

There are two approaches to the use of actual peace education curriculum material. It can either be implemented as a discrete curriculum (an "autonomist" approach), or it can be integrated throughout existing curricula (an "integrationist" approach) (Page, 1991). Most peace educators tend to favour the second approach – or even to see the second approach as the only true option (Bar-Tal, 2002: 6; Evans et al., 1999: 2).

In contrast to these understandings of peace education, there is a school of thought maintaining that "school-based peace education is always bound to be ineffective because it targets the wrong people in the wrong setting" (Cairns, 1996: 164). These theorists contend that children's attitudes about peace and war are influenced more by what they learn at home than what they learn at school, and thus that *parents* are the proper targets of peace education. Others assert that we must move even beyond parents to include "a wider social campaign" (Bar-Tal, 2002: 5). While it is clear that educating parents and the broader society for peace would be an important part of an ideal peace education process, educators tend obviously to have less access to the parents than they do to the children, and much peace education is concerned with beginning where it is possible to begin, rather than waiting for the ideal to be possible. Bar-Tal (2002: 1) acknowledges that "schools are often the only institution that society can formally, intentionally and extensively use to achieve this [peace education] mission."

Peace educators seem to generally accept that peace education achieves its purpose. "However, there is virtually no empirical evidence to substantiate their claim" (Cairns, 1996: 164). A recent and very thorough investigation into peace education publications by Nevo and Brem (2002: 1) revealed that,

during the period 1981-2000, close to a thousand chapters in books, articles, institutional reports and convention / symposium presentations which dealt with the broadly defined topic of peace education, were published.... About 30% of these items referred to a particular peace education intervention program.... [Only] one third had in them elements of effectiveness evaluation.

Why is this? At least one reason is that much of the target behaviour of peace education is abstract, and therefore difficult to evaluate "in an objective and quantifiable way" (Wichert, 1989). Another problem is that many of the desired outcomes of peace education are long-term_rather than short-term, and long-term longitudinal studies require a significant amount of time and maintained focus, and thus also require considerable resources, which are not always within the reach of those interested in peace education research.

While mindful of the potential difficulties, there is an increasingly loud call for serious research and evaluation in the field of peace education. Without it, "many...peace education programmes, although often well-intended and well executed, lead to unknown results and when they fail...it is not clear why that failure" (Salomon, 1999: 2).

In South Africa, the field of peace education is relatively new (Dovey, 1996: 135). Despite this, there are already a number of peace education initiatives underway throughout the country. The Quaker Peace Centre and the Centre for Conflict Resolution, both in Cape Town, and the Umtapo Centre in Durban are all involved in peace education. (Unfortunately it was not possible to gain access to the actual programmes run by these organisations, although the information received indicated that their peace education work did not extend to the pre-school level.) And there is a perceived need for peace education. A 1993 study by Valerie Botha and Adele Kirsten indicated a unanimous endorsement for peace-education-type programmes for both children and youth amongst the education and other youth-related professionals they surveyed. The 296 young people surveyed for the same study recorded a similar level of support for such programmes. In 1992 the South African Teachers' Association (SATA, 1992: 3) even ventured a working definition of peace education for this context: "Education for Peace (in schools) is the exploration and development of concepts, values and skills to enable pupils to live in a more peaceable manner, even in a violent society."

In contrast, some researchers and commentators have directly rejected the idea of peace education being a positive intervention in the lives of children growing up in situations of violence. One argument against its use is that peace education traditionally focuses only on the development of interpersonal skills relating to the successful handling of interpersonal conflict. "While this is no doubt a very worthy aim, it does raise a question mark over the ability of curricula such as these to influence intergroup or political conflict – the type of conflict which most often leads to violence on a large scale" (Cairns, 1996: 149). Another school of thought is that peace education in situations of conflict is futile because "children who are growing up in a society which is based on 'hate' and 'the denial of human values' cannot be successfully socialised or indeed resocialised into a 'peace-loving citizen'" (Punamaki, 1987 in Cairns, 1996: 144).

More hopeful research findings suggest that "if young people are 'given a meaningful alternative' to the current political violence in which they find themselves enmeshed, 'the great majority of the new generation will grasp it'" (Raundalen & Dodge, 1991 in Cairns, 1996: 145-46). Certainly this is the indication of the research undertaken by Botha and Kirsten (1993) among South African youth.

Undoubtedly, though, the effects of peace education need to be thoroughly researched for the arguments against it to be challenged with any authority. Such research is increasingly being called-for and undertaken. However, as there is little peace education that has been done in South Africa, there is obviously still a significant gap in peace education research in this specific context.

2.5 SYNTHESIS

South Africa is a very violent country (Carl & Swart, 1996). Growing up in a violent society can have devastating consequences for young children, particularly those whose other life circumstances already put them at risk for developmental damage (see, for example, Cairns, 1996; Rock, 1997; Shmuckler, 1989; Stavrou, 1992). One of the documented consequences of childhood exposure to community violence is an increase in aggressive behaviour. (Cairns, 1996; Duncan & Rock, 1997a; Stavrou, 1992) The available literature on childhood aggression clearly documents the stability of aggression over time (Olweus, 1978). Considering South Africa's violent history, and the violent current reality in which our children are being raised, it is no surprise that an increasing number of people are calling for measures to intervene in this cycle of violence. The introduction of peace education in South African schools is one such measure being suggested.

Peace education is very new to this country, however, and there is not an existing South African model of comprehensive peace education at pre-school level. Nor is there widespread research from the international peace education community that measures the impact of the various models of peace education currently being practiced worldwide (Nevo & Brem, 2002). There is much that can be learnt from the rest of the world in terms of existing curricula, but there are few research findings that indicate what will be most effective in the South African context. Indeed peace educators internationally are only beginning to address the question of whether peace education does actually educate for peace.

