

**AN INVESTIGATIVE STUDY INTO WAYS OF INCORPORATING ROAD  
SAFETY EDUCATION IN THE REVISED NATIONAL CURRICULUM  
STATEMENT IN THE FURTHER EDUCATION AND TRAINING BAND**

By

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## **ABSTRACT**

This research focuses on how Road Safety Education can be incorporated into the Revised National Curriculum Statement in the Further Education and Training Band

Education is based on theories about how learners learn, what influences that learning and what is effective practice. Such theories are based on research. Educational research may be seen as a systematic attempt to gain a better understanding of the educational process, generally with a view to improving its efficiency.

Varied view points are obtained when qualified individuals with common or divergent backgrounds are brought together to explore a problem, to provide information or to evaluate the merits of a proposition. I chose to interview the Heads of Department of the existing learning areas in order to explore their attitudes and opinions towards the incorporation of Road Safety Education in the Revised National Curriculum Statement. The interview focused on their understanding of this curriculum, implementing it, Road Safety Education and how it can be incorporated into this curriculum.

Questionnaires and interviews are a way of getting data about people by asking them rather than by observing and sampling their behaviour. For this study the 50 grade 11 learners were presented with carefully selected and ordered questions in a combination of closed and open form. This enabled the learners to answer freely and fully in their own words and their own frame of reference concerning the incorporation of Road Safety Education in the Revised National Curriculum Statement

This research was prompted by the high fatality rate in the country as a result of road accidents. An in-depth analysis of documents, provided by the KZN Department of Transport, were undertaken. This researcher found that documents provided information about aspects of road safety, proper road usage, and other factors that contribute to the

high fatality rates on our roads, aspects that could not be observed because they had taken place before this investigative study had occurred.

Each year, publication of the figures for road accidents bring fresh disappointments especially for those who have striven so hard for an improvement. The time has now come for us to recognise that the conventional road safety programmes of the past years are incapable, no matter how delicately applied, of yielding anything but marginal improvements. What is surely needed is some new approach with a potential for huge improvements. Road safety should be about education and not about prosecution. Educational programmes must be undertaken to overcome existing areas of ignorance and to initiate a process of change concerning road safety. It is therefore imperative that the Revised National Curriculum Statement incorporates a comprehensive, compulsory Road Safety Education Programme.

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## **DECLARATION OF ORIGINALITY**

I hereby declare that this dissertation, except the acknowledged referenced citation is my own original work. It has not been submitted for any previous degree or examination at any university.

  
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## **APPROVAL OF THESIS SUBMISSION BY SUPERVISOR**

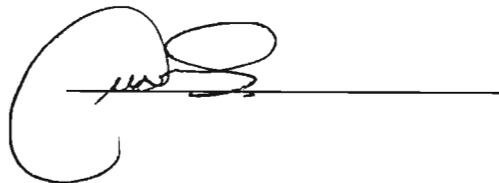
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## TABLE OF CONTENTS

		PAGE
<b>CHAPTER ONE</b>		<b>1</b>
1.1	Brief Outline of Topic	1
1.2	The Aim of this Study	3
1.3	Rationale for the Study	4
1.4	Principle Theory that informs the Area of Interest in the Research Project	5
1.5	Overview of Related Research	7
1.6	Research Methodology and Research Design	11
1.7	Primary Sources of Data	13
1.8	Structure of the Dissertation	13
<b>CHAPTER TWO</b>		<b>14</b>
<b>Literature Review and Theoretical Framework</b>		
2.1	Introduction	14
2.2	Education	16
2.3	The Outcomes of Road Safety Education	18
2.4	Curriculum	19
2.5	Curriculum Development	21
2.6	Frameworks	23
2.7	Curriculum Design	25
2.8	Curriculum 2005	26
2.9	Revised National Curriculum Statement	28
2.10	The Curriculum Development and Design Process	33
2.11	Principles of Teaching and Learning	34
2.12	Design Dimension Considerations	35
2.13	Knowledge Areas	37
2.14	Conclusion	42

**CHAPTER THREE 43**

**Research Methodology**

3.1	Qualitative Research	44
3.2	Research Approach- Case Study	48
3.3	Strengths and Limitations of Case Study	50
3.3.1	Interviews	52
3.3.2	Questionnaires	57
3.3.3	Document Analysis	59
3.4	Conclusion	60

**CHAPTER FOUR 62**

**Analysis of Data**

4.1	Introduction	62
4.2	Administration of the Questionnaire	63
4.3	Analysis of Responses to the Questionnaire	63
	Part Two: The Interview	77
4.4	Summary of the Main Findings of the Study	84

**CHAPTER FIVE 86**

**Recommendations and Conclusion**

5.1	Introduction	86
5.2	Recommendations	88
5.3	Conclusion	94

## **FOREWORD TO MRS M. GOVENDER'S MASTERS IN EDUCATION THESIS**

The majority of South Africans wish to make South Africa a safer place for themselves and their children.

Over the past decade the KwaZulu-Natal Department of Transport has entered into a social contract with all road users to do just that by making road safety everyone's business.

Our efforts to mobilise all our citizens to end the carnage on our roads are based on scientific findings that attribute some 80% of all road traffic collisions to human failure.

Every year in South Africa we experience more than 500 000 traffic collisions on our roads. 500 000 collisions per annum result in thousands of people killed or permanently disabled, thousands of families left bereaved and many of them also rendered destitute through the loss of a breadwinner.

It has been clear for some time now that we will only create a safe road environment in South Africa when all road users internalise road safety norms and values. The public therefore must be properly informed and educated about the causes of road accidents, government's role in reducing road collisions and the role of a responsible public in promoting a culture of road safety and road tolerance.

Mrs Govender's thesis makes a valuable and timely contribution towards furthering our understanding of how best to reach all young road users and to inculcate a culture of road safety.



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**DR K.B. MBANJWA  
CEO: TRANSPORT**

# CHAPTER ONE

## 1.1 Brief Outline of Topic

Road safety education plays an important role in achieving positive outcomes for short term and long term strategies. In the short term, it can equip people, especially pre-school and school learners, to learn with their peer group how to safely manage the everyday road environment in which they live. If good practice is learnt at an early age, learners can also influence their parents' behaviour and introduce safe principles into the home setting. In the long term, road safety education can create a generational change and, provided it is ongoing and widespread, it will eventually improve behaviour and attitude and performance to being safe road users.

In today's modern world, road safety education must start early in any learner's life, and must continue right up to the time the learner is ready to leave school at the end of the FET phase, in order to develop appropriate attitudes leading to safer road use. Educational research (Kwa-Zulu Natal Assessment Study, 1996: 46) has shown that learners learn best about safety skills and appropriate attitudes in schools when programmes are:

- integrated into existing school curricula in the Life Orientation learning area
- delivered continuously over the whole of each year
- sequential as far as the development of concepts and skills
- related to the abilities and experiences of learners

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Road safety education should also enable learners to identify risks and train them to assess those risks and develop strategies to deal with them.

Programmes and resources must be developed to support the implementation of road safety education by a wide range of government, industry and community agencies.

At the moment, a variety of awareness programmes, initiatives and education are being undertaken by the provincial Department of Transport and the Road Traffic Inspectorate (RTI). Most road safety programmes in schools are actually delivered by police officers working with school teachers. A range of programmes are delivered covering issues such as seat belts, children in traffic, school driver education, junior traffic training, alcohol safety training for offenders and buddy training.

The police forces see their main role as one of enforcement and, because of their overall lack of resources, provide only minimal resources into road safety education. Because of the lack of numbers, they cannot outreach into many schools, and in those that they do, there is very little follow-up (UNIARC, 2003). It therefore follows that the only way that road safety education can be efficiently and effectively delivered is by trained educators who understand the principles of learning and the importance of continuous reinforcement.

Road safety education must be incorporated into the learning areas in the Revised National Curriculum Statement in the FET phase.

In this way, trained professionals will deliver road safety programmes, provide valuable input into evaluation and feedback and use a variety of education delivery modes. No particular

knowledge of mechanical principles is required to be a good driver. Rather, it is drivers' attitudes and behaviour which influence whether drivers are responsible or not. Education programmes must be directed at improving attitudes and knowledge rather than the physical task of driving a vehicle.

## **1.2 The Aim of this Study**

The aim of this study is to analyse the responses of the learners and educators in the FET phase regarding the incorporation of a Road Safety Education programme in the Revised National Curriculum Statement in order that these responses will lead to an effective programme that will be compulsory in the FET phase.

The key issues that will be addressed and the main questions posed by this research will be:

- How can Road Safety Education be incorporated into the various learning areas?
- How can suitable curriculum materials be developed to successfully implement this programme?
- How can the schools be encouraged to develop a road safety policy which will provide a sequential and comprehensive programme for its learners?
- How can this programme be monitored, evaluated and reviewed to see if the expected outcomes are being met and whether any improvements can be made to enhance the quality of the programme?

### **1.3 Rationale for the study**

I chose this study because of the enormity and relevance of this topic in our country. After every major holiday one is inundated with statistics concerning road accidents.

Despite spending nearly R200 million a year and patrolling nearly 50 000 km in six months to ensure Kwa-Zulu Natal roads are safe, an unacceptably high number of people continue to lose their lives through road accidents in the province (Daily News, 26 /09/03).

Provincial transport department spokesman Logan Maistry said 256 people were killed on the province's roads during the first six months of this year. World Health Organisation (WHO) data estimated that, in 1998, more children in Africa died from road crashes than from HIV, and more young adults (aged from 15 to 44 ) were killed by car accidents than malaria (WHO, 1999). Road accidents are a major and growing cause of death and injury to children in developing and transitional countries.

One reason why these accidents happen is that children do not have the necessary knowledge and skills that allow them to deal with this hostile environment. Receiving road safety education as part of their normal school curriculum is recognised as being one of the most effective ways of providing this life saving knowledge. Road safety education therefore needs to be given much greater priority in the curriculum especially in the FET phase. These learners will be the next generation of road users, so the installation of sound and comprehensive awareness and implementation of good road behaviour at this stage can only be an investment in the future safety of our roads.

#### **1.4 Principal Theory that informs the Area of Interest in the Research Project**

Education is based on theories about how learners learn, what influences that learning and what is effective practice. Such theories are based on research. Educational research may be seen as a systematic attempt to gain a better understanding of the educational process, generally with a view to improving its efficiency (Entwistle, 1973). According to Taylor (1973) a primary function of research in education is to sensitise-to make people aware of problems.

Interest in curricular change is not new. Recently curriculum development has become dominant in educational research activity. The first major attempts at curriculum development were mounted in the United States about the time when America entered the 'space race'. Public interest stimulated a critical analysis of scientific education in the United States, backed by huge financial outlays. One of the main aims of these schemes was to bring the school syllabuses more into line with current scientific developments (Nisbet & Entwistle, 1970:144).

Each year, publication of the figures for road accident deaths bring fresh disappointments especially for those who have striven so hard for an improvement. The time has now come for us to recognize that the conventional safety programmes of the past years are incapable, no matter how delicately applied, of yielding anything but marginal improvements. What is surely needed is some new approach with a potential for huge improvements. Road safety should be about education and not about prosecution. Educational programmes must be undertaken to overcome existing areas of ignorance and to initiate a process of change concerning road safety. It is therefore imperative that the Revised Curriculum Statement incorporates a comprehensive, compulsory road safety education

programme. Through the emphasis on sustainable Road Safety Education, the aim is to facilitate the adequate transfer of skills and knowledge.

The main determinants of the curriculum may reveal different points of view. The curricula may be classified as socially-oriented, subject-oriented or pupil-oriented (CERI, 1975: 159). The last two types keep the relationship between the curriculum and society implicit, and take as their starting point either school subjects or learners. The solutions found within their frameworks do exist in terms of social reality, however, and either they are in agreement with the demands of society or they are not.

The socially-oriented curriculum concentrates on content which is useful and necessary to the learners as future members of society. This type of curriculum must produce solutions to social problems. The approach of a social problem should normally be done in phases which logically follow each other. Each phase is based on the results of the previous phase. For, Road Safety, which is also defined as a social problem, such a phased approach can be used, starting from the foundation phase right up to the FET phase. In this instance curriculum development should provide solutions to Road Safety Education. There should be co-ordinated and sufficient initiatives to ascertain that role players are equipped with the necessary information, knowledge, insight and skills required for them to make a meaningful part in curriculum development concerning road safety education (DOE, 1997a).

The science of road traffic safety can be divided into three basic elements, the roads, the vehicles and the road users. The road users can be further divided into vehicle occupants ie. drivers and passengers, cyclists and pedestrians. In any transportation system there are

inadequacies in the road infrastructure, defective or unsafe vehicles and a lack of understanding by the road users. All of these factors contribute to the number of road accidents.

