegetation, and a guided walk in the Nahoon Estuary Nature Reserve to look at the effects of invasive vegetation on indigenous species. A third outing to collect indigenous tree seeds for the municipal nursery in the Ihlanza Valley below the school grounds was cancelled due to lack of support by club members.

Towards the end of the year, a school assembly to commemorate Arbour Day culminated in the planting of plants which had been donated by the local municipal nursery. There was one related follow-up activity several weeks later to weed the new garden.

The following sections (4.3.2.2 – 4.3.2.4) describe the main teaching and learning processes that occurred in relation to these plant-related club activities.

#### **4.3.2.2. Investigative teaching and learning processes**

The investigative dimension of the plant theme was substantial in comparison to the other environmental themes discussed later in this chapter (4.3.3 – 4.3.5) and was characterised by experiential learning and information transfer through interaction with a more knowledgeable person. Club members had indicated previously that they did not want their involvement in TALON Club to feel like 'school' with readings or lectures that required much concentration (J 15/1). For instance, Catherine had said that viewing Al Gore's environmental film *An Inconvenient Truth* as a club activity would not be popular as it was not fun (J 19/2). Additionally, the established norms within the club favoured more experiential and interactive activities such as short, practical projects and local outings and the emphasis was certainly not on knowledge acquisition and analysis.

It was with this in mind that I initiated the plant theme. In a plant questionnaire given to my Grade 9 learners and then to the TALON Club members in January, I confirmed that their knowledge about plant names and uses was limited (Appendix 2). This corresponded with findings of international researchers that secondary school students have a poor knowledge of organisms around them – see section 1.2. I was thus motivated to use the opportunity of my involvement in the club to establish a common, facts-based understanding of and appreciation for plants, and highlight that plants are a source of many livelihoods and hobbies in our community.

The majority of plant-related investigative learning processes occurred through the contributions of educators and guest presenters who shared their knowledge and skills. At the first general club meeting of the year (23/1), I brought a selection of common plants from my garden and pointed out some interesting facts about each plant. I held up and then passed around a branch of *Plumbago* and explained how this indigenous plant is revered in Xhosa culture and has widespread uses in the Xhosa community. Similarly, *Aloe* sap is used for skin ailments, *Hypoxis* tubers are used in HIV/AIDS treatment, *Carissa* fruits and certain *Solanum* berries are eaten, especially by children, and the *Strelitzia* is so popular that it has honorary status in California.

During this first general meeting (23/1), I asked members if they wanted to learn more about plants. Fifteen of the seventeen responded affirmatively and I took this as an early indication that they were motivated to learn more about the cultivation and uses of plants and led me to the idea of 'adopting' cuttings at a future meeting (see 4.3.2.4). That

subsequent action project was supported by sharing of knowledge and skills about making successful plant cuttings: I told club members about waterwise gardening and showed them how to prepare cuttings and plant them in pots. I pointed out the succulent leaves and explained that these plants can tolerate dry conditions because of special storage adaptations. They then copied what I had demonstrated and each member planted about ten plants of his/her own.

The investigation continued with the input of two parents, Mr Onions, a traditional healer (13/2) and Mrs Kruger (13/3), the owner of a health shop. I arranged with Mr Onions telephonically that he should focus on local plants and to keep in mind that the knowledge he imparted should be of interest and relevance to young people. Mr Onions brought various specimens with him to the club meeting, which I supplemented from my own collection. He explained the medicinal uses of these plants and members showed lively interest in what he had to say. They learnt from Mr Onions' explanations that some plants are very toxic, in particular the Gifbol (*Boophane* species) and the *Euphorbias* and that they must wash their hands after handling them. I brought two books that were made available for the TALON members to look at that could add to the knowledge already given – Van Wyk & Gericke (2000) and Van Wyk, Van Oudtshoorn & Gericke (1997). After this meeting, the following thoughts were expressed: "I have learnt which plants are good and bad" (TQ9); "I have learnt the importance of plants" (TQ16) and "many plants have important healing powers" (TQ18). Mr Onions was thanked in a card for teaching "amazing facts about plants"; "that plants have very useful healing properties"; "that they are helpful" and that "they can be used as medicines" (C1, Appendix 10). Learning about the plants had raised the members' awareness and enthusiasm about them and they were now thinking about them. "In my own case, when the sangoma came, after he had shown us all those plants, I looked out for them (on a holiday to the Wild Coast)" (KA, FG 11).

Mrs Kruger and I met on two occasions at her shop before the TALON visit (13/3) to discuss what I wanted the learners to investigate. We decided to concentrate on the connection of plants to healthy eating and to provide an opportunity for the members to taste, smell and touch the various products. Mrs Kruger prepared two delicious vegetarian meals and I took hummus (chick peas) and bread as well. The members were encouraged to ask questions, which they did. The questions revolved around the relevance of plants in their own lives. For example, Natina wanted to know whether there was a cream she could use on her skin as it was very dry. Megan, who is a vegetarian, expressed being pleased to be introduced to Mrs Kruger – this visit served to strengthen her resolve to continue not eating meat (J 13/3). In the 'thank you' card (C2) to Mrs Kruger, they indicated learning about herbs, nuts, and soya beans; how plants can be used for constipation, healing and detoxing our bodies; and many "amazing facts and interesting things" (C2). Mrs Selkirk and Megan's mother both visited the health shop on a subsequent occasion to collect recipes.

Although the abovementioned contributions by educators and parents were generally regarded as 'presentations' or 'talks', they were more than one-directional knowledge transfer sessions; each had a significant experiential component. When I brought the selection of common plants to the first general meeting (23/1), I circulated all the specimens for club members to have the opportunity to touch, smell and even taste the leaves, flowers and fruits. Similarly, during Mr Onion's visit, club members touched the various plant samples and smelt and tasted the cut aloe leaves. The visit to Mrs Kruger's health shop also provided an opportunity to learn first-hand, on-site. The eleven girls who attended the outing were able to browse through the shop, examine the various products, and taste the two vegetarian meals prepared by Mrs Kruger.

Other plant-related outings provided opportunities for club members to investigate new surroundings and gain new knowledge. Although the visit to Nahoon Beach was scheduled as a cleanup activity, I took the opportunity to point out how plants are effective in dune formation and stability. I showed them where exposed roots could be seen keeping the sand from being eroded by wave action. I provided a disposable camera and encouraged each TALON member to take pictures of any interesting plants they encountered on their walk. These photos were later used, with my own collection, to create a scrapbook of their experiences as a record for themselves and the club (S 7, 8, 9, Appendix 10). The opportunity to take photographs had an investigative dimension because it required TALON members to look more closely at their surroundings and to think about what they would like to photograph and why. In general the photos reflected the harsh conditions that some plants live and even thrive in (J 28/2).

In May we had another opportunity to learn about indigenous and exotic plants during a guided walk at the Nahoon Estuary Nature Reserve which was attended by seven club members (9/5). One of the Buffalo City municipal guides took us on a tour of the mangrove trees and pointed out the exotic vegetation that is literally stifling the existing indigenous plants. The outing was much appreciated as the club members were given an opportunity to see and touch various exotics. The guide pointed out how people had impacted on the reserve in the past. Neighbouring residents had encroached into the reserve with their gardens and allowed their dogs to roam freely to harass and in some cases hunt the small wild animals. We saw first hand how erosion had increased as a result of incorrect storm water management. Our guide related particularly well with the TALON members. He was able to hold the club members' interest for an extended period, as he made the learning process a fun and interactive event (J10/5). For example, we all tasted the salty leaves of the mangrove trees and planted sticky mistletoe seeds on a tree. I supplemented the guide's knowledge with information from a field guide *East Coast Estuaries and Mangroves* by T. Williams. The initial aim of this outing had been to look at the exotic vegetation, but it evolved into showing the TALON members other environmental issues as well. This was a good opportunity to show learners the complexity that exists even in a small reserve.

The outing to the Nahoon Estuary Nature Reserve led to an interesting debate at the next committee meeting (14/5) on what plants should be taken to Bongulethu Secondary School when we visited. They had seen that some exotic plants had become pests and that they displaced the indigenous flora. However, on a previous visit to Bongulethu School we noticed that the trees that had survived over the years were not indigenous. In particular the Australian bottlebrushes and casuarinas were flourishing. They decided rather to take plants that would survive harsh conditions, in this case six Brazilian pepper trees that were donated by the municipal nursery (OS 3). It was clear that past experience and the knowledge gained as a result had swayed the committee to plant trees that would survive, and were not necessarily indigenous, as the aim was to create shade and add aesthetic value to the Bongulethu School grounds.

Across these varied activities, there were small but, I believe, valuable opportunities for club members to draw on their own prior knowledge and make a contribution to the general discussion. For example, when I shared the information that some plants provide medicines for pharmaceutical use – aspirin from willow trees and quinine for malaria from a tree in central Africa, Kate reported reading about a plant (*Hoodia* sp.) that the Bushmen used to control their appetites. She knew that this plant was being researched by pharmaceutical companies and would be marketed shortly as an appetite suppressant.

I used this opportunity to prompt an informal debate about who ‘owned’ this knowledge – the Bushmen or the scientists and pharmaceutical companies that developed the product. I added to this discussion the case of Rooibos tea where an American company had attempted to ‘hijack’ the name exclusively for their product, thereby denying South Africans the right to use a name that they have used for centuries. I also asked the club members to consider the ethics of taking our unique South African plants overseas, breeding them into colourful hybrids that make much money for foreign companies but in essence denying us potential income but it was interesting to note that in the questionnaire in April (TQ 1-19) and the interviews in May (TI 1-6) when I probed what new knowledge they had gained about the environment from TALON, nobody commented on these discussions whereas they did refer to their learning in relation to Mr Onions’ visit and the outing to Mrs Kruger’s health shop.

Reflecting on how and why the plant theme had been introduced, the committee members made the following comments in May 2008 about the plant investigation: “It’s not given enough recognition and by learning more about plants we can help the environment and choose our actions” (KA, FG 2); “I think it had to be forced a little because no-one was pointing it out, nobody in the school notices about plants” (K, FG 1) and: “It’s a topic we had to investigate because not enough people actually know about it, so we were creating more awareness, because if people know they can take proper action” (M, FG 1).

#### **4.3.2.3. Teaching and learning processes that supported visioning**

In Chapter Two, I referred to the importance of supporting learners to develop their visions, ideas, hopes and dreams about their lives and the society in which they live. An important part of this process is imagining alternatives to current practices and keeping alive prospects for change. In this section, I reflect on some of the ways in which plant-related visions were developed through TALON Club activities.

In the plant propagation activities, the Talon members primarily saw the opportunity to sell plants to raise funds for what they perceived to be 'core' club activities: (i) donation of funds to charitable animal-centred causes, (ii) Bongulethu School outreach (OS7) and (iii) boosting club membership. The plant selling activities in March and May to parents were seen as opportunities to promote TALON as a club of choice for Grade 8 learners. The committee envisioned a bigger club and used the two evenings to advertise what they did in the hope of attracting new, younger members.

However, in the focus group interview several months later, the committee members' reflections indicated a deepening concern for plants and a clearer vision for plant-related activities within TALON Club. They could imagine alternatives to the activities they had experienced and suggested ways of doing it better next time. The committee was asked how they could improve on the plant theme and responded as follows: "If the plant project was repeated we would do things differently, we could take a whole term and just focus on plants, as well as get more people involved" (E, FG 3); "We could advertise more, tell our friends and the whole school what we were doing" (KA, FG 3). Kate wanted the project to be less scientific, as she didn't like "scientific" (KA, FG 3). "It would have to be fun; it's unattractive if it's boring" (M, FG 3). For some, the plant theme expanded into how they imagined their future lives to be: "I see myself in a beautiful garden when I grow up" (TI 3).

During a club committee meeting in March, I introduced the committee to a spider diagram (mind map) that I had prepared to assist the committee in planning further plant-related activities for Term Two (see Appendix 22). I gave each committee member a copy. The spider diagram did generate interest amongst the committee, but it was a superficial one. Megan and Debbie said it would be a good idea to go to the municipal nursery and Chris wanted to go to the bonsai nursery (J 19/3). It was agreed informally to plan a visit to the municipal plant nursery, but unfortunately, this visit did not take place as it fell on a public holiday of which we were unaware at the time of planning. The bonsai nursery visit did not seem popular, so the idea was not pursued. I expressed disappointment that evening in my journal that the committee was more interested in the up-coming science festival in Grahamstown than in making substantial plans for the following term (J 19/3).

One example of using the vehicle of plants to envision and then act was our visit to Bongulethu Secondary School. One of the activities that the members wanted to do was to put chicken wire around some of the trees that had

previously been planted in the school grounds as they were being eaten by the goats. The learners recalled that Mr Onions had said that *euphorbias* were poisonous and they had tasted the bitter *aloe* sap, so those plants were not likely to be eaten. I offered to bring specimens of these plants to add to those already at Bongulethu School, together with the pepper trees.

Initially, club members appeared to have a limited vision of how plant-related activities might contribute to a more sustainable future or, more immediately, create opportunities for social interaction and fun in the club. Whilst visions of this kind were largely absent earlier in the year, committee members' reflections during the later focus group discussions on their actions and the resultant changes suggest that – in future – their plant-related visioning might be different. The following section describes the main actions and associated changes.

#### **4.3.2.4. Teaching and learning processes that supported action and change**

The action and change processes under this theme started with the planting of succulent cuttings in February and April and their sale in March and May. I planned the activity after I learned during the first general meeting that six of the club members were already looking after plants at home. When I discussed these ideas at a subsequent general meeting (7/2), many showed an interest in what I had to say and, after the formal part of the meeting was over, five members and I planted cuttings of succulent plants from my garden at home. These were mostly waterwise plants such as *aloes*, *haworthias*, *cotyledons* and *crassulas*. Other plants had been donated for sale by the East London Wildflower Society, where I was the treasurer. Megan was the only member who offered to help sell the plants, despite feeling nervous about doing so (S10, J29/3) on our first evening. Catherine joined in for a short time later. In May there were more helpers (5). Both Mrs Selkirk and I helped to sell the plants and promote their use to parents. The plant sales raised over R1 000 that we could use to fund our other projects.



**Figure 4.2. Megan selling plants**

On Valentine's Day (14/2) members presented plants from our collection to their families to which they had attached quirky names such as Rainbow, Four Legs and Loopy, thus celebrating the occasion in a unique way (Appendix 9). When I asked Talya what the significance was of these names were she said they were "a joke, to have fun" (TI 6).

On one occasion when we could not get to Bongulethu Secondary School (21/2) we brought forward a related scheduled activity – planting spinach in containers to take to the school on our next visit. The member who grew the best spinach would qualify to win a prize. I showed them the interesting shape of the seeds and gave about 20 seeds to those who were interested. I explained how nutritious spinach is as a food source and that it is a popular vegetable in Xhosa homes. I showed them how to fill a seed tray with soil, push in the seeds and to place the trays in a warm, sunny position with enough water. Eight learners took home seeds and seed trays. This activity did not have the desired results as only Kaylin reported back that her seedlings had grown (J 13/3).

The visit by Mr Onions led three of the members to take some of the plant specimens home with them to start their own gardens (TC1). Kaylin took home the *Carpobrotus* leaves that she had brought and applied the juice to a rash that was on her grandmother's arm. After a few days she reported to me that it seemed to be helping (J 21/2). This positive, direct action, encouraged me as it demonstrated a degree of courage and faith in what Mr Onions had been teaching. It was an example of appropriating theoretical knowledge and using it in a practical, relevant way to a contextual issue.

The visit to the health shop had inspired Thalia to eat healthier foods (TC2). Megan felt encouraged to continue being a vegetarian (TI 6) and to take her mother to the health shop to buy vegetarian products and collect new recipes.

The Arbour Day assembly (7/9) was an opportunity for TALON to promote its activities in the school. At the 27/8 committee meeting, members drew up a short five minute presentation to celebrate the importance of trees. Megan was tasked by them to lead the presentation, as she was the least shy to promote TALON to large groups. At the following general meeting (28/8), members decided who would go on stage holding large letters of the alphabet that together would spell 'arbour'. Six members were needed, but the committee could not persuade enough club members to stand on the stage, so three non-members were co-opted. They made posters with large letters drawn on them. It was interesting to see their thoughts on what each letter stood for. **A** was for agriculture, **R** was for remedies, **B** was for beauty, **O** for oxygen, **U** for umbrella and **R** for recreation. The words they chose for the letters of 'arbour' suggested an awareness of how important trees were in their lives (OS 14).



**4.3. TALON members on stage for arbour day assembly**

In September (12/9), the plants that had been donated by the municipality for Arbour Day were planted after the general meeting in the tuck-shop quad. Five members helped me as the rest had other commitments. A month later, by which time end-of-year pressures had begun to take their toll, those members who could stay on after one of the general meetings (3/10) weeded the plants they had planted in the quad during Term Three. No-one volunteered to assist me with watering plants so I allocated that task to one of my Grade 9 classes.

The TALON members had the following comments about how they viewed the plant activities related to action and change. The talk by the traditional healer, the visit to the health shop, the Nahoon Estuary Nature Reserve outing and the planting of the plants had all led to changes within the TALON members: "I look at plants in a different way" (TQ19); "I have changed my perception of plants" (S4). Kate said "by knowing more about plants I have more choice of what actions to take" (FG 2). Similarly, Megan said that by raising awareness in the investigative stages "there could be proper action" (FG 2), and: "You didn't think about it before and now you're thinking about it" (FG 3). It was evident from the above examples that the club members were becoming aware of links between knowledge-gathering in the investigative stage affecting the choices that were available for action possibilities.

TALON Club members' families had been affected by their actions, for example on a holiday to the former Transkei, Kate had looked out for the medicinal plants that she had learnt about (FG 2). Kerri was now looking after her own bonsai instead of leaving it to her mother to water (FG 4). Kate was always discussing things with her mom, who wanted to invite the traditional healer to talk to her garden club about medicinal plants. Kaylin had mobilised her family and the gardener to plant seedlings and to fertilise them and make compost (PI 2; TI 3). Expressions of emotion were evident, especially in the case of Kaylin, who wrote: "(planting plants) changed my whole perspective about the environment. Now, after that, I've gone plant crazy... they are exquisite, enjoyable, beautiful, crazy and exciting" (S4).

The focus group discussion on the plant project had uncovered how changes in their own families had taken place as they had grown older. Kerri used to water the plants with her father as a child, but this had stopped: “We used to make it a big thing to water the sunflowers, now we need more money to buy things and they need to work a lot harder” (FG 4). Megan, too, commented: “Me and my mom used to garden together when I was younger, she’s got too busy now, and she doesn’t have time anymore” (FG 4). In these examples, past experience with plants had been joyful and there was a wistful sense of loss that this type of interaction in the company of a parent was no longer occurring.

Club members assumed that other people beyond TALON Club were influenced by the plant project: “The people who bought plants from us, they didn’t just leave the plants to rot in a corner, they planted the plants, and it spread, like all through. Our work spread to all those who bought plants from us” (M, FG 3). I heard the following positive comments from two parents on the evening of the plant sale: “This is a marvelous idea” and “What a good idea” (J, 29/3). Certain educators at school became involved too, bringing pots for the plants, taking photographs for the school magazine and term report, and buying potted plants from the TALON members.

### **4.3.3. Animals and Animal Welfare**

#### ***4.3.3.1. Summary of animals and animal welfare-related activities***

The animal welfare theme was well-established within the TALON Club. It has been customary to sponsor kennels for cats and dogs at the SPCA, bird enclosures and fish tanks at the Aquarium and animal cages at the Zoo for some years. Annually, tinned food is collected for the SPCA animals through an inter-class competition. In January posters were made for all the classrooms to encourage learners to donate tinned food for the SPCA. These were taken by the committee to the SPCA in March. To fund this and other projects in 2007, the club raised money by selling fried (slap) chips to supporters of school sports teams at a derby day (5/5) and selling succulent, waterwise plants at the Open Evenings (29/3, 14/5). At a meeting at the beginning of Term Two we had a discussion about vegetarianism centred on a newspaper article (Appendix 23). Mrs Selkirk and I attended a bird quiz in May. Our first outing to the Zoo took place in the third term where enrichment toys were made. We also managed to visit the SPCA to deliver a cheque and dog food. In our final term we repeated the Zoo outing, and made a trip to the Aquarium. Our last visit was to the SPCA to deliver more food.

#### ***4.3.3.2. Investigative teaching and learning processes***

It was often an outing that catalysed an investigation and search for new knowledge. For example, on a previous visit to the Zoo, club members had seen how much the bears had enjoyed eating the fruit/nut-filled ice block that they had made. At the committee meeting before our zoo visit (13/8) there was a lively discussion on what fruit and nuts they

should include in the next one they made. This was not discussed in a formal manner, but took place in a spontaneous, informal discussion. Based on prior experience they decided amongst themselves to include fruit that was in season only, as nuts were too expensive.

The Zoo provided pedagogical support for the club members to learn more about the animals for whom they were making enrichment toys. This was in the form of information leaflets on suricates and otters which were distributed to them during their Zoo visit. However, I observed that the club members took little interest in these pages and preferred to continue their practical activities without a concomitant desire to extend their knowledge base through reading (J 21/8). Similarly, the outings to the East London Aquarium had opportunities for extending learners' knowledge, but during the visit there in Term Four (22/10) the club members did not read the information boards or ask any critical questions (J 22/10).

Early in March (7/3) as a prelude to visiting the health shop, I brought a two page article on lamb slaughter to school to discuss with the members at a general meeting (Aaronovitch, 2007, Appendix 19). The basic message was that if you eat meat you should be able to see the animal being killed. The journalist had, with others, visited a farm where a lamb was chosen, slaughtered and then cooked for their lunch. The members were invited to read the article, which I attached to a white board. I presented them with a summary of the key ideas and opened up the floor for discussion. As the resource material was graphic and confrontational, it had the effect of shocking the TALON members. The group tried to come to a common understanding of how this was relevant to their own lives. One member mentioned that physiologically we have the teeth to eat meat, another expressed dismay at the prospect of having a braai (barbeque) without meat. I suggested a compromise – instead of eating a lot of meat, we could eat less, as this would result in fewer animals being killed. Megan said that she felt more strongly than ever about her convictions of being vegetarian (J7/3).

The newspaper article on killing lambs (Aaronovitch, 2007) had initiated discussion at a general meeting on being a vegetarian. At the time there was no obvious continuation of the topic, but early in February, 2008, Megan organised for a friend at school, Frances, to talk at a general meeting about the treatment of battery hens that were bought by KFC for their restaurants. Although the members expressed their outrage at these meetings, no-one said they had changed their eating habits.