The primary aim of this study was to design and develop a uniquely South African peace education programme at pre-school level, to document this process, and to evaluate the impact of this new programme in a range of South African pre-school settings. It was intended that this process would both facilitate the refinement of the specific peace education curriculum and methods employed, and provide a strong lobbying argument for the implementation of peace education in a wider educational context in South Africa. It was also intended that this study would form part of the international move towards evaluating peace education programmes, contributing to the development of evaluation tools that can be used worldwide.

In reaching this study's primary aim, it was also intended that this research would make a contribution to a number of ongoing peace education debates. It aimed to explore the question raised by Punamaki's assertion that peace education is neither desirable nor possible in situations of violence. It meant to feed into the debate raised by Salomon's unique definition of what peace education actually is. Finally, this study expected to contribute to the process of finding a definite place for pre-school peace education in the overall peace education picture.

CHAPTER THREE: RESEARCH DESIGN

3.1 INTRODUCTION

In this study, the research problem necessitated the development and evaluation of a particular educational intervention - a peace education programme - in response to a specific social problem - societal violence. This focus on making a practical contribution to the improvement of a 'real life' situation places this study within the realm of action research. The action research model contains "the key concepts of feedback, collaboration between researchers and practitioners, an emphasis on research in natural settings and practical problem solving" (Chettiar, 1999: 54). Within this research framework, one recent development is the emergence of "a systematic and phased process of action research" (Els, 1998: 156) - Intervention Research - which was considered to be ideally suited to a study of this nature.

3.2 METHODOLOGY - INTERVENTION RESEARCH

The research was undertaken within the framework of the Intervention Research model developed by Rothman and Thomas (1994). The framework offered by the second facet of Intervention Research - Intervention Design and Development - was applied for the purposes of this study.

3.2.1 An Introduction

Intervention Research is not an entirely new research model, but rather "a compromise that amalgamates many existing methodologies" (Rothman & Thomas, 1994: xvii). While aspects of this methodology have been in evidence for some time, Intervention Research was only formally introduced to the research world as a comprehensive methodology by Rothman and Thomas in 1994.

Intervention Research emerged largely out of the frustration of social science researchers about the perceived inability of other research methods to guide research into, and development of practical human service interventions (Els, 2000: 39). In an attempt to bridge the gap between pure and applied research, Intervention Research aims to link knowledge and practice, providing a systematic framework for "designing, testing, evaluating and refining needed social technology, and

disseminating proven techniques and programs to professionals in the community” (Rothman & Thomas, 1994: xxv).

Intervention Research utilises both qualitative and quantitative techniques, and as a complete methodology, comprises the following three facets:

- Intervention Knowledge Development
- Intervention Design and Development
- Intervention Knowledge Utilisation.

These three facets do not necessarily describe a linear process, but rather may be used and re-used in any order. These facets may also be conducted independently of one another. In brief, the Intervention Knowledge Development facet generally provides foundation knowledge in a specific area. This facet often provides the basis for a subsequent Intervention Design and Development study. This second facet is the central process of Intervention Research, best understood as “a problem solving process for seeking effective intervention and helping tools in order to deal with given human or social difficulties” (Els, 2000: 44). The third facet of Intervention Research is Intervention Knowledge Utilisation. This involves the conversion of knowledge gathered from theory or from research into a practically usable form so that it may be applied in a real life context.

3.2.2 Rationale for the choice of Intervention Research

The Intervention Research model was selected for this study for the following reasons:

- Intervention Research has been developed for the purpose of undertaking research in practical settings, aimed at addressing real life issues. The research problem for this study - the development and evaluation of a particular educational intervention in response to the issue of societal violence - quite clearly falls into this category;
- Intervention Research is action-based, and relies on a participatory approach, ideally suited to the collaborative approach preferred for this study;
- The Intervention Design and Development component provides a comprehensive framework for a phased process of addressing social problems. As the given research problem required the development and

evaluation of a particular social intervention (a peace education programme), such a framework would be useful;

- **Intervention Research** encompasses a multi-methodology approach to data collection and analysis, encouraging the use of both qualitative and quantitative techniques. Use of both kinds of techniques was necessary for this study, considering the difficulty of measuring the impact of peace education programmes, and the consequent need to explore a variety of measurement instruments. The dearth of prior research in this field also meant that there was not an existing single measurement instrument that could be applied in this case.

3.2.3 An overview of Intervention Research

Table 3.1, overleaf, gives an overview of the three facets of Intervention Research, summarising their respective functions, objectives, methods and outcomes.

Table 3.1: The three facets of Intervention Research

<p>INTERVENTION KNOWLEDGE DEVELOPMENT</p> <p>(KD)</p>	<p>INTERVENTION DESIGN AND DEVELOPMENT</p> <p>(D&D)</p>	<p>INTERVENTION KNOWLEDGE UTILISATION</p> <p>(KU)</p>
<p>FUNCTION</p> <p>Develops insight into a phenomenon</p>	<p>FUNCTION</p> <p>Designs and develops innovative interventions</p>	<p>FUNCTION</p> <p>Disseminates knowledge about interventions</p>
<p>OBJECTIVES</p> <p>Contributes to the knowledge base</p>	<p>OBJECTIVES</p> <p>Evolves new human service technology</p>	<p>OBJECTIVES</p> <p>Applies knowledge</p>
<p>METHODS</p> <p>Conventional research methods</p>	<p>METHODS</p> <p>Problem analysis, intervention design, development and evaluation techniques</p>	<p>METHODS</p> <p>Transformation and conversion of knowledge into application</p>
<p>OUTCOMES</p> <p>Information and empirical generalisations</p>	<p>OUTCOMES</p> <p>Assessment interventions, service programs, systems and policies</p>	<p>OUTCOMES</p> <p>Application to human service interventions</p>

Source: Els (1998: 157).