Our vision for the future must be to substantially reduce the number of accidents, injuries and deaths on our roads. An all out effort is required to reduce this rate to an acceptably low level. A dramatic reduction is not possible overnight but with a concerted effort by everyone it is possible in the short term, leading to substantial reductions in the longer term. In the proposed study an attempt will be made to focus on how Road Safety Education can be incorporated in to the Revised National Curriculum Statement in the FET phase. The primary task of education policy makers is the establishment of a just and equitable education and training system which provides a relevant, high quality education which is accessible to all learners. In order to execute such a policy, it is essential to compile plans for the effective promotion of Road Safety Education within the formal school context.

## **1.5 Overview of Related Research**

Research, both here and overseas, has indicated that the major obstacle to reducing traffic accidents is fragmentation of the efforts of the authorities involved in Road Safety Education (Road Safety Plan for Kwazulu- Natal, 1995: 10). A holistic approach to road safety which incorporates all stakeholders and road users together with the various controlling authorities has been proven, in countries where deaths and injuries have been reduced to comparatively low rates, to be the most effective method of reducing road accidents. The holistic road safety regime being designed by SANRAL, with technical support from the CSIR, is anchored in education and enforcement and

supported by engineering measures. The CSIR, Traffic Management Programme has developed modules that:

- Provide education to relevant target groups on the ABC of road safety
- Expose school children to appropriate road user behaviour

The Scottish Executive and the Scottish Road Safety Campaign (SRSC) commissioned research to assess the current state of road safety education (RSE) in Scottish schools, the key stakeholders' views on RSE and the factors which affect its delivery. The results of the research assisted in the development of a strategy for the Scottish Road Safety Campaign to provide a more "equitable and consistent promotion and delivery of road safety education within Scottish Schools" (Graham, 1997:1). The Scottish Road Safety Campaign's main role in the development of a national strategy is to co-ordinate the development of a 'core curriculum' and to provide support through the provision of teaching and learning resources. According to Graham (1997) road safety education should be a clear part of an overall programme of personal safety education, fitting within the school's Personal and Social Development curriculum. While road safety skills and knowledge can be reinforced using a cross-curricular approach, there is also a need for it to be taught in its own right as a discrete subject.

Previous research commissioned by the SRCS highlighted the generally inconsistent approaches to road safety education throughout Scottish primary and secondary schools. This study was commissioned to assess the overall factors which determine the way in which road safety education is undertaken in Scottish schools and the roles played by the key stakeholders.

A further aim was to identify the mechanisms by which road safety education can be improved and delivered more effectively and equitably in both primary and secondary schools. The findings were used to develop a strategy for the Scottish Road Safety Campaign, which could be used to promote a more effective and consistent approach to road safety education within the curriculum.

Within the curriculum, road safety education is most appropriately located within the framework provided by Personal and Social Education. There is also considerable scope for the development of cross-curricular linkages between other subjects and road safety education. These enable key road safety skills and knowledge to be reinforced. The SRSC have produced a range of useful resources aimed at developing these linkages.

An education plan to deliver road safety education to all Victorian school children in Australia was recently developed by a working party of representatives from VicRoads, the Victorian Board of Studies, the DSE (Directorate of Schools Education), TAC (Transport Accident Commission) and the Council of Adult Education. It consolidates work undertaken previously and represents a framework within which co-ordinated action between relevant organizations can occur to provide all children with a comprehensive road safety education. The Traffic Safety Education Action Plan will be delivered through the school system and community agencies respectively. It includes a variety of strategies including the use of the latest technology. The plan recognizes that road safety education for Victoria's school age children will occur through two separate, but complimentary, delivery streams; the school system and community agencies (Victoria Police Force VicRoads, 1997: 47).

Programs and resources will be developed to support the implementation of road safety education by a wide range of government, industry and community agencies. (Victoria Police Force VicRoads, 1997: 46). For learners studying for the Victorian Certificate of Education (VCE) – the equivalent of Grade12 in South Africa - VicRoads has developed student / teacher kits relating road safety to particular subject areas. One example is a Health Education pack offering teachers and students a range of activities and information about road, transport health and safety.

England has a long history of road safety education through its Road Safety Officers working in schools with teachers and where resources permit, with children. The Department of the Environment, Transport and Regions (DETR), while not being directly responsible for delivering road safety education, provides guidelines for best practice. Since the early 1990s the DETR has commissioned extensive research into good practice in the effective delivery of road safety education at all school levels, and has published a number of guidelines for its delivery. The DETR research concluded that:

- road safety can be used in most areas of curriculum
- learners need to receive small, frequent, and purposeful inputs of road safety education throughout their school careers,
- well trained and supported teachers are the best placed professionals to deliver road safety education in schools. (Road Sense, Ata Haere,)

## **1.6 Research Methodology and Research Design**

The site for this research topic is Southlands Secondary. The school is situated in Havenside, Chatsworth a working –to middle-class residential area. Southlands Secondary is a co-educational school catering for grades 8 to 12. The school serves approximately 1149 learners. According to the Educational Management Information Services (EMIS) which is carried out annually at schools by the Department of Education, the school in 2003 has learners ranging from 12 years (grade 8) to 19 years (grade 12). The racial intake is 32 % Africans, 1% Coloureds, 67% Indians. The teaching staff consists of a principal, 2 deputy principals, and 34 educators.

The reason for this site is twofold, firstly the researcher is a member of the staff and this will facilitate access to the school and secondly this particular school was one of the schools that was involved with a school driver education programme sponsored by Volkswagen South Africa in the nineties.

This study does not attempt to test a specific hypothesis but attempts to generate some of the issues which may be important for future curriculum development in this country, with specific reference to Road Safety Education. In generating such issues it is hoped to raise specific problems in which further research may be done so that curriculum developers can incorporate Road Safety Education into the Revised National Curriculum Statement.

The measurement process is an integral part of the research study. The approach one uses in a single study can be quantitative, qualitative or a combination of both. For the purposes of this

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study a qualitative approach will be used. It is hoped that the study will yield meaningful insights into the respondents' experiences, beliefs and judgments about incorporating Road Safety Education into the Revised National Curriculum Statement.

Qualitative research encompasses a variety of approaches to investigate the world. Qualitative research procedures are employed in disciplines such as education, sociology, anthropology, history, theology and literary criticisms. Some types of qualitative investigations are case studies, participant observation of a particular group or sub-culture of the biographies, or life histories of certain individuals.

According to Cohen and Manion (1989:307) the research interview has been defined as two-person conversation initiated by the interviewer for the specific purpose of obtaining research relevant information. An interview allows the individual to report on what they feel.

The researcher realised that this would be a suitable research tool, considering the focus of the study. The flexibility of interviews allowed for opportunities to solicit attitudes and understandings about issues relating to the incorporating of Road Safety Education in the curriculum. For this purpose the researcher chose to interview the Heads of Department of the following Learning Areas

- Mathematic Literacy, Mathematic and Mathematic Sciences
- Economic and Management Sciences
- Technology, Arts and Culture
- Natural Sciences
- Human and Social Sciences

Qualitative research allows for the incorporation of a range of techniques and instruments to gather data. One such instrument is the questionnaire. The information gathered from the questionnaire would be of a more personalized nature. (Burroughs, 1975:106) 50 Grade 11 learners were chosen to respond to the questionnaire. 10 learners were randomly chosen from each Grade 11 class. There are 5 Grade 11 classes.

### **1.7 Primary Sources of Data**

The primary sources for this study will be the 50 Grade 11 learners, the Heads of Department of the 5 Learning Areas and the data obtained from various documents concerning road safety education.

### **1.8 Structure of the Dissertation**

**Chapter One:** Introduction, Background of Study and Problem Statement

**Chapter Two:** Literature Review and Theoretical Framework

**Chapter Three:** Research Methodology

**Chapter Four:** Data Analysis and Discussion of research findings

**Chapter Five:** Recommendations and Conclusion

## CHAPTER TWO

### LITERATURE REVIEW AND THEORETICAL FRAMEWORK

#### 2.1 Introduction

After World War II, highway travel began to increase dramatically. This long-term growth of the vehicle fleet and travel resulted in increasing road casualties. Throughout the twentieth century remarkable progress has been made in reducing overall mortality and improving the general health of children, but no such improvement has been achieved in reducing mortality from road accidents (OCED, 1986). The relative importance of road accidents as a cause of impairment, disability and death of children continues to increase. During 1998, 637 young road users under the age of 12 years were killed on South African roads (De Coning, 2001). The death of young road users is perceived throughout society as posing grave human and moral problems apart from the economic and financial loads imposed on social services.

All over the world researchers are striving to find solutions for this harsh reality. The daily traffic situation deals with the life of human beings and the loss of it. When international trends regarding the level of road safety education in schools are taken into account, it appears that road safety education plays a definite, explicit role in accident rates. International research has shown that in countries where road safety education is compulsory, the accident rate is relatively low whereas in countries where there is no or partly compulsory road safety education the accident rate is relatively high (20<sup>th</sup> South African Transport Conference). It is

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clear that young road users must be empowered with relevant knowledge, applicable skills and a positive attitude to such an extent that road safety education can penetrate not only the individual learner but also society. This means that formal, informal and non- formal road safety education targeted at different groups in society can take place simultaneously in order to reach all road user categories. The focus is thus not only on the integration of road safety education programmes in the formal school set-up but also on community-driven road safety education projects.

Evaluation studies of the effectiveness of road safety education programmes are advocated especially. Considerable funds and resources are devoted to traffic education programmes both inside and outside schools. Yet, little is known about the safety impact or potential of educational programmes. There are few programmes that have been evaluated. So far most evaluations were concerned with the effects on intermediate criteria such as attitudes, skills and behaviour. While this type of evaluation is important for the development of educational measures, there is hardly any safety education programme that has been evaluated in terms of accident reduction capability. Evaluation studies of road safety education programmes are therefore needed to provide data that facilitate and rationalize decisions and programme development (OCED, 1986).

## 2.2 Education

Road safety education can be used as a tool in a systematic approach to road accident prevention. Human error is a major contributory factor in road accidents, and road safety education directly aims to influence the road user by changing his cognitions, attitudes, behaviour or skills. Road safety education differs fundamentally from approaches to road safety, which aims to change the other components of the traffic system. Changes in car design and in the highway and traffic infrastructure can decrease the number and consequences of accidents that occur, and can to a certain extent force the road user to display behaviour that is desirable from a safety point of view. However, road safety remains to a large extent dependent on the behaviour road users' display. Road safety education implicitly assumes that traffic behaviour is dependent on the skills, knowledge and attitudes of traffic participants, and that it is possible to improve the behaviour of road users through systematic educational efforts.

Education should be seen as an integral part of an integrated approach to the problem of the road safety of children. The safety of unprotected road users, including children, depends on how the traffic environment is organized and how motor vehicle traffic is controlled. Nonetheless their traffic knowledge, skills and behaviour play an important role in reducing accident risks. Traffic and/or road safety education programmes will therefore be the traditional means to develop appropriate knowledge and skills needed for safe behaviour.

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The instruction of children in traffic safety is a desirable practice that should start from an early age. Ideally the instruction of children in road safety education should be practical, intensive, and sustained and should be incorporated into all the existing learning areas.

For young children it is highly desirable that parents should be involved. Parents should educate their children regarding the most important traffic risks, create the necessary behaviour and train their children in actual traffic. In this sense road safety education of children is first of all education of parents and other adults, in particular educators and other officials responsible for the road safety of children.

Programme outcomes should focus on improving knowledge and changing behaviour. Knowledge of road safety procedures can be improved, both by classroom instruction and by practical training. Road safety education can bring about changes in the behaviour displayed on the roads by children both as pedestrians and as road users. To change the behaviour of young learners, or to maintain any changes in behaviour over a reasonable period of time requires programmes of instruction that are far more intensive than has conventionally been the case in the past. Educational programmes for older learners that are based only on the occasional intervention by outside agencies have limited value.

Although the critical period may well be before the child goes to school, road safety education should involve both parents and teachers. All parents and all institutions responsible for road safety education must recognize that education is a long-term process; therefore educational programmes have only a small effect if not performed over a long period of time.

Whether these assumptions are correct should be established through careful implementation of road safety education activities. In the past, many of these activities have not been explicitly aimed at influencing road user behaviour or at reducing road accident frequencies. In many cases, the outcomes have not been specified at all or they have only been specified in terms of knowledge acquisition (OCED, 1986).

### **2.3 The Outcomes of Road Safety Education**

The outcomes of road safety education can be defined as achieving an optimal use of the transportation system with optimal safety for all traffic participants. The specific outcomes of road safety education should be formulated on the basis of a problem analysis using accident and exposure data. This analysis should consider accident data, exposure data and information about the psychological functions, cognitions and skills of the target group. A task analysis can provide a useful framework for the structuring of these different types of data and can be used as a systematic basis for the formulation of the educational outcomes. An example of an educational outcome would be that a child must have an understanding of the risks involved in traffic participation.