There were also occasions when TALON members' lack of knowledge and lack of motivation to investigate and learn more undermined the success of animal-related club activities. In the first week of May, an inter-school birding quiz was organised by the Border Bird Club. The aim was to introduce young people to the hobby of bird watching with the prospect of increasing younger membership of bird clubs. We could not get any TALON members to volunteer, as

they felt that they did not know enough about birds or their names and so only Mrs Selkirk and I attended as spectators to support two non-TALON members in the quiz.

Members interviewed in the focus group had the following reflections about their visits to the SPCA, the Zoo and the Aquarium: "I've always learnt something on the outings, especially the zoo visit" (KA, FG 6); "If you go to the zoo or the aquarium it teaches us about the animals and what we should and shouldn't do, like when they're becoming extinct, if they're endangered really severely" (K, FG 6).

#### **4.3.3.3. Teaching and learning processes that support visioning**

In Term One, club members were invited to express their expectations and visions for TALON activities in a general questionnaire (18/4). In response to the question "What outings would you like to see planned in the near future?" almost all indicated that they wanted to make a difference for the environment in some way. More specifically, 8 of the 19 club members referred to their desire to get involved with animal welfare-related activities. "Zoo visits, picnicks (sic) and SPCA volunteer work" (TQ 8); "More SPCA visits, maybe just to help" (TQ 10). However, none of the 7 members who applied to become 2007/8 TALON Committee members mentioned animal-related activities in response to the question "What are your visions for TALON in the future?" (TC 1-7).

During a TALON Committee meeting to plan the year's activities, I invited the committee to verbally express any new ideas or visions they had for club activities. Only two new visions were forthcoming, one of which was to make enrichment toys for Zoo animals – an activity which hadn't been done in the club for some years. At a general meeting the following week, club members were asked by the committee what new activities they would like to do, but the general consensus was that members just wanted to continue with the traditional club activities and no new visions were forthcoming.

The animal enrichment workshops at the Zoo (1/8, 9/10) were seen as a new initiative that was introduced to the club: "We are kind of evolving ourselves, the zoo enrichment, we hadn't done that yet" (M, FG 6).

Kerri was deeply moved by a photographic display at the SPCA which showed neglected and traumatised animals. This encounter seems to have catalysed more explicit visioning on her part: "The rest of the school should know what it's like to be those SPCA dogs being on the streets, being starved and everything" (K, FG 6); "When I went to the SPCA and I saw those pictures of the animals on the walls and I saw how they fixed them up, I wanted to collect more food for them, I wanted to help them" (ibid.). She felt strongly that the school learners should be made more aware of what it was like to be an SPCA dog (FG 6).

In general terms, visioning processes in relation to animal welfare appeared to be extremely limited or even absent entirely. It was surprising, therefore, to note the extent of club members' practical action in response to animal welfare concerns, as described in the following section.

#### ***4.3.3.4. Teaching and learning processes that support action and change***

It was the SPCA focus that sustained the most action opportunities as the year unfolded. At the second general meeting (30/1) the members made classroom posters to encourage other learners to donate tinned pet food to the SPCA. This is quite a big task as there are 35 classrooms. This practical activity was especially enjoyed by the girls who took great pleasure in colouring in their artwork (J 2/3). Some of the members made their posters in groups. As they did not manage to finish all 35, this was continued at the next meeting (7/2). Tins of food were collected by the committee throughout the school for the next few weeks. Towards the end of the term (19/3) some of the committee members and Mrs Selkirk delivered the tins to the SPCA.

Not all of the tins were collected in time for the March visit to the SPCA so the surplus was taken in September. Money made from selling chips and plants (R340) was also donated towards supporting our adopted animal cages. The chairlady, Catherine, arranged telephonically that TALON Club would present the money and tinned food they had collected to the SPCA on the 19<sup>th</sup> of September. After Megan had handed over our contribution to the manager, we visited the cat and dog enclosures. Spontaneously some members tried to find a cat that had been lost by an educator the previous week. As a follow-up to this visit and a personal appeal from the SPCA manager, some of the TALON members volunteered to collect money outside a shop in East London on Saturday 6 October. Megan asked those who were interested to write their names on a list on the notice board, which she later collated. Serving in one-hour shifts, ten of the members as well as Mrs Selkirk and I collected money for the SPCA. Two of the girls brought their dogs as well. The general public was complimentary and gave generously. Two people commented to me that it was pleasing to see young people involved with charity work (J8/10).

A final visit to the SPCA (23/10) took place with four committee members delivering the balance of the donated tinned food. The manager was most appreciative of their efforts and pointed out that their contribution would help the animals.

On a previous visit to the SPCA the club members had heard that some of the animals suffered from boredom in their cages, especially those without a partner (e.g. the otter). This led to destructive behaviour by the animals and pulling out of their fur. The TALON members wanted to help by making enrichment toys that would distract the animals for a while. Although they made an appeal for material to be brought at the next general meeting such as small cardboard boxes (15/8), no-one brought anything with them on the day and it was up to the Zoo staff to provide the equipment that was needed.

This outing (21/8) was enjoyed by the TALON group as they felt they were doing something practical and useful for the animals. It was a direct action in that they could see for themselves that the animals were benefiting. The three animal toys made involved putting raw fish in-between the spines of pine cones for the otter to remove; filling a hollow tube with sawdust and meal worms for the suricates, and rubbing cinnamon onto small boxes for the monkeys to smell and investigate. These 'toys' were made in small groups, with assistance from the curator. This was an especially sensory and tactile experience as the fish pieces had to be pulled off the fish; the meal worms had to be handled by the members and the grated cinnamon was rubbed with fingers into the cardboard. This activity provided them with totally new experiences. They expressed 'feeling special' as they were allowed into the cages, an activity not permitted for the ordinary zoo visitor (J 15/8, OS11).

This successful Zoo outing was repeated in Term Four (9/10). Fewer members (6) attended this time round, probably due to the pressure of final year exams that were due to start soon. This was again evident in the low turnout of members (8) on our only visit to the Aquarium at which our sponsorship cheque of R500 was handed over.

In terms of change occurring as a result of these activities related to animal welfare, I noticed (especially in the focus group interview in May 2008) that the participants were beginning to link the activities we had been involved with throughout the year. Upon reflection they could see that what they were doing was not unrelated, but part of a far wider, more complex process. These comments were made when I asked them how they viewed the club outings they had planned and taken part in. Kerri could now see a link between the plant project and the activities that involved animal welfare: "It brings it back to the plants 'cos the animals need the plants, the birds and the squirrels eat the nuts and the berries, so if people are killing the plants....." (FG 7). Megan explained that going on an outing (e.g. a visit to the Zoo, beach or SPCA) enabled her to "make the connection" between what she had learnt in a formal setting (classroom-based knowledge) and what she could see in practice. "We're seeing the animals that are not as privileged as our animals...we're seeing these animals in their habitat, and we can make the connection" (FG 7).

Committee members expressed a deeper understanding of how it must be to be an abused animal as a result of their visits to the SPCA: "You can't go to the SPCA and look at an animal that has suffered so much and not change. I think you'd have to be a really hard person not to change" (M, FG 7); and "Every time we go on a visit, I tell my mom that we need to do something, especially the SPCA, 'cos that's the one that affects me the most" (K, FG 7).

The Aquarium did not present itself to the TALON Club as a context that needed particular investigation, visioning or initiation of any action and change – it was primarily a place to enjoy looking at the fish and to have fun. This was in stark contrast to the action that TALON had initiated a few years ago in 2001 when the two pelicans and the penguins were knifed by a young woman and her friends. As a result of this TALON members had stood with placards outside

the Aquarium to protest at the lack of security for the animals. This was an example, to me, that often action is only initiated when a crisis is evident. As this was not the case in 2007, there was no reason to investigate or act further.

#### **4.3.4. Community Outreach**

##### ***4.3.4.1. Description of club activities related to community outreach***

TALON members interacted with the community in two ways. The first was the formalised relationship with their sister school, Bongulethu Secondary School, near Brakfontein, and the second was through more informal and sporadic interactions with the wider East London community in relation to environmental concerns. About five years earlier, an academic initiative developed between our school and Bongulethu Secondary School. The aim was to help this disadvantaged school (that is, one with fewer resources) in the various matriculation examination areas in the form of exam papers, extra lessons, books and laboratory practicals. Every year the educators and Grade Twelve learners from Bongulethu School visited our school for an afternoon of intense examination preparation. They were also bussed to our school each May to see the annual school play. The Enviro Club, subsequently renamed TALON, offered to help with their gardens by bringing plants, pots, soil and fertilizer. In the last couple of years the scope and regularity of interaction has lessened, but TALON still makes regular contact with the school.

It was some time before we managed to arrange a successful outing to our sister school in 2007. On three previous occasions (21/2; 25/4; 16/5), either a lack of transport at our school, a school principals' meeting or a funeral at their school had frustrated our attempts to visit. Only in July (25/7) did we finally get there (see 4.3.1.1). There had been debate in the committee meetings about the visits to Bongulethu School and whether we were welcome there at all (J5/3). Kate in particular felt uncomfortable being there as she found communication difficult (J5/3). As the work got underway in the garden it became obvious that there were two groups – 'us' and 'them'. Although an attempt was made to initiate conversation it was somewhat stilted (J 25/7). We asked the educator in charge to contact us after our visit with a wish list that they might have for anything that they needed. Some money had become available at Hudson Park from the Old Hudsonian Society and we were tasked with finding out what Bongulethu Secondary School needed. To my knowledge there was no response from the school.



**Figure 4.4. TALON members outside locked gates at Bongulethu Secondary School**

#### ***4.3.4.2. Investigative teaching and learning processes***

The activities with Bongulethu Secondary School were Talon's expression of their belief that helping people was important. TALON's efforts at community outreach at the Bongulethu School showed up the disparities in living conditions in two different communities. As the processes of trying to visit the school unfolded, the frustration the TALON members felt became apparent and manifested in heated discussion. At the committee meetings (5/3, 19/3, 30/7) they discussed issues of education parity, political will, language, and the provision of health and energy services. These discussions, in which experiences and opinions were exchanged can, cumulatively, be regarded as an investigative process of young people trying to understand better the socio-economic context of a neighbouring community.

The outreach to their sister school was a reminder to them of "how lucky we are, it's sad, they don't have the proper resources and you wonder what the government's doing to help them" (KA, FG 9). Megan viewed it as a good experience because she saw how different the facilities were (FG 9). The learning through the visits into a different socio-economic context prompted not only emotional responses but questioning into the causes and consequences of these disparities. The visit led to a debate on whether it was appropriate to be teaching the Bongulethu learners about electricity saving (arising from load shedding) (FG 10, 11; J, 25/7) and whether they knew how to sterilise water (from news reports on baby diarrhoea in the north of the province) (FG 11). However, a level of naivety was evident in many of the reflections. Megan felt that even without resources "they're always happy and they try" (M, FG 9). Emma remarked that they were not spoiled, as they knew what they did and didn't have and that in spite of being less privileged they appeared happy (FG 10). TALON committee members expressed the view that learners from Bongulethu Secondary School seemed less taken up with their social lives: "People here (at Hudson Park High School) are spoiled, I think, they don't want to help, they're more worried about their social life" (E, FG 10).

Emma was curious to know how such a poor community could acquire so many household appliances. She reported that on a previous visit to the village where the school is situated, her brother had entered one of the houses and had

seen a DVD player, a flat-screen television, a fridge and a stove. He had commented to her that it was because they didn't pay for their houses or have insurance that they had extra money with which they could purchase these goods (E, FG 11). Megan added that these villages and the townships were not subjected to load shedding either (M, FG 11). Such comments reflected the struggle of the urban, middle class and predominantly white club members to reconcile the social complexity of their outreach activities. They also revealed their ignorance about the living conditions and socio-cultural experiences and aspirations of the Bongulethu Secondary School learners.

#### **4.3.4.3. Teaching and learning processes that support visioning**

In the general TALON questionnaire (TQ1-19) sixteen of the respondents had answered positively to the question "Do you think that helping people is a part of environmental education?" This was recognition that TALON members viewed their activities as going beyond the traditional ones of animals and waste issues to include those of people as well. The committee members in the focus group interview could envision ways of improving their interactions with the Bongulethu Secondary School. Emma thought that by asking for help from the Hudson Park High School Xhosa Society (Qhayiya), the problem of communication would be addressed (FG 10). This might alleviate the uncomfortable feeling that Kate experienced when visiting the school: "People look at us weirdly" (TI 1). Kate and Kerri wanted to teach the learners how to look after the plants that they had donated, and to take them fertilizer (FG 10) as they were tired of visiting and finding that plants donated in the past had died. This was ironic in that the TALON members had not committed themselves to caring for their own plants at Hudson Park High School. They wanted to teach the learners about saving electricity (K, FG 10), and how to purify water (E, FG 10). They also considered taking a water purifier to the school, but realised that this would be expensive (FG 10).

Despite the ability of the TALON members seeing that there were visioning possibilities involving their schools, there was no sense that these were a part of a bigger picture. The interventions they suggested were short term and generally involved buying something for the school, delivering it, lingering briefly and then going home. There was no evidence that TALON members considered what they themselves could learn from the Bongulethu learners. I asked the focus group if they spoke about Bongulethu school visits to their parents and Debbie replied: "I speak to my Mom and Dad, but to them it's just another poor rural school and we're trying to help out" (FG 11). I comment further on this in section 4.4.3 where the role of the educator is discussed.

On one occasion in May (J 26/5) it was a TALON educator who prevented the members from exploring new visions in a community setting. I was asked by another educator if TALON would like to help a group of street children to establish a vegetable garden in their shelter. This sounded promising, but as I asked her to explain it became less likely that this would be a suitable avenue for action possibilities. It was a group of older teenage boys and as the TALON members were predominantly female and younger I was concerned that forging a connection would be

inappropriate. I also felt that the parents of the TALON members would not approve. I offered instead to purchase vegetable seedlings to donate to their garden, but this was never taken up.

#### **4.3.4.4. Teaching and learning processes that support action and change**

As discussed in 4.3.4.3 under 'vision', there were ideas/visions for strengthening interactions by improving the contact with the school. However, although the visit to Bongulethu Secondary School had highlighted certain issues and critical questions were asked, there was no further interaction with the school that year and therefore no action and change beyond what was reported several months later when the focus group interview took place. Nor did TALON members identify a practical role for themselves in the future to address the issues discussed.

This theme, the one that involved interacting with people, presented the most barriers that could prevent any meaningful action and change from taking place. Both the learners and the educators had experienced communication problems with Bongulethu School, such as unanswered telephone calls, a lack of transport and a lack of understanding between Xhosa and English home-language speakers. For example, Natina, a Xhosa speaker, was tasked in January by the committee members with contacting the educator in charge of the nature group at Bongulethu School in order to make a date for our visit. However, her calls were unanswered and Mrs Selkirk had to approach the school herself through a different educator.

I became aware that this theme, which was people-centred, was placed alongside the other themes and did not take on a more significant role in the TALON Club. I noted an element of emotional detachment on the part of TALON members in relation to this theme when compared to the animal theme that was engaged with at a more emotive level.

#### **4.3.5. Waste**

##### **4.3.5.1 Description of club activities related to waste**

A focus on waste and remediating waste issues has historically been a common concern for the TALON Club. It was pursued during 2007 and became a dominant theme in 2008. For some years the TALON group helped with the Grade 8 litter cleanup which is held in September every year. This takes place during school hours and involves taking two hundred and forty learners into the valley below the school to collect refuse out of the Ihlanza River. The class that collects the most rubbish wins a prize. The members enjoy doing this as it is a way of being seen doing something positive for the school (J 18/9).

A small-scale cleanup of the Nahoon beach took place in February (28/2) and it was combined with the plant theme (4.3.2). During the Nahoon Estuary Nature Reserve visit (9/5) we picked up mainly glass and plastic bottles. Although waste was not the main reason for our outing there, we nevertheless used the occasion to pick up litter during our other activities.



**Figure 4.5. TALON members help with the Grade 8 Ihlanza River cleanup**

#### ***4.3.5.2. Investigative teaching and learning processes***

At the beach cleanup I pointed out that some of the small plastic waste that we picked up was the result of a possible malfunction of the sewerage system, often caused by power outages. This was exacerbated by the general public disposing of intractable solids into this system rather than the solid waste system. The waste consisted of blue ear buds, condoms, bottle tops and plastic pellets used for injection mouldings. Although club members expressed an interest in this information, there was no evidence of this investigative process relating to subsequent visioning and action-taking processes. Learners failed to see that this would, for example, be a good opportunity to approach industry with a view to educating users of their products not to flush them away, but to dispose of them in another manner, or to investigate their own families' waste disposal practices.

#### **4.3.5.3 Teaching and learning processes that support visioning**

TALON Club members' engagement with the theme of waste was based on limited investigation – there was little enquiry into the nature of waste, especially its origin. Instead members were more concerned about how the immediate and short-term problem of urban waste could be better responded to.

The visions that were expressed were derived from the focus group interview. When I asked them how we could improve the outings the responses included the following: Kate and Debbie wanted the members to include cleaning the Nahoon River banks as a new venture for the club (FG 6, 11); Kerri wanted to see more bins on the beach for people to use (FG 7) and to include the Bongulethu Secondary School learners on cleanups of the beach and valley adjacent to the school (FG 6). The Qhayiya cultural society could be asked to help mediate communication difficulties between the English and Xhosa speakers (E, FG, 11). Kerri suggested including a learning component on the beach cleanups, for example to investigate “what rubbish was doing to the beach” (FG 7). Megan wanted to include recycling as an extension of the waste theme for the following year as she saw it as an easy project that could involve the whole school : “Recycling is a big thing, ‘cos its 7-11, it’s so easy and it’s getting the whole school involved” (FG 13).

Kate could see that a messy beach would put people off from visiting it (FG 6). She suggested including a waste collection competition: “Sometimes cleanups are the best; everyone here I think loves the beach. You get into groups and you have a competition” (FG 7) and: “They learn about the environment while having fun” (D, FG 7). Visioning was concentrated more on the aesthetic effects of waste and not on health, economic, or any other potential consequences.

Megan hoped that by cleaning up the beaches they would be showing others the correct way forward: “I feel it’s quite important for us to set an example for other people who don’t think about it, they’ll see us and they’ll go, OK, why aren’t we doing that too?” (M, FG 6). It seemed important for Megan to be seen to be doing the right thing and promoting the idea that being involved in an action gives it more authenticity.

In the TALON general questionnaire conducted in April 2007, none of the 19 respondents indicated that they wanted to pursue any new ‘waste’ activities besides the traditional cleanups in the river valley and on the beach.

#### **4.3.5.4. Teaching and learning processes that support action and change**

The actions then, were conducted within the narrow focus of cleaning up an immediate problem and did not look back at the potential origins of the issue. When we did hold our cleanup at the beach our timing was inappropriate as the municipal cleaners were just ahead of us and most of the garbage had been collected. Instead we picked up the really small pieces of plastic that are often overlooked during normal clean cleanups.

The focus group was asked what changes they felt had occurred as a result of their actions. Their replies with regard to the cleanups were immediate and practical: “Cleaner beach, Cleaner beach!” (D, FG 7). This outburst reflected the understanding that by cleaning up waste, one could improve a situation in a very short time, even if only for a while.

The members made some global comments on what they had learnt from being members of TALON. They said that they had “learnt a lot” from being in TALON (TQ 6, 8, 9). “I’ve always learnt something on the outings” (KA, FG 6). Kerri said she learnt more doing an activity than sitting in the classroom (K, FG 5). This was reiterated by Kate and Megan who said that “Doing” was better for remembering than reading, talking and writing. In general the members preferred outings to the meetings (75%), which were sometimes boring (TQ 1, 11, 13, 17), and disorganised (TQ 7, 18).

#### **4.3.6. Conclusion**

This section has described the learning and teaching processes involved in the development of action competence in the TALON Club. The pedagogical dimensions of the club’s various themed activities (plants, animal welfare, community outreach and waste management) have been highlighted using the IVAC framework (investigation, visioning, action and change). Whilst this structure is effective in foregrounding the pedagogical dimensions of TALON activities towards understanding better the action competence-oriented learning processes in the club, other factors appeared to have been influential too. These contextual and relational factors are described in the following section.

### **4.4. CONTEXTUAL AND RELATIONAL FACTORS INFLUENCING ACTION COMPETENCE-ORIENTED LEARNING PROCESS IN THE TALON CLUB**

#### **4.4.1. Introduction**

Several contextual and relational factors influenced the nature and outcome of TALON Club activities. These included structures and traditions at club, school, family and community level, as well as more individual factors such as personal aspirations, social dynamics and the moral impulse. Some of these have been alluded to briefly in the summative descriptions of section 4.3, but this section now foregrounds their occurrence and describes the extent to which they affected action competence-oriented teaching and learning processes in the TALON Club. These factors were recorded in my journal, in the observation schedules and in the focus group interview.

#### **4.4.2. Structures and mechanisms of a school-based club that influenced action competence-oriented learning process**

Chapter One provided a brief outline of how the TALON Club is organised. Now in this section, I describe in more detail how those club structures and mechanisms appeared to influence action competence-oriented learning processes. I describe the nature of the meetings, the club's alignment with wider school structures and the nature and role of the committee.

##### **4.4.2.1. The meetings**

When I attended my first TALON general meeting I noted in my journal that it appeared 'chaotic' (J/23/1). The learners were noisy, exuberant and had to be reminded that TALON was not a social club; that it had a more serious function (J/ Mrs Selkirk, 23/1). On other occasions the use of the 'ice-breaker' as a way of having fun and getting to know the members was a puzzle to me - on only one occasion did it have any environmental input (OS, 8). I observed Chris calling for order at the AGM (OS 5) and Mrs Selkirk taking charge of an unruly meeting (OS 21).

At the focus group interview in May 2008, I discussed with the committee how they viewed the club meetings. Megan conceded that: "they are not really about the environment, it's more about letting people know... it's also about feedback, which is important, about what we have been doing, what they feel about it, to encourage" (FG 11). Debbie and Kerri concurred that they were for "communication and to know what was going on every week" (FG 11).