The central facet of Intervention Research is Intervention Design and Development. The main activities undertaken in Intervention Design and Development (summarised from Els, 1998: 161 – 166) are outlined below. (Again, it should be noted that these phases, and the activities within them, are not necessarily sequential. Phases one and two, for example, can be interchangeable, or can meld into one phase.)

- **Problem analysis and project planning:** Identifying and involving clients; gaining entry to, and co-operation from study contexts; identifying concerns of the population; analysing identified problems; planning and scheduling the project; setting goals and objectives.
- **Information gathering and synthesis:** Conducting a situation analysis or needs assessment; using existing information sources; studying natural examples; identifying functional elements of existing and successful models.
- **Design:** Identifying other prototypes; identifying anticipated design problems and intervention requirements; specifying the design domain; determining the design participants; selecting a project site; formulating an initial model.
- **Early development and pilot testing:** Developing a primary intervention; conducting a pilot test.
- **Evaluation and advanced development:** Selecting an evaluation design; Collecting and analysing data; replicating the intervention under field conditions; refining the intervention.
- **Dissemination:** Preparing the product for dissemination; Identifying potential markets; creating a demand for the intervention; encouraging appropriate adaptation.

3.2.4 Intervention Research in South Africa

South Africa is a country in transition. There is an intense focus in this country on building a society that is significantly different from that built under the system of apartheid. This building process involves addressing the issues that apartheid has left behind, including poverty, violence and inequity. Intervention Research lends itself to this kind of process, focussed as it is on "creat[ing] means for improving community life, health and well-being" (Fawcett et al., 1994:25). It is not surprising, then, that this research model is being chosen by South African researchers, in a variety of fields, who are intent on addressing such issues.

One recent South African Intervention Research study was undertaken by Els (1998) in the field of Sociology. Els's study was designed to address the state of disarray in South Africa's child protection system – a state which led to the delivery of deficient and fragmented services, resulting in secondary abuse. The study aimed to investigate the delivery of child protection services in this country, to facilitate the development of an intervention to improve delivery and integration in this area. Els's 1998 study involved a national situation analysis, which was carried out using the Intervention Knowledge Development facet of intervention research. This initial study laid the foundation for a later study by Els (2000), which ultimately generated a national integration strategy. These two studies together utilised the total Intervention Research process.

Another recent Intervention Research study carried out in South Africa was that by Maxwell (2001), this time in the field of Psychology. This study focussed on addressing the lack of psychological support for trauma doctors working in South Africa. Maxwell aimed to design and develop a psychological intervention that would maximise the coping resources of doctors working with trauma patients in Johannesburg General Hospital. This was a much smaller and less ambitious project than the one undertaken by Els (1998, 2000), and it utilised only one facet of Intervention Research – Intervention Design and Development.

3.3 THE APPLICATION OF IR METHODOLOGY TO THIS STUDY

The central facet of Intervention Research - Intervention Design and Development - was undertaken independently of the other two for the purposes of this study, as it

offered a comprehensive framework for a study of this scope. This study followed the framework outlined in 3.2.3 up to, and including half of the fifth aspect of the process. Looking at this specific study using the framework offered by Intervention Research, the design and development activities were undertaken as follows:

3.3.1 Problem analysis and project planning

Generally speaking, Intervention Researchers choose a community for which the issue they want to study is of particular concern or interest. In this case, the request for the intervention came from a specific community – the ‘Chain of Hope’ pre-schools of the MCSA - and thus the community was already identified, and had already welcomed entry and offered co-operation. At the beginning of the study, the research project was explained to the participants, and their consent was obtained. (While the initial request came from the leadership of the Chain of Hope – and it was not necessarily safe to assume that the whole community shared their commitment to this process – it was soon discovered through the ensuing peace education workshops that there was indeed a shared concern and shared commitment.) The researcher had formerly been a teacher in and director of one of the Chain of Hope pre-schools, and thus was already known to a number of members of the Chain of Hope. This familiarity may also have helped with gaining entry.

Details of the target population are given under point 3.4. The concerns of the target population were explored in the first workshop run with the pre-school teachers. (These workshops are dealt with in more depth in Chapter Four.) Planning and scheduling the project, and setting goals and objectives, were also undertaken both in that first workshop, and on an ongoing basis, in consultation with the Director of the Chain of Hope.

3.3.2 Information gathering and synthesis

Intervention Researchers must...look beyond the literature of their particular fields. This is essential since societal problems do not confine themselves neatly to the disciplines of psychology, social work, architecture, education, public health or other bodies of knowledge or practice. Thus, Intervention Research must contribute to both the “scholarship of discovery” – the generation of new knowledge about behaviour-environment relationships –

and the "scholarship of integration" – establishing new linkages between concepts and methods of various disciplines (Boyer, in Fawcett et al. 1994:32).

The information gathering and synthesis phase included a review of the literature available in relevant fields: children in violent societies (sociology); childhood aggression (psychology); and peace education itself (education). The review of this literature provided valuable information in each of these areas, and revealed some of the ongoing debates to which this study may be able to make a contribution. This literature was accessed using the ERIC and PSYCHLIT databases, as well as library searches, web searches, utilising the researcher's own library and approaching various people for relevant literature. The literature review appears in Chapter Two.

This phase also involved an exploration of the specific context in which the intervention would take place, paying particular attention to the impact of South Africa's historical and current violence, and of South Africa's history of inequity in educational provision and authoritarianism in education. The results of this exploration form part of Chapter Four.

The Intervention Research model recommends studying natural examples as part of this phase. This involves identifying community members who have already attempted to address the problem under study, or a similar problem, and observing the methods they have used (De Vos, 1998a:391). Within the target population of this study, one teacher was identified who had initiated a number of innovations in her school in response to concerns about violence. One innovation was a school Peacemaker Award, which was awarded weekly to a child who had exhibited peaceful behaviour or attitudes. Another was setting aside a regular time for children to share "sad, bad news" in their classes.