The teaching outcomes of road safety education are all concrete outcomes that can contribute to installing the desired skills, knowledge, attitudes and behaviour. Teaching outcomes specify what a child must know or must be able to do to attain a particular educational outcome. In the example given above, it would require specification of the cognitions and abilities needed to

understand the risks involved in traffic participation. An example of a teaching outcome would thus be that the child knows that motorcycles go faster than bicycles. It may, for example, be necessary to teach children to distinguish different colours before they are able to learn to use traffic lights. Thus, teaching outcomes are not only formulated on the basis of road safety considerations but also on the basis of educational considerations (OCED, 1986).

The outcomes of Road Safety Education can be defined on many levels, from the very general to the very specific. Assessment can take place on each of these levels of specification. Many different criteria can be used to assess an educational programme.

The appropriate level to be chosen depends on the stage of development of the programme and the decisions that have to be based on the assessment.

In formative assessment, criteria are derived from the programme objectives and can concern cognitive and psychomotor skills, cognitions, traffic knowledge and understanding. Risk perception, attitudes and behaviour can also be used. In summative assessment the criteria are directly linked to the outcome of Road Safety Education, in principle accident reduction.

## **2.4 Curriculum**

Over the decades many definitions of curriculum have been provided; because key players in education represent a diversity of values and experiences, it is extremely difficult to achieve a wide public or professional consensus.

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To define curriculum 'as what is taught in schools' is of course very vague. By this is meant the range of subjects taught and the amount of instruction time given to each in terms of hours and minutes. Marsh (1997:4) states that curriculum is quite often defined as a product or a document which includes details and goals, objectives, content, teaching techniques, evaluation and assessment and resources. These are official documents issued by the government or one of its agencies and which prescribe how and what is taught. When the curriculum is being planned, the physical resources, and work programmes should all be taken into account (National Department of Education, Curriculum 2005, 1997).

Defining curriculum as a 'set of performance objectives' or student learning is a very practical orientation to curriculum. This approach focuses upon specific skills of knowledge that is considered which should be attained by learners. Reid (1978:152) asserts that the theories commonly invoked to explain curriculum development differ according to the emphasis they place on the role of external or internal forces. Any enterprise as complex as curriculum development requires some kind of theoretical or conceptual framework of thinking to guide it. Generally speaking, a conceptual system for the curriculum or a theory of curriculum is a way of organizing thinking about all matters that are important to curriculum development (Taba, 1962:413). Present criticisms of public education are characterized by critics' attempts to base curriculum development upon theories about society, culture, learning and subject matter.

The strongest pressure in general for re-examination of the curriculum comes from the drastic changes in technology and culture. In South Africa the strongest pressure came from the political and social arena. After the election of a democratic government in 1994 South Africa

was ready to shed the shackles of its past educational practices which was dominated by apartheid policies. Analysing the nature of society and of its demands on individuals formed the basis of curriculum development.

During this period there emerged the concept of behavioural objectives of education, a concept which encompassed goals that went beyond acquiring knowledge and academic skills and differentiated the learning processes appropriate to each objective. The emerging science of group dynamics contains materials which suggest new ways for creating an effective dynamic of learning in groups and for planning the conditions for learning. These developments have more than an immediate significance; they suggest also a new way of thinking about curriculum.

The new curriculum which evolved in the mid 1990s in South Africa attempts to affirm both equality and excellence by defining what is essential for all students throughout the nation. The question is, as posed by Ornstein & Hunkins (1993: 60), whether all students should experience a common curriculum, considering the diversity among the learners in South Africa.

## **2.5 Curriculum Development**

*Introductory*

Curriculum development is a complex undertaking that involves many kinds of decisions. Decisions need to be made about the general aims which schools are to pursue and about the

more specific objectives of instructions. The major learning areas of the curriculum must be selected, as well as the specific content to be covered in each. Choices must be made about the type of learning experiences with which to implement both the content, understandings and other objectives. Decisions are needed to be made regarding how to evaluate what students are learning and the effectiveness of the curriculum in attaining the desired ends. Ornstein & Hunkins (1993: 265) states that for the curriculum development to be adequate, all these decisions need to be made competently, on a recognized and valid basis, and with some degree of consistency.

The post apartheid administration declared that curriculum development would be a “fully participatory” process with the teaching profession, educators, subject advisors playing a leading role along with academic subject specialist and researchers (DOE, 1997a).

In addition, the Department of Education adopted the principle that the curriculum should ‘emerge’ or ‘evolve’, and should not be designed as a finished package for implementation by teachers. The design had to be developmental and was based on the principles of consultation, collaboration and co-ordination. There should be co-ordinated and sufficient initiatives to ascertain that role players are equipped with the necessary information, knowledge, insight and skills required for them to take a meaningful part in curriculum development.

## 2.6 Frameworks

Perhaps more than any other African country, in recent years South Africa has invested enormous energy and substantial resources in thinking about the preferred evolution of its education system (Samoff, 1996: 1). Individuals, political movements, education organizations, various sorts of formal and informal groups, special institutes, task teams, and many government departments have laboured to review policies, list policy options, and suggest policy guidelines. Samoff (1996: 1) states that frameworks are guidelines, the architectural skeleton on which the building is eventually constructed. Marsh, (1997) further states that ‘frameworks’ provide planning focus for teachers. Frameworks play an important role in the control and direction of South Africa’s New National Curriculum (Curriculum 2005).

The primary task of education policy makers is the establishment of a just and equitable education and training system which provides a relevant, high quality education which is accessible to all learners, irrespective of race, colour, gender, age, religion, ability or language. A priority for both national and provincial education departments is therefore, the creation of a transformative, democratic, open learning system, fostering in all its users a strong commitment to lifelong learning and development.

The usual method of curriculum revision is to start by revising the “framework” before experimenting with the more specific parts of a functioning current framework. This curriculum framework serves as strategic intervention designed to facilitate and guide the

development of a transformed education and training system in a practicable and sustainable way

Although curriculum frameworks establish norms and standards, they do not prescribe content or methodological approaches. They are not intended to direct teaching and learning but to guide further curriculum development, that is the development of learning programmes and materials which best meet the needs of those they are intended to serve. Bolan (1982: 285) states that the ultimate purpose of the framework is to deepen our understanding of any educational innovation. Marsh (1997: 27) states that as a tool of control and direction, it is also regarded as a stimulus for evoking creative ideas and activities.

According to Marsh (1997: 30) a curriculum framework document usually includes;

- a rationale or platform;
- scope and parameters of the curriculum area
- broad goals and purposes of subjects within the curriculum area;
- guidelines for course design
- content;
- teaching and learning principles;
- guidelines for the evaluation of subjects;
- criteria for accreditation and certification of subjects
- future developments for the area.

Marsh (1997) further argues that a well developed curriculum framework should contain the following features:

- \* strong links between theory and practice
- \* up-to-date and relevant information about pedagogy, learning and resources
- \* evocative and inspiring to teachers- they become impressed by its potential as a curriculum area.

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Curriculum frameworks are not to be regarded as learning programmes. Rather they are philosophical and organizational frames of reference with a dual purpose: they provide norms and standards for curriculum development and design, and at same time, create opportunities for innovation, allowing the development of flexible, relevant learning programmes and materials which will take cognizance of particular needs, constraints and realities. For example, the particular curriculum constraints in multi-grade classrooms, the need for an Aids Awareness Programme, the incorporation of Road Safety Education in the Revised National Curriculum Statement.

## **2.7 Curriculum Design**

Curriculum design implies the development of a framework or pattern for the creation of opportunities for learning. Curriculum design is a statement which identifies the elements of the curriculum, states what their relationships are to each other and indicates the principles of organization for the administrative conditions under which it is to operate. Grundy (1987: 28) further states that it is the *eideis* which will guide the process of curriculum development. These may be arrived at by taking into account the 'real' world in which the curriculum is to be implemented, but essentially the objectives are theoretical statements or principles which stand in a deterministic relationship to the world of practice. These pre-specified objectives will determine the design of the learning experience (Grundy, 1987: 28). A design needs to be supported with and to make explicit a curriculum theory which establishes the sources to consider and the principles to apply. Both are needed to make consistent decisions about the curriculum. Curriculum design involves various philosophical or theoretical issues, as well as

practical issues. Ornstein & Hunkins (1993: 233) state that a person's philosophical stance will affect his or her interpretation and selection of objectives, influence the content selected and how it will be organized, affect decisions about how to teach or deliver the curriculum content, and guide judgments about how to evaluate the success of the curriculum developed.

## 2.8 Curriculum 2005

Curriculum 2005 is probably the most significant curriculum reform in South African education of the last century. Deliberately intended to simultaneously overturn the legacy of apartheid education and catapult South Africa into the 21<sup>st</sup> Century, it was an innovation both bold and revolutionary in the magnitude of its conception. As the first major curriculum statement of a democratic government, it signaled a dramatic break from the past.

The National Department of Education set out its agenda for change in the first White Paper on Education and Training (1995). Subsequently, it has focused on developing frameworks policies for different parts of its vision. The emerging vision for education and training was a systemic umbrella agenda (Christie, 1999: 280).

C2005 arose out of coalition processes designed to ensure an integration of education and training through the National Qualifications Framework (NQF). The organizations of the democratic movement anticipated the adoption of an inclusive notion of lifelong learning and the integration of education and training through a national qualifications framework. As an assessment, qualifications, competency and skills based framework, it encouraged the

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development of a curriculum model aligned to the NQF theory and practice. This model drew on a variety of ideas current in the international arena and reshaped them to fit local conditions.

The objectives of the National Qualifications Framework are defined as being to create an integrated national framework for learning achievements, the facilitation of access to, and mobility and progression within education and training and career paths and the enhancement of the quality of education and training (Spady,1994). The National Qualifications Framework is defined as a systemic framework for organizing education and training around the notion of learning outcomes; OBE is seen as an ‘approach to education’ while C2005 is seen as ‘the curriculum that has been developed within an outcomes-based framework and is in the process of being implemented in schools’. OBE means clearly focusing and organizing everything in an educational system around what is essential for organizing curriculum, instruction, and assessment to make sure this learning ultimately happens (Spady, 1994).

OBE entails a new method of curriculum design which organizes learning from exit assessment backwards. While policy makers differ on some aspects of C2005 as a planned process and strategy of curriculum change, it is underpinned by elements of redress, access, equity and development. To achieve these, C2005 employs methodologies used in progressive pedagogy such as learner centeredness, teachers as facilitators, relevance, contextualized knowledge and co-operative learning.

## **2.9 Revised National Curriculum Statement**

The Revised National Curriculum Statement for Grades R-9 is the result of a decision in mid - 2000, by the Council of Education Ministers and Cabinet to revise the first Curriculum 2005. The Council of Education Ministers and Cabinet required the Department of Education to develop a National Curriculum Statement Grades R-9. This National Curriculum Statement would embody a vision of the kind of learner required by our society (DOE, 2000).

The Revised National Curriculum Statement builds its Learning Outcomes for the General Education and training Band for Grades R-9 (for schools) on the critical and developmental outcomes that were inspired by the Constitution and developed in a democratic process.

The critical outcomes envisage learners who are able to:

- identify and solve problems and make decisions using critical and creative thinking;
- work effectively with others as members of a team, group, organization and community;
- organize and manage themselves and their activities responsibly and effectively;
- collect, analyse, organize and critically evaluate information;
- communicate effectively using visual, symbolic and/ or language skills in various modes;
- use science and technology effectively and critically, showing responsibility towards the environment and the health of others; and
- to demonstrate an understanding of the world as a set of related systems by recognizing that problem solving contexts do not exist in isolation.

The developmental outcomes envisage learners who are able to:

- reflect on and explore a variety of strategies to learn more effectively;
- participate as responsible citizens in the life of local, national, and global communities;
- be culturally and aesthetically sensitive across a range of social contexts;
- explore education and career opportunities; and
- develop entrepreneurial opportunities.

Issues such as poverty, inequality, race, gender, age, disability and challenges such as HIV/AIDS all influence the degree in which learners can participate in school. The Revised National Curriculum Statement Grades R-9 (Schools) adopts an inclusive approach by specifying the minimum requirements for all learners. All the Learning Area Statements try to create an awareness of the relationship between social justice, human rights, a healthy environment and exclusivity. Learners are also encouraged to develop knowledge and understanding of the rich diversity of this country, including the cultural, religious and ethnic components of this diversity.