I observed that democratic processes were commonplace within the club. Using an agenda that followed basic business meeting guidelines (such as welcome, apologies, ice-breaker, events to be planned, general and thank you) ensured that there was a sharing of tasks within the TALON committee and that the general members could make a contribution as well. My observation schedules indicated that lively discussion occurred and that there was amicable debate between the members. Ordinary members had the opportunity to vote and they exercised this right (OS 4, OS 5) when voting for new committee members, the TALON outings and on who would say farewell to the Grade 12 learners.

Existing club structures seemed effective in allowing broad participation, but they were not used as effectively as possible. For example, sometimes the more serious issues were rushed through because the ice-breaker had taken up a disproportionate amount of time. The input from the educators was on occasion very rushed as the meeting may have started late or other issues sidetracked the discussion. I noted (OS 5) that at the committee meeting immediately before the annual general meeting, at least twenty minutes were used to discuss a pancake recipe. While the AGM was in progress, two of the committee members cooked the pancakes for all to eat later.

#### **4.4.2.2. Alignment with school structures**

I was encouraged by the way that the TALON Club functioned, given that it appeared, in my opinion, to be placed in the lower ranks of importance at the school (J 16/5). For example, some members were unable to attend club meetings and outings on a Wednesday due to school sport commitments, which took priority over TALON Club meetings. To accommodate this, we sometimes had our outings on Tuesdays. Wednesday afternoons are traditionally reserved for staff meetings, so often Mrs Selkirk was unable to attend on time. I was able to be there as I had been given special permission to miss the staff meetings for my research.

At times there were too many other activities at school to expect the TALON members to be at all the meetings. In the first week of May, for example, there were 3 TALON Club events (general meeting, bird quiz and derby day) which TALON members were expected to attend (J 2/5). In all I counted over fifty TALON events for the committee and educators, 36 of which general members could attend too. To attend all of these would require substantial commitment and flexibility on the part of the learner.

Different times of the school year also compromised the continuity of club activities and hence their associated learning processes, for example examinations and sporting events. It becomes difficult to communicate with learners during the examination period as their teaching venues change and school finishes much earlier than normal.

The extended educator strike in May/June 2007 similarly delayed the TALON Club projects as well as my own research activities with the club. This period of time was an uncertain one for both learners and educators who had no idea how long the strike would continue. This had never happened in our school before and was a new experience all round. To help cope with the uncertainty of the strike, our school ran a shortened 'skeleton' day so that at least the mid-year examinations could take place. After that the learners went home and no extra-murals (TALON meetings) took place.

Additionally, the very structure of the academic year into four terms with vacations in-between imposed a logic onto the sequencing of club activities which might not otherwise have existed if the club was not school-based. For example there was almost a two month break in all club activity in May/June/July and nearly three months in November/December/January. Club members (and the educators too) had an unspoken expectation that a new school term should bring a new theme and new activities, and this often took precedence over the resolution of earlier themes or projects. This was evident in the Third Term, when the new committee started their year of office and wanted to introduce new ideas and activities.

Communication with club members through school mechanisms was both efficient and obstructive. Messages to remind club members of forthcoming events or to announce late changes to the plans could be announced over the

inter-com, but these were not always heard or remembered by club members. The club notice board was a potentially effective means of communication but often had outdated or incorrect information displayed because committee members failed to keep it up-to-date. The committee members kept in contact with each other with their cell phones.

Hudson Park High School is in the fortunate position of having five minibuses to transport learners for school activities like clubs and sports events. This enabled many of the off-site club activities such as visits to Nahoon Beach, the Aquarium and Bongulethu Secondary School to take place. However, there were occasions when access to the transport was denied after the outing had been arranged and the club either had to reschedule the activity or cancel it. For example in the first term our visit to Bongulethu Secondary School was cancelled because the buses were needed to transport cricket teams to an away match.

#### **4.4.2.3. The TALON Committee Structures**

The structures and mechanisms of the TALON Committee proved to be central to the club's existence. Importantly, they created opportunities for individual committee members to organise projects, plan and conduct meetings, and when necessary, to motivate or cajole general club members in response to, for example, a lack of commitment or punctuality. The TALON Committee appeared to be the only mechanism in the club that openly encouraged creativity, initiative and responsiveness, and hence became the vehicle for some individuals to develop their leadership skills and clarify their environmental commitment, as described below.

Members who wished to become committee members needed to complete an application form during Term Two. In early 2007, fourteen club members indicated in the general questionnaire that they would like to be on the committee, with eight applications being subsequently submitted. They had to state what their visions were for the future of TALON and why they wanted to be on the committee. Their visions included a bigger club and making a difference (TC1); getting more people involved (TC 2); getting people to be more enthusiastic about the environment (TC 3); getting bigger, gaining more members (TC5); and seeing TALON excel at what it was doing (TC7). They all contained elements of helping, teaching and learning.

Some of the applications indicated their confidence in themselves to become good leaders: Respondent TC1 believed she was valuable to the club and that she was very committed to it. TC2 said she already had some leadership qualities which she would like to develop. Leadership skills were indeed enhanced or developed by the committee members within the workings of the club. All the committee members shared the running of the meetings. Debbie kept a reliable attendance register. The scrapbooks show evidence of the learners taking up leadership opportunities: for example in S1 and TC2, Thalia is seen taking charge of the agenda and using the blackboard to direct the meeting. Catherine and Megan presented a slide show to the Grade 8s to attract new members (J 6/3); Megan sold plants and organised the selling of chips on Derby Day (J 29/3, 5/5).



**Figure 4.6. Thalia takes charge of a meeting**

Early in September Mrs Selkirk and I noticed that the committee was not working together very well. Catherine told us that personal differences between two committee members had caused the disruption. The notice board was not being kept up to date and there had been a drop in attendance at the general meetings. At a later committee meeting on the 10/9 (OS 17) Mrs Selkirk was uncharacteristically outspoken. She said that unless they were better organised and more disciplined, they risked losing TALON. They had to put their personal differences aside and focus on the needs of TALON. This led to an emotional outburst from Megan who was determined to save the club.

There were two unsolicited responses to this crisis from the committee members. At the next general meeting Megan asked all those in attendance to sign a petition to save TALON. She asked members to attend more regularly, to check the notice board carefully and not to cancel going on an outing after having indicated that they would be doing so. After this appeal, attendance at the meetings was somewhat better.

Emma, the chairlady, conducted a SWOT analysis with the committee listing the Strengths, Weaknesses, Opportunities and Threats they saw to the club. She had got this idea from her father, who is involved with education management. I did not know about this and it was only a passing comment that alerted me to the fact that the SWOT analysis had been conducted. To my knowledge there was no action taken on the findings, and I was not informed of its contents. When I asked Emma at a later date what the outcome had been, she was vague and said that the committee wanted to be more effective. I also found out that Kate had not been included in the SWOT questionnaire. I interpreted this as an example of a good idea that was not followed through, possibly because of a lack of confidence

on Emma's part or because Mrs Selkirk and I had not been intuitive enough to recognise that they needed help to become more effective as a committee.

#### **4.4.2.4. *The influence of TALON traditions on the club activities***

It emerged that in the TALON Club tradition was an important reason for the activities that were chosen (K, FG 5). It was described by one committee member as what "people had left behind for us to do" (M, FG 6). Collecting food for the SPCA, selling slap chips and visiting the Bongulethu Secondary School were all projects that had been inherited by the current group (FG 8, 9). The committee had asked members what they had wanted to do and the response had been "stuff that they had done before" (KA, FG 6). Kate expressed the fear of getting "stuck in the rut of tradition and not doing anything new, so it must be up to us to think of (activities), not them" (ibid.). They did try new things – making toys for the Zoo animals and organising a river clean up rather than a beach clean up (which only took place in 2008), (J 16/7). It was difficult for the committee to make any significant change to this situation, as they were undertaking activities that were expected of them by the club members themselves.

#### **4.4.3. The role of the educator in the TALON Club**

During the first meeting of the TALON committee in January 2007, I introduced the idea of action competence to the club members. At that stage, my limited understanding of action competence was founded on the precept of encouraging learners to develop their own learning opportunities. While this is certainly true, it is only one aspect of the process and ignores the context in which it develops. I explained to the committee that I would observe how they proceeded with the idea of using plants as a theme, highlighting their importance to humans. The club activities for the first term would thus be centred on plants. At the second committee meeting the members prepared for the first general meeting. I could not attend this meeting, which in hindsight was a mistake because the committee members and I developed different expectations of the nature and purpose of the forthcoming general meetings. These misunderstandings were rectified at the next meeting. However, I missed a further two meetings due to professional commitments. I mention this here to indicate the initial confusion that transpired and how necessary it was for me to attend every meeting. It was apparent that a close working relationship between the educators and the members was essential and, in my case, was still developing. Communication, so necessary for action competence to develop, had to take place in the physical presence of each other.

Mrs Selkirk spent about two and a half hours per week in contact time with the TALON learners, divided roughly as follows: One hour every two weeks in a committee meeting, one hour every two weeks in a general meeting and about three hours on an excursion or visit every two weeks. This was besides the planning that was going on behind the scenes – making phone calls, organising transport, making announcements at school, and bringing equipment to meetings (J). I know that this was the case as I was there as well and I often spoke to her on an informal basis in the

staffroom. My journal (dated 8/2; 28/2; 27/3; 19/4; 16/5; 21/6; 16/7; 10/9) record some of these discussions. She also needed to have a PDP license to drive the school bus. This costs about R300 every two years.

The committee ran the meetings themselves, often without Mrs Selkirk initially being present when she had other commitments. However, if she felt that the meetings were deviating from the agenda, or if there were discipline issues, she would intervene (J19/4, J10/9, J16/7, OS2, OS16, OS17, and OS21). She also kept copious notes in her diary to help her remember and plan meetings (OS2, 16). It helped with operational matters that her daughter, Catherine, was the chairlady of TALON for the first six months of 2007 (J 24/5). Without the attention to minute details by Mrs Selkirk and later me, the club would not have run as smoothly as it did.

Mrs Selkirk said at a committee meeting in September (10/9) that she was happy to do afternoon outings with the learners, but not weekend camps. She had experienced a lack of environmental interest and discipline on previous occasions and felt that such trips were not worth the time she had to spend away from her own family (J10/9, OS 17). At this particular committee meeting where the comments were made, she was feeling annoyed at the lack of co-operation she was getting from the committee members (J 10/9). They had missed a planning meeting and were not keeping the notice board up-to-date.

On other occasions Mrs Selkirk was fully involved – helping to sell plants, helping to sell chips, encouraging the learners in what they were doing. I noticed that she was generally very positive and always praised the members (OS 2, 7). She had strong feelings about our relationship with Bongulethu Secondary School. When I asked her whether we were possibly being patronising in some of our actions she was adamant that this was not the case. In her opinion the TALON learners had a lot to give and they should do so. She understood why Bongulethu Secondary School was closed when we visited and was willing to keep the channels of communication open for an explanation (J16/5).

Mrs Selkirk took the decision to change the results of the elections for the new committee in May 2007. She felt that the person who gained the most votes was not ready to be in such a leadership position and instead announced that Emma, with the second highest number of votes, would be the new chairlady. Emma was in Grade 11 and was seen as more experienced and reliable than the other candidate. She had always been very loyal and attended all the meetings (J24/5).

Towards the end of June, Mrs Selkirk decided that she would be leaving TALON at the end of 2007 as Catherine, her daughter, would no longer be there. She felt she would rather be involved with a younger daughter in the chess group. She also thought that a younger person would do a better job than she had (J 21/6). As educators we could steer the choice of projects that the club became involved with. In the second term (J 19/4) a fellow educator asked if the TALON Club would like to become involved with establishing a vegetable garden at a shelter for street-children. I

declined the offer without taking the request to the committee as I did not think it was an appropriate project. It would involve older teenage boys and our generally younger TALON girls working together. I also felt that it would not have the support of the members' parents.

#### **4.4.4. Awareness of wider socio-ecological issues**

I wanted to determine to what extent the TALON members were aware of and influenced by wider socio-ecological issues such as global warming, poverty, malnutrition and the energy crisis. Through the focus group interview in May 2008, I tried to determine whether awareness of such issues influenced the investigative, visioning, action or change processes of TALON Club activities.

Global warming/greenhouse effect was mentioned by 5 of the 6 respondents in the TALON interview as their main worry in terms of major environmental issues. Other concerns were pollution and titanium mining in the Transkei. They all felt they could help, but not alone: "If everyone pulled their weight they could make a difference" (TI, 4), and "One person can't change the world, but a group can – it's like the starfish story, if each one of us can pick up one starfish and return it to the sea, we can save them" (TI, 6). Luzuko wrote in a thank you card to me: "When I hear on the news about the things that are killing our environment... I hope TALON can help... 'cause change starts with little steps, then they get bigger and bigger" (C 3).

One year later (May, 2008) the issue of energy and load shedding was the most important concern of the participants in the focus-group interview (FG 2, 3, 10, 11, and 12). They were aware of the ozone layer, the Brent Crude oil price, hydrogen cars and economic hegemony (FG 4, 5). Kerri remarked that the forests were being cut down for profit, and that "It shouldn't be about the money... where's the money going to be if the world dies?" (FG 5). Megan read the following off her ruler: "Today we understand that our future depends on the earth, and the earth's future depends on us" (FG, 5). They debated the power of money and the discussion was concluded by Kate (FG, 5) who quoted a North American Indian chief: "After the last tree has been cut down, after the last fish has been caught, after the last river has been poisoned, then you will find that money cannot be eaten".

Closer to home, in the Eastern Cape, the learners were aware of load shedding and reducing electricity usage. They were also concerned about health issues such as the deaths of babies in the northern part of the Eastern Cape due to diarrhoea caused by polluted water (FG 10). This led to a discussion about whether the learners at Bongulethu Secondary School needed to be taught about how to purify water (FG 10). They concluded that buying a water purifier for the school would be too expensive. Kate said she was looking out for examples of what she had learnt about plants when she travelled through the countryside – she now noticed the plants she had seen at one of the meetings (FG 2) and the exotic vegetation on a farm near Grahamstown (FG 12).

I concluded that these socio-ecological challenges were not making the learners feel helpless; if anything they were inspired to make a more concerted effort to learn more and to take action. The following section describes in more detail the extent to which club members were motivated by personal commitment to do good deeds and minimise suffering or environmental degradation.

#### **4.4.5. The moral impulse – learning and caring for others**

An educator, Mrs Schwartz at Merrifield College, East London, commented that “a certain type of child would join an environmental club” (Schwartz, pers comm., 2007). She did not elaborate on what she meant, but when I interviewed two parents about this comment, the response from one parent (PI 2) was: “She’s right, (my daughter) is soft for animals and plants, and she always notices the change of seasons”. Another parent (PI 1) felt that a child in an environmental group would have a great love for the environment that had probably been instilled by parents or a mentor.

Members of TALON join on a voluntary basis – they are there by free choice. There is a small incentive in the form of service points. A point system was put in place some years ago for members to earn a badge through attending meetings and outings. A meeting is worth half a point, an outing one point, and committee members get double points. Points are also awarded if the member donates something substantial towards TALON. For example at the derby day, members who donated frozen chips, oil, tomato sauce or money gained a point. After twelve points the member is entitled to wear a TALON badge on their school blazer. These points can accumulate towards gaining a service award from the school. At prize-giving in August each year there is a trophy for the most outstanding TALON member. In 2007, Catherine, Mrs Selkirk’s daughter won the prize. At the end of her five years in TALON she had accumulated about 180 points. In comparison, Megan had 115 points and Debbie had 95 points after two and a half years as members. Mrs Selkirk worked out the points using the attendance register kept by Debbie. It was interesting to note that the newer members I interviewed were unaware of the service points (TI 1, 3) and that others (four who were interviewed) were not really interested in them and would have become TALON members anyway (TI 2, 4, 5, 6). This form of altruism was typical, in my opinion, of the average TALON member.

Interviews, samples of learners’ work and my own observations through being actively involved in the club reveal that the desire to help and the desire to learn more about the environment were important factors for joining the club. In the TALON questionnaire that I circulated in early 2007, club members indicated wanting to learn about their environment (TQ 1, 3, 4, 5, 7, 10, 14, 15, 17) and to help (TQ 3, 10, 19). Other reasons for joining TALON included fun, friends, adventure, and wanting to make a difference. All the TALON committee application forms (TC I-7) had ‘helping the environment’ as a reason for being elected (see Appendix 4). Four other members (not on the committee) also wanted to help the environment (TQ 3, 10, 11, 17). Specific environmental problems that members wanted to help with were pollution and animals (TQ 4, 5). The scrapbook pages (S1, 3, 6, 7, 9) are visual evidence of the

TALON members engaged with helping the environment through their actions. The scrapbook authors expressed a desire to be helpful, for example: “We are learning more about what is happening in our environment and how to help it” (S 3); and “Cleaning up is helpful, I’m doing something good” (S9).

The desire to investigate and respond to environmental problems was in many cases closely allied with personal feelings that went beyond cerebral knowledge dispensed as ‘cold, hard facts’ (Jensen, 2004). TALON members expressed deep emotions about their commitment to TALON and their subsequent actions. “I love TALON” (TC 7); “I can’t wait to tell my mom about the TALON meeting, it’s exciting to be in touch with nature” (TI 2); “TALON is such a good cause...if being on the committee means giving up [other activities], I will” (TC4). This moral impulse and desire to make a difference was linked to deep emotions, as when Kerri was moved by the photos of abused animals at the SPCA (4.3.3.3).

#### **4.4.6. Social dynamics**

It was important for the TALON members to be with their friends and to make new ones (TQ7). All the scrapbooks show interaction between the members and that they were having fun together. Respondent TI 3 said she had always found the people in TALON friendly, that they said ‘hello’ outside of TALON meetings and that she always felt welcome. TALON was seen as “a place where people could hang out with their friends” (TQ 15) and that “being together, no matter where, is fun” (TQ 12).

It was apparent that new technology, in this case the cellular phone, was being integrated into the meetings. Cellular phones are banned during school hours, but in the afternoons they are in evidence. I noted during one club meeting that six cell phone interactions took place (OS 1). Mrs Selkirk told them at the next meeting that it was bad manners to be texting or speaking on a cellular phone during meetings (OS2). After this I noticed a decline in calls during meetings, but Kate was always listening to music and said she was addicted to mix-it (OS 10). As mentioned in 4.4.2.2, the TALON committee members kept in contact with each other with their cell phones. I mention this as at times I was unsure that as educators we had the full attention of the TALON learners (J19/2; FG J, 7)

Fun as a reason for being in TALON was mentioned in 13 of the 19 TALON questionnaires. Fun was also given as reason for preferring outings to meetings at school (TQ 1, 2, 3, 6, 8, 9, 13, 16, and 17). It was “NB to have friends and fun, if it’s not fun why are we doing this?” (TI 1). And from TI 3: “Fun is important, I wouldn’t enjoy TALON without it: it would be too serious”.

It was evident that some members did talk to their families and friends about what they were doing in TALON. Generally, TALON activities were discussed with both parents and, according to one learner, some of the best discussions took place in the car on the way to or from school (TI, 1) or at the dinner table (PI 1). In both the parent

interviews I conducted, it was clear that there was in-depth dialogue occurring between some TALON members and their parents (PI 1, 2). One parent said that she was unable to answer some of the challenging questions that her son was asking at home (PI 1). Kaylin was especially close to her grandmother and found her to be an ally at home when trying to persuade her mother to buy her plants and fertilizer (PI 2). Kate also said she had a lot of communication on environmental matters with her parents and that they were a “very environmentally aware family” (FG 4, 13). Only respondent TQ 16 said he didn't talk about TALON at home or to his friends.

#### **4.4.7. Dwindling club membership**

A lack of new members joining TALON, especially those from Grades 8 and 9 was a concern. In May 2007, Catherine and Megan gave a slide show to the Grade 8s to encourage them to join. At the open evening in May there was a TALON table manned by the committee to promote the club to prospective Hudson Park learners. A chip 'n dip social was organised at one of the meetings to encourage new Grade 8 members to attend (J 7/3). There was no response to these overtures.

I spoke to Mrs McIntyre, who is in charge of the environmental club at Hudson Park Primary School about our club's concern about membership (J29/10). She said that they had also noticed a drop in numbers, especially amongst the older members. There were currently no Grade 6s and 7s in her group. This meant that there was no current pool of environmental club members coming to the high school who might join TALON Club.

There were other service groups that operated within the school, the most popular one being Interact. This club has a people focus and is involved with projects around East London such as visiting old age homes, orphanages and hospitals. It had more than fifty members in 2007 and had a higher profile at the school. TALON therefore had to compete for membership with Interact and other groups such as first aid, library, and tuck-shop monitors.

There was an overwhelming ratio of girls to boys on the TALON committee in 2007. In 2006/7 there was only one male learner on the committee and in 2007/8 there was none. This pattern was reflected in the general members who were also mostly girls. By the end of the year attendance at general meetings had dropped from 20 members in February to 14. The four male learners who had been attending at the beginning of the year had reduced to two. The attendance at outings dropped – on average only 7 or 8 members participated – mostly committee members. The highest member attendance at a general meeting was 20 (at the chip 'n dip social and the hot-dog social) (OS 6).

Sometimes food was used as an enticement to increase membership attendance at meetings. From the above examples one can see that this strategy was effective. Most felt that this was a good way to encourage Grade 8s to join, but another member felt that this was not an ethical option (TQ 8). Three members (TQ 5, 8, 10) did not enjoy

having people at the meetings who were only there for food and “had nothing better to do” (TQ 8). The visit to the health shop had been popular as there were some tasty dishes prepared for the members (S 7).

#### **4.4.8. Community interactions**

TALON operates within the wider school structure and the members interacted with other learners and their parents. In various ways, these extended interactions influenced the action competence-oriented learning processes that occurred within the club.

The most important function of the club that involved other learners was fundraising. The club needed to undertake some form of fundraising for the various projects being supported. There were two ways to do this – by selling plants grown by TALON members to educators and parents, and by selling slap (fried) chips to learners at a Derby Day. Both were successful, with Megan saying; “Fund-raising is nice, it’s a good life skill to deal with people and customers... and you know there’s an initiative we’re trying to get out, it affects them, then they feel better about it even if they don’t want what we are selling” (FG 8). Emma viewed fundraising as being for the benefit of the environment; Megan said it was good for building their (inter-) personal skills and Kerri said: “You get to deal with tricky situations” (FG 9). They also acknowledged that selling plants had been a good idea: “we made a lot of money, selling plants” (M, FG 2).