Another component of this phase involves identifying functional elements of existing and successful models. Three existing models of peace education were identified within South Africa, and these were investigated to the extent that was possible by accessing the websites of their respective organisations. (Requests to these organisations for further information yielded no response.) None of these models had been developed at the pre-school level, although some of the content areas they covered were relevant to this level. Certainly the extent to which teacher development formed part of each of these programmes was very instructive. The

intervention developed in this study built mainly on existing models of peace education in other parts of the world, and on work undertaken in this area by the researcher in 1993 and 1994. This aspect of the development process is also explored further in Chapter Four.

3.3.3 Design

This phase involved firstly designing an observational system “for discovering the extent of the problem and detecting effects following the intervention” (Fawcett et al., 1994: 34). According to the Intervention Research model, this system consists of three parts. First, definitions of the behaviours associated with the problem under study are defined in operational terms. Second, examples of the behaviours are provided to help with identification of the behaviours. And third, scoring instructions are prepared to guide the recording of target behaviours (De Vos, 1998a: 393). The observational system designed for this study is detailed in section 3.5 of this chapter.

The second component of the design phase involves specifying procedural elements of the intervention. These form the skeleton of the intervention. In this study, the procedural elements identified were orientating the teachers to peace education, working with the teachers to develop a draft curriculum, educating the teachers for peace through ongoing workshops, assessing the impact of the programme and making recommendations on refining the curriculum.

3.3.4 Early development and pilot testing

In this phase, the above information was utilised to develop a peace education programme for the Methodist pre-schools in the Central District of the MCSA. The complete design and development process – which is an integral part of this study - is documented in Chapter Four.

It was decided not to do a pilot test for a number of reasons. Firstly, the researcher had been previously involved in the development of a pre-school peace education programme for a single Johannesburg pre-school, which formed the departure point for the programme developed in this study. (See section 4.3 for further details of this earlier programme.) While the earlier development and implementation process was not formally documented, there was nevertheless learning that took place, which

informed this subsequent process, and which could be considered an informal piloting process. In addition, the overall population of 40 pre-schools requesting the intervention in the case of this study was relatively small, and also very rich, in the sense that these schools covered all the different categories of pre-school types in South Africa. Also, conducting a pilot test of the duration required in a small number of schools would have meant a significant delay in access to peace education for the remainder of the 40, which was considered negative and unnecessary. Finally, as the intention was to develop the intervention in conjunction with the teachers themselves, to limit the teachers we had access to by limiting the study at the beginning was counter-productive. Thus, the draft intervention was developed with teachers from as many schools as possible, and implemented directly under field conditions in all 40 schools early in 2000.

3.3.5 Evaluation and advanced development

In Intervention Research, evaluation is used to both facilitate the further development and refinement of the given intervention, and to "demonstrate relationships between the intervention and the behaviours or outcomes that define the problem of interest" (Fawcett et al., 1994: 34). Thus, in Intervention Research studies, two types of products result: the research data, and the intervention itself. In this study, the literature review revealed a significant need for research into the effectiveness of peace education programmes – a need that was particularly pressing at pre-school level. Thus, there was a particular focus on the evaluation phase in this study.

The evaluation phase includes selecting an experimental design, and collecting and analysing data. As encouraged by the Intervention Research model, and as required by the specific nature of the study itself, this research project involved a variety of data gathering techniques. Both qualitative and quantitative data gathering methods were used. Details of the data gathering and analysis techniques used appear in section 3.5 below.

While implementation took place in all 40 pre-schools almost simultaneously, not all 40 schools were used as evaluation sites. This would have been time-intensive, and was certainly not possible given the time and resources available for this study. It was also not necessary for an initial evaluation.

This phase usually involves replicating the intervention in field conditions. As noted in point 3.3.4, this study did not make use of a small-scale pilot study, and thus the intervention was implemented in field conditions from the beginning. This study did not complete the last process of this phase – refining the intervention. However, it did make recommendations for this refinement.

3.4 TARGET POPULATION

The target population identified in the first stage of the study (see 3.3.1) comprised the learners and teachers of 40⁶ Methodist pre-schools in the Central District of the Methodist Church of Southern Africa (MCSA). At the beginning of this study, these schools had a combined enrolment of approximately 2400 children, and employed 102 teachers. The schools were located in an area extending from Bedfordview on the east border to Vryburg in the west, from Midrand in the north to Ennerdale in the south. (See map on page 4.) Represented in this group were schools in the inner-city, township schools, rural town and location schools, wealthy suburban schools, rural farm and village schools and schools in informal settlements – the full spectrum of pre-school types in South Africa. The learners attending these schools represented the four historically defined South African population groups (Black, White, Coloured and Indian), along with learners whose families are refugees from other parts of Africa. The teachers were from similarly diverse backgrounds (excluding Indian). It should be noted that while education in South Africa is no longer officially segregated along racial lines, in practice there is lingering segregation in schooling in this country. What was evident in this target group is the reality throughout the country: that formerly black schools are still predominantly or totally black; formerly white schools have either become predominantly black (like those in the city centres) or are still predominantly white, with a few coloured, Indian and black children; schools that were traditionally coloured and Indian tend to be the most mixed, with few, if any, white children, but a mix of coloured, Indian and black children.

The teachers in this target population to a large extent had not received formal teacher education. At the start of this study they had been receiving training in pre-school education from one of three training NGOs (Ntaitaise, Khululeka or

⁶ While there were 55 pre-schools in the Central District at this time, only 40 were actively involved in Chain of Hope workshops, and it was these schools that comprised the target group.

Nyologang) at various introductory levels for a period of one year. This training took the form of regular workshops on topics ranging from making materials out of scarce resources to nutrition and thematic program planning. This independent training process was ongoing throughout the duration of the study.