### **Revised National Curriculum Statement: Learning Programmes**

The Revised National Curriculum Statement is aimed at promoting commitment as well as competence among teachers, who will be responsible for the development of their own Learning Programmes. The underlying principles and values of the Revised National Curriculum Statement Learning Area Statements underpin the Learning Programmes. Whereas

the Learning Areas stipulate the concepts, skills and values to be achieved on a grade by grade basis, Learning Programmes specify the scope of learning and assessment activities for each phase. Learning Programmes also contain work schedules that provide the pace and sequence of these activities each year, as well as exemplars of lesson plans to be implemented in any given period. In the Foundation Phase, there are three Learning Programmes: Literacy, Numeracy and Life Skills. In the intermediate Phase, Languages and Mathematics are distinct Learning Programmes. Learning Programmes must ensure that the prescribed outcomes for each learning area are covered effectively and comprehensively. Schools may decide on the number and nature of other Learning Programmes in the Intermediate Phase based on the organizational imperatives of the school, provided that the national priorities and developmental needs of learners in a phase are taken into account.

In the development, design and delivery of learning programmes, cognizance should be taken of differing ages, genders, geographical and demographic locations, cultures, languages and religious beliefs. The selection of topics for learning and teaching and of teaching approaches and methods need to reflect sensitivity to all of these. According to Ornstein & Hunkins (1993: 249) learners should be able to recognize the uniqueness of our multicultural situation and potential for the development of culture as a unique South African commodity that has immensely positive implications for nation building, economic and social development (DOE, 1997).

Learning programmes should facilitate the creation of opportunities for all learners, including those that are disabled, to strive towards the attainment of similar learning outcomes and

achievements. Such an approach does not deny that there are relevant differences among individuals. Neither does it rule out approaches that would recognize different levels of mastery. Implicit in the idea of national standards, is the belief that differences in learners' interests and abilities should challenge educators to explore a host of alternative instructional methods and approaches. It follows that learners should be given the opportunity of coping with demanding performance standards at their own pace rather than at the pace of the majority of the learners in a class.

Education and training should promote the development of a national identity and an awareness of South Africa's role and responsibility with regard to Africa and the rest of the world. Learning programmes should, protect and advance basic human rights. Learners need to develop a sense of self-worth and need to experience acceptance.

Learning programmes should, promote learners ability to think logically and analytically as well as holistically and laterally. This includes an acknowledgement of the provisional, contested and changing nature of knowledge and of the need to balance independent, individualized thinking with social responsibility and the ability also to function as part of a group, community or society.

### **Assessment**

Each Learning Area Statement includes a detailed section on assessment. An outcomes-based framework uses assessment methods that are able to accommodate divergent contextual factors. Assessment should provide indications of learner achievement in the most effective and efficient manner, and ensure that learners integrate and apply skills. Assessment should

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also help learners to make judgments about their own performance, set goals for progress and provoke further learning.

### **The kind of Educator that is Envisaged**

All teachers and other educators are key contributors to the transformation of education in South Africa. This Revised National Curriculum Statement GradesR-9 (Schools) envisions educators who are qualified, competent, dedicated and caring. They will be able to fulfil the various roles outlined in the Norms and Standards for Educators. These include being mediators of learning, interpreters and designers of Learning Programmes and materials, leaders, administrators and managers, scholars researchers and lifelong learners, community members, citizens and pastors, assessors and Learning Area or Phase specialists.

### **The kind of Learner that is Envisaged**

The promotion of values is important not only for the sake of personal development, but also to ensure that a national South African identity is built on values very different from those that underpinned apartheid education. The kind of learner that is envisaged is one who will be inspired by these values, and who will act in the interests of a society based on respect for democracy, equality, human dignity, life and social justice. The curriculum seeks to create a lifelong learner who is confident and independent, literate, numerate, multi-skilled, compassionate, with a respect for the environment and the ability to participate in society as a critical and active citizen (DOE, 2000).

## **2.10 The Curriculum Development and Design Process**

The philosophy of progressive learner-centered education, outcomes-based education and an integrated approach to what is to be learnt, have all influenced the design of the Revised National Curriculum Statement. Curriculum development, especially the development of learning programmes and materials should put learners first, recognizing and building on their knowledge, skills, abilities and experience, and responding to their needs. Curriculum development processes and delivery of learning content (knowledge, skills, attitudes, and values) should take account of the general characteristics, developmental and otherwise, of different groups of learners. Different learning styles and rates of learning need to be acknowledged and accommodated both in the learning situation and in the attainment of qualifications. The ways in which different cultural values and lifestyles affect the construction of knowledge is incorporated in the development and implementation of learning programmes.

Grundy (1987: 29) states that the product of a learning process designed in this way will be judged according to the fidelity with which the implementation of the curriculum design realizes the objectives, thus producing the desired outcomes.

## 2.11 The Principles of Teaching and Learning

Motivating learners by providing them with positive learning experiences, by affirming their worth and demonstrating respect for their various languages, cultures and personal circumstances is a pre-requisite for all forms of learning and development. This should be combined with the regular acknowledgement of learners' achievements at all levels of education and training and the development of their ability and willingness to work both cooperatively and independently. Learners must be encouraged to reflect on their own learning progress and to develop the skills and strategies needed to study through open learning, distance education and multi-media programmes. Learning programmes should promote learners' ability to think logically and analytically as well as holistically and laterally. This includes an acknowledgement of the provisional, contested and changing nature of knowledge and of the need to balance independent, individualized thinking with social responsibility and the ability also to function as part of a group, community or society. The perception of educators as dispensers of knowledge will also have to change so that learners are valued as equal and active participants in learning and developmental processes (Christie, 1999).

Although learning programmes for education and training should adhere to a coherent framework of principles (Curriculum Framework) and lead to the attainment of national standards and qualifications (National Curriculum Framework), the means for reaching these ends should be determined by providers in accordance with the needs of their learners. Frameworks, play a significant role here, in that they, guide the people who develop learning programmes in more detail. These include such things as the move to outcomes-based

learning; the interpretation of essential outcomes; the structures of education and training system around areas of learning and bands of learning (DOE, 1997).

## **2.12 Design Dimension Considerations**

In designing Curriculum Frameworks, the following aspects must be considered Integration, Progression and Credibility (National Curriculum Framework).

### **Integration**

The advantage for using frameworks in integration are; learners have access to a broader education by being able to select from a number of curriculum frameworks rather than a narrow range of traditional subjects. The curriculum will be more coherent and orderly because the framework for each curriculum area is arranged sequentially, from grade one to grade 12. Marsh (1997: 31) states that there are opportunities to incorporate desirable skills, numeracy and problem solving skills.

The major challenge in dealing with scope is integrating the myriad learning's that students are to encounter at a particular grade level of the curriculum. According to Ornstein & Hunkins (1993: 238) integration refers to the linking of all types of knowledge and experiences contained within the curriculum plan. Integration allows the learner to obtain a unified view of knowledge. Taba, (1962) advanced the view that although curriculum planners can organize

opportunities for learning in such a way as to facilitate integration; it is the learners who integrate what they are learning through various educational experiences.

The integrated approach to education and training, linked to the development of a National Qualifications Framework, is based on a system of credits for attaining learning outcomes, irrespective of where they have been attained. The reason that integration became the dominant feature of C2005 includes the following: to make the curriculum more relevant to work and everyday life; to reconnect theory and practice.

### **Progression**

The National Qualifications Framework must ensure that the framework of qualifications permits individuals to move through the levels by accumulating appropriate combination of credits.

Learning programmes should facilitate progression from one class, phase or learning outcome to another from any starting point in the education and training system. National qualifications will be awarded, at each of the levels of the National Qualifications Framework, provided that candidates have accumulated enough credits and have met the additional requirements, such as rules of combination required for the particular qualification.

### **Credibility**

In order for a country to be internationally competitive, its education and training system must have standards and outcomes which are comparable to the rest of the world. However, there

should be recognition of the realities of comparative advantage and disadvantage with regard to natural resources, infrastructural development, and uneven development within South Africa to avoid, a slavish or uncritical emulation of international systems or parts of such systems that might not be relevant to our needs.

Learning programmes should have both internal and international credibility. With respect to internal credibility it is imperative that they should be valued by the nation as being valid, relevant and of high quality. Acknowledging the need for both internal and international credibility imply, that the areas or fields of learning described in a Curriculum Framework, as well as the prescribed national standards, should meet indigenous needs without necessarily deviating too markedly from those offered elsewhere in the world.

### **2.13 Knowledge Areas**

The identification and definition of knowledge areas is an important element of all curriculum development, including outcomes-based curriculum development.

However, the selection of knowledge areas and the criteria used to select them have always been contentious because such choices inevitably make certain assumptions about the nature of knowledge, the processes of learning and, implicitly, the nature and purpose of education. Curriculum developers must be aware of the assumptions underlying their choices and of the effects these choices could have, not only on the learning and teaching process but also on society as a whole (Taba, 1962). Traditionally, two broad schools of thought on nature of

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knowledge and the learning process have dominated the education and training arena. The one school of thought accepted intellectual pursuits as supreme and true knowledge as timeless and objective, owing nothing to the particular circumstances of individual eras, societies, cultures or human beings. The other regarded human beings as blank sheets to be filled with sensory experiences and believed that learners acquired knowledge in an experiential and scientific way, by formulating and modifying a variety of hypotheses. A basic position such as this inevitably led to a greater awareness of the tentative nature of human knowledge. This awareness, in turn has given rise to many modern theories of knowledge which regard knowledge as hypothetical and, therefore, subject to constant change, modification and evolution.

It is the former school of thought, more than the latter, which inevitably led to the stratification of society and the separation of liberal and vocational education, a conflict which can still be discerned in present day education and training practices. This resulted in vocational education being stigmatized as less intellectual and more practical.

The second school of thought, on the other hand, eventually led to the learner centered movement which suggested that the content of the curriculum should be based on the “common sense knowledge” of the learner rather than on the “educational knowledge” of the teacher.

It is only lately that curriculum development has started looking beyond considerations of content alone and begun to recognize that curriculum development should be outcomes- based

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This does not mean that learning outcomes should replace knowledge areas. Rather it acknowledges that the formulation of learning outcomes should be the first step in the curriculum development process (Marsh, 1997).

The shift to an outcomes-based education and training system and the ensuing development of outcomes-based learning programmes makes good sense in terms of facilitating mobility from one learning context to another; integrating education and training; enabling transportability of learning; opening access to learning, and recognizing prior learning experiences. Moreover, an outcomes-based approach to learning could promote a greater sense of purpose and accountability. The teaching and learning processes are at least as important as the formulated outcomes or results. There needs to be a balance between quality inputs and quality outputs. It is with this in mind that the Curriculum Framework includes areas of learning (DOE, 1997).

The inclusion of knowledge areas in an outcomes-based curriculum framework should not be read as a reluctance to move from a content- based, input paradigm.

Rather, it should be read as an affirmation that results (outcomes) require quality inputs. Learning activities, resources, situations and contexts should not therefore, be reduced to merely the means of achieving certain ends.

Furthermore, if we accept that curriculum planning must begin with the formulation of statements about the purposes we hope to attain or the principles upon which our education and training practices are to be based, all decisions about the content of our curriculum must be subsidiary to those prior choices. Since it is essential, generic outcomes, which inform the

processes and procedures of learning and teaching, should be used as criteria for the selection of knowledge areas.

Based on these principles, and taking account of the additions, emphasis and specificities of our country which need to be built into all learning programmes to make them especially appropriate to the South African context. The skills and knowledge to be covered in the Revised National Curriculum Statement are divided into eight learning areas. New curriculum frameworks have been developed spanning the twelve years of schooling.

The following Areas of Learning are proposed for the General and Further Education and Training Bands:

- Language, Literacy and Communication (LLC)
- Mathematical Literacy, Mathematics and Mathematical Sciences (MLMMS)
- Natural Science (NS)
- Technology
- Human and Social Sciences (HSS)
- Economic and Management Sciences (EMS)
- Arts and Culture (A & C )
- Life Orientation (LO)

The Further Education and Training band is where the integrated approach to education and training comes to its full right. Although the areas of learning which informed GET will still play a role in helping learners to attain the learning outcomes at each of the proposed levels in this band on the National Qualifications Framework, occupational content areas and higher education and training disciplines will necessary influence what is to be offered and how these offerings are to be assessed

The descriptions of the learning areas for the Revised National Curriculum Statement emphasise the role, especially the social role of each in reconstruction and transformation of South African society.

Some of the eight learning areas are dedicated to this role. For, example, Life Orientation is described as ‘fundamental in empowering learners to live meaningful lives in a society that demands rapid transformation’. The other learning areas are also expected to promote social and developmental values. The description of MLMMS indicates that this learning area should empower people to work towards the reconstruction and development of South African society. In the same vein Economic and Management Sciences is described as fundamental in preparing citizens of South Africa to understand the critical importance of re-construction, development and economic growth for a sustainable economic future.