**Figure 4.7. TALON girls selling chips on derby day**

Other ways that they interacted with the rest of the school included the collection of pet food, the Arbour Day assembly and the slide show for the Grade 8s. By selling plants to parents at open evenings the project affected the greater school community. At the same events the TALON committee advertised the clubs activities with other service groups in the hall. Mr. Onions, the traditional healer and Mrs Kruger from the health shop were both parents of children at our school. Many educators were supportive of TALON and brought pots, took photographs and wrote short articles for the school newsletter.

The TALON members were aware of how other learners viewed them. Some members felt that being in TALON was difficult because other learners saw them as being “weird” (Kate, OS, 16) and of “having a mental picture of TALON” (FG 13). Debbie commented that you had to be brave to be in TALON and that it was committing “social suicide” to be seen carrying a plant (OS 16). There was an idea that being in TALON one had to be clever and scientific: “I think there is a TALON label, it’s a scientific thing - you have to be clever” (E, FG 13). There was ignorance about TALON activities: “Some people don’t know what TALON does, when I explain they go WOW, we didn’t know that” (D, FG 13). Thalia felt differently and commented that TALON had a new image, it “wasn’t so nerdy anymore, it had got substance and was more meaningful” (TI 5).

Outside school there was interaction with members from the community. When visiting any of the places that related to the themes described above, club members and the educators interacted with and learnt from the people working there. As the learners took home new knowledge, they mobilised it by using the community structures such as the municipality (for a blocked drain), the SPCA (for a lost dog), and the newspaper (for road traffic control) to effect change in an environmental problem (IT2, IT3, IT5). This displayed a growing confidence in the social structures that support a democracy and therefore action competence processes at work.

#### **4.5. CONCLUSION**

This chapter has provided an account of the activities and associated learning processes of the TALON Club during 2007. The data was presented in two stages. The first stage (section 4.3) focused on the pedagogical processes associated with the development of environment-oriented action competence in the club. Because action competence develops in response to a particular concern, the section’s first level of structure was thematic (plants, animal welfare, community outreach and waste). The second level of structure in stage one of the chapter drew on Jensen and Schnack’s (1997) pedagogical dimensioning of action competence (investigation, visioning, action and change) and each theme was considered in terms of this IVAC framework.

The second stage of the data presentation focused on contextual factors that may have influenced action competence-oriented environmental learning processes in the TALON Club. This stage (section 4.4) was structured according to themes that emerged from close scrutiny of the data. These included structures and mechanisms of the club and school as a whole, social dynamics, club members’ sense of moral obligation to attend to environmental concerns, and the role of the educator in steering club processes.

In the next chapter I discuss this data in terms of the development of action competence-oriented teaching and learning processes and factors that influence such processes.

## CHAPTER FIVE: MAKING MEANING OF THE DATA

### 5.1. INTRODUCTION

This chapter is structured in two parts. The first part (Section 5.2) presents a holistic, summative reflection on the development of action competence in relation to TALON'S four themes: plants, animals and animal welfare, community outreach and waste. It draws on the work of lead authors and researchers in action competence (see section 2.5) to interrogate the extent to which TALON Club activities created opportunities for action competence-oriented learning processes. This discussion is derived from Chapter Four's more detailed account of the club's themed activities which were presented in terms of the IVAC framework.

From this platform, the second part of this chapter (Section 5.3) addresses the research question of the study: 'What influences the development of action competence-oriented teaching and learning processes in a school environmental club?' The goals established were:

- To describe a year of activities within the TALON Environmental Club.
- To identify how pedagogical, contextual and relational factors influenced action competence processes amongst TALON Club members.

Against the backdrop of the first goal, the second goal is discussed under three broad categories: the influence of pedagogy (5.3.3); the influence of context (5.3.2) and the influence of relational dynamics (5.3.3).

### 5.2. THE DEVELOPMENT OF ACTION COMPETENCE IN RELATION TO TALON'S FOUR THEMES

#### 5.2.1. Indicators of elusive action competence (Appendix 20)

The eight indicators from Appendix 2 (see 2.9) were used to review each of the four TALON themes in relation to these indicators. I had distilled these indicators from the literature on action competence and an extensive analytical table, an extract of which appears in Appendix 18. This helped me to gain a clearer sense of the nature and extent of action competence-oriented teaching and learning processes in the club before analysing (in section 5.3) what factors influenced such processes. I was aware that 'boxing in' the spirit of action competence risked creating a narrow and prescriptive view of the process, thereby undermining the very ethos of action competence. Consequently, I attempted to work with the indicators in the broadest possible way while reviewing the data, seeking trends and synergies between the literature and the experiences within TALON Club, but avoiding technicist or prescriptive comparisons. In the following section (5.2.2), I review the data presented in Chapter Four in relation to these

indicators to gain a clearer sense of the extent to which action competence processes were enabled through TALON Club activities.

### **5.2.2. A review of developing action competence through themed club activities**

**The plant theme:** The manner in which this theme was chosen was not democratic - it was in a sense imposed on the members by the educators. In the view of Jensen and Schnack (1997), this theme, as the focal point of potential action, was not reached by negotiated consensus. They insist that the learners must make a conscious decision themselves as to what they want to investigate and how that will be achieved. TALON members' sense of 'ownership' of the learning processes was thus limited. Consequently, the expected sequence within any action competence-oriented learning process of developing a sense of moral responsibility and a subsequent commitment and motivation to act was lacking. Ashley (2000) suggests that school curricula should strengthen the learners' ability to be able to take moral decisions in the face of the dominating value given to science in many education systems; Ferreira (1997) reported that it was Grahame, the educator, who felt the moral responsibility to extend his pupils further than the three Rs so that they became action competent. In the TALON Club it was left to the educators to arrange for the equipment for the plants, to bring the cuttings, to water them and to organise the speakers (4.3.2.1).

Opportunities were limited for TALON members to acquire their own new skills and to employ them to better understand why the plant theme was chosen. Some members were able to reflect on a new interest in plants (especially Kaylin, S4) and how to grow them (Debbie and Kate), but it is unclear how the theme was interpreted by the majority of the Club members. Consequently, no substantial barriers to action were identified and therefore no strategies to overcome them were developed, which is what Simovska (2000; pers. com, 3/03/ 09) identifies as significant. In particular, her paper in 2004 that examined possibilities and barriers as learners participated in their everyday life at school found that even when changes were not successfully brought about, the learners expressed commitment to continue with their endeavours even after the project closure. Vognsen (1996) reported similarly from a Danish school project that struggling for change had enabled the learners to stand together and engage in collective action. The TALON members did not persist with the plant project, even though it had brought in needed funds and had been supported by other educators and parents.

The quality of the knowledge that the members encountered was based heavily on content and information transfer by the educators, guest speakers and the trail guide. The learners were not given opportunities to explore for themselves how the plant project should have proceeded. This is expressed succinctly by Stevenson (1987, p. 85), cited by Mogensen (1996) as an example of the two different approaches found in environmental education – one that has its origins in the traditional school (didactic in nature), the other being more progressive and open-ended in nature. Mogensen continues that action competence is not about the dissemination of knowledge, but the development of a personal capacity that enables individuals to take meaningful actions in a critical manner. Similarly

Simovska (2005) found that learners worked in a more action-competent way when the knowledge was open-ended and dialogic in nature, with no limits to their visions and action possibilities.

As discussed in Section 2.5.3, and summarised in Figure 2.1, Jensen and Schnack (1997) make an important distinction between 'actions' and 'activities'. They note that true actions have two characteristics: In the first place an action must be addressed to finding a solution to the problem being studied; in the second place the learners themselves must decide what to do, either alone or with others. Analysis of the data of TALON Club members' involvement with the plant theme reveals that the 'actions' that were initiated remained in the realm of 'activities' and failed to produce the sense of personal and group agency that would enable them to make choices towards enacting change processes. I, in my role as the educator, paved the way for these activities to take place which resulted in a weaker engagement by the club members with the plant theme.

Critical engagement with the plant theme was absent as the members did not question the role of tradition, habits and norms with regard to plants. This theme had the potential of a worthwhile investigation into exploring the cultural traditions of plants and the threat of their overexploitation, but it was not taken up in depth beyond the talk by Mr Onions (4.3.2.2). We therefore missed an opportunity to challenge the current usage of these plants and to explore more viable ways of working with them that would ensure their survival. Schnack (2000) points out that when we challenge traditions we are presented with the opportunity of freeing society from the repressive power and grip that they hold. An action competence approach is able to uncover our automatic lifestyle choices that are 'traditions-in-action' to establish critically how relevant they are to current contextual circumstances.

There was little evidence of club members making a connection with plants beyond their importance from a scientific aspect. I had hoped that they would see more links with plants from the point of view of career opportunities and hobbies, but the committee took scant regard of the spider diagram that aimed to reveal experiences that would strengthen their relationship with the plant theme (4.3.2.3). However, in the focus group interview (FG 2, 3) in May the following year, the reflective comments of the committee members showed that they had come to appreciate the value of plants to a greater extent and that the theme had come to hold more relevance to them over time. Dibben (pers. com 28/02/09) had expressed a similar experience with her environmental club learners - often it was only years later that they could reflect on the value of their school-based environmental experiences.

One of the indicators of developing action competence is when learners engage in a creative, generative, open-ended manner with the topic under investigation. In the case of TALON's plant theme, some members expressed their creativity by starting their own gardens (Debbie, Kate, Kaylin) and they later expressed in the focus group interview that if the theme was adopted again they would do it differently (E, KA, M, FG 3). Their intentions, though, remained

at that level, because the plant theme was not pursued during the following year, even though they had previously raised over one thousand Rand selling plants for use in other projects.

More successful was the manner in which the learning displayed by the TALON members moved out of the group and into the community. Colquhoun, 2000; Fien & Skoien, 2002 and Nagel, 2000, in one way or another, expressed the common understanding that action competence belongs in society and is developed by participating in civic issues related to a functioning democracy. Fien & Skoien (2002), for example, describe civic action competence as the understanding and skills that develop when people are actively engaged in problem solving at the community level. Parents of TALON members were pleased to see that plants were being grown (J, 29/3) and Megan anticipated that other people were influenced by their actions (M, FG 3). Kaylin had used her new knowledge to treat her grandmother's skin condition (J 21/2). Megan, a vegetarian, took her mother back to the health shop for vegetarian recipes and ingredients. From the TALON questionnaires (TQ) it was evident that most of the members were discussing what they were learning with their parents. Kate in particular had a close relationship with her parents who took an active interest in environmental matters (KA, FG 4, 13).

When reviewed in the light of the indicators of action competence (see 5.2.1), it is apparent that TALON Club members displayed limited agency, reflexivity, autonomy and creativity in relation to the plants theme. These shortcomings are traceable in part to the way in which the theme was introduced as it provided few opportunities for democratic visioning and decision-making, and reflected the norm of teacher-led activities within the structures and conventions of a school. It had the highest level of outputs (such as tangible 'products' in the form of plant cuttings and successful fundraising events) and focused activities (such as local outings and guest presenters). As a focus on plants had never before been included in TALON Club's activities, the theme brought new ideas and opportunities into the club which had the *potential* to catalyse further activity and action. This point is further discussed in section 5.3.1.

**Animals and Animal Welfare theme:** Unlike the plant theme, this theme was well established in the club, as evidenced by the commitment of funds to sponsoring the well-being of animals, especially at the SPCA, Zoo and Aquarium. Of all the themes, it was the one that had the highest levels of participation and group action – the club members were involved with collecting canned pet food, fundraising by selling chips and collecting from the public, making posters, visiting the Zoo, Aquarium and SPCA and making 'toys' for the Zoo animals.

The theme was easy to relate to as the members all had pets at home, so they could personalise and develop a sense of responsibility towards the animals they were helping. The animal welfare theme thus reflected the highest level of moral responsibility and sense of purpose. A sense of deep emotion was evident in the actions around this theme as evidenced in comments from the focus group interview where Kerri was deeply moved by the photos of

abused animals at the SPCA (K, FG 6, 7) and Megan had said that you would have to be a very hard person not to be affected by the cruelty of people to animals (M, FG 7). The action competence literature alludes to emotion as important as part of the commitment phase that leads to action and change possibilities. Jensen & Schnack (1997) explain that it is through action experiences that learners are able to connect their emotions with values and knowledge and that action taking is therefore an important part of the educational process..

TALON Club members had expressed their desire to continue with this animal welfare theme (Question 10, TQ) and it was well-established in the school as a charity drive, having the tacit support of parents and the community. While these factors added momentum to the activities, the powerful influence of tradition (4.4.2.4) detracted from opportunities for critical engagement, creativity and innovation. The animal welfare-related activities were undertaken because they had been done successfully in previous years, *not* because the club members could articulate a clear sense of the central problem (e.g. that animals in zoos are in artificial environments and hence suffer from boredom; or that animals in the SPCA are there because they were being abused in the community of people who were expected to care for them) and the significance of their actions through TALON Club.

There was little evidence of club members seeking to extend their existing knowledge about the animals with which they were interacting. Despite various opportunities to interact with interpretive signage and printed information sources, club members appeared satisfied to pursue practical actions. This resonates with other comments from some club members that they did not want TALON activities to resemble school and schoolwork (4.3.3.2).

An example of developing reflexivity and possible change was the informal debate held during a club meeting around a magazine article about lamb slaughter (4.3.3.2; J7/3; Appendix 19). Some club members expressed strong views about the ethics of meat-eating, but this was an isolated teacher-led activity to which no further reference was made by club members after the lively debate on the day. Grahame (Ferreira, 1996) had a similar experience with his class when he questioned how many action experiences they would need to develop their own action competence. He concluded that one-off experiences were questionable in value – learners would need multiple encounters with a set of values before they were internalised as democratic skills and subsequently transferred to other experiences.

When reviewed in the light of the indicators of action competence (see 5.2.1), the theme on animal welfare is seen to have created numerous action opportunities and was more learner-led and participatory than the plants theme. Numerous positive actions were indeed achieved but it is hard to trace their origins to action competence-oriented learning processes. Actions were seldom based on informed, reflexive perspectives and there was little evidence of innovation or problem-solving. The decisions to undertake certain actions were mostly modeled on established traditions in the school and club and a taken-for-granted sense of caring for animals.

**Waste theme:** The waste theme generally lacked a cohesive, investigative approach. Some of the waste related activities were appended to other outings (e.g. on the visit to the Nahoon Estuary Nature Reserve) or only involved picking up litter. There was no attempt made to determine how the waste issues could be resolved other than by increasing the number of bins on the beach. This theme had the longest history in the TALON Club and was therefore also part of the entrenched tradition of both the school and the club.

The activities were generally of a mechanistic nature, in that they were repetitive, with little evidence of unpacking the salient issues around the theme to uncover other responses. Although the club involved other learners in its activities (the Grade 8 annual clean-up) there was little genuine participation or group action that gave in-depth meaning to these actions, which were aimed at short term remedial change instead of reflecting on the origins of the waste problem. Change was thereby regarded in a somewhat superficial manner, and similarly to the outreach theme there was no reflection that they were in some way connected to the issue of waste and that their own lifestyles might need changing.

Because of the weak investigation in this theme no barriers (obstacles) were identified and therefore the element of being involved in a contentious environmental issue was absent. Without educational strategies to engage with the waste problem, the TALON Club members did not feel empowered to imagine more creative ideas beyond introducing the recycling theme into their activities the following year and organising a river clean-up instead of a beach clean-up. Simovska (2005) found that in her own research most learners worked together in a more genuinely participative way when they faced obstacles to achieving their actions.

It was, however, a theme that managed to advertise the activities of the Club to the wider East London community. By being seen cleaning up the beach, Megan was confident that their actions would reverberate into the consciousness of others and set an example, thereby creating awareness in others that had been absent before. Being observed by others cleaning the beach was an example of the expanded meaning of direct and indirect actions that Bishop & Scott (1998) proposed. It was an example of an action having a direct influence that might lead on to the purposive influence of others (2.7).

**Community engagement:** Nearly all the TALON members wanted to help the environment and included people in their understanding of 'environment' (4.3.4.2). This raises the question posed by Uzzell (1999) about the place of a school within its community. He supports the proposal that action competence develops in a school where social agency is promoted, that is, the encouragement of a 'dialogue model' that breaks down barriers between the school and the community. In this way genuine social, political and cultural issues can be addressed. He stresses that this approach improves the authenticity of the environmental issue under discussion as it exposes learners to real issues that will confront them when they leave school. This raised the question of the extent to which Hudson Park High

School and Bongulethu Secondary School could be placed in the same 'community'. The data showed that spatial and time distance decreased the relevance of the issue with both the learners and their parents.

The actions that the club undertook towards engaging with learners at the Bongulethu Secondary School were not authentic, democratic or participatory. Both educators and learners reported their dis-ease with this theme (e.g. James, J25/7; Kate, J5/3) when the two groups of learners interacted. There was no negotiated consensus between the two groups on what would be an appropriate problem to investigate and therefore the relationship was at risk of being seen as one-directional and patronising. Vognsen (1996) succinctly suggests that action competence practice has the ability to identify common values within communities of pluralistic societies that will give authenticity to action opportunities. In this case study such a sense of commonality was not established between the two school groups and there was no attempt made to find a common consensus about what could/should be done.

In terms of the indicators of action competence described in Section 5.2.1, there was no evidence of a commitment or motivation to act. TALON Club members were placed in situations where they had to interact with other teenagers with whom they had little in common, for whom they had expressed little sense of moral responsibility. Club members had noted that their attempt at outreach with Bongulethu Secondary School was the 'right thing to do'. There was an element of despair at the situation at Bongulethu School that the problem was one caused by politics and a failed education system and therefore too large and socially complex for the TALON group to engage with (KA, FG 9).

The barriers to a more meaningful contact were of a more socially complex nature than those posed by the other themes. The barrier of communication presented in two ways – it was difficult to contact and travel to the school which was some distance away, and, once there, the two groups struggled to understand each other, both linguistically and socially. The committee did resolve to include the Hudson School Xhosa Society in future visits to assist with these barriers, but nothing came of that idea (4.3.4.3). This led to a lack of opportunity for the learners to gain experience in the form of meaningful involvement and later critical reflection of this experience, as advocated by Schnack (2000).

The actions that were taken - such as planting trees and placing wire around the plants - were not expected to be successful, as there was a history of failed gardening attempts at Bongulethu School. These actions were undertaken instead with a sense of procedure and obligation but very little agency and visioning of achievable change (KA, K, FG 10).

The reflective view by the committee that re-evaluated the issue the following year at the focus group interview failed to establish relevance and authenticity as essential components of the action competence process. Jensen &

Schnack (1997), however, remind us that it is not the duty of the school to solve political problems through the actions of learners, but rather what the learners themselves learnt from participating in these issues.

### **5.3. FACTORS INFLUENCING THE DEVELOPMENT OF ACTION COMPETENCE-ORIENTED TEACHING AND LEARNING PROCESSES**

The research question of this study is 'What influences the development of action competence-oriented teaching and learning processes in a school environmental club?' The previous section (5.2) has outlined the extent to which action competence-oriented processes were evident in the TALON Club and it is now possible to turn attention to analysing the factors that influenced such processes. From the data as presented in Chapter Four, three broad categories of influencing factors emerged: pedagogical, contextual and relational. Each of these categories is now considered in more depth using analytic statements derived from the data presented in Chapter Four.

#### **5.3.1. The influence of pedagogy**

I refer here to the influence of teaching practices on the development of action competence.

**Analytic Statement 1: Club members avoid activities which are 'too much like school' but this often leads to superficial and poorly-informed action-taking.**

At the start of 2007, the TALON committee explained to me that they did not want to be involved in any activities that 'felt like school', that is with reading and writing tasks or lectures that required concentration (J 15/1). The club members were accustomed to short practical projects and local outings where the emphasis was not on knowledge acquisition, analysis or reflection. They expressed their preference for outings as they claimed to learn more than by being in a classroom (KA, FG 6; K, FG 5) and that 'doing' something was preferable to reading, talking and writing (4.3.6). Similar findings from a project in Denmark were reported where learners had said it had been important for them to 'escape' traditional schoolbooks and the curriculum (Vognsen, 1996).

Across all the themes, the investigation phase was often ignored, or of an insubstantial nature, which led to superficial engagement with the various environmental problems. Australian teacher Grahame (Ferreira, 1996) spent a considerable proportion of his teaching time establishing sound investigative processes with his learners, but we did not do the same in the TALON meetings. The members were generally more interested in their social interactions (4.4.6) and the outings that we undertook. I did attempt, through guest speakers and building on their own prior knowledge, to ground the members more deeply in the environmental problem under discussion, but the members mostly failed to develop an interest in the problem beyond how it affected them personally or immediately (e.g. finding how a plant cream could help a rash).

Reading or viewing information-based texts in particular was ignored by club members, for example they did not look at the information sheets prepared for them by the Zoo personnel (4.3.3.2) or read the information signs at the aquarium (4.3.3.2). Their lack of knowledge led in one instance to a loss of confidence, as they declined to participate in an inter-school bird quiz (4.3.3.2). The spider diagram that I had prepared for a committee planning meeting was only looked at in a perfunctory way (4.3.2.2) and club members rejected my suggestion that they watch Al Gore's documentary on global climate change (4.3.2.2) as they considered it too serious to be an enjoyable club activity.

Literature on youth (2.3), especially that related to generational matters (Bennett et al., 2007 and Feiertag & Berge, 2008), supports the overall evidence of shallow engagement with the environmental issues under review. According to them, educators may have to change their teaching methods to become more effective communicators. The new generation requires more group-oriented tasks, fewer lecture-type lessons and more tailor-made information creating opportunities (Feiertag & Berge, 2008).

Most club members said that they favoured outings and practical projects, as evidenced by the responses to question 3 of the TALON Questionnaire (Do you prefer outings or meetings run at the school...?) and question 5 of the six individual interviews (How do you feel about the meetings we have at school that are run by the committee?) However, the limited information, investigation and analysis across all themes in the TALON Club caused these outings and action projects to be generally superficial. I was thus unable to determine long-term change processes within the observable timeframes of this study. Jensen and Schnack (1997) note that action-taking has become a popular theme in schools as part of a move away from 'scientism' and a heavy academic programme, in favour of a more practical approach. They note that such actions should be authentic, that is, relevant to the learners concerned (ibid.). In order for this to occur, the knowledge acquisition process should give learners a deeper insight into the environmental problem that is based not only in science, but in the socio-cultural, political or economic structures of that community as well. However, in the case of teaching and learning processes in the TALON Club, there is little evidence of learners making connections (from knowledge-rich starting points) between the environmental foci of club meetings and their wider socio-cultural, political or economic context. Club activities seemed more social and/or procedural in nature, creating few opportunities for authentic, situated and transformative action.