3.5 METHODOLOGY – DATA GATHERING

In the evaluation phase of the study, data was gathered to facilitate evaluation of the impact of the programme's curriculum on the schools. The researcher failed to find an existing model for evaluating the outcomes of peace education curricula at pre-school level before the start of the study. As there was not an existing model that could be adapted for, and applied in this context, a variety of data gathering methods were used to generate as full a picture of the impact as possible. As a starting point, literature and research in the field of childhood aggression was used to develop a foundation for measurement of the programme's impact on aggressive behaviour. This was supplemented with observation and journal writing by a group of teachers, a teacher questionnaire and, finally, interviews with a selection of stakeholders.

The data gathering methods used were:

3.5.1 Naturalistic observation

"Considerable evidence now supports the use of naturalistic observation of aggressive behaviour in field settings" (Kaplan, 1984: 67). Thus, naturalistic observation was used to facilitate measurement of one of the key factors to be studied – the impact of the curriculum on children's aggressive and pro-social behaviour. For this purpose, aggressive and pro-social behaviours were identified according to the framework utilised by Bay-Hintz, Peterson and Quilitch in their 1994 (437-438) study:

Aggressive behaviour was defined as any behaviour that involved a destructive or hurtful action toward a person or object, and included both physical and verbal responses: (a) hitting, kicking, biting, scratching, pulling, grabbing, jumping on, bumping, tripping, throwing an object at another person, or attempts to do so; (b) throwing materials or equipment, kicking doors, walls or furniture, overturning furniture, knocking materials off shelves, breaking or destroying toys or equipment; or (c) threatening physical assault,

verbally resisting instructions, stating dislike or other negative feelings about another person, name calling or other derogatory remarks, threatening physically destructive actions (e.g. to break a toy), or verbal attempts to exclude another child from an activity.

*Cooperative behaviour*⁷ was defined as behaviour that was directed toward another child and that involved a shared, reciprocal, mutual or helpful quality. Cooperative behaviour included: (a) sharing, assisting, or executing a task with another child, working together toward a common goal, sharing material, or explicitly helping another child; (b) physically supporting another child (e.g. one child carries another child, or helps a child up off the ground or over a barrier) or engaging in physical contact of an affectionate nature (e.g. linking arms, holding hands, embracing, kissing, or patting another child on the back); or (c) verbal behaviour such as giving a child instruction on how to do something, verbally offering to help or share, or agreeing to a request made by another child.

In addition to the categories of aggressive behaviour identified by Bay-Hintz et al. (1994), a fourth was added in this study – aggressive fantasy play. This term incorporated all play in which there is acted-out killing and other violence, for example gun play, play fighting and superhero play involving 'killing'. While aggressive fantasy play generally does not involve an actual 'destructive or hurtful action', it involves simulation thereof, and thus raises concern in a context in which the express aim is building more positive, pro-social behaviours in children. Also, while it is acknowledged that children will act out those behaviours they see happening around them, whether on television or through direct experience, and that this will inevitably include violent acts in a country like South Africa, there is cause for concern about what message will be sent to children by teachers allowing such play. Will children not get the message that violence and aggression are not only a natural, but also an acceptable part of life? And is this not problematic in a context in which there is a specific focus on trying to overcome violence through exploring its consequences and learning from the myriad alternative behaviours that exist? Thus, aggressive fantasy play was considered to be of interest, and was included in this study.

⁷ In this study the more inclusive term "pro-social behaviour" was used, while keeping the definition provided by Bay-Hintz et al.

The measurement procedure used was adapted from the procedure used in the Bay-Hintz study (1994: 439). Ten preschools, representative of the demographics of the total 40, were selected for the observation of children's behaviour. (See Appendix 1 for details of study schools.) Observations were undertaken by the researcher alone, and took place during free-play periods of the preschool routine. Groups of children were observed for periods of five minutes at a time, with the room being scanned from right to left at 30 second intervals during each five-minute period. Incidences of aggressive behaviour were recorded, as were incidents of pro-social behaviour. (See Appendix 2 for a copy of the instrument used to record observations.)

In addition, the researcher recorded information on the number of learners being observed, the age group, the gender breakdown, the number of adults supervising and the area in which the play was taking place. These variables were recorded in an attempt to enable them to be controlled for in the data analysis process.

There were other variables that could not be controlled for – for example mobility of teachers and children, absence of certain children on certain days, and the content of the regular pre-school programme (outside of the peace education component) used in the schools.

It was intended that six observations would be undertaken in each of the ten schools immediately before introduction of the curriculum, and again approximately seven months following introduction, to give a total of 60 'before' and 60 'after' observations. Due to unforeseen circumstances in some of the schools during the first round of data gathering, however, it was not possible to undertake six observations in every school. Thus an eleventh school was added to the list, and during the first round of data gathering, nine observations were undertaken in one school, six observations were undertaken in six of the schools, five observations in one school, four observations in two schools, and just two observations in one school – still giving the total of 60 observations. (This pattern was mirrored during the 'after' observations, giving a total of 120 study school observations.) To the extent that it was possible, considering time limitations, the researcher undertook the 'before' observations at each school over two days, and did the same with the 'after' observations.

Immediately before the second round of child observations were undertaken, the researcher undertook general observations in the eleven schools. During these

observation times, the researcher made note of indicators that the curriculum was, or wasn't, actually being used in each school. These indicators included those found in UNESCO's Curriculum Framework for Peace Education:

At the classroom level, there should be evidence of: recognition of diversity and disparity; co-operative group work; open and respectful student/staff relationships (Evans, et al. 1999: 7).

An additional indicator was the use of peace-education-appropriate discipline methods (which may be inferred from the "open and respectful student/staff relationships" listed above).

For this component of the study, a control group of five preschools that weren't using the curriculum was also used. (See Appendix 1 for details of control schools.) Child observations were undertaken in these schools at intervals in the year corresponding with the times the study schools were observed. The observation method was consistent with those in the study schools. Six observations were undertaken in each control school at each time, giving 30 'before' 30 'after' observations.