The apartheid legacy runs deep and clearly requires that the curriculum of post-apartheid South Africa deal forcibly and systematically with issues of justice, democracy and respect for diversity and difference. However, it should also address the means to promote innovation and economic growth as the basis for social development for all. In this view of curriculum, learners are enabled to contribute to society when they have access to the cognitive tools required by such a society. Seen in this light, the two challenges are indivisible: social transformation can only be successfully pursued through widespread access to high level skills and knowledge, and equally, innovation and development must serve the social values of our new democracy. A high knowledge and skill curriculum thus becomes the means to promote

social justice, growth and development. A comprehensive Road Safety Curriculum from pre-school to Grade 12 will ensure a generation of safe and responsible road users thereby reducing the wanton carnage and unnecessary loss of lives on our roads.

#### **2.14 Conclusion**

One must conclude that the major question about curriculum planning is how to plan wisely, scientifically, and on the basis of rationally recognized facts and considerations.

Road safety education is not a compulsory part of the curriculum but if we recognize its importance, we need to find ways to weave it into the learning experiences that are already taking place in the classrooms and schools. Applying road safety as context in any curriculum area where work has already been planned doubles the value by providing a way of practicing learnt skills in a meaningful context, and reinforcing positive road safety messages. As with all effective curriculum delivery, there is a need for constant reinforcement if the concepts and skills are to be retained, applied and extended.

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## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Qualitative Research

According to Bogdan and Biklen (1982), *qualitative research* has the following five features:

(1) the natural setting is the data source and the researcher is the key data-collection instrument. In this case the natural setting is Southlands Secondary School and the researcher who is the key data-collection instrument is an educator at the school;

(2) it attempts primarily to describe and only secondarily to analyse. This research aims to describe how road safety education can be incorporated into the FET curriculum and the responses of the participants will be analysed;

(3) the concern is with process, that is, with what has transpired, as much as with product or outcome. The concern here is with the process of road safety education and how it can be incorporated into the FET curriculum;

(4) its data are analysed inductively, as in putting together the parts of a puzzle

(5) it is essentially concerned with what things mean, the *why* as well as the *what*

Here the concern is with Why is the fatality rate concerning road accidents so high in South Africa and What can be done to reduce it?

This type of research methodology, also referred to as *ethnography*, is said by Wilson(1997) to be based on the fundamental beliefs that (1) events must be studied in natural settings, that is, be field based and (2) events cannot be understood unless one understands how they are perceived and interpreted by the people who participated in them.

Ethnography relies on observations of interactions and interviews of participants to discover patterns and their meanings. The application of the qualitative or ethnographic approach to the field of evaluation has been termed *responsive evaluation* (Stake, 1998). In this approach the researcher interviews people in and around the setting. For this research project the learners as well as the educators will be interviewed. The researcher will attempt to identify the chief concerns of the various participants and audiences and to assess the merit, worth or meaning, of the phenomena, that is the incorporation of Road Safety Education into the existing learning areas, to the participants. The key philosophical assumption, upon which all types of qualitative research are based, is the view that reality is constructed by individuals interacting with their social worlds. Qualitative research “implies a direct concern with experience as it is ‘lived’ or ‘felt’ or ‘undergone’” (Sherman and Web, 1988: 7).

In contrast to quantitative research, which takes apart a phenomenon to examine component parts (which become the variables of the study), qualitative research can reveal how all the parts work together to form a whole. It is assumed that meaning is embedded in people’s experiences and that this meaning is mediated through the investigator’s own perceptions. Patton (1990) explains:

“Qualitative research is an effort to understand situations in their uniqueness as part of a particular context and the interactions there. This understanding is an end in itself, so that it is not attempting to predict what may happen in the future necessarily, but to understand the nature of that setting- what it means for participants to be in that setting, what their lives are like, what’s going on for them, what their meanings are, what the world looks like in that

particular setting-and in the analysis to be able to communicate that faithfully to others who are interested in that setting”.

According to Eastwood (1988), the principle characteristic of qualitative research is that it is concerned with the understanding of a real-life event or situation. In this case the researcher seeks to understand how Road Safety Education can be incorporated into the FET curriculum. This approach will enable the researcher to discover the responses of the 50 grade 11 learners, who were randomly chosen, and the educators towards the incorporation of Road Safety Education in the FET curriculum, how will they adapt to Road Safety Education being a formal part of the curriculum that will be examinable and assessable.

More importantly, it is an approach where the investigator does not set criteria, but where the perceived reality of the participants in the research situation forms the core of the study. The outcomes of qualitative research are, consequently, directly applicable only to the particular setting or event concerned. The approach does not deal with generalities, although it is significant to note the influential effect of much qualitative research both within the field in which it was conducted and across other disciplines (Tuckman, 1988).

In this study, the researcher chose qualitative research methodology for the following reasons:- Qualitative research investigates a situation or event initially without reference to hypotheses or theory. According to Burgess (1985) all methods associated with qualitative research are characterized by their flexibility. As a consequence researchers can turn this to their advantage, as a rigid framework in which to operate is not required. Qualitative research

allows the researcher to encompass the dynamic social and value systems operating in a situation and to infer the meanings of these systems for the participants. A researcher who wishes to employ qualitative methods also chooses a real setting or event to study. For many qualitative researchers the main objective involves studying individuals in their natural settings to see the way in which they attribute meanings in social situation (Burgess, 1985: 8). An essential component of qualitative research is its personal viewpoint. The kinds of studies that are conducted using this perspective involve focusing on how definitions are established by teachers and pupils and how teacher and pupil perspectives have particular implications for patterns of schooling. In this instance the researcher seeks to gain the personal viewpoints of the educators and learners concerning Road Safety Education in the curriculum in the FET phase.

Qualitative research approaches take account of the fact that investigators have personal biases, viewpoints, and subjective attitudes towards the issues under investigation. There seems to be no reason why a viewpoint based on personality and individual experience, should not be included as a research project. Qualitative approaches to investigation allow the interpretation of the individual investigator to inform the design and results of the study. It also takes account of the inseparability of the researcher and the issues under investigation, and acknowledges that each informs the other. Researchers combat this by employing a variety of techniques to demonstrate trustworthiness of their findings (Burgess, 1985: 9).

All the methods associated with qualitative research are characterized by their flexibility. As a consequence researchers can turn this to their advantage as a rigid framework in which to

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operate is not required. Qualitative research is, therefore, not based upon a fixed set of rigid procedures, but nevertheless the researcher does need to develop a set of strategies and tactics in order to organize and manage.

The term 'method', 'technique' and even 'methodology' tend to be used interchangeably. In order to clarify what follows it is useful to restrict the use of the term 'methodology' to its strict meaning as denoting 'the logic of methods' (Walker, 1985: 45). The term 'method' is used to specify research recipes and techniques refer to the detailed practice of these strategies. A key decision in any research project involves the selection of methods. While such methods allow the researcher to get close to the data and to understand the definitions, concepts and meanings that participants attribute to social situations (Burgess, 1985). In this study this researcher will attempt to understand the definitions, concepts and meanings that the respondents will attribute to Road Safety Education and how it can be incorporated in the existing learning areas in the Revised National Curriculum Statement.

(Merriam, 1988) states that since qualitative research focuses on process, meaning, and understanding, the product of a qualitative study is richly descriptive. Words and pictures rather than numbers are used to convey what the researcher has learned about a phenomenon. The design of a qualitative study is emergent and flexible, responsive to the changing conditions of the study in progress.

A flexible design in qualitative investigations results in a situation where researchers modify the methods that are used and utilize them in a variety of different combinations.

Methodological considerations start from the fact that it will usually be possible to reach alternate conclusions about the same set of results: methods, techniques, strategies and processes should not be isolated from one another as they can each influence the other in the course of the investigation.

### **3.2 Research Approach – Case Study**

The case study is a specific instance that is frequently designed to illustrate a more general principle (Nisbet and Watt, 1984: 72), it is the study of an instance in action. According to Cohen, Manion and Morrison (2000: 181) the single instance is of a bounded system, for example a child, a clique, a class, a school, a community. It provides a unique example of real people in real situations, enabling readers to understand ideas more clearly than simply by presenting them with abstract theories or principles.

A case study is similar to a survey, but instead of gathering data concerning a few factors from a large number of social units, investigators make an intensive study of a limited number of representative cases (Van Dalen, 1979: 295). In this case the representative sample will be the 50 grade 11 pupils and the Heads of Departments of the existing learning areas. Such intensive study, allows the researcher to gain insights about people's attitudes, values and behaviours that is lost in most other approaches. Generalisations made from case studies are rarely considered valid or useful to many. However, it serves as a good way to gain knowledge or understanding of people in relation to their environment and lessons can be learned.

Case studies can penetrate situations in ways that are not always susceptible to numerical analysis. Case studies can establish cause and effect, indeed one of their strengths is that they observe effects in real contexts, recognising that context is a powerful determinant of both causes and effect (Cohen, Manion and Morrison, 2000: 18). Sturman (1999: 103) argues that a distinguishing feature of case studies is that human systems have a wholeness or integrity to them rather than being a loose connection of traits, necessitating in-depth investigation. Further, contexts are unique and dynamic, hence case studies investigate and report the complex dynamic and unfolding interactions of events, human relationships and other factors in a unique instance. Unlike the experimenter who manipulates variables to determine their casual significance or the surveyor who asks standardised questions of large, representative samples of individuals, the case study researcher typically observes the characteristics of an individual unit- a child, a clique, a class, a school or a community. The purpose of such observations is to probe deeply and to analyse intensively the multifarious phenomena that constitute the life cycle of the unit with a view to establishing generalisations about the wider population to which that unit belongs. The grade 11 learners will be a representative sample of the learners in the FET phase at Southlands Secondary. The Heads of Department will be the representative sample of educators in the existing learning areas.

Irrespective of disciplinary orientation, case studies can also be described by the overall intent of the study. They are useful, though, in presenting basic information about areas of education where little research has been conducted. Innovative programs and practices are often the focus of descriptive case studies in education. The innovative programme here will be the incorporation of Road Safety Education in Curriculum 2005.

### 3.3 Strengths and Limitations of Case Studies

All research designs can be discussed in terms of their relative strengths and limitations. The merits of a particular design are inherently related to the rationale for selecting it as the most appropriate plan for addressing the research problem (Merriam, 1988: 41). One strength of an experimental design, for example, is the predictive nature of the research findings. Because of the tightly controlled conditions, random sampling, and the use of statistical probabilities, it is theoretically possible to predict behaviour in similar settings without actually observing that behaviour.

A researcher selects a case study design because of the nature of the research problem and the questions being asked. The case study offers a means of investigating complex social units consisting of multiple variables of potential importance in understanding the phenomenon. It offers insights and illuminates meanings that expand its readers' experiences. These insights can be construed as tentative hypotheses that help structure future research; hence, case study plays an important role in advancing a field's knowledge base. Educational processes, problems, and programs can be examined to bring about understanding that in turn can affect and perhaps even improve practice. Case study has proven particularly useful for studying educational innovations, for evaluating programs, and for informing policy (Merriam, 1988: 4).

The special features of case study research that provide the rationale for its selection also present certain limitations in its usage. Although rich, thick description and analysis of a phenomenon may be desired, a researcher may not have the time or money to devote to such an

undertaking. Guba and Lincoln (1981: 377) note an additional limitation of case study narratives. “Case studies can oversimplify or exaggerate a situation, leading the reader to erroneous conclusions about the actual state of affairs.”

Qualitative case studies are limited, too, by the sensitivity and integrity of the investigator. The researcher is the primary instrument of data collection and analysis. The researcher is left to rely on his or her own instincts and abilities throughout the research effort.

Further limitations involve the issues of reliability and validity. As Hamel (1993: 23) observes, “the case study has basically been faulted for its lack of representativeness and its lack of rigour in the collection, construction, and analysis of the empirical materials that give rise to this study.” This lack of rigour is linked to the problem of bias, introduced by the subjectivity of the researcher and others involved in the case.

According to Stake (1998: 263) researchers search for ways to confirm their observations, and the readers of case studies are engaged in a process of understanding the validity of the observations. One way to improve validity is through triangulation, where one attempts to obtain understanding by using a range of different methods. Triangulation offers the researcher other avenues to determine whether the conclusions drawn are really true and valid.

Data sources that may be used in a case study approach are usually of three types:

- interviews
- document analysis

- observation of the phenomena in action

For the purposes of this study the researcher choose interviews, document analysis and the questionnaire. In this study the questionnaire will be used to complement the data gained by the interviews and document analysis.

### **3.3.1 Interviews**

One direct way to find out about a phenomenon is to ask questions of the people who are involved in it in some way. Tuckman (1988: 393) argues that because different people have different perspectives, a reasonably representative picture of the phenomenon's occurrence and absence may emerge and thereby provide a basis for interpretation of the phenomenon. Many people are more willing to communicate orally than in writing and, therefore, will provide data more readily and fully in an interview than on a questionnaire (Van Dalen, 1979: 158).