This situation is contrary to the ideals of action competence. Jensen and Schnack (1997) insist that environmental education actions should not be reduced to activities that act as a counterweight to the academic focus of the school curriculum. They state that an 'activity' must move beyond the idea of changing behaviour alone and be the result of a careful process of developing 'intention' in the actor. This is supported by the development of critical thinking skills, and the examination of value systems towards justifying future choices (Fien, 2000). Central to this is the IVAC pedagogical framework which requires investigation of an identified problem, envisioning of solutions and alternatives

and initiation of action and change processes to address the problem. In the case of TALON Club, however, these stages of teaching and learning were mostly under-developed due to club members' reluctance to engage with information-based texts, conduct in-depth investigation or analysis, or commit to long-term action-projects that inevitably require co-ordination and time. This has significant implications for the type of activities conducted in the environmental club and their underlying pedagogy. Whilst all authors on action competence drawn on in this study emphasise the importance of learner-led investigation, problem-solving and reflexivity; my experiences with TALON Club reflect an explicit avoidance of such in-depth, information-rich, critical work.

Action competence as a process develops through four interlinking dimensions: investigation, visioning, action and change. That is what distinguishes it from the behaviourist approach (Schnack, 2000) where the outcome may look the same but was not reached through a careful process of critical engagement with the issue under discussion. The learners in the TALON Club may have been 'doing the right thing' in terms of pursuing activities with an environmental focus, but their understanding of why these actions were under taken was not developed in a critical manner from a strong information base, and this weakness can be traced in part to a lack of appropriate pedagogy to initiate and enhance such learning processes. By this I mean that as educators we did not create appropriate links with the TALON members at a level that was truly relevant to them.

### **5.3.2. The influence of context**

#### **Analytic Statement 2: School and Club structures and mechanisms enable and constrain action competence-oriented learning processes.**

School and club structures enabled and constrained the development of action competence processes within TALON Club. Both aspects are commented on in this section, showing how, on the one hand, democratic and participatory structures were in place but, on the other, that institutional traditionalism slowed down and sometimes even nullified budding action competence processes.

#### *Enabling club and school mechanisms in the TALON Club:*

The club structures, as discussed in 4.4.2.1, supported the development of action competence processes by creating opportunities for democratic interactions. The club members could participate in discussion and dialogue; they could discuss and negotiate which topics they wished to pursue, and they could vote for committee members. The members recorded that they felt comfortable at the meetings and that they felt welcome (4.4.6). They learnt transferable life-skills (e.g. asking a knowledgeable person questions, group work, dealing with people while fundraising) that would help them in other fields. The Club structures therefore encouraged the development of social skills towards good citizenship, identified by Schoeman (2006) as being, amongst others: communication,

conflict management, consensus building and co-operation. Because action competence is a process as well as an ideal, the act of going through the meeting framework can be viewed as engaging with democratic constructs and is valuable in its own right, regardless of the outcome. This view is supported by Vognsen (1996) who describes action competence not only as an *aim* but as a *means* towards environmental and civic education.

The club structures were particularly favourable for the committee members as they were afforded greater personal and leadership opportunities through the running of the meetings (4.4.2.3). Committee members showed the greatest commitment in both time and effort to the club – for example sometimes it was only the committee that went on outings (28/2; 22/8). They were therefore in contact with the educators on a more regular basis and developed a close relationship with them. At an individual level there was also evidence of action competence developing, for example Emma independently conducted a SWOT (strengths, weaknesses, opportunities and threats) analysis to determine how best to improve the club; Megan, on her own initiative, organised a petition amongst the club members to save TALON by improving member attendance and commitment. Catherine and Megan compiled a slide show for the Grade 8s and Megan organised the Arbour day assembly presentation. Debbie proved her efficiency with an up-to-date attendance register and as a minutes' keeper.

The wider school structure also created an enabling environment in the club for action competence-oriented learning processes by:

- affording it space in the pastoral portfolio;
- granting permission to club members to sell plants and chips as fundraising activities during school events;
- making available a section of the school grounds for planting indigenous plants;
- providing a well-resourced environment within which TALON Club could operate (library access, classrooms as meeting venues, notice boards), as well as access to school mini-buses;
- offering a platform to profile TALON activities such as school assemblies and articles in the school newsletters and magazine;
- providing club members with additional incentive to be active members through the school's point system towards a school Service Award;
- Securing the support of other educators (through the donation of plant cuttings and pots, and by taking photographs).

It would be difficult to contemplate the development of action competence through a school-based environmental club without the enabling structures and mechanisms outlined above. However, just as these structures created an enabling environment for the development of action competence, they also constrained many opportunities. These aspects are described below.

*Constraining mechanisms in the school and the TALON Club:*

In all institutions there are mechanisms that work in opposition to change and seek to maintain the *status quo* (Jickling, et al, 2006). These have been described by Jensen and Schnack (1997; see also section 2.5.3) as the habits and norms that reside in the hidden structures that support our society. These “ingrained routines” (Jensen & Jensen, 2000) need to be uncovered and critically examined for their relevance to our everyday lives. Hudson Park High School has its own “set way of doing things” (Payne, 2000) that would be difficult for a small club like TALON to challenge. There was an expectation by the school management that TALON would continue with its traditional themes, for example the annual Grade 8 litter cleanup was automatically scheduled into the timetable without consultation of the TALON members or TALON Committee.

The most influential structural constraints on the TALON Club members were:

- Rigid timetabling which didn't allow for much flexibility or spontaneity with TALON related activities;
- The traditional expectations within the school that tied up time and left less opportunity for TALON to develop their own responses to environmental issues. For example TALON members were expected to take part in open-days, the Grade 8 cleanups, arbour day, the SPCA food collection and Bongulethu visits. Additionally, during exam time, especially in June, extra-mural activities are curtailed.
- Club members' additional commitments to school sport, and the prioritisation of those commitments above TALON Club commitments;
- Teachers' limited time due to numerous school commitments;
- Shortages of school transport which is prioritised for sporting events.
- In May/June of that particular year (2007) the educator strike brought additional pressure to the TALON Club members and their educators as planning was difficult in the existing atmosphere of uncertainty and concern for learner safety.

The way schools are structured according to terms with vacations between them appears to have influenced the continuity of TALON Club activities and even the selection of activities. There is an unspoken assumption that each new term will start with something 'new' to focus on during club meetings and outings, even at the expense of adequate reflection or synthesis of the previous theme. For example, the Easter vacation led to a break in focus on the plant theme and may account for the subsequent lack of interest in the spider diagram that I introduced to advance the plants theme the following term (19/3). Collectively, these factors interrupted the smooth running of the club and compromised continuity.

During club meetings, the structures and procedural running of the meetings, which encouraged democratic processes such as dialogue and participation, often overshadowed the environmental focus and learning

opportunities that were made available by the educators. Much time was spent working procedurally through the agenda which usually resulted in insufficient time for substantial environmental input. As a result, environment-oriented planning was mostly incoherent and connections were seldom made between the numerous activities from one week to the next, or even between the broader themes.

The above structures are aimed at promoting democratic processes through participation by all the TALON members. However the manner in which they were engaged with by both the educators and club members had a limiting influence on the development of action competence. The attempt to translate democratic ideals into practice through the club structures did not materialise, indicating that there needs to be a review of how the meetings take place and what is expected of the various role players.

### **5.3.3. The influence of relational dynamics**

Relational dynamics describes how the learners in the club related to each other and the educators. It proved to be the overriding influence on the action competence-oriented learning and teaching processes within the club, as evidenced by the following three analytical statements.

**Analytic Statement 3: Social dynamics and a desire for fun take precedence over investigation, visioning, action or change processes.**

The evidence presented in Chapter Four indicates that the TALON Club was functioning on two levels. On one level it was meeting as an environmental club and engaging with environmental issues in the community. On another level it reflected and catered for the social needs of its teenage members. This area is under-explored in the literature on action competence processes reviewed for this study; although the leading authors note the importance of immediate context in the development of action competence, they make little mention of micro-level social interactions and dynamics. This study suggests, however, that social dynamics and a desire for fun and the 'making of good memories' is one of the most influential factors in the way action competence-oriented learning processes transpired in TALON Club.

Being together with friends was an important reason for attending the meetings (4.4.6). My journal and observation schedules record that the members were happy to be in close physical proximity to one another. The sometimes noisy meetings could be misconstrued as being chaotic, with Mrs. Selkirk having to remind them that TALON was not a social club (4.4.2.1). Megan noted in an interview that the meetings were for communication, feedback and encouragement (and not necessarily for the environmental input); Debbie and Kerri concurred, adding that meetings were to know what was going on in the club (4.4.2.1). This is congruent with the findings of Percy-Smith

(2002) that young people are the happiest when they are with their friends and that in their free time they want to spend time with them.

From the outset, the TALON committee expressed that they did not want to do anything if it did not have an element of fun to it. Fun was seen as being opposite to boring and serious, which were not what TALON members wanted from the club. As evidenced in the responses from the TALON Questionnaires, club members wanted to be learning, helping and doing, in a fun environment. Chalwa (2002) expressed similar findings in her research on urban youth who placed a value on their environment depending on the variety of activities available and whether they were in the company of their peers. They avoided situations where there was a lack of variety leading to boredom. This posed a dilemma for the TALON educators, as environmental issues are 'serious' and not 'fun', thus causing a conflict of interest in what the functions of the meetings were (4.4.3). It highlighted the fine line that an educator must determine between allowing the learners to negotiate their own realities and the responsibility that they have to ensure that the learners remain focused on the environmental issue under scrutiny. Jensen (2002) states that this way of teaching demands an active, skilled educator who constantly challenges the learners in a meaningful dialogue and who takes their suggestions seriously.

At events where food was provided there was a higher turnout of members, as evidenced by the attendance register. These were opportunities to have fun with friends in a social setting in which club members felt comfortable. This was seen as an acceptable strategy to encourage newer members. I had asked in the focus group interview how the committee felt about selling chips to raise funds for TALON projects, even though it was not a very healthy food option (Appendix 7). They had laughed and suggested that they could be sold in rice paper (M, FG 8) or palm leaves (K, FG 8). I took this to mean that they were satisfied with the way things were and wanted to maintain the *status quo*.

The social aspect of the club generally resulted in a shallow engagement with the environmental themes in which they were involved. This was contrary to the values-oriented responses that were so evident in the questionnaires, interviews and observations which revealed a moral impulse on the part of club members to respond to an imperfect world (see 4.4.5 and analytic statement 5). There is thus a lack of congruence between what the members said they *wanted* to do and their actualised or reportable actions which appeared to be more socially motivated. This is discussed more fully in analytic statement 5.

The social element in the club highlighted the different expectations of the learners and the educators. The noisy meetings, cell-phone calls, absenteeism and perceived lack of responsibility led to some friction between the educators and members, especially the committee members. This exposed the different function all role-players perceived the meetings to have. The educators expected to facilitate learning and action-taking in relation to the

environmental concerns of the club, but often the meetings had little environmental input and the outings were poorly attended.

The collective attitude towards the importance of social interactions (expressed in fun, friends and food) was in contrast to the individual motivation that characterised the reasons for the members joining TALON in the first place. This is discussed in the following section.

**Analytic Statement 4: Most club members were motivated by a sense of moral responsibility in relation to environmental concerns but were unable as a collective to translate this into meaningful action and change.**

The literature on youth (2.2) shows that young people are indeed aware of the environmental problems around them, but that they have negative views on the matter and often feel helpless about their possible role in being a part of the solution processes. In South Africa, amongst the youth, there are similar beliefs (Soudien, 2004), with concerns about crime, HIV/AIDS, child abuse, education, violence, unemployment and poverty.

Members of the TALON Club had expressed that they wanted to help and learn about the environment (4.4.5). All the applicants for the committee had 'helping the environment' as reason for being elected (TC 1-7). The desire to do 'something good' was evidence that they wanted to make a positive difference to environmental problems. Allied to this was the expression of deep emotion by some members about TALON: TC 4 was prepared to give up other activities if she needed to as "TALON is such a good cause", and TC 7 said "I love TALON and want to help as much as I can". Comments by educators and parents alluded to a 'special' kind of person wanting to be in an environmental club (4.4.5). One parent reported that her daughter couldn't wait to tell her about the TALON meeting because it was so exciting to be in touch with nature (PI 2). Another (PI 1) said that TALON was a place where her son could express his love for the environment. Schnack (2000, p. 111) reminds us that as humans we are "social, active, emotional and knowing" beings which connects with the TALON members' ideals that they want to be involved with others and to make a difference. Additionally, this was a voluntary society and the members were there because they chose to be aligned with this group. Even the incentive of service points was not initially important to newer members, who said they would have joined TALON anyway (4.4.5). Despite this, the visioning dimension across all the club themes was limited because of the unwillingness of the learners to engage in in-depth investigation to environmental problems (Analytic statement One).

I expected this sense of moral responsibility to have led to expressions of commitment and motivation to act, as Ashley (2000) and Schnack (2000) had reported in their own research. These are essential components of the action competence process, without which actions would be reduced to activities, behaviour modification or rhetoric. This adds the understanding of "intention" to the action, which is what action competence is about (Schnack, 2000).

Megan could recognise the difference with her comment “that by knowing, one can take proper action ... and do the right thing” (FG 2).

However, in the TALON Club, this altruism did not always carry through to the actions of the club members. It was difficult to translate the concepts and visions of members into practical expressions of meaningful actions. Schnack (2000) has recognised that action competence attempts to bridge the gap between the two worlds of theory and practical implementation. He acknowledges that it is easy to know what to do, but that to actualise it is more problematic. He suggests that action competence can close this gap by offering real-life, authentic experiences so that learners can engage critically in their action taking.

In particular, I isolated five examples of where I felt that personal commitment was not followed through into meaningful actions:

- The care of the plant cuttings after they had been planted and the care of the plants planted during Arbour Week were left to me. The learners knew that the plants needed to be watered regularly, but they did not respond to a request by me to help. I had to find a class that I taught to do this for me (4.3.2.1).
- Many of the TALON members had expressed a wish in the general questionnaires to be on the committee (14), but only eight applied in May. Possibly this was due to some change in their extra-mural activities. I did not establish why the others had not applied (4.4.2.3).
- When the enrichment toys were made at the Zoo, the committee had appealed to the general members to bring fruit, nuts, small boxes and ice-blocks with them on the day. On that day no-one, including the committee brought any of the suggested items with them. Fortunately the Zoo was able to help with the ingredients, so the venture was still a success (4.3.3.4).
- The committee tried to elicit support from members to participate in the Arbour Day assembly, but only three accepted the challenge. The remainder did not have the confidence to stand in front of hundreds of other learners. The other three volunteers came from non-TALON members (4.3.2.4).
- In an attempt to establish how TALON could be saved from closure Emma drew up a SWOT analysis which was completed by four committee members. She did not tell me about this and when I heard about it I asked her about the responses and how they would be translated into action. She was vague in her answer and the matter was never discussed with me or during club meetings again (4.4.2.3).

The TALON members were unable as a collective to follow through with their initial commitments and to translate the above examples into meaningful action and change. This highlights the significance of visioning and planning that is grounded in knowledge and a clearly articulated sense of the problem and what needs to be done. This never really happened across any of the club themes. Barriers to acting on their sense of moral responsibility appear to be traceable to the inconsistent and diverse activities that the club engaged in, a lack of planning on the part of the

educators, the pressure of other school activities, poor communication within the Club, or the social expectations within the club that took precedence over club functioning.

**Analytic Statement 5: Power gradients between educators, committee members and general members determined the extent of participatory, democratic interactions.**

This statement has its roots in analytic statement two, which draws attention to the influence of the structures and mechanisms of TALON Club and the school as a whole. Each of the three components of the TALON Club (educators, committee members, and general members) exerted an influence on the others, thereby shaping the participatory and democratic interactions that played out in the club and determined the extent to which action competence-oriented processes played out.

Democracy and participation are at the heart of all action competence-oriented processes and without genuine respect for those constructs there can be little development of action competence either as an ideal, an aim or a process. Participation can be viewed as democracy-in-practice (Schnack, 1996). Hart (1997) has identified eight levels of participation: that which is based on manipulation and coercion is at the extreme of non-participation, whereas child-initiated actions that involve shared decision-making with adults indicate that learners are able to define issues and actively seek assistance when required. Using this framework, Simovska (2005) identified two dominant qualities of student participation: token and genuine participation. It differs from the approach by Hart (1997) in that the model focuses more on the *quality* of the participation rather than the *degree* of participation. This quality factor deals with values, such as self-determination, democracy, diversity and equity (Simovska, 2005). In essence, “genuine participation allows for student ownership of the learning process” (ibid., p. 181).

The educators in the club held considerable power, which influenced the participatory processes in the club. For example Mrs Selkirk had changed the democratic consensus of the members when voting for the new chairman and I had withheld from the committee a request for assistance from the TALON Club (4.4.3). The plant project was implemented without enough input from the committee. Although the members had expressed a wish to have a weekend excursion, a previous negative experience by Mrs Selkirk had put her off from organising another one (4.4.3). We did not create enough opportunities to establish with the committee a closer congruence of values, as suggested by Schnack (2000) in these situations.

As educators, we did not identify or consciously reflect on our somewhat autocratic style. It was part of ‘the way things are’, habituated in our school practices. If we had, we would have faced the same anxiety experienced by both Grahame (Ferreira, 1996) and Jeff (Barrett 2006) as they ‘stepped back’ from their more traditional teaching methods to allow their students a greater voice in their own learning. This concept of ‘stepping back’ is discussed by Jensen

and Schnack (2005) as the challenge experienced by educators when they allow their learners more room for genuine participation, but are there as knowledgeable adults to help guide them when necessary. Botma (2000) reported from her research in Namibia that educators found it difficult to change their teaching styles and that learners generally did what they were told to.

The participation experienced between the members and the educators could not be called genuine from the viewpoint of Simovska (2000, 2004, and 2007). She advocates three criteria to avoid tokenism: the participation must be active, it must involve choices and it must be able to be actualised. Especially in the involvement of choices, the TALON educators denied club members their say, as illustrated in the above examples. The actions that took place were of a more 'activity-based' nature and did not meet the criteria of 'action' as put forward by Jensen & Schnack (1997). From Table 2.1 it is clear that an action involves students deciding what to do and then targeting action towards solving the problem.

The TALON committee members were at the interface between the general members and the educators. Most of the planning was done by the committee and educators, and during the general meetings, the scheduled outings and activities were presented to the members as a *fait accompli*. The committee did try to establish what the general members wanted from the club, but my observations showed that the general members were happy with the meetings and outings as they were and hence did not propose anything particularly different. Because of the close working relationship between the committee and the educators, their levels of commitment to the club were more intense than those of the general members - they attended more meetings and were involved in the details of logistical arrangements, communication and planning.

During the focus group interview the following year, I was able to probe how the committee had experienced the action competence processes in the club. This smaller group had the advantage of more personal and more regular contact with the educators and participation was more authentic in that decisions were made and shared with adults. This echoes Simovska's (2005) view of authentic participation involving close co-operation between learners and educators, leading to transcending the individual's meaning-making to one that produces creative collective thinking.

#### **5.4. Conclusion**

This chapter began with a review of the extent to which action competence processes were evident in the TALON Club. Due to the open-endedness of the action competence ideal, I found it necessary to synthesise the literature to identify 'indicators' of action competence. I was able to reflect on the four main environmental themes of TALON Club in terms of these indicators of action competence and found that, although there were elements of action competence developing through isolated incidents and in some individual club members, there was little evidence of the development of substantial or collective action competence-oriented learning processes.

From this vantage point, I identified and described factors influencing action competence-oriented learning processes in TALON Club, limited as they were. I identified three broad areas of influence: pedagogical factors, contextual factors and relational factors. The analytic statements presented in this chapter in relation to these three areas reveal that club members tended to avoid activities which are 'too much like school' (i.e. those that required concentration, analysis or critical reflection) and that this weakened the investigative dimension of action competence-oriented learning processes which in turn impoverished the knowledge-base from which action and change could develop. This was compounded by a dominating desire amongst club members for fun and sociable interactions with one another; these social dynamics took precedence over investigation, visioning, action or change processes. The data also revealed that although most club members were motivated by a sense of moral responsibility in relation to environmental concerns, they were unable as a collective to translate this into meaningful action and change. Wider, more structural factors were also influential: the school's and club's structures and mechanisms were enabling in that they provided committee members with opportunities within a supportive environment to try out their leadership and communication competencies. However, other structures and mechanisms such as school timetabling, transport limitations and procedural traditions of club management often constrained action competence-oriented learning processes. Power gradients between educators, committee members and general members also significantly influenced the extent of participatory, democratic interactions.

Each of these influencing factors has been discussed in this chapter (5.3.1 - 5.3.3) but it is important to recognise that it is their *collective* influence which has determined the extent of action competence-oriented learning processes in TALON Club. Through recognising the limited extent to which action competence-oriented learning processes played out in this particular case study of a school-based environmental club (see 5.3), I am now able to identify key areas in the club that need more careful attention or radically different approaches. Some influencing factors can be responded to in quite immediate and localised ways (such as pedagogical decisions) but other influencing factors (such as power gradients and the impact of school structures and traditions) may require more gradual change beyond the scope of a single club. The conclusions and recommendations in relation to these insights are presented in the following and final chapter.

## **CHAPTER SIX: CONCLUDING RECOMMENDATIONS AND CRITICAL REFLECTIONS**

### **6.1. SUMMARY OF THE RESEARCH PROCESS**

The central question in this study was: What influences action competence-oriented teaching and learning processes in a school environmental club? The research goals were:

- To describe a year of activities within the TALON Environmental Club.
- To identify how pedagogical, contextual and relational factors influenced action competence processes amongst TALON Club members.

I participated with the members of the TALON Club in 2007 and 2008, initially as a co-helper with Mrs Selkirk and then managing the Club myself in 2008. The data was generated from interviews, questionnaires, observation schedules, club members' work and my research journal. The data was looked at from two perspectives: firstly using the IVAC model as a pedagogical framework for the development of action competence and secondly in terms of contextual and social interactions. The emerging picture of how action competence-oriented teaching and learning processes played out in the context of an environmental club in a middle-class, urban high school was then analysed in relation to broad indicators of action competence which were derived from current literature, and the pedagogical, contextual and relational factors influencing these processes were identified.