Limitations in terms of funding and time required that the researcher did all the observations herself. Considering that the same person was invested in the intervention itself, this raises concerns about possible bias in the results. The likelihood of bias influencing results was reduced in a number of ways:

- The researcher was genuinely interested in discovering whether the intervention made an impact or not. The Intervention Researcher is always interested in working towards actual societal improvement. The aim of this study was to develop an intervention that would be beneficial in reducing levels of childhood aggression, which may then translate into an eventual reduction in aggression in South African society. There was little to gain in terms of actually meeting this aim by trying to influence the results through manipulating the data gathering process.
- The researcher was careful to follow the observation and measurement procedure precisely in the case of each observation.
- No analysis of this data was undertaken until all observations had been completed. Thus, there was no scope for manipulating, during the 'after' observations, those variables that later emerged as influential variables, in order to reduce recorded levels of aggression and increase recorded levels of co-operative behaviour in the study group and not the control group.

- **Additional data gathering methods were used, in which the observations and impressions of other stakeholders were probed, to provide a comparison with the results found through researcher observation. This use of “methodological triangulation” (Duffy, in De Vos. 1998b: 359) sought to increase the reliability of the overall results, and to reduce any possible observer bias.**

3.5.2 Teachers’ Journals

In each of the original ten study schools being observed, two teachers were requested to keep journals. These teachers were asked to identify four children, according to the following guidelines: Two whom they considered to be aggressive, one whom they considered to be withdrawn, and one whom they considered to be rejected by the other children.

Each teacher was asked to make an initial assessment of each of their four identified children early in the year (before the introduction of the peace education curriculum) according to specific questions set by the researcher. (See Appendix 3 for copies of journal sheets.) At monthly intervals thereafter, the teachers were to make a journal entry for each child, again responding to specific questions set by the researcher, and based on detailed observation of each child by the teacher.

The use of teachers’ journals as a data gathering method was one way in which “investigator triangulation” (Duffy in De Vos, 1998b: 359) was utilised, even within the financial and time limitations of this study, with a view to increasing the reliability of observation.

3.5.3 Questionnaire

A questionnaire was developed (see Appendix 4) that aimed to reveal teachers’ experience of the teacher development workshops, their implementation in the schools of techniques and philosophies explored in the workshops, and their thoughts about and use of the curriculum itself. This questionnaire was administered at the end of 2000 to two of the three geographically clustered groups of teachers in the study, and to the third group in mid-2001.

In each case, the questionnaire was administered by the researcher, during workshops in which the teachers were brought together in their respective regions.

The questionnaire was administered to the teachers of each region as a group. The third group completed the questionnaires significantly later than the other two due to the fact that their final workshop in 2000 was cancelled, and it was not possible to find another forum at which to administer the questionnaire until 2001.

3.5.4 Interviews

Once the data from the observations, journals and questionnaires was analysed, a number of stakeholders were identified and interviewed, to explore their experiences in more depth. Interviews were undertaken with six people:

- the Director of the Chain of Hope
- the district teacher trainers in the three regions of the district
- one teaching principal who used the curriculum in her school
- one principal of a school where the curriculum was not used

The Director and the three district teacher trainers were selected for their capacity to give a broad perspective on the experience of the intervention in the regions in which they had responsibility. The other two interviewees were selected in order to access in-depth information about the experiences of both a school in which the curriculum was used, and one in which the curriculum was not used.

Because of the fact that the teachers in the study were receiving other pre-school related training during the course of the study (see section 3.4), a question was included in the interview schedule to explore to what extent the interviewees thought the changes they had seen in the teachers, children and schools might be the result of this other training instead of the peace education intervention.

See Appendix 5 for a copy of the interview schedule.

3.6 METHODOLOGY – DATA ANALYSIS

The variety of data gathering methods used necessitated a variety of data analysis techniques. Both quantitative and qualitative techniques were utilised to analyse the data that had been collected.

3.6.1 Naturalistic observations

The naturalistic observations produced quantitative data, which was analysed using the Number Cruncher Statistical Systems (NCSS – Licenced to Jerry Hintz, 1997) computer programme. All quantitative analysis was undertaken by a lecturer in Analytical Methods at the University of the Witwatersrand Graduate School of Business, thus increasing investigator triangulation in this study.

Firstly, the data was screened for inaccuracies by looking for missing cells and outliers. Next, simple descriptive statistics were produced, in order to give an indication of the direction that the results would take.⁸ The study group and the control group were considered separately in this process, and in each case the number of aggressive incidents per child, the number of aggressive incidents per child excluding fantasy play⁹ and the number of pro-social incidents per child, both before and after implementation of the curriculum, was explored. The mean, median and standard deviation in each case were noted.

It would have been possible to run two-sample tests to determine whether or not the mean decline in the number of aggressive incidents over the study time period was significantly different for the control and study groups. But because of variety inherent within and between the schools observed, the measurements were taken in different sized classes, with different numbers of teachers, at different time of the day, during different types of activities and in different school contexts. Therefore a significant change in the number of aggressive or pro-social behaviours would not necessarily imply that the intervention was causing the change. Thus it was necessary to analyse the impact of the intervention, controlling for the effect of the other variables. In order

⁸ In this and all following analyses, each observation was treated as an independent observation, even though variables like the observation times, schools and play-types were not completely randomised. The analysis techniques work on the assumption that each observation is independent of the others, while in practice it was impossible to actually undertake 120 completely independent study school observations and 60 completely independent control school observations in this study. Within the study, observations were carried out at as many times, in as many schools as was possible given the time and access limitations of this study, as well as the unforeseen occurrences that are part of daily pre-school reality. The fact that they were not completely random means that there is a possibility that the power of the results of some analyses may be overstated, and this was taken into consideration when interpreting the results.