The main purpose of an interview is to obtain a special kind of information. Patton (1990: 196) explains as follows:

“We interview people to find out from them those things we cannot directly observe. We cannot observe feelings, thoughts, and intentions. We cannot observe behaviours that took place at some previous point in time. We cannot observe situations that preclude the presence of an observer. We cannot observe how people have organized the world and the meanings they attach to what goes on in the world. We have to ask people questions about those things. The purpose of interviewing, then, is to allow us to enter into the other person's perspective.”

Interviewing is necessary when we cannot observe behaviour, feelings, or how people interpret the world around them. The most common way of deciding which type of interview to use is by determining the amount of structure desired. At one end of the continuum fall highly structured, questionnaire-driven interviews; at the other end are unstructured open-ended, conversational formats. For the purpose of this study semi-structured interviews will be conducted. Merriam (1988: 74) states that the semi-structured interview is halfway between the ends of the continuum. Less structured formats assume that individual respondents define the world in unique ways. In this type of interview either all of the questions are more flexibly worded, or the interview is a mix of more or less structured questions.

Cohen, Manion and Morrison (2000) state that the respective roles of the interviewer and the interviewee may vary and the motives for taking part may differ, a common denominator is the transaction that takes place between seeking information on the part of one and supplying information on the part of the other.

Tuckman (1988) describes it as providing access to what is inside a person's head. He further states that each person's answers will reflect his or her perceptions and interests. Because different people have different perspectives, a reasonably representative picture of the phenomenon's occurrence and absence may emerge and thereby provide a basis for interpretation of the phenomenon. Many people are more willing to communicate orally than in writing and, therefore, will provide data more readily and fully in an interview than on a questionnaire. Several advantages accrue from the friendly interaction in an interview that cannot be obtained in limited, impersonal questionnaire contacts. In a face-to-face meeting, an

investigator is able to encourage subjects and to help them probe more deeply into a problem, particularly an emotionally laden one. Through respondents' incidental comments, facial and bodily expressions, and tone of voice, an interviewer acquires information that would not be conveyed in written replies. Van Dalen (1979) states that these auditory and visual cues also help him key the tempo and tone of the private conversation so as to elicit personal and confidential information and to gain knowledge about motivations, feelings, attitudes, and beliefs. Interviewer's opinions and attitudes and their expectations of the respondents' opinions and attitudes may influence whether and what questions are given and whether and how they are recorded.

Although tape recordings give accurate information, they can prove to be intrusive.

It might be less threatening not to have any mechanical means of recording the interview, in which case the reliability of the data might rely on the memory of the interviewer.

Note-taking is more personal and establishes a better relationship between the interviewer and interviewee. Reporting interviews involves constructing a story around the events that have taken place and the outcomes of the process that took place between the interviewer and interviewee. The information provided is totally dependent upon the reputation of the researcher. Reports must indicate the context and structure of the data from each interview as well as a clear statement of purpose for the interview.

This researcher chose to interview the Heads of Department of the existing learning areas. An interview schedule was prepared to ensure that the researcher did not stray away from the area

of focus. An interview schedule is helpful because each person's answers will reflect his or her perceptions and interests. Because different people have different perspectives, a reasonably representative picture of the phenomenon's occurrence and absence may emerge and thereby provide a basis for interpretation of the phenomenon. Varied viewpoints are obtained when qualified individuals with common or divergent backgrounds are brought together to explore a problem, to provide information or to evaluate the merits of a proposition.

I chose to interview the Heads of Department of the existing learning areas in order to explore their attitudes and opinions towards the incorporation of Road Safety Education in the Revised National Curriculum Statement. The interview focused on their understanding of the Revised National Curriculum Statement, implementing it, Road Safety Education and how it could be incorporated into the Revised National Curriculum Statement. The interviews took place during our free periods in a rather informal manner. According to Van Dalen (1979) in an informal, unstructured interview, one can gain an insight into the character and intensity of a respondent's attitudes, motives, feelings and beliefs. The interview schedules were used to guide me in my line of questioning. Each interview session lasted for approximately one hour and fifteen minutes.

All the Heads of Department that were interviewed were quite willing to be interviewed. They felt that it was an interesting topic and that Road Safety Education should definitely be incorporated into the existing learning areas. They were also concerned about the high fatality rate on our roads and felt that if Road Safety Education was compulsory it will lead to a generational change which will lead to all learners becoming safer road users.

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The educators that were interviewed presented a wide range of information concerning their learning areas and how Road Safety Education could be incorporated into these learning areas in the FET phase. With the present system of education educators make very little effort to familiarize themselves with information that does not pertain to their specific learning area. After conducting these interviews not only did I learn more about the existing learning areas but also how Road Safety Education can be incorporated into these learning areas.

The interview has both its advantages and disadvantages in such studies. The fact that interviews allows one to really delve into issues immediately, offers the researcher an advantage, as it allows for issues to be clarified. The interviewer can get the interviewee to elaborate on particular points on the spot. The interview also has an important shortcoming. During the interview both the interviewee and the interviewer are engaged in conversation on a one to one basis, dealing with topics or issues that the interviewer may feel strongly about. The interviewer in such circumstances can become carried away and then unintentionally and often unconsciously become so involved with issues that subjectivity and personal bias can easily taint the data.

Cohen, Manion, and Morrison (2000) offer a solution to overcome this problem. They suggest that they compare the results with some other source that has shown to be valid. If the two sources are found to be similar then it can be safely assumed that the results obtained are valid.

### 3.3.2 Questionnaires

Qualitative research allows for the incorporation of a range of techniques and instruments to gather data. One such instrument is the questionnaire. The questionnaire will reveal the attitudes, opinions and beliefs of the 50 grade 11 learners towards the incorporation of Road Safety Education in the Revised National Curriculum Statement in the FET phase. Fifty questionnaires were hand delivered to the grade 11 learners. There are five grade 11 classes. Ten learners from each class were randomly chosen. The learners chosen agreed to complete the questionnaire and returned it by the end of the school day. A response rate of a hundred percent was achieved because the learners felt that Road Safety Education affected their daily lives and was one of the most relevant things that could be learnt at school.

Questionnaire and interviews are used by researchers to convert into data the information directly given by a person. By providing access to what is “inside a person’s head,” these approaches make it possible to measure what a person knows (knowledge or information), what a person likes and dislikes (values and preferences), and what a person thinks (attitudes and beliefs) (Tuckman,1988: 213). Questionnaires and interviews can also be used to discover what experiences have taken place and what is occurring at present.

Questionnaires and interviews are a way of getting data about people by asking them rather than by observing and sampling their behaviour. For some studies or certain phases of them, presenting respondents with carefully selected and ordered questions is the only practical way

to obtain data. Isolating specific questions for consideration tends to objectify, intensify, and standardize the observations that respondents make.

Some subjects may not supply accurate answers, however, for they may suffer from faulty perception or memory or may not be able to express their impressions and ideas adequately in words. Many people do not give thoughtful consideration to questionnaires; they fill out the forms carelessly or they report what they assumed took place. Respondents also tailor replies to conform to their biases, to protect their self interests, to place themselves in a more favourable light, to please the researcher, or to conform with socially accepted patterns. To obtain reliable data, therefore, questionnaires must be carefully structured.

For the purposes of this research, the researcher chose to cast the questions in a combination of closed and open form. Closed form, or structured questionnaires consist of a prepared list of concrete questions and a choice of possible answers. To indicate their replies the grade 11 learners were asked to mark either “yes” or “no”. They were also asked to insert brief statements into blank spaces or on empty lines. These included their ages and gender.

Rather than forcing the grade 11 learners to choose between rigidly limited responses all the time, open form questions were also included. This enabled the learners to answer freely and fully in their own words and their own frame of reference concerning the incorporation of Road Safety Education in Curriculum 2005. This method of collecting data gave the learners an opportunity to reveal their motives or attitudes and to specify the background or provisional conditions upon which their answers were based.

### 3.3.3 Document Analysis

The first step in conducting a qualitative study is to obtain copies of available documents describing the event or phenomenon. According to Tuckman (1988) this is the best and most objective way to orientate yourself to the situation that you are about to study.

Document analysis is the analysis of documents in order to gather facts. Document analysis is superior in finding out retrospective information about a program, and may be the only way that certain information is available ( Walker:1985). Document analysis is particularly useful at the beginning of an evaluation when the evaluator is trying to understand why the program is the way it is. This research project was prompted by the high fatality rate in the country as a result of road accidents. An in depth analysis of documents, provided by the Department of Transport, and also documents providing statistics from UNIARC , were undertaken. These documents were an excellent source for determining the purpose and the rationale for undertaking this research project.

The researcher found that there were some advantages and benefits to using this method. Document analysis is superior to interviewing for collecting some retrospective data. Information obtained from documents is often more credible than information obtained via interviewing. The researcher has also found that documents provided information about aspects of road safety, proper road usage, and other factors that contribute to the high fatality rate on our roads, aspects that could not be observed because they had taken place before this investigative study had occurred.

### **3.4 Conclusion**

In this chapter I discussed the essential characteristics of qualitative research; the focus is on interpretation and meaning; the researcher is the primary instrument in data collection and analysis. The first section of the chapter defines the case study and describes when it is appropriate as a research design. The next part of the chapter dealt with the three different methods that were used to gather data.

In qualitative research, interviewing is often the major source of the qualitative data needed for understanding the phenomenon under study. Asking good questions is the key to getting meaningful data. Considering how to begin the interview and accounting for some of the complexities in the interaction between interviewer and respondent will result in a more informed analysis of the interview data. This chapter addressed those issues.

The questionnaire is a widely used and useful instrument for collecting data. The researcher can select several types of questionnaire, from highly structured to unstructured. For the purposes of this study both open ended and closed questions were asked.

Documents, broadly defined to include public records, personal papers, physical traces, and artifacts, are a third major source of data in qualitative research.

Documents of all types can help the researcher uncover meaning, develop understanding, and discover insights relevant to the research problem. In qualitative case studies all three means

of data collection are frequently used. Data collection in a case study is a recursive, interactive process in which engaging in one strategy incorporates or may lead to subsequent sources of data.

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## CHAPTER FOUR

### ANALYSIS OF THE DATA

#### 4.1. Introduction

##### 4.1.1 Part One: The Questionnaire

This study was undertaken with the aim of investigating how Road Safety Education can be incorporated into the Revised National Curriculum Statement in the Further Education and Training Band

The responses of the 50 grade 11 learners and the Heads of Department of the different learning areas will be analysed here.

The researcher encountered no problems gaining access to the learners as well as the educators because the researcher is an educator at the school.

- There were five grade 11 classes. Ten learners from each class was randomly chosen. All 50 learners completed the questionnaire and returned them.
- Interviews were held with the Heads of Department of the following learning areas.
  - Mathematic Literacy, Mathematic and Mathematic Sciences
  - Economic and Management Sciences
  - Technology, Arts and Culture
  - Natural Sciences
  - Human and Social Sciences

Data for this study has been obtained through verbal and non-verbal responses. Data from educators was mainly obtained from a semi-structured interview. Data from learners was obtained using a questionnaire.

## **4.2 Administration of the Questionnaire**

Questionnaires for learners consisted of two sections. The first section dealt with the personal particulars of the learners and the second section aimed at investigating their responses to the incorporation of Road Safety Education into the Revised National Curriculum Statement in the Further Education and Training Band.

In order to expedite the administration of the questionnaires, the researcher personally handed out the questionnaires to the fifty learners during the break. The researcher explained to the learners the aim of the study, and requested their co-operation in completing the questionnaire. The researcher also provided an opportunity for the learners to ask questions if they did not understand any particular question. All learners stated that they understood the requirements of the questions. The learners completed the questionnaire in 30 minutes and handed them in.

## **4.3 Analysis of Responses to the Questionnaire**

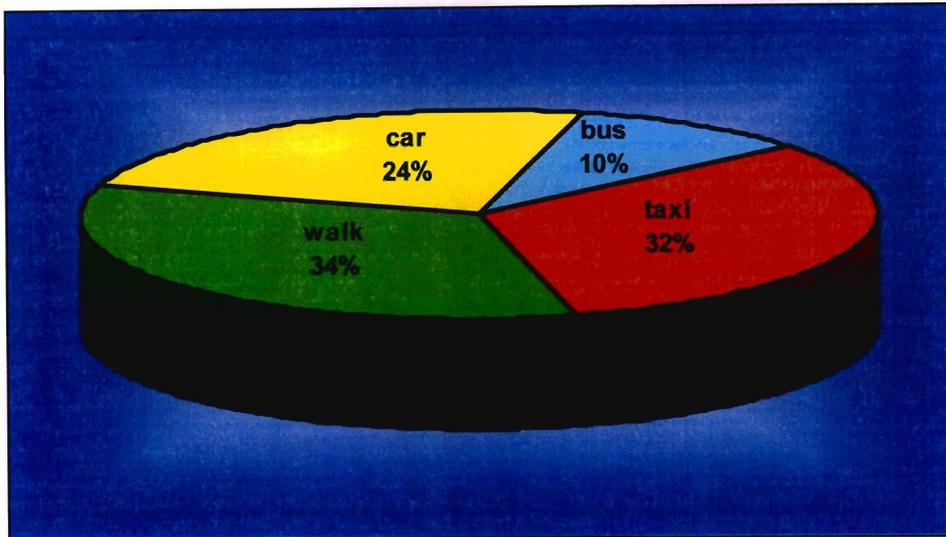
The responses to the questionnaire were analysed and commented on from information from various literature sources and my own experiences and opinions.