This final section presents concluding perspectives on the factors identified as influencing action competence-oriented teaching and learning processes in TALON Club. With each point, recommendations are made for the TALON Club towards strengthening the action competence-oriented processes in the club.

### **6.2. FACTORS INFLUENCING ACTION COMPETENCE-ORIENTED TEACHING AND LEARNING PROCESSES**

#### **6.2.1 Pedagogical influences**

When school environmental clubs are considered as sites of learning, the role of more knowledgeable people is significant in providing information, offering supportive guidance and enabling access to resources and structures generally unavailable to young people. This study has shown that the educators played a key role in initiating, structuring and resourcing almost all aspects of TALON Club's activities. The data has shown how the educators went to great lengths to create an enabling learning environment, especially around the plant theme, most notably through

their pedagogical choices (inviting guest speakers, giving demonstrations and providing knowledge resources) and through practical support (providing equipment, plant specimens, transport and so on).

Anecdotal evidence suggests that some individual members acted independently of the educators and carried through the action competence processes either at home, within the committee or with the general members, but these were isolated encounters that were initiated but not carried through into sustained change processes within the club. There was a general reluctance amongst the members to engage with written texts, anything very serious or resembling typical school pedagogy. What they did want was to be enjoying themselves with their friends. With the exception of the plant theme, the level of investigation around an environmental concern was superficial. I found that this weak start to a theme resulted in activities that lacked critical engagement and new visioning possibilities. They could not, therefore, be considered as 'actions, in the sense of action competence processes.

### ***Recommendations:***

The educator, committee members and general members need to collaboratively plan a programme that addresses the above issues. More time needs to be spent on deciding on relevant issues for the club to investigate that can be acted upon within the club and school framework. As time is limited during TALON meetings, this may lead to less varied activities, but allow more time to be spent deepening engagement with the issues under discussion. Programme planning would most likely happen in a classroom situation, probably in groups, with a lot more guided dialogue than has occurred in the past. As a result members might feel increased 'ownership' of the processes and therefore a more genuine participation will develop.

By using the IVAC framework as a planning tool, the educator may be able to strengthen the teaching and learning processes in the club. The steps within the IVAC framework, i.e. investigation, visioning, action and change, need to be given equal consideration as they are dependant on each other for critical, democratic, participatory processes within action competence-oriented learning. Even if the steps are not sequential, these four pillars must be addressed. The educator must resist the temptation to skip the investigative phase on the assumption that the learners understand the reasons for taking environmental action. This study showed that although the 'right thing' was done, it was often without a thorough understanding of why the specific actions were taken, and this compromised the depth of engagement and levels of reflexivity.

Reflection on the part of the educator is an important part of the action competence process. To assess whether the TALON Club has the required focus I would suggest that the educator makes use of the eight pointers of action competence processes identified in Appendix 2 and 5.2.1. In this way a set of questions will emerge that will help determine progress. Examples could be: Are the learners engaging in group discussions around the problem? Have

they displayed an understanding of the social origins of the problem? Have they shown commitment to owning the problem? I would suggest that this rigorous process be followed on a regular basis to ensure that the processes developed remain open to negotiation by the parties concerned.

The role that tradition plays within what is taught and learnt within the club needs to be examined. In the case of the animal welfare, waste management and community outreach themes, learners' engagement was dominated by a sense of habituated responses, undertaking activities because they happened every year and came to be expected within the school structures and the members themselves. This affected the pedagogical dimensions of those club activities because we were too quick to move onto solutions (actions) that had not been carefully examined in a more open-ended, reflexive manner. These themes displayed limited uncovering of the societal causes that are embedded in them and resulted in actions that were addresses at end-of-line solutions only. By challenging traditional responses to environmental issues the TALON members and educators may envision alternative strategies that will result in more authentic participative processes.

### **6.2.2 Contextual influences**

The club and school structures proved to be enabling and constraining on the development of action competence processes. They were enabling in that members were given space to conduct meetings following democratic principles that would encourage dialogue, discussion, and participation by the members. The school supported the club in various ways and viewed TALON as an important part of the pastoral portfolio. However, there were also constraining mechanisms that inadvertently thwarted these processes. The procedural way that the meetings functioned led to minimal time being spent on environmental issues and more on moving through the meeting agenda. The educators allowed the committee members to have carte blanche on the way the meetings were conducted which did not work in favour of participation by the general members. In this case the use of the meeting as a democratic structure towards promoting participation in environmental issues actually hindered these processes. Thus the implementation of the investigative and visioning phases of the action competence model phase was flawed.

#### ***Recommendations:***

It has been shown that the meetings promoted democratic principles, but at the expense of environmental teaching and learning processes. To change this situation into one where there are genuine participatory, learner-led and socially grounded opportunities the educator, committee and members need to engage in more meaningful dialogue. The challenge for the educator is to have the skill to guide the processes away from the superficial meeting processes and to spend more time on the environmental focus of the agenda.

To help make the IVAC framework relevant there appears to be a need for two components - a place where the investigative and visioning phases can be thought through in a critical way as well as the opportunity to put these ideas into practice. In the TALON Club, it was the classroom that provided the space for investigation and visioning opportunities and therefore more time should be spent focusing on these aspects at meetings rather than the club structures which tended to hold them up. The outings are a natural follow-on from the meetings, but instead of being viewed as an escape from school they should be carefully thought out so that the investigative and visioning phases are implemented with a deeper understanding of the environmental issue being studied.

A way needs to be found that encourages better attendance at both meetings and on the outings. As this is a voluntary club there is no punitive sanction if one does not attend and nor should there be if the spirit of action competence is to be upheld. Yet for participation to occur there must be regular attendance. By focusing on the attributes of responsibility, reliability and genuine participation where all the members feel they are needed the educator could improve the situation. It would also help if the TALON Club had a higher profile within the school, thereby increasing the feeling of belonging to a group who are trying to make a difference.

### **6.2.3 Relational issues**

Relational dynamics proved to be the factors that had the most influence on action competence-oriented processes within the club. Each one will be summarised with recommendations for future actioning in the club.

#### *6.2.3.1 Social dynamics*

Social dynamics in TALON Club, with the adherent concepts of fun, friends, food and youth culture, were powerful influences on action competence-oriented processes. It was an aspect of the study that I had not anticipated, yet it is one that permeated the TALON Club and its environmental endeavours. In most club activities, it appeared that the social priorities of the teenaged club members took precedence over investigation, critical reflection and sustained action taking that generally characterise action competence-oriented processes. Although club members were genuinely keen to help with environmental matters and to make a difference, there were qualifications to these actions: they wanted to be with their peers and especially their friends. They expected club meetings and outings to be socially enjoyable and recreational. Without these criteria, they did not want to be in the TALON Club. The literature on youth supported the attitudes found in the TALON Club, especially relating to teenagers as urban, middle-class western youth (Chalwa, 2002; Malone & Hasluck, 2002; Percy-Smith, 2002; Strelitz, 2002).

**Recommendations:**

Educators in TALON must be cognisant of the social priorities of teenagers and appreciate that they have perspectives that are probably not congruent with their own. This does not need to be a barrier to environmental learning, but it could become one if not vigorously challenged. To build on rather than resist these social priorities and enable action competence-oriented processes, the educator needs to develop shared meaning with club members through more genuinely participative processes. This may empower the learners to achieve greater depth and continuity in their environmental action-taking while also maintaining vibrant, youth-oriented social dynamics. In TALON Club it was not new knowledge that inspired the members, but rather the social context in which the learning took place. This should give confidence to those educators who may feel that they do not have the factual and scientific knowledge to be involved with an environmental group, but have the passion to do so.

**6.2.3.2. Moral Responsibility**

Although an individual sense of moral responsibility in relation to environmental concerns appears to have influenced action competence-oriented processes in the TALON Club, members seemed generally unable to translate this into meaningful or sustained action and change. Club members clearly expressed their sense of commitment, care and responsibility for environmental problems and to the TALON Club but, other than a few isolated incidents, such expressions were mostly idealised and vague with limited practical follow through. In some cases this was attributed to a lack of confidence on the part of the members to get involved and to participate more fully. At other times it was traceable to the dominance of the educator who took over the responsibilities of the members instead of insisting that they take care of them themselves, thereby reducing the scope for young people to act on their sense of moral responsibility. In other cases, poor communication between the committee members and the educators appears to have compromised a developing sense of moral responsibility.

As noted in 6.2.2, contextual influences, most especially the school and club's constraining structures and mechanisms, may limit opportunities for learners to act on their sense of moral responsibility. In practical terms, teenagers do not generally have access to the resources and decision-making opportunities that enable them to act on their sense of moral responsibility, nor do they have much experience of initiating or coordinating such things. Learners of this age are also still experimenting with and clarifying their own values and sense of moral responsibility and it is to be expected that a club such as TALON serves as a 'testing ground' for such processes. Thus, whilst noting that club members' follow through in acting on their expressed environmental passions and concerns was very limited, this should be seen in the light of their context, age and experience.

**Recommendations:**

It is important to remember that school-based environmental clubs such as TALON are not environmental agencies or activist groups. Rather, they provide low-risk, supportive spaces in which young people can express their

environmental concerns and develop the knowledge and skills to take environmental action, albeit only at a later stage as adults. As described above, TALON members appeared to be held back by lack of confidence, skill or experience in mobilising responsive action, despite openly expressing a desire to be agents of change. Educators should prioritise creating a 'safe forum' for club members to engage with projects and activities that build confidence, skills and experience, even if these do not in themselves guarantee the ideal and desired environmental outcomes in a wider community context beyond the school club. This requires a shift in the educators' primary emphasis away from 'trying to make an immediate difference' towards creating participatory, open-ended and dialogic processes that enable learners to articulate and respond to their evolving sense of moral responsibility. A genuine partnership between the TALON members and the school could be initiated through the development of the proposed environmental centre, alluded to in Chapter 1.2. If the TALON members are consulted on what form it might take they will feel more inclined to become more involved in the Club.

#### *6.2.3.3. Power gradients*

The power gradients between educators, committee members and general members influenced the extent to which participatory and democratic interactions could occur. This has already been alluded to, as it was related to the social interactions within the club. Within a club that is oriented towards the development of action competence, the dominance of the educators was problematic and gave rise to (mostly unacknowledged) social tensions. Whilst the significant role of educators in such a club should not be disregarded, it should not overshadow or disable genuine participatory, democratic processes in the club. As described in this study, the concept of action competence has at its core the practice of democratic principles. It develops when participation is genuine and not of a token nature. Evidence from this case study suggests that this was one of TALON Club's weakest areas. Whilst democratic mechanisms were evident in the club (such as meeting times and venues, voting procedures and the opportunities for committee members to run meetings by themselves), these were nevertheless with the approval of, or under the moderating scrutiny of, the educators. The limited authority of the Club within the school structures meant that members remained largely dependent on the educators and that this stifled the potential, for the committee in particular, to initiate new and different approaches. Decisions were occasionally taken by the educators of which the members had no knowledge, and most club themes and activities were initiated or at least reviewed and permitted by the educators.

Power gradients were also evident amongst club members themselves, in the distinction made between committee members and general members. Far greater demands in terms of time commitments were placed on committee members, but this was accompanied by expectations of having to make decisions on behalf of general club members, and of selecting club activities in line with their own interests.

**Recommendations:**

The democratic and interactive ethos of existent TALON club management procedures (voting, portfolio sharing and so on) should be maintained and strengthened. Additionally, closer attention should be paid to the 'behind the scenes' planning, in particular the contributions and influence of the educators as they interact with committee members in selecting themes, activities and outings. Educators should be cognisant of the risk of dominating in club processes that are intended to create spaces for personal growth of club members. In turn the committee members must avoid what could be viewed as unintentional 'cliquey' behaviour that isolates them from the general members. A careful balance must be developed between the educators, committee members and general members that strengthens rather than weakens collective actions. Efforts should be made to encourage general club members to attend TALON meetings and outings more regularly as their current *ad-hoc* attendance compromises their levels of involvement which in turn does not enhance the democratic, participatory nature of club processes.

**6.3. SOME CHALLENGES FOR ACTION COMPETENCE PROCESSES IN THE CONTEXT OF SOUTH AFRICAN SCHOOLS**

The concluding insights and recommendations presented in this chapter may have implications, or at least provide some thinking points, for environmental clubs in other South African schools. This study has shown that action competence-oriented processes in a school-based environmental club are influenced by a complex interplay of pedagogical, contextual and relational factors, and these will obviously differ from club to club. However, some broad and apparently influential principles are apparent; these are summarised below:

- All club members, including educators, committee members, general members and perhaps even guest presenters, should share a common understanding of democracy and work explicitly towards learners participating fully and meaningfully within the school structures. This may be difficult to achieve in hierarchical or authoritarian contexts where learners are traditionally expected to assume more passive roles.
- Action competence-oriented teaching and learning processes require in-depth knowledge and critical engagement around an environmental concern, which may be a challenge in poorly resourced contexts or with educators who are unable to support critical, reflexive processes.
- The educator plays a critical role in the action-competence process – he/she needs to have the confidence to encourage learners to determine the direction of their own learning, yet be on hand as a guiding, knowledgeable adult.
- As evidenced in the intimate relationship between the TALON committee and the educators, small groups appear to promote better opportunities for action competence processes. This might prove challenging in large school-based clubs with high learner to educator ratios. In line with the inclusive and participatory ethos of the action competence ideal, in such cases it may be strategic to draw more strongly on the knowledge and experience of community members, especially parents, grandparents and guardians.

Action competence-oriented processes in their fullest and most idealised form as described in international action competence literature might not, therefore, be as readily achievable in contexts where democratic principles are still being defined and cultivated. Action competence as a concept/ideal originated in, and has been advanced and practiced within, Danish society that has a long history of democratic governance, with a generally well-educated and culturally homogenous populace, a well-resourced education system, highly qualified educators and low learner to educator ratios (Grant, 1997; Lotz-Sisitka, 2004). In the light of the socio-cultural diversity and socio-economic disparities of the South African context together with its legacy of inequitable education systems, there may well be many more influences and challenges to enabling action competence-oriented processes than assumed in the Danish tradition.

#### **6.4. CRITICAL REFLECTION ON THE RESEARCH PROCESS**

If this study were to be repeated I would recommend concentrating the data generation activities with the TALON committee members only as they were the most involved and best positioned to engage in action competence-oriented learning processes. This does not mean that the ordinary member's input was not valued, but that my engagement with the committee was easier, more frequent, of a longer duration and hence more substantial.

My involvement with TALON Club and my activities both as researcher and educator responsible for the club was bound by the timeframes of the school calendar. Consequently, my interactions with the club at the planning stages as well as many of my observations of club activities commenced early in 2007, before my proposal was finalised and before I had developed a sound understanding of action competence as a complex, multi-layered concept. In particular, an emphasis on democratic processes should have been one of the key pedagogical thrusts within the TALON Club. Action competence develops when the concepts of liberal education, democracy, human rights and dialogue accompany it. Instead my initial research focused on outcomes rather than processes, which was a limitation, as these outcomes could equally have been the result of behaviourist approaches to environmental learning and not of democratic processes. It was only at this stage once I was able to recognise the critical elements of action competence-oriented processes that I was in a position to make appropriate observations and ask more strategic and nuanced questions. The subsequent focus group interview was an opportunity to extend the existing data, and certainly this reflective look at what had transpired one year earlier enabled a deepening understanding on the part of the committee and me of the IVAC principles in action competence development. It served to stimulate participants' memories and to holistically view the past year as not necessarily a random group of activities, but as many parts of a complex story.

The use of plants as a theme was both enabling and constraining in developing action competence processes. I realised that it was *my* passion for plants and not that of the learners which drove the theme, which is contrary to action competence principles. However, it did mean that the theme exhibited the best investigation, as opposed to the

other themes that were of a more traditional, habituated nature. It led me to question whether there was a place for limiting directions for further investigations or whether the learners should be free to explore their own ideas and risk a shallow, superficial engagement.

It has certainly been a study that has challenged my own teaching practice and made me critically re-examine my own traditional, habituated way of doing things. As a novice researcher I have learnt that environmental issues are extremely complex, with no pat answers that can satisfy everyone involved (research participants, Talon members, and immediate community) at once. I have had some success with developing fledgling action competence processes, but the very nature of the concept makes description difficult. On one occasion, in Chapter Five, in an attempt to quantify the occurrence of action competence-processes I tried to further reduce the table in Appendix 22. By doing that I was left with an insincere, glib set of phrases that did no justification to action competence ideals. Instead I returned to a more satisfying, but lengthy description of how I saw action competence processes developing in 5.2.2.

## 6.5. AREAS FOR FUTURE RESEARCH

- As this was a limited study, I was unable to explore some of the avenues that were opened-up as the research continued. With reference to action competence, I was faced with the quandary of defining *direct* and *indirect* actions as proposed by Jensen & Schnack. In my experience these two concepts tended to merge, depending on the perspective of the people concerned. I found that in TALON the members were more successful with *direct* actions than *indirect* actions, as they were more achievable in the short term. I would like to see a concerted effort to develop more *indirect* actions, as those are the ones that have the potential to inspire other people to become involved.
- This study has indicated that, on a small scale through TALON Club, connections between school and community can create rich learning opportunities. Young people's ability to make connections and learn across these spaces may be a significant factor in developing action competence towards more democratic citizenship. This area was not formally explored through this study but it appears to be a potentially valuable area worthy of further qualitative research.
- I am concerned that action competence processes can only occur in those schools where the educators and school facilities support the democratic ideals in which action competence thrives. This may well have implications for those schools that are not as privileged as Hudson Park High School in terms of access to the best resources in terms of support and learning opportunities.
- Some research indicates that adolescent girls are generally more environmentally aware than boys of the same age. Within TALON Club there were glimpses of gender bias towards females, but this was not probed at

all. I would like to see a programme developed that encourages boys to become more involved in environmental issues at school, and specifically in the TALON Club.

## **6.6. CONCLUSION**

This case study research was conducted to investigate what influences action competence-oriented teaching and learning processes in a school-based environmental club. It was based on the precept that action competence is an appropriate way to develop in young people the knowledge, skills and values associated with responding effectively to local and global environmental concerns. I hope that the research findings will provide some guidance to environmental educators interested in following a democratic pedagogy and specifically the action competence ideal.

TALON Club followed a year of activities that, for the purposes of analysis, were organised into four themes – plants, animals/animal welfare, waste management and community outreach. The teaching and learning processes associated with each of these themes were critically reviewed in terms of the IVAC framework to determine the nature and extent of action competence-oriented processes. Once the extent of action competence-oriented processes had been ascertained, and towards answering the study's research question, I identified factors influencing these processes from the vantage points of pedagogy, context and relational dynamics.

The study concluded that a complex interplay of pedagogical, contextual and relational factors influenced the way action competence-oriented processes played out in TALON Club. Participation and democracy were central to these processes, through both their absence and their presence. As the researcher and educator involved with the club, I was challenged to reconsider the nature of the educator's influential role in a club striving to function with an action competence orientation, and I have made recommendations to TALON Club regarding the centrality of a participatory ethos and the importance of supporting reflexivity through deeper investigations and a solid knowledge platform. Although these insights and recommendations are not generalisable from a single case study, it is my hope that they might nevertheless be helpful starting points for the leaders and members of similar school-based environmental clubs who aim to review their own progress towards enabling action competence.

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## APPENDIX 1: Minutes of a committee meeting

Minutes

Com. Meeting 05/03/07

- ① Welcome & Apologies (Thalia)
- ② Minutes
- ③ TALON FILE ← minutes ~ Apoint secretary  
register ~ Megan, Mrs James & Debbie
- ④ Slide show and duties ~ Catherine
- ⑤ Wednesday meeting ~ advertising Natina
- ⑥ Beach clean-ups & photos ~ Mrs James
- ⑦ Notice board ~ Debbie, Catherine, Megan
- ⑧ Tues 13 March outing ~ Herb Shop - poster Debbie
- ⑨ Last week of term outing ~ Valley Social / Margalethu
- ⑩ Term Planner Term 2 Monday 19 March

⑤ [Wed Meeting]

- Welcome ~ Natina
- Game ~ Thalia
- Outing ~ Health shop Mrs James
- SciFest ~ Catherine
- Spinach ~ Megan //
- Vegetarian ~ Megan
- Beach clean-up Catherine
- \* Chips & Dip

## APPENDIX 2: Indicators of action competence

<b>Indicator</b>	<b>Related concepts</b>
<b>1. The learning process was characterised by democratic, participatory processes.</b>	democracy/participation( All a/c authors, especially Schnack, Jensen, Simovska, Heck, Carlsson) learners direct their own learning, develop skills (Grant, Colquhoun, Agyeman,) dialogue (Carlsson, Nilsson) group action, negotiated consensus, opposes oppression and ideology (Schnack) respect for oneself and others
<b>2. The learners source knowledge from their societies and cultures as well as science</b>	Jensen & Schnack, 1997; Schnack, 2000; Bishop & Scott, 1998
<b>3. The learners demonstrated a sense of moral responsibility, commitment / motivation to act</b>	commitment/motivation (all a/c authors) sense of the self / other emotion (Simovska, Fontes, J/S) moral responsibility (Ashley, Schnack, Ferreira)
<b>4. Learners persist in the face of difficulties (barriers)/ develop strategies to overcome them (Simovska, pers com).</b>	Simovska, pers comm.; 2000, 2004, 2007;
<b>5. Learners developed a sense of agency and the ability to make choices towards enacting change processes</b>	Empowerment (Schnack, Tones, Payne, Jensen) courage, risk, faith (Schnack, Ferreira)
<b>6. Learners displayed critical engagement and reflexivity towards the problem being investigated</b>	Reflect critically on the role of tradition, habits, customs, norms; consider the underlying assumptions; justify values; responsiveness; environmental problems are structurally anchored in society and our way of living (science does not adequately account for it all). All a/c authors, (especially Schnack, Bishop & Scott, Jensen, Ashley)
<b>7. Learners engaged in a creative, generative, open-ended manner to the problem under</b>	transformative / change perspective; visions Especially (Jickling)

<b>investigation</b>	
<b>8. The Talon members' learning is situated within a wider social sphere of concern and responsibility</b>	Citizenship; autonomous thinking <u>within</u> the collective. authentic problems ; situated nature of the learning and action taking; relevance knowledge moves beyond the school and into community. citizenship (Nagel, Colquhoun, Fien/Schoein)

Developing skills → these are implied across the indicators.