⁹ While the inclusion of aggressive fantasy play as a form of aggression has been explained under point 3.5.1, it was thought helpful to consider aggression including fantasy play separately from aggression excluding aggressive fantasy play when analysing data, in order to provide richer information. This would also mean that the results could be used by those who disagree that aggressive fantasy play qualifies as a form of aggression.

to do this, it was necessary to analyse the impact of all variables on the number of incidents of aggression and pro-social behaviour, and of the variables on each other. The statistical technique used to explore these issues was multiple regression.

Multiple regression is a technique that tests the value of a number of independent variables as predictors of a single dependent variable (Makridakis, Wheelwright & Hyndman, 1998: 240-310). In preparation for the multiple regression analysis, Chi² tests were carried out to develop an understanding of the relationship between the independent variables, in order to anticipate the likely outcomes, and to ensure that they were significantly independent of one another to be useful inclusions in the final regression model.

Next, a correlation matrix was used to examine the correlations that existed between independent variables. High correlations between specific independent variables that were much higher than the correlation between the said variables and the dependent variable would have caused problems if both the said variables were included in the regression model. If this was the case, there was a possibility that the results would have been influenced by multi-collinearity, a condition that is said to occur when there is near perfect correlation between predictor variables, or a linear combination of predictor variables.

As multiple regression is designed to estimate linear relationships between a number of independent variables and a dependent variable, it was necessary to test for any serious breakdown in the assumption of linearity for the given data. Scatter plots of a number of independent variables charted against the dependent variable were observed to give an indication of the likely nature of the relationship.

The final steps before undertaking the actual multiple regression analysis were, firstly, utilising the technique of stepwise regression to determine which of the independent variables should be included in the multiple regression model. Because stepwise regression is able to consider only one dependent variable at a time (either aggression with fantasy play, aggression without fantasy play or pro-social behaviour), the results obtained from the stepwise regression analysis were confirmed using a multivariate variable selection technique.

Once this process was completed, the multiple regression procedures were run using the variables emerging out of each of the stepwise regression procedures. In multiple regression, the equation resulting from running the procedure is of the form:

$$y_1 = b_0 + b_1x_1 + b_2x_2 + \dots + b_nx_n$$

Where, in the case of this study, y is the predicted number of aggressions (or pro-social occurrences), b_0 is the intercept on the y axis (or the number of aggressions estimated when all the independent variables are set to a value of 0), and b_1x_1 is the coefficient of the first independent variable multiplied by the value assigned to that independent variable. A coding system was used for the independent variables, and this is explained in the table below.

Table 3.2: Key to codes used in data gathered through naturalistic observation

Variable code	Meaning
ic	Inner-city
sub	Suburb
town	Township
is	Informal settlement
rt	Rural township
bef/aft	The implementation of the intervention
em	Early morning
ea	Early afternoon
la	Late afternoon
fp	Free play
b	Free play plus activities
chn.	Number of children
boys	Number of boys
4-	Children observed were aged four and younger
4+	Children observed were aged four and over
adults	Number of teachers observing play
location	Whether the observation took place inside or outside

In the regression results, positive values of the coefficients indicated a positive relationship between the independent and dependent variables, negative values indicated that a decline in the value of the independent variable would result in an increase in the value of the dependent variable. Tests of normality were conducted to determine whether or not the residuals (the difference between values predicted by the regression model and the actual values) were normally distributed. In instances where the assumption of normality was not seriously violated, tests of significance were used to determine whether or not the coefficients produced by the multiple regression procedure differed significantly from zero.

3.6.2 Teachers' Journals

Information contained in the teachers' journals was transcribed and then subjected to analysis. Firstly the occurrences of behaviour change in each of the three categories (aggressive, shy/withdrawn & rejected) were noted and documented in terms of the age and gender of the child, the pattern of change over the months of observation, the teacher's use of the curriculum, and the teacher's assessment of why the change happened. Following this organisation of the data, the data was analysed for patterns and departures from these patterns. The resulting information was compared with the results obtained from the analysis of the naturalistic observations.

3.6.3 Questionnaires

The quantitative data obtained from the questionnaires was largely descriptive, and was explored in Microsoft Excel to reveal demographic details of the respondents, as well as percentages and/or frequency of the opinions expressed in each case. The qualitative data contained in the questionnaires was explored in terms of its confirmation or contradiction of the quantitative data. Quotes from this data were used to illustrate some of the results of the quantitative analysis, and in some cases to reveal aspects that were not covered at all by the quantitative analysis.

All results obtained from the questionnaires were compared with the information obtained from the naturalistic observations and the teachers' journals.

3.6.4 Interviews

The interviews were transcribed and then subjected to thematic analysis in order to identify the issues that these stakeholders raised in their reflections on the entire intervention process. The issues thus revealed were compared with the results of the previous three processes, and their relationships therewith explored.

3.7 DATA REPORTING

Formal analysis of all data was only undertaken at the end of the data gathering process. Thus, no results (preliminary or final) were reported to participants during the course of this study. All results are contained in Chapter Five of this document, and this is the first time they have been published. Following submission of this dissertation, these results will be made available to the other stakeholders involved in this study.

3.8 CONCLUSION

This chapter has served to give an overview of the Intervention Research model, to outline the specific steps of the Intervention Design and Development phase, and locate this specific study within this phase of the model. This chapter has also detailed the data gathering techniques utilised in this study, and the methods of data analysis employed. In the next section the process – and end product – of developing this particular intervention are described in detail.

CHAPTER FOUR: DESIGNING AND DEVELOPING THE PROGRAMME

"...school work can get new forms only if teachers can be deeply involved and if they are continuously supported by school administration and other people outside the school" (Finnish report quoted in Skilbeck, 1990: 72).