### **QUESTION 1, 2, 3**

Children of this age group come into contact with a broad spectrum of road users including / amongst others: bus and taxi drivers, parents and social “lift club” arrangements, thus their responses are a fair reflection of their environment

The learners' place of residence was important because this determined how they travelled to school and their experiences of the road environment. The learners resided within a 10 km radius of the school. Shallcross was the greatest distance away from school. Learners that did not reside in Havenside travelled to school by cars, taxi's or buses.

Residential Area	No. of learners	Percentage
Havenside	13	26
Chatsworth	16	32
Westcliff	2	04
Merebank	1	02
Silverglen	3	06
Shallcross	1	02
Lamontville	4	08
Mobeni Heights	3	06
Bayview	4	08
Umlazi	2	04
Montclair	1	02



**FIGURE 1**

With regard to Figure 1, 34% of the learners walk to school, with the majority of them living in Havenside where the school is situated. The 32% of the learners travel by taxi. They are the learners who live in the areas adjacent to Havenside. 24% of the learners are dropped at school in their parents' cars. 10% of the learners travel by bus. When the learners were questioned about this, they indicated that their parents insisted that they travel by bus as it was a safer option than the taxis.

76% of the learners experienced the road in the absence of their parents.

#### **QUESTION 4, 5**

*Have you been involved in a road accident?*

*Has any members of your family or any of your friends been involved in a road accident?*

Of the 50 learners who responded to the questionnaire, 32% had been involved in a car accident and 68% had indicated that they were not involved in a car accident. 70% of the learners had indicated that their family and friends had been involved in road accidents. 30% of the learners had indicated that none of their family and friends was involved in road accidents. According to research conducted by the CSIR, Transportek road accidents have been recognized as one of the major causes for human losses in both developed and developing countries. In view of this, the South African National Roads Agency Limited (SANRAL), an institution responsible for the construction and maintenance of national roads in South Africa, has over the years become acutely aware of the need not to concentrate only on the engineering aspects of these national assets, but also to endeavor to create safer environments for road users along roads. A holistic road safety regime needs to be designed that is anchored on education and enforcement and will be supported by engineering measures.

#### **QUESTION 6, 7**

*Have you experienced being in a vehicle which was dangerously driven?*

*Will you tell the driver of the vehicle that he/she is driving dangerously?*

66% of the learners experienced being in a vehicle that was dangerously driven. 34% indicated that they had not experienced being in a vehicle that was dangerously driven. 72% indicated

that they will tell the driver if he was driving dangerously. 28% felt that they will be unable to confront the driver if the vehicle was dangerously driven. Surveys from the Arrive Alive Campaign have shown that human factors contribute to 75% of fatal accidents in South Africa. According to *Strategy 2000: An End to Carnage on South Africa's Roads*, human factors make up 80-90 % of contributory factors to road accidents. Human attitude and judgment on the road may relate back to cultural aspects, estimate of the value of human life, gender, personal aggression and personal stress levels. Driver anger and aggression on the road may be driver self-created anger, or anger may be initiated by the actions of other drivers on the road.

## **QUESTION 8**

*Do many people die as a result of road accidents?*

All 50 learners agreed that many people do die as a result of road accidents. Human factors that affect the severity and occurrence of accidents include speeding, alcohol and drug abuse, attitude, judgment, impairment, vision, unskilled drivers, disobeying existing traffic regulations and failure to use standard safety measures. In 2001, the Department of Transport published *The Road to Safety: 2001-2005*, which outlines the primary concern to be tackled by 2005. An outline of the general problem it offered is as follows;

There are currently 512 000 traffic crashes a year.

Of these, about 28 000 are fatal or lead to serious injury.

The total cost of these crashes to the SA economy is currently estimated at around R13, 8 billion a year.

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In December 2002, 1 216 people lost their lives on South African roads, making an overall increase of 329 (37, 09%) (DOT, 2003). The number of road deaths in South Africa is still staggeringly high, being one of the highest causes of death in the country. The causes of such incidents are numerous and varied, and must be tackled to ensure road safety not only for drivers, but commuters and pedestrians as well. All road users need to become more responsible for their use of the road. There are currently about six million licensed and registered vehicles on South African Roads (DOT, 2001). The number of licensed drivers should ideally suggest that there are around 6 million responsible and qualified road users frequenting South African roads, but the annual death toll indicates otherwise (UNIARC, 2003).

## **QUESTION 9**

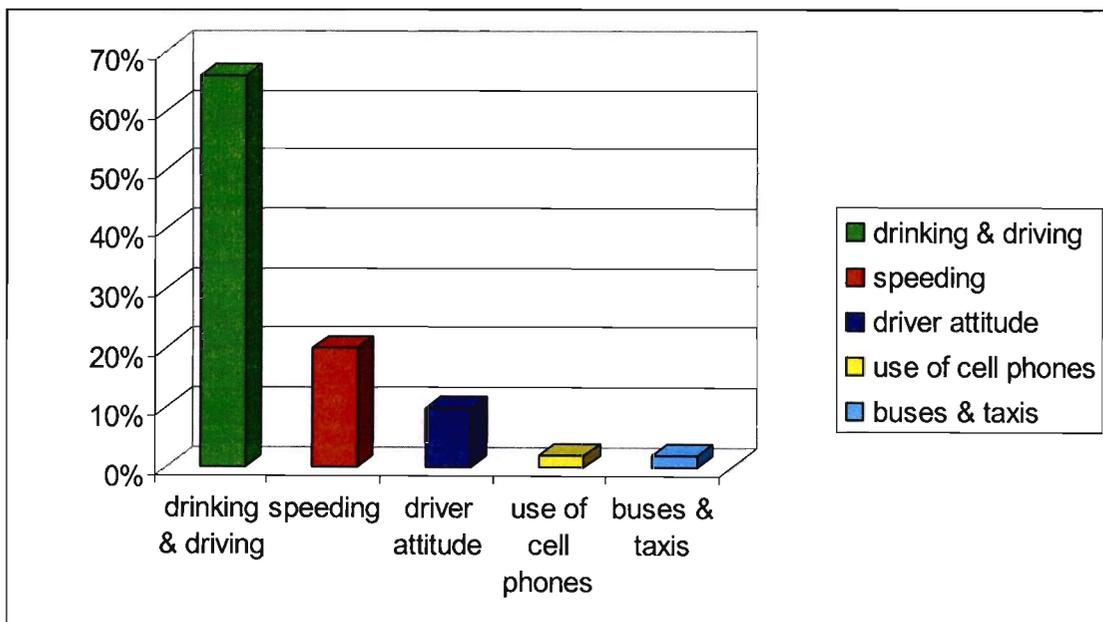
*How did you become aware of this problem?*

Only 4% of the learners indicated that they became aware of this problem at school. Road safety education is seen as not featuring prominently in any school curriculum. It is rather done on an arbitrary basis when the situation warrants it or if officials from the Road Safety Directorate visit the school. 26% of the learners indicated that they became aware of this problem by reading the newspaper. Newspapers often publish articles about road accidents if the fatality rate is exceptionally high or if a major obstruction had occurred on any of the main roads. Road accident statistics are also published during peak holiday periods. Invariably a comparison is made for the same period of the previous year, indicating whether there was a reduction or an increase in road fatalities.

68% of the learners indicated that they became aware of this problem by watching the news on television. Accidents involving multiple deaths are broadcast during the local news hour. 2% of the learners indicated that they read about road accidents and its consequences in magazines.

### QUESTION 10

*What do you think is the major cause of road accidents?*



66% of the learners indicated that drinking and driving is the major cause of road accidents. There is increasing evidence that not only alcohol, but other drugs, both legal and illegal, impair driving ability. Research involving vehicle handling tests and vehicle simulators indicates that even small amounts of alcohol affects the performance of tasks involving skill and accuracy which are important in driving. Driving ability is impaired even though the classic signs of drunkenness are not apparent. (Di Pietro and Mackenzie, 1994: 80) Alcohol may make a driver feel more confident but will in fact leave that person less able to cope with unexpected events. In one of the worst festive seasons this century in Kwa-Zulu Natal, 6614 people were allegedly tested for drunk driving between the 1 December 2002 and 15 January 2003 ( Department of Transport,2003).

20% of the learners indicated that speeding was the major cause of road accidents. During the 2003 festive season, 22.5% of human factors contributing to accidents was due to speeding. “Excessive speed or speed too fast for circumstances plays a role in approximately 30% of all crashes and about 50% in the case of commercial freight and public passenger vehicles” (Department of Transport, 2003).

10% of the learners indicated that the bad attitude of the drivers was the major cause of road accidents. 2% of the learners indicated that using a cell phone while driving was a major cause of accidents. 2% of learners indicated that buses and taxi’s was a major cause of road accidents.

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## **QUESTION 11**

*Do you think that only traffic policemen should be responsible for maintaining road safety?*

72% of the learners indicated that it was not the sole responsibility of traffic policemen to maintain road safety. 28% of the learners indicated that maintaining road safety should be the responsibility of traffic policemen. It is not likely that traffic policemen can play a major, independent role in road safety education due to their limited availability and their limited experience and training as educators.

## **QUESTION 12**

*Did you ever learn anything about road safety at school?*

74% of the learners indicated that they learnt something about road safety at school. 26% indicated that they did not learn anything about road safety at school. When international trends regarding road safety education in schools are taken into account, it appears that road safety education plays a definite, explicit role in accident rates. International research has shown that in countries where road safety education is compulsory, the accident rate is relatively low, whereas in countries where there is no or partly compulsory road safety education the accident rate is relatively high (De Coning, 2001). It is clear that young road users must be empowered with relevant knowledge, applicable skills and a positive attitude to such an extent that road safety education can penetrate not only the individual learner but also the society.

### **QUESTION 13**

*If yes did the lesson cover all aspects of road safety?*

In response to question 13, 38% of the learners indicated that the lesson covered all aspects of road safety and 62% of the learners indicated that the lesson did not cover all aspects of road safety. Not much time is devoted to road safety education as such and the instruction that is given is frequently influenced by chance circumstances and tends to be incomplete. It was found that the learners' level of knowledge was not as high as it should have been, and that it could probably improve if more time is allocated to road safety education. The assumption is that if young road users will receive specific theme-related education and training they will be accident free in their exposure to related traffic situations.

### **QUESTION 14, 15**

*Were these lessons carried out on a regular basis?*

*Were these lessons done once in a while?*

Only 4% of the learners indicated that these lessons were carried out on a regular basis. 96% of the learners indicated that the lessons were not carried out on a regular basis. According to De Coning (2001) it is essential to combine developmental stages with road user categories in order to compare the level of education to the exposure rate in an age- related framework. It is clear that road user roles change according to the age of the road user. Road safety education should focus on present as well as future road user roles.

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### **QUESTION 16, 17**

*Does our school have a Road Safety policy?*

*If no, do you think that we should have one?*

72% of the learners indicated that our school does not have a road safety policy. 26% of the learners indicated that our school has a road safety policy and 4% did not respond. 86% of the learners indicated that we should have a road safety policy and 14% of the learners indicated that we should not have a road safety policy. It is essential to equip young road users with specific knowledge and skills regarding the safe use of the road.

### **QUESTION 18, 19**

*What do you understand by Revised National Curriculum Statement?*

*How many learning areas are there in this curriculum statement?*

The learners' response to this question indicated that they were familiar with OBE and Curriculum 2005, because they were the first group of learners to start with this curriculum. They also indicated that at Grade 11 level they were not very familiar with the Revised National Curriculum statement, because they had reverted to studying the traditional six subjects for matriculation exemption purposes. All 50 learners had indicated that there were 8 learning areas in the Revised National Curriculum statement.

## **QUESTION 20**

*Do you think that Road Safety Education should be taught at schools?*

94 % of the learners indicated that road safety education should be taught at schools. 6% of the learners indicated that it should not be taught at schools. Road Safety education implicitly assumes that traffic behaviour is dependent the skills, knowledge and attitudes of traffic participants, and that it is possible to improve the behaviour of road users through systemic educational efforts (OECD, 1986). In the past, many of these activities have not been explicitly aimed at influencing road user behaviour or at reducing accident fatalities.