Action competence protagonists: Agyeman, 2006; Barrett,2006;Bishop & Scott 1988;Breiting,1996;Breiting & Mogensen,1999 Carlsson,2000Carlsson & Jensen,2006Colquhoun,2000Ferreira,1996Fontes,2004;Fien,2000Fien & Schoien, 2002 Grant,1997; Hart,1997Jensen,1994Jensen,2004Jensen & Jensen,2005Jensen & Nielson,1996 Jensen & Schnack,1997Jensen & Simovska,2005Lotz-Sizitka, 2004Mogensen,1996Nilsson,2005; Payne,2000Sauve,2005Schnack,1996,2000Simovska,2000,2004,2007Simovska & Jensen,2003Svedbom,Uzzell,1999; Vognsen,1996Uzzell,1999; Vognsen,1996

## APPENDIX 3: Plant quiz answer sheet

Kim Rouquette

2

IOP

TALON

Plant awareness exercise:

1. —
- ✓ 2. Aloe
3. —
4. —
5. —
- ✓ 6. Sterlitzia
- ✗ 7. Peppercorn —
- ✓ 8. fern
9. —
- ✗ 10. Maulberry
- ✗ 11. Poppy
12. —

- ✓ 13. Yes, cactus.
- ✓ 14. Photosynthesis
- ✓ 15. Yes.

Plant shown to pupils.

cycad  
aloe  
plumbago  
hen and chicks  
African potato  
sterlitzia  
impatiens  
fern  
num-num  
soko-soko berry. (*Solanum nigric*)  
nasturtium  
geranium.

(Do you look after plants at home)

(What is the name of chemical that makes plants independent)

(Are you interested in learning more about plants?)

## APPENDIX 4: General questionnaire to all TALON members

TALON QUESTIONNAIRE April 2007

This term we want to find out just what it is that makes our TALON members so special! Please take a few minutes to answer the following questions so that you get the club you want. Answer as freely as possible, there's no right or wrong answer, we want to know what motivates you, what drives you nuts and what advice you can offer.

1. For how long have you belonged to Talon?.....
2. What has been your best memory of being a member of Talon?.....
3. Do you prefer outings or meetings run at school by the committee?.....  
Why?.....
4. Why did you join Talon?.....
5. What have you learnt about the environment from Talon?.....
6. What don't you enjoy about Talon? Please be honest here.....
7. Do you or your family practice recycling at home? If yes, what do you recycle?.....
8. Do you discuss the Talon meetings/outings with your family?.....
9. Or with your friends?.....
10. List two or three activities that you would like to see planned.....
11. Do you think that helping people is part of environmental education?.....
12. Would you like to become a part of the committee for 2007/2008?.....
13. Can you suggest how we can motivate pupils in grade 8 to join Talon?.....

## APPENDIX 5: TALON committee application form

### TALON COMMITTEE APPLICATION FORMS


May 2007

Name : Megan Jaye  
 Grade : 10  
 Years in club : 2.5  
 Points (Mrs Selkirk to fill in) : 115 1/2

What are your visions for TALON in the future?  
Going a bit outside the box, I want to see us really making a difference. I would also like us to get a bit more involved & being more organised as a club.

Why would you like to be on the Committee?  
I have been on the committee since Gr 8 & I believe that I am valuable to the club. I am also very committed to this club & have & will continue to give up time for it. I want & make <sup>it</sup> the biggest TALON year ever!

What other activities are you involved in after school?  
Walk for Life Tues & Thurs

Signed :  Appendix 6.  

Talon Voting Form:	
Chairman 1:	_____
Chairman 2:	_____
Name 1:	_____
Name 2:	_____

*Applications must be returned to Mrs Selkirk or to her pigeon hole by Friday 18<sup>th</sup> May*

**TALON**  
 Moving forward.  
 The box  
 with great risk comes great reward  
 New badges  
 Together we can make a difference  
 Lets do it  
 Everyone looks up on environmental issue, be it big or small. We pick 2 or 3 of the most achievable ones (that we can help towards)

## APPENDIX 6: Interview schedule for six TALON members

### Interview schedule for Talon members (Six members)

1. Name:..... grade: .....  
M/F
2. Length of time a member of Talon.....
3. Your favourite outings  
are.....
4. What do you think that you have learnt from being a member of  
Talon?.....
5. How do you feel about the meetings we have at school that are run by the  
committee?.....
6. Do you go to Talon meetings to get the service points or would you attend even if you  
got no points at all?.....
7. How would you improve the attendance at the meetings?.....
8. Have you ever contacted anyone in authority who could help with an environmental  
problem that concerns you? Please explain.....
9. Do you discuss issues/activities with your family at home? Who? When? Or your  
friends?.....
10. Has being a member of Talon led to any changes in your families environmental  
behaviour?.....
11. As a young person do you feel that your contribution to the Talon group is  
important?.....
12. Do you feel worried about the really big environmental problems? How do you think  
we could affect them?.....
13. What sort of issues should Talon be getting involved with?.....
14. Do you think we should have more projects at school and if so, what kind?.....
15. are you a shy person, do you think that belonging to Talon has given you confidence?  
.....
16. How do you feel about the future for yourself and your effect on the  
environment?.....
- Anything else?.....

## APPENDIX 7: Parent interview schedule

### Parent Interview for Action Competence

Explain how I view **action competence**. What is it that I might expect to see at home?

1. Does your son/daughter discuss the Talon meeting or outing with you?.....

Where would you talk about Talon? .....

2. What are his/her favourite outings?.....

3. Has being a member of Talon given your son/daughter more confidence; or become more assertive, or is asking more challenging questions.....

4. Has he/she implemented any environmental actions at home or in the community?.....

5. Do you consider yourself to be an environmentally aware person?.....

6. Have you changed any of your habits since your son/daughter became a member of Talon?.....

7. Or anyone else in the family?.....

8. A comment was made by a fellow teacher that 'a certain type of pupil' joins an environmental club. What do you think this means?.....

9. An important theme in all the interviews has been '**fun and friends**' in Talon. Can you comment on this?.....

10. Another comment has been '**I can be myself**', what do you think this means?.....

Anything

Else?.....

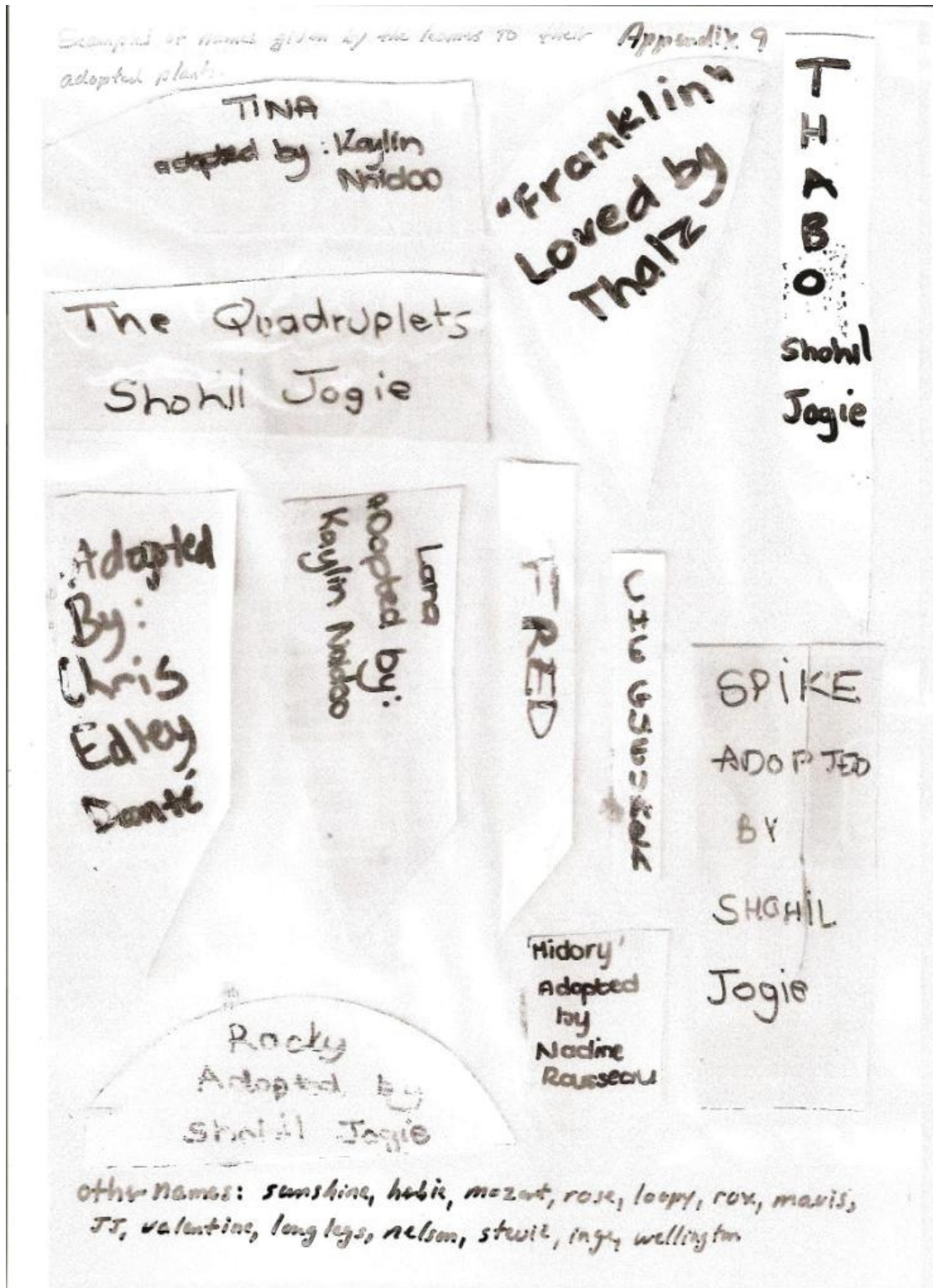
Thank you.

## APPENDIX 8: Observation schedule

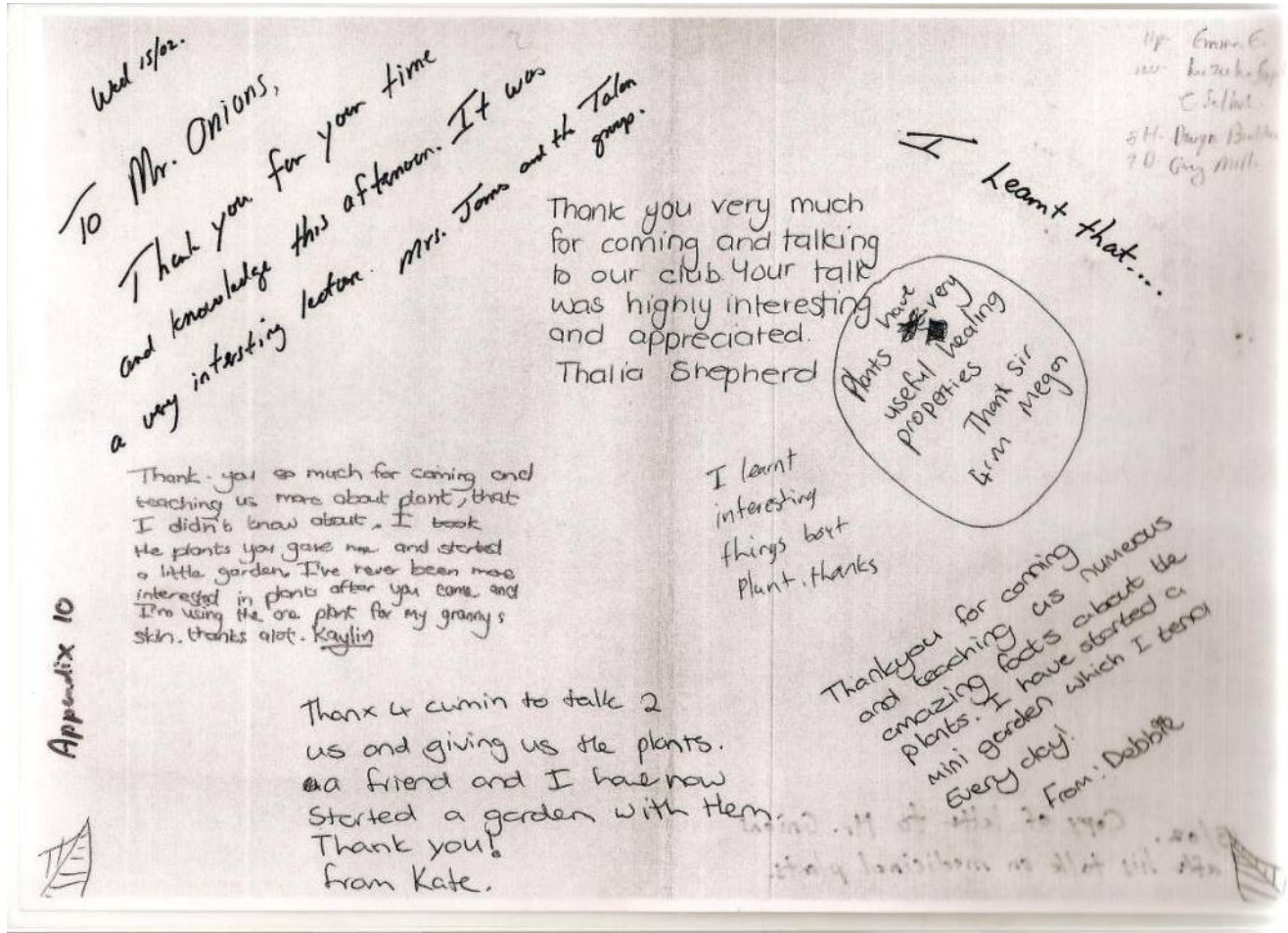
Observation schedule for Talon      date:      activity:

1. How many people attended the meeting?
2. How many girls/boys?
3. Time that Mrs. Selkirk arrived.
4. Did meeting start on time?
5. Was the meeting conducted timeously, follow an agenda?
6. How many cell phone interactions took place?
7. How many pupils left before the end of the meeting? Why?
8. Did the members ask critical questions?
9. What interactions took place between the learners?
10. What was the overall body language of the group?
11. Was there evidence of democratic processes?
12. Were any problems dealt with?
13. Was there evidence of conscious decision taking?

**APPENDIX 9: Plant names given to plant cuttings**



APPENDIX 10: Thank you card to Mr Onions





APPENDIX 12: Research journal extract

Monday 11/06/07

Appendix 12 Journal Extract.

A new beginning, a new day, beautiful weather. Feeling much more motivated again. Must sit down and finish draft of Ch. 3. It's all there, it just has to be co-ordinated and put down on paper.

Interviewed Tristen Abels this morning. What a lovely boy. Very sincere. Will plan his mother to ask about what the parents are experiencing from Talon.

Another interview tomorrow and 2 on Wednesday. - wonder if they will telephone? Call is for an all-out strike on Wednesday. What is going to happen? Quite a lot of uncertainty from all concerned. Popsit on coming to school in civvies. A threat of intimidation from today, extra security guard in evidence.

- Sent another e-mail to C. Grant asking for info on a/c.
- Has Cornwell received my ref. list?

Col Grant

Head from Col Grant. Seem he has dropped the second side of a/c. but still puts it into practice. He also found that it was exhausting time wise and that one needs ENERGY.

I'm glad his replied, means that I can top him for more info at times





APPENDIX 15: Example of analytic memo

Leadership in data.	Axial coding.	Appendix 14.
L/ship/ initiative	<ul style="list-style-type: none"> <li>L. Thalia taking charge of agenda.</li> <li>L. Thalia using board to direct meeting.</li> <li>we come together, organize, get the job done.</li> <li>L/E. took plant her to use for GRAN</li> <li>cooking, selling chips on their own</li> <li>Megan selling plants</li> </ul>	S1 S1 S3 S4 S6 S10
<u>Thank you cards.</u>		
<u>Cat.</u> L/ship. initiative	<u>Description.</u> <ul style="list-style-type: none"> <li>I have started a mini-garden</li> <li>a friend and I have started a garden</li> <li>I started a little garden</li> <li>I am using one plot for my granny</li> </ul>	Debbie Kate Kayla Kayla Scene TC1
L/ship/ initiative	<ul style="list-style-type: none"> <li>phoned municipality about sewage block at Moon. (with dad)</li> <li>phoned SPCA over about a stray dog.</li> <li>discuss things with her Dad (who is always in municipality)</li> <li>to get things done.</li> <li>also wrote a letter to the paper 2 yrs ago</li> <li>worked at SPCA - started by belonging to Talon</li> </ul>	IT2 IT5 IT5 " IT6
L/ship	<ul style="list-style-type: none"> <li>all indicated such a desire by virtue of fact that they applied to be on the committee.</li> <li>went to learn leadership qualities... which I do have some.</li> <li>I want to... teach people the importance of nature.</li> <li>went to make a difference / we can make a difference</li> </ul>	TC 1-77 TC2 TC4 TC1
L/ship	Asks challenging questions at her. buys plants, gets family involved in animals, fertilise	PT1. PT2
L/ship. Cathini leads meeting Chris calls for order.	14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	Scene 03 05.
L/ship	Description - yes to committee (only 8 applied)	PTO

## APPENDIX 16: Analytic table from the focus group interview

CATEGORY	DATA	PERSON	REF
<b>PI</b>	Plants are very important to us, we need them for oxygen	k	1
<b>Plant investigation</b>	I'm sure not everyone realises that we need plants everyday for oxygen and beauty	k	1
	I think it had to be forced a little because no-one was really pointing it out. nobody in the school notices about plants	k	1
	Why was this a topic to investigate from an environmental perspective?	james	1
	Its not given enough recognition and by learning more about plants we can help the environment and choose our actions	kate	1
	It's a topic of discussion, or a topic we had to investigate because not enough people actually know about it, so we were creating more awareness , because if people know they can take proper action	meg	1
	So by showing a variety of things it raises your awareness.	j	1
	In my case, when the sangoma came, after he had showed us all those plants....I looked out for them.		
	Mam we are taking away carbon dioxide and the whole ozone layer...so the suns not so harmful	k	1
	When we were learning all about electricity , Kerri, you went through your house and turned off the lights you weren't using and I was talking to my family and my dad was turning off the lights, that helps	kate	1
	A fact sheet with all the facts about the plant	kate	3
	With like simple little facts	meg	3
	If you read something like a paragraph they don't listen	k	3
	Its not a weed , its that plant that the sangoma showed us, its bushman's poison	deb	3
	You were showing us all the plants on the beaches	kate	5
	It also brings it back to the plants, cos the animals need the plants, the birds and the squirrels eat the nuts and the berries, so if people are killing the plants...	k	7
	We should maybe talk about something different, we could focus on the plants this week ...	k	7
	The main problem is a lack of education, some of them might not know that if you don't water this type of plant regularly its going to die	kate	10

**APPENDIX 17: Contextual and relational categories of focus group interview**

<b>Part Two</b>	<b>FACTORS INFLUENCING TALON ACTIVITIES – contextual and relational aspects</b>		
<b>code-S-M</b>	<b>Structures and mechanisms of a school-based club</b>		
	Club structures, club mechanisms, wider school structures, anything else emerging  Contextual issues	<b>James – j</b> <b>kate</b> <b>Emma – e</b> <b>Megan – meg</b> <b>Kerri – k</b> <b>Debbie - d</b>	
	Meeting held on a very busy day at HPHS – open evening that night	j	1
	Meetings well run, secretary who takes minutes	j	1
	Debbie – good with attendance reg. and Talon badges	j	1
	Transport – have to be realistic about our outings	kate	
	Debbie using cell phone	J	7
	Can everyone put their phones on silent	e	7
	We have to phone and leave messages for them 3 times and then they cancel because they have a funeral or something on. Laughter.	kate	9
	When we do get to help them were locked out	k	9
	You can't hear them clearly (language problem at Bong)	k	9
	Were seeing the different school facilities	meg	9
	We could include the Qhayiya Soc	e	11
	We are not fluent in their language	e	11
	We need the meetings for communication	d	11
	So we know what's going on every week and what's happening in the club	k	11
	The notice board does not have anything on it	j	11

	Ice-breaker some are to do with the environment and stuff, some are just for fun.	k	11
	I don't really feel that our meetings...are not really about the environment, its more about letting people know. its also about feedback, which is important, about what we have been doing, what they feel about it...to encourage	meg	11
	Kerri left before end of meeting was being fetched by mother	j	11
	Bong – and school structure- it is our sister school	d	9
	Its very stop-start, the teachers have gone and helped them a little bit, but they want to revive it again, every time it comes up in the staffroom, whos interested in helping..	j	9
<b>code- FT tradition</b>	Why do we go to these places? tradition	k	5
	What people left behind for us to do	m	6
	(they said that they wanted to do ) stuff that they had done before	kate	6
	We can get stuck in the rut of tradition we never do anything new	kate	7
	Collecting food for the SPCA is a tradition that Talon does every third term	meg	8
	The nice thing about selling slap chips is that it actually started when me and Debbie were in grade 8	meg	8
	Bong – ( the visits) its also tradition, something that we've inherited from the past	j	9
<b>fun</b>	Cleanups- they learn about the environment while having fun	d	6
	Fundraising – it was lots of fun, especially if you have enough people	k	8
	Ja, its really hectic, but its fun	meg	8
	Meetings – some are to do with the environment and stuff, some are just for fun	k	11
	Cos if we tell them how much fun we have, they're going to want to come	e	11
<b>Friends family</b>	We could advertise more, tell the whole school what we are doing, tell our friends	k	3

**APPENDIX 18: Extract from table of critical reflections**

**CRITICAL REFLECTIONS ON THEMED TALON CLUB ACTIVITIES IN TERMS OF INDICATOR 1: The learning process contained democratic, participatory processes**