4.1 INTRODUCTION

Central to the Intervention Research model - and the feature that marks it as unique among models of research - is its focus on the systematic development of social interventions to address particular real life issues (Rothman & Thomas, 1994). In this study, the intervention was a pre-school peace education programme, developed at the request of the MCSA. In order to properly fulfil this request, it was necessary to cultivate an understanding of the context in which this request was made, and in which the intervention would be implemented. This chapter outlines what was learnt about the context through the information gathering and synthesis phase of Intervention Design and Development. It goes on to document the process of actually developing the pre-school curriculum and the teacher development programme that accompanied it, utilizing the design and the early development and pilot testing phases of Intervention Design and Development. (The remaining phases of Intervention Design and Development – problem analysis and project planning, and evaluation – and the remainder of the design phase, are all explored in Chapter Three.)

4.2 INFORMATION GATHERING & SYNTHESIS: EXPLORING THE CONTEXT

Before actually beginning the process of developing the peace education intervention, it was necessary to go through the process of exploring the context in which the intervention was to be implemented. The information gathering and synthesis phase of Intervention Design and Development provided the framework for this exploration. Initial information gathered through this phase was reported in Chapter Two. This first section of Chapter Four outlines information collected through

this phase that related specifically to the context in which the intervention was to be located.

4.2.1 Violence

One of the most striking features of the South African context broadly is the high level of community violence, taking the form predominantly of violent crime. This was discussed in Chapter Two, but it is important to revisit it here, as it is both something that provides the impetus for the initial request for a peace education programme, and something that complicates the fulfilment of this request.

It was recently reported that “a South African is 12 times more likely to be murdered than the international norm” and that “no country is more violent towards its children than South Africa” (Smith, 2001: 3). The violence that currently characterises life in South Africa emerged out of a level of political violence that kept the eyes of the world focussed on this country for many years.

South Africa’s familiarity with violence brings a level of urgency to calls for the implementation of peace education and similar programmes. And the current levels of violence, coupled with the country’s violent history, also make this process more difficult. People working in this field are faced with the complexity of placing the responsibility for educating children for peace with educators who have been and are themselves immersed in – and potentially damaged by - South Africa’s historical and current violence.

4.2.2 Educational inequity

Another factor that characterises the South African context relates to the quality of primary, secondary and vocational education received by the educators themselves. Under apartheid, education at all levels was strictly segregated, and there were enormous inequalities in educational expenditure for black and white learners. In 1984-5, for example, educational expenditure in South Africa for white learners was R1 702 per capita, and for black learners was R169 per capita. In the same period, the pupil:teacher ratio in white education was 18.7:1 and in black education was 41.2:1 (Fourie in Duncan and Rock, 1997b: 54).

The Bantu education system ensured that the conditions in black South African schools were not conducive to effective learning. Bantu schools had

extremely overcrowded classrooms, inadequate or non-existent physical resources and infrastructure, ill-trained teachers and no specialised services such as remedial education or psychological counselling (Mdhluli & Zwane, 1996: 5).

The impact of the poor quality of black education was compounded by “the material poverty of many students, who [were] often malnourished and walked long distances to attend school” (Christie, 1992: 39).

Furthermore, during the 1980s the concept of ‘Liberation before Education’ took hold among black students, in response to the blatantly inferior education they were being offered, and there was an increasing rejection of the education system (Rock, 1997: 10). This took the form of rolling boycotts, protests and the vandalism and destruction of schools, which contributed to the breakdown of a culture of learning and teaching amongst black South Africans. It also significantly affected the amount of education actually received by black learners. For example, “1980 was a year in which almost no black education happened at all, for the boycott lasted well into September” (Davenport & Saunders, 2000: 489).

Many of the current generation of black teachers grew up and were educated in this context of poverty, deliberately inferior education, and educational boycotts.

Adding to the problems that characterised black education generally, successive apartheid governments took the view that early childhood education was “the responsibility of parents and families and not that of the State” (Department of Education, 1996: accessed through the Internet - no page reference given). This involved the disengagement of the government from the training of teachers at early childhood level, with this responsibility being taken up largely by unregulated NGOs. While some of these bodies provided high quality teacher training, this was certainly not universally the case, and it is not surprising that pre-schools should find themselves with “a desperate shortage of adequately qualified staff” (Van den Berg & Vergani, 1986: 128) - a situation that has largely remained the same in the ‘90s and ‘00s.

These factors are obviously relevant when considering the implementation of a new educational programme. The pre-school teachers in the MCSA’s Central District were predominantly black, and their particular history and needs required specific consideration.

4.2.3 Authoritarianism

Another distinctive aspect of education in South Africa historically is the predominance of "an ethos and management system dominated by extreme authoritarianism" (Taylor & Vinjevold, 2000:170). This is not particularly surprising in a society which has its roots deeply embedded in Calvinism. That a society structured generally along authoritarian lines should have an authoritarian education system is instead rather predictable.

This fact is significant for this study, however, when one considers that peace education is quite consciously an anti-authoritarian model. Indeed it "contradicts the principles of traditional education" (Bar-Tal, 2002). Central to programmes of peace education are, among other things, experiential learning, the teaching of critical thinking, respectful treatment of all people and structuring schools to facilitate inclusive decision-making. "School personnel following the principles of peace education reform teach content and skills, respond to feelings, use a peaceful pedagogy, discipline in a nonpunitive manner, motivate students to pursue peace, and administer schools democratically" (Harris, 1996: 387). Indeed the introduction of peace education in South African schools requires a significant transformation of curriculum and of school ethos and structure. Dovey (1996: 147), writing in the South African context, noted that "the authoritarian nature characterizing the management of many of our schools may militate against introducing a peace education process that tries to involve the whole school."

4.2.4 Corporal punishment

During the apartheid years, 'Christian National Education' and the educational philosophies that guided it encouraged educators to believe that corporal punishment was the 'scientifically irrefutable' way to educate children. During these years, corporal punishment was sanctioned by law, and encouraged by teacher training institutions.... Along the way, the practice of corporal punishment became deeply woven into the fabric of our society (Porteus, Vally & Ruth, 2001: 5).

The final feature of the South African context which will serve as a focus in this section is the entrenchment of school corporal punishment in South African society.