## **QUESTION 21**

*Do you think that it can be incorporated into the existing learning area?*

In response to question 21, 72% of the learners indicated that road safety education can be incorporated into the existing learning areas. 26% of the learners indicated that it cannot be incorporated into the existing learning areas. 2% of the learners did not respond to the question. In Victorian schools, Road Safety Education is included in the Personal Development Curriculum Framework. The National Road Safety Strategy emphasises the importance of education as a means of achieving the strategy's goals (Di Pietro and Mackenzie, 1994).

## **QUESTION 22**

*When do you think that Road Safety Education should begin at school?*

90% of the learners indicated that road safety education should start at pre-school level. 8% of the learners indicated that road safety education should start at primary school level and 2% of the learners indicated that road safety education should start at secondary school level. It is thus recommended to firstly determine the level of exposure of young road users to specific situations in terms of their typical traffic participation patterns in order to compile and develop Road Safety educational programmes, projects and products. In terms of the ideal traffic safety education praxis it is recommended that the exposure rate of young road users to specific situations must give clear indications to selection processes in order to develop the most effective and high quality Road Safety education programmes (CSIR, Transportek, 2001).

## **QUESTION 23**

*Do you think that Grade 12 learners should write their learner driver's test at school?*

In response to this question 76% of the learners indicated that grade 12 learners should write their learners' drivers test at school. 24% of the learners indicated that this test should not be written at school. Learners tend to be least informed on road use and safety awareness and this need to be addressed via a formal curriculum. The National Department Transport and its provincial counterparts have created a number of public awareness and education campaigns on road safety. However these are secondary and indirect education methods as they are not enforced or regulated within the institutionalized driving instruction framework.

## **QUESTION 24**

*Do you think that driving lessons must also be part of the curriculum?*

88% of the learners indicated that driving lessons must be part of the school curriculum. 12% of the learners indicated that it should not be part of the school curriculum. Safe drivers, skilled in defensive driving techniques, should be the primary objective of any road safety education programme.

Theoretical discovery of knowledge should where possible always be followed by practical exercises. The emphasis should be continuously on practical work sessions and exercises after theoretical lessons in road safety education. The ideal is that learner drivers will acquire real traffic experience by means of practical exercises in the traffic situation. In this way the lack of real traffic experience, which increases the vulnerability of learner drivers in traffic participation, is restricted.

## **QUESTION 25**

*Do you think that compulsory road safety education at school will reduce the number of deaths on our roads?*

94% of the learners indicated that compulsory road safety education at school will reduce the number of deaths on our roads. 6% of the learners indicated that compulsory road safety education will not reduce the number of deaths on our roads. Educational programmes for children are seen as long-term strategy. Ideally this teaching should be a part of the curriculum

(preferably as a cross curricula theme) and not through reliance on individuals or organizations visiting schools. It is essential that education inputs are incremental (building on previous skills) and that they are linked to a child's physical and psychological abilities (Watson, 2000).

## **PART TWO: THE INTERVIEW**

The interview which I am going to present, gives a broad perspective of the heads of department views and opinions concerning the incorporation of Road Safety Education in the Revised National Curriculum in the Further Education and Training Band. Themes in the semi-structured interview were basically the same as the ones that were used in the questionnaire.

### *What do you understand by the Revised National Curriculum Statement?*

All the heads of department stated that it was the revised curriculum statement of Curriculum 2005. It was noted that the respondents had an adequate understanding of C2005. The Revised National Curriculum Statement strengthens and consolidates Curriculum 2005 which was first introduced in 1998. They had also indicated that they knew that the curriculum for each learning area is structured in such a way as to “realize the broader social goal of the creation of learners who, are confident and independent, literate, numerate and multi-skilled, compassionate, environmentally respectful and able to participate in society as critical and active citizens” (DOE, 2001). The Revised National Curriculum statement is one step in an

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ongoing process of curriculum transformation and development. It signals the consolidation of the major curriculum gains made in South-Africa since the achievement of democracy.

*Do you think as a school manager you should have had an input into this curriculum statement?*

All the heads of department agreed that educators at grass root level were often marginalized when it came to important issues of curriculum development. They would have preferred having a direct input into curriculum development. They had indicated that they were most qualified to cater for the educational needs of the learner, considering that they interacted with the learner on a daily basis. Christie (1999) points out, that what is implicit but not elaborated in the drawing of the 1995 Education White Paper, is the virtual absence of the formal education sector in the conceptualization of an integrated approach, through which educators can develop a voice in education and training matters. It is worthwhile to solicit educators' opinions of curriculum change. The role of educators in educational change cannot be underestimated. In a very real sense, the quality of an education system depends upon the educators in the classroom (Ashley, 1990: 26). It is the task of the educator to transform the curriculum into experiences which will stimulate learners to question, enquire, reason and search for the unknown. Jennings-Wray (1980) says "teachers should be developed and be given more powers of curriculum-decision making."

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*Are you aware of the high fatality rate on our roads? If so how did you become aware of this problem?*

The heads of department indicated that they were aware of the high fatality rate on our roads. They became aware of this by newspaper articles, television and radio news.

*What measures are currently being undertaken to reduce this high fatality rate?*

Aggressive media campaigns, especially during the holiday periods, billboard advertising, visible policing and the issuing of fines for the transgression of traffic rules.

Road user education and awareness raising is an important part of any Road Safety strategy. This depends largely on showing success through analysis of data, and encouraging compliance with changed conditions. In Kwa-Zulu Natal general awareness of road safety initiatives between 1998 and 1999 rose from 60% to over 90% (Watson, 2000). Efforts are being made to keep road safety in the public arena, and to encourage debate on the issues. Regular media briefings, media releases and letters to the newspaper are vehicles for this. The province has produced three of its own television advertisements (one on speed and two on alcohol) and has produced and flighted comprehensive billboard and radio campaigns in support of the television messages.

*Do you think that road safety education can be incorporated into your learning area?*

The heads of department agreed that it could be incorporated into their learning areas. The mathematic head of department indicated that this was only possible where calculations and data analysis were concerned. He also stated that this learning area could not make a significant change where attitude and behaviour were concerned.

Road Safety Education can be incorporated into the Natural Science learning area. Here the learners will learn about the functions of the organs of the body. Drugs and alcohol impairs these functions and subsequently affects the road user either as a pedestrian or a driver. In Physical Science the learners learn about speed and collisions. Learners become aware of how speed affects driving safely.

The Arts and Culture head of department indicated that Road Safety Education could very well be incorporated into this learning area, because it was such a visual learning area. The lines that are used for art work can denote the road markings, that is, the broken lines, barrier lines and continuous solid lines. The shapes can be used to teach the various prohibitive and warning signs, that one finds on the road. Colours are used to denote the colours of the road: red, green and amber. Blue signs are information signs. Learners will also learn about texture concerning road surfaces. Not all the road surfaces have the same road texture. Different textures and different road conditions demands appropriate driving skills. In this learning area learners learn about space. This can be incorporated to mean the following distance between cars, parking space, walking space, that is, pavements and pedestrian bridges. Highways and freeways are prohibitive spaces. Drama, art and music can be used in an integrative way to teach learners about road safety. The educator also indicated that he was doing this at the moment in his learning area but the bias was more towards the art aspect rather than the safety aspect. He further stated that if road safety education became compulsory, then this bias could change.

This head of department also manages the Life Orientation learning area. He felt that Road Safety education should be an integral part of this curriculum. It is in this learning area that learners can learn valuable lessons about behaviors and attitudes. A generational change can be effected in this learning area. Learners will learn correct attitudes and behaviours from pre-school right up Grade 12. Good practice in Road Safety Education is developmental, progressive and relates to the stage of development of the learner. There is scope for developing a more holistic and integrated approach to road safety within the framework of Life Orientation.

The Human and Social Science head of department indicated that road safety education can be incorporated in this learning area. This learning area involved all aspects of human life. Protecting and saving human life in a social context is an important aspect of this learning area. Road safety education is all about saving and protecting human life. Democracy is an important phase organizer in the History module of this learning area. Road Safety Education will teach learners how to use the road as responsible, democratic citizens. They will learn about being law abiding citizens by learning about traffic rules and how to obey them. In the Geography module they will learn about urban and rural communities and how these communities manage the roads in these different contexts.

In Kwa-Zulu Natal, approximately 88% of collisions take place in Cities and Towns (urban areas) and the balance of 12% in rural areas. Crashes in rural areas have a much higher fatality rate, with approximately 46% of the fatalities occurring in rural areas and the balance in urban areas (DOT, 2003).

Road Safety Education can also be successfully incorporated in the Economics and Management Sciences curriculum. Building roads is an important economic function in any country. The building and maintaining of roads gives rise to a system that is on the road. These two entities are mutually dependent. Learners will learn about the economic aspect as well as the safety aspect of road usage. Road accidents also have a major economic impact. Road crashes cost approximately 1 to 3% of Gross National Product in developing countries. It is estimated that developing countries lose in the region of \$100 billion as a result of crashes. This is almost twice as much as the total development assistance received worldwide by developing countries. Economic and social development is severely inhibited by these costs (Watson, 2000). The World Bank initiative, Global Road Safety Partnership, considers national medium or long term plans a pre-requisite for achieving sustainable improvements in road safety.

In Kwa-Zulu Natal, before Asisphephe began to operate, crashes cost over R2 billion annually. Hospitals, ambulance and rehabilitation services were inundated with road trauma patients, at great cost to the state and to the individuals (DOT, 2003).

*Do you think that Road Safety Education should be a compulsory part of the curriculum?*

All the heads of department agreed that Road Safety Education should be a compulsory part of the curriculum. They further indicated that through a sustained programme starting at pre-school and continuing right up to Grade 12 level, Road Safety Education will definitely reduce the carnage on our roads. They had also stated that it must be examinable and assessable so that the learners will know that it is an important part of the curriculum. Previously learners

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did not attach any importance to subjects that were not examined and assessed. These subjects were Guidance, Right Living and Physical Education. Learners regarded these periods as free periods. All the heads of department agreed that it must be examined at Grade 12 level because this was regarded as the most important examination of all.

*Do you think that learning how to drive a car should also be a part of this curriculum?*

The heads of department agreed that this was a culmination of all the theoretical aspects that the learners had learnt over the years. At the Further Education and Training band the learner is physically as well as mentally prepared to cope with the practical aspects of driving a car. This would be a more intensive course than what the current driving schools have to offer. The driving schools only teach the learners how to drive the car. All other important road safety aspects are not taught. They also stated that this would obviate the widespread corruption and bribery that is synonymous with obtaining driver's licenses. Large numbers of learners can be accessed in this way. They will also be a generation of safe road users, because they were in the system from pre-school. This generation of road users will display appropriate behaviours and attitudes on the road not only as drivers, but as pedestrians, commuters and passengers. An integrative approach across the learning areas will enable learners to be aware of the inherent dangers posed by alcohol and drug abuse.

#### 4.4 Summary of the Main Findings of the Study

From the findings which have been analysed and interpreted, the learners' and Heads' of Department opinion of the incorporation of Road Safety Education in the Revised National Curriculum in the Further Education and Training Band may be summarized as follows.

- ✚ All the learners who responded to the questionnaire and the Heads of Department who were interviewed, were of the opinion that road safety education should be included in the school curriculum.
- ✚ The respondents were of the opinion that for Road Safety Education to be sustainable it must start at pre-school level and continue right up to Grade 12 level.
- ✚ In this way a generational change can be effected which will lead to a generation of drivers that have acquired the appropriate skills, behaviours, and attitudes to being safe road users.
- ✚ They also believed that if it was compulsory, examinable, and assessable learners will take Road Safety Education very seriously.
- ✚ The learners as well as the Heads of Department indicated that learning to drive must also be part of the curriculum in the Further Education and Training Band.
- ✚ In this way they will receive training that is holistic and integrative rather than just mechanically learning how to drive a car.
- ✚ All the Heads of Department indicated that it can be incorporated in their learning areas.
- ✚ The respondents also stated that, not very much attention was paid to Road Safety Education at the moment in schools.
- ✚ It was carried out on an arbitrary basis, by agencies outside the school.

- ✿ They indicated that this did not have a major impact in changing attitudes and behaviours.
- ✿ The Heads of Department also indicated that they would like to be consulted on matters pertaining to curriculum decision making and curriculum changes.
- ✿ All the respondents agreed that education was the key to reducing fatalities on the road.

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## CHAPTER FIVE

### RECOMMENDATIONS AND CONCLUSION

#### 5.1 Introduction

In this chapter I will discuss recommendations regarding strategies for the effective incorporation of Road Safety Education in the Revised National Curriculum in the Further Education and Training Band. For this incorporation and implementation to