REFLECTION ON THEMED TALON CLUB ACTIVITIES	FACTORS INFLUENCING THIS PROCESS:		
	Pedagogy	Context	Relational Dynamics
<p><b>Plants:</b> This theme was chosen by the educator, not the learners (J15/01/07; J23/01/07; FG, 1)</p> <p>heavily content based in the form of presentations by educators and guest lecturers (J13/02; J13/03; J9/05)</p> <p>learners/committee did not re-elect to continue with this theme (J5/03)</p>	<p>experiential learning, information transfer in ‘show and tell’ sessions, fun quiz ( J23/01;J13/02;J21/02; J9/05 )</p> <p>generally a one-way information flow, from adult to learner (J23/05; J13/03)</p> <p>educator showed learners how to plant cuttings (J7/02; J19/02; J21/02)</p> <p>opportunity for learners to develop entrepreneurship ( J29/03; J5/05)</p> <p>educator attempted to introduce new ideas - selling plants, new outings around the plant theme (J5/03;J19/03;J29/03)</p>	<p>in the classroom, where it was possible to work in groups, discuss information, answer questions (most of the time)</p> <p>Outside at our ‘nursery’ where the participants planted their cuttings in groups.(J7/02;S4,S5)</p> <p>Outings arranged around the theme to broaden the knowledge base. Numbers initially high, but they dropped off as the year progressed, indicating a lack of participation (J13/03; register).</p> <p>In the main the learners expected the educators to do the bulk of the organising, so their need to participate more fully was negated. (all plant activities, S1, S3,S5,)</p>	<p>the noisy meetings at times interfered with the pedagogy, thereby lessening the potential to learn (OS1;OS5; OS6; J23/05;</p> <p>learners enjoyed planting plants for Valentines day, worked as a group to do this (J13/01;S2,S3 )</p> <p>learners co-operated in deciding what to do on Arbour day, but some were too shy to participate in the activity (OS14;</p> <p>made posters in groups in</p>

	School-type activities not welcome ( J 15/01;J19/02; J9/05)		class for arbour day (OS14)  the educators held the power in the club, thus controlling the orientation of the plant theme (J15/01/07; J23/01/07; FG, 1)
<p><b>Animals/Animal Welfare:</b> the SPCA theme was steeped in the school tradition.(FG,M,D 6,8)</p> <p>Learners wanted to continue with it(TIq13; TQq10)</p> <p>A high degree of participation, especially by the committee members (register)</p> <p>Democratic in that they voted on ‘toys’ to make for the animals, which ones to visit, what the raised money should be spent on. (OS9)</p>	<p>The Teaching around this theme was limited (general observation).</p> <p>Educators tried to introduce new ideas, but they were not taken up for discussion – e.g. meat article (J5/03; J7/03;J13/03;</p> <p>learners did not want to read new information at the zoo, or info boards at the aquarium (OS11; J22/10)</p> <p>attempt by educators to get TALON learners to take part in a bird quiz – they lacked the confidence to do so (J3/05)</p>	<p>Learners, especially girls, participated willingly in this theme. It was close to them.(J19/09;</p> <p>Easy to develop consensus around the problem of animals (FG, M 7)</p> <p>learners participated in collecting tins, bringing food to school, taking it to the SPCA (J19/09; J8/10;</p> <p>theme pushed by strong tradition in the club, school (FG M,D,6,8)</p> <p>as the year progressed attendance of animal outings decreased (J21/08; J9/10; register)</p>	<p>participated with their friends (J19/09)</p> <p>high involvement by the committee in the outings and meetings</p> <p>worked in groups at the meetings (J30/01)</p> <p>making the placards and posters for the food collection drive (J23/01;J30/01)</p> <p>Least amount of educator/learner power gradient as the</p>

			learners were able to work on their own with a familiar theme.
<p><b>Community Outreach:</b> this theme was bound up with the traditions of the school</p> <p>the pupils did not really enjoy their involvement in this theme (J5/03;</p> <p>visits to Bongulethu were problematic</p> <p>low participation on the outings to Bongulethu (J6/05;</p>	<p>very little pedagogy around this theme</p> <p>. no preparation leading up to the visits that might increase meaningful participation</p> <p>Assumed by the educators and learners that fixing the gardens was the extent of the involvement needed.</p>	<p>Outreach to Bongulethu was always a visit to their school (J16/5; J25/7)</p> <p>difficult to make telephonic contact and to get there, thus negating genuine participation (OS2)</p> <p>low turn out on these visits, problem with language (register)</p> <p>learners in two camps, with little integration (J25/7)</p>	<p>Stilted contact with Bong. Learners (J25/7;OS7)</p> <p>Pupils in two physical groups – us/them (J25/7;OS7)</p> <p>did not understand language (J25/7)</p>
<p><b>Waste:</b> cleanups involving the club and grade 8s of the school – a participative, but compulsory exercise (J18/09)</p> <p>workshop on waste, only for 2 members plus educators – an opportunity to participate with</p>	<p>Opportunistically attached to other themes (4.2) as a ‘fill-in’ (OS2; J28/02; J9/05)</p> <p>not investigated from a societal perspective – actions involve the end-result, not the origin</p>	<p>Away from the classroom, in the open, often at the beach.(J28/02;J9/05;J12/09;J18/09;J20/09)</p>	<p>good participation, especially by the committee (attendance register)</p> <p>numbers dropped off as year progressed (OS8;J16/04 attendance</p>

others in the community (J20/09)	satisfying for the participants in that a difference could be immediate (FG D 7)		register)
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## APPENDIX 19: Letter to parents



# Hudson Park High School <sup>①</sup>

PHONE (043) 726 3205  
FAX (043) 726 6565  
e-mail: office@hphs.co.za

DEVEREUX AVENUE  
VINCENT  
EAST LONDON  
5247

January 2007

Dear Parents,

Thank you for supporting your child to join the TALON environmental group at Hudson Park High School. I will be working with the group on various aspects of PLANTS, how to grow them, how to market them and how to sell them. We will also invite people to tell us how they became interested in plants & the role that plants play in their lives.

This study will be part of my research for my Masters Degree in Environmental Education. It may require that your child is interviewed by me, or that he/she provides answers to questionnaires.

It is all in the interest of education. Should you have any questions please feel free to contact me at: 043 7481793 in the evenings.

As we will be growing plants at school I have a wish list for any of the following:

- 1 Garden Trowels (even if the handle is broken).
- 2 Plant Pots (cleaned please).
- 3 Seedling trays.
- 4 Cuttings of indigenous and water wise plants (aloes, succulents, geraniums, etc.).
- 5 A blackboard or white board for advertising.

Thank you for your co-operation,

## APPENDIX 20: Signature of TALON members

Dear TALON members,

Please would you write your name and signature below granting me permission to use your contributions to TALON for my research.

Thank you

Mrs. James

Name	Signature	Grade
1 Kale Murray	K Murray	9U
2 Kim Louquette	KLB	10P
3 Kerri-Lee <del>to</del> <del>Warrington</del>	<del>Kerri-Lee</del>	10U
4 Nicola Warrington	N Warrington	10D
5 Nadine Rousseau	<del>Nadine</del>	10H
6 Emma Edley	<del>Emma</del>	11P
7 Kaylin Natchoo	<del>Kaylin</del>	11U
8 Shobit Jagoe	<del>Shobit</del>	9N
9 Maryam Maryika	<del>Maryam</del>	10U
10 Xhanti Noto	X	10O
11 Megan-June Elworthy	<del>Megan-June</del>	10P
12 CJ Sankel	<del>CJ Sankel</del>	12N
13 Debbie de Wit	<del>Debbie</del>	10N
14 Gregory Mill	<del>Gregory</del>	9D
15 Tristan Heels	<del>Tristan</del>	9D
16 Sirenathi Nyangoro	<del>Sirenathi</del>	10S
17 Fikile Nondudule	<del>Fikile</del> Ex	10N
18 Barani Balintulo	<del>Barani</del>	10U
19 Malakine Stifolo	<del>Malakine</del>	10P
20 Chris Edley	<del>Chris</del>	12
21 Luziuko Sapotela	<del>Luziuko</del>	12D
22 N. Thumana	<del>Nthine Thumana</del>	12D
23 <del>Luziuko Sapotela</del>		12
24		
25		
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31		
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33		

**APPENDIX 21: Chronological table of events for TALON in 2007**

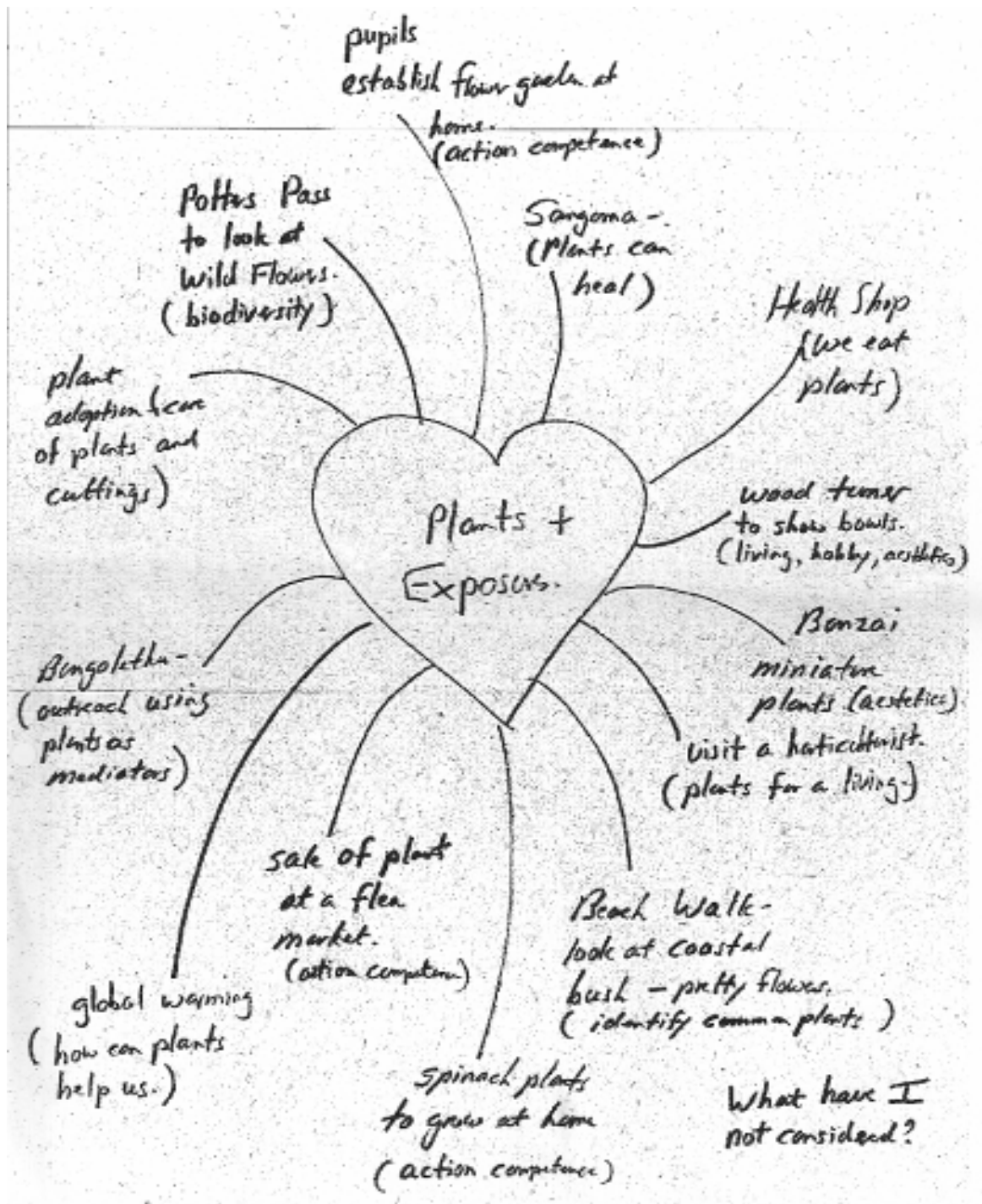
<b>Date</b>	<b>Club Activity</b>	<b>Organiser / Leader / Initiator</b>	<b>Participants</b>	<b>Comment</b>	<b>Theme</b>
<b>TERM 1</b>					
15/1/07	Committee meeting at home of Catherine	Committee	Mrs James 6 members	Introduced project	plants
22/1/07	Committee meeting	Committee Mrs Selkirk	6 members	Missed meeting	Planning for term
23/1/07	General meeting	Committee Mrs Selkirk Mrs James	17 members	No Gr. 8s Introduced project Plant questionnaire Letter to parents Permission from members Posters for SPCA	All themes discussed
30/1/07	Gen meeting	Com/ Mrs S.	16 members	Mrs J away in Grahamstown SPCA posters	SPCA tin project animal welfare Made posters for animals
5/2/07	Com meeting	Com/Mrs S.	5 members	Unable to attend	General planning
7/2/07	Gen meeting	Com/ Mrs James	15	Plant cuttings Took photos	Plants SPCA posters/tins
13/2/07	Gen meeting	Mrs James	13	Mr Onions Traditional healer Learners took home plants for valentine day	Plants
19/2/07	Com meeting	Com/Mrs S,J	6	No to inconvenient truth	All themes
21/2/07	Gen meeting	Com/Mrs S/J	10	Bongulethu visit cancelled – no bus Planted spinach	Community Plants
28/2/07	Outing/clean up at Nahoon beach	Com/Mrs S/J	6	Low turnout Members took photos. C cut foot	Plants Waste
5/3/07	Com meeting	Com/Mrs S/J		Debate about Bongulethu School No Gr 8s joining Spider diagram	Community Plants
6/3/07	Com present slide show of	Com/Mrs S	2	To attract Gr 8s to join TALON	Membership

	TALON at assembly				
7/3/07	Gen meeting	Com/Mrs J	20	Chip 'n dip social vegetarian article	membership
13/3/07	Outing to health shop to Mrs Kruger	Mrs J	11	Only girls attended	Plants Health
19/3/07	Com meeting Deliver pet food to SPCA	Com/Mrs S/J	5	Planning for term Two.	All themes
23/24/4	Science festival	Mrs S	6		
27/3/07	Outing to valley cancelled	Com/Mrs S/J	2	Not well advertised	Plants – to collect seeds
29/3/07	Grade 8 open evening	Mrs J/com Mrs S	2	Sold plants to parents	Plants/ fundraising
TERM TWO					
16/4/07	Com meeting	Com Mrs S/J	1	Mrs S annoyed at turnout	cancelled
18/4	Gen meeting	Com/Mrs S/J	17	Planted cuttings deep fat fryer bought complete questionnaire	
25/4	Outing -cancelled Bongulethu School		17	At the last minute, cancelled as they were having an education meeting at their school	cancelled
30/4	Cancelled - public holiday				cancelled
2/5	General meeting	Com/Mrs/J	15	Very busy week	
3/5	Bird quiz evening	Bird club/ attended by Mrs S/J	0	No-one interested in going	Animal welfare
5/5	Derby day	Com/Mrs/J	5	Sold chips for funds	All themes
9/5	Outing to Dassie trail - NENR	Com/Mrs J	7	Enjoyable talk/walk to learn about indigenous plants/aliens	plants
14/5	Com meeting	Com/Mrs S/J	5	Planning for AGM pancake recipe	None
16/5	Outing to Bongulethu School	Com/Mrs S/J	7	Gates closed, school empty, funeral	plants
23/5	Annual general meeting	Com/Mrs/J	18	New com elected pancake social	All themes mentioned

				discussed research	
Educator strike/holidays	TWO	MONTH	RECESS		
TERM THREE					
16/7	Com meeting	Com/Mrs S/J	5	Plan for term	All themes
18/7	Gen meeting	Com/Mrs	20	Pancake social new com introduced	No serious discussions
25/7	Outing to Bongulethu	Com/Mrs S	7	Planted plants, placed chicken wire	Plants
30/7	Com meeting	Com/Mrs S/J	5	All themes discussed summary of research	All themes
1/8	Gen meeting	Com/Mrs/J	7	Where is everybody? report on research	Waste
13/8	Com meeting	Com/Mrs/J	5	Tribute to Grade 12s from TALON	Waste. animal welfare
15/8	Gen meeting	Com/Mrs S/J	14	Farewell to Gr 12s	None
21/8	Outing to zoo	Com/Mrs S	7	Made enrichment toys	Animal welfare
22/8	outing – valley walk	Com Mrs/J	5	Poorly attended - farewell to Grade 12s	plants
27/8	Com meeting	Com/Mrs S/J	4	Plan arbour day	plants
29/8	Gen meeting	Com/Mrs S/J	11	Practice for assembly	plants
7/9	Assembly for arbour day	Com/Mrs S	6	Very amusing skit	plants
10/9	Com meeting	Com/Mrs S/J	5	Riot act from Mrs S	SPCA
12/9	Gen meeting	Com/Mrs S/J	13	Plan Gr 8 cleanup Signed petition to save TALON Planted plants in quad SWOT analysis given to com members by Emma	Waste plants
18/9	Gr 8 cleanup	Com/Mrs S/J and school staff	11	3 hours in valley picking up litter	Waste
20/9	Waste water	2 staff,2 com		Recycling theme	Waste

	conference	members			
TERM FOUR					
1/10	Com meeting	Com/Mrs J	5	Plan final short term	plants
3/10	Gen meeting	Com/Mrs J	13	Worked in quad SPCA/Zoo discussion	Plants/animal welfare
9/10	Outing to zoo	Com/ Mrs S	6	Zoo toys	Animal welfare
15/10	Com meeting	Com Mrs S/J	5	Confusion – no programme	
17/10	Gen meeting	Com/MrsJ	10	meeting	general discussion
22/10	Outing Aquarium	Com/MrsJ	8	Delivered cheque	Animal welfare
23/10	Food to SPCA	Com/MrsJ	4	Delivered tins	Animal welfare
exams	THREE	MONTH	RECESS		

APPENDIX 22: Spider Diagram



## APPENDIX 23: Meat article

My day of eating freshly killed meat

David Aaronovitch on seeing Freckles slaughtered, cooked and served as a chop

If I had to kill all my meat myself, I'd probably stick to carrots

ONLY a surrealist novelist – or a British TV company – could have thought of creating a swish new restaurant on the grounds of an abattoir, with large picture windows overlooking the scene of slaughter. So here we are, a hundred of us, sitting in comfort in what was the yard of Metbrick's slaughterhouse in the Derbyshire town of Glossop, in central England, waiting to watch our dinner being killed.

Today's effort – Kill it, Cook it, Eat it – had been declared an attempt to re-authenticate the process of animal consumption by reconnecting people "with those shrink-wrapped packets of meats they buy in the supermarket and show the whole journey from farm to fork, from pasture to plate".

That question, I agreed, was a good one. You don't have to be a Marxist or a dark Green to see that there is something to the argument that we are too alienated from the natural world, and from the processes that support our existences.

What the producers have noticed, as have the food experts and the more thoughtful chefs, is that today's heightened interest in the authenticity of our food presents an opportunity to discuss these things more seriously than ever.

But, I wondered, did the people from the meat and farming industries mean it when they said that we all ought to know how animals were raised, looked after, died and were butchered? Weren't they at all afraid that – horrified – we would turn, en masse, to vegetarianism?

The restaurant studio set up, complete with roving cameras and roving presenters, consisted of a seating area in the middle, with 80-odd people sitting eight to a table.

On one table was a collection of TV chefs and food writers. On mine were a career magician and a Liverpoolian woman vegetarian who regularly manages appearances on the daytime confessionals.

The moment of the slaughtering was approaching. One woman, who had brought her children along, said that she had taught them that "if you're not prepared to know where it comes from, to see it, and if you're not comfortable with it, don't eat it". Last year 14 million British sheep and lambs – almost double the population of London – went to "good homes". In all we consumed 364000 tons of sheep and lamb meat.

We were instructed to exit the comfy restaurant and to get ready to file past the slaughtering, as though viewing an art installation. "We must be completely silent," said someone from the TV company, "because we don't want to stress the animals."

There they were, in Room 1, the pen, lambs to the slaughter, all fleecy and cute. Eight months old, black-faced and docile, born last April, with a season's gambolling, a winter and then death to look forward to.

One lamb emerged from the pen to be held in the next stainless-steel room between the chunky thighs of Brian, the literally stunning slaughterer, who clamped its head between the yellow ends of a gigantic pair of pliers, passed the electricity through its brain, and then – gently – pushed it to the floor. Thus began the journey from animal to meat.

The stunned animal was lifted, hooked by one leg to a rising conveyor system, and taken on a slow 45° angle trip upwards until it hung, neck down.

It then passed up and through a door to a third long steel room, where the knifeman, in a red apron, was waiting.

A single deft sweep of the blade cut the beast's throat, releasing a curtain of dark crimson blood to gush away into the cattle grid underneath. One back leg twitched. In some animals, we saw, there was no movement at all, in others you'd swear they were trying to run away.

There it was, our lamb, Freckles or whatever it might have been called – sans fur, sans feet, sans guts, sans everything, turned in 10 minutes into a carcass and a pile of offal. By lamb No 4 some of us had become almost blasé.

Was this a demonstration of an evolutionary trait, this speed with which we can conquer scruple in order to feed? We filed back into the restaurant, leaving the workers to go on killing. There was no gallows humour, and an obvious respect for the men who had done the killing. But the second great test was yet to come. The very animals we had seen in their pen, being stunned, being killed, whose blood had run off in sheets, would now be cooked in front of us.

The smell of garlic and melted butter filled the Slaughterhouse Café, and within minutes we were each presented with a little pink lamb chop. Mine was chewy and I didn't want to eat it. Behind me the presenter had a conversation with the chef. "The meat," he pointed out, "has a gelatinous texture." "Yes," she replied, "that's because rigor mortis hasn't yet set in."

Rigor mortis in a lamb chop? I can barely cope with the idea of rigor mortis in a dead human being, let alone in my dinner. With the image of the kicking back legs of a dying lamb still in my head, would it make any difference at all to the way that I experienced meat in the future? I wasn't going to become a vegetarian. The speed with which I had assimilated and become used to the deaths of these animals had told me that. True, if I had to kill all my meat myself, I'd probably stick to carrots – just so long as someone else grew them – but that wasn't the proposition. The question was whether seeing the process altered in any fashion the stupid quality of the way in which I'd been used to eating meat. Whether it would stop the denial involved in pretending that this thing on my plate was something other than an animal killed to feed me.

Yes, it did, to an extent. I don't mean that, since that day in Glossop, I have gone around mentally separating out the mince in the bolognese sauce and trying to reconstitute it as Henrietta the Hereford

I have taken to looking more carefully – more thoughtfully, if you like – at what's on the shelves, in the freezers, or hanging on the butcher's hook. Where's it from? It was born, it lived, it was killed.

This doesn't mean that every time I have some nuggets I am going to don feathers and do a dance to honour the chicken spirits.

Though maybe I should, for though seeing my lamb killed didn't change my desire for meat in the least, I think it may have altered for some time my appreciation of what has to happen for that desire to be realised. Isn't that a bit good? And doesn't it make me a better home for Freckles? — © The Times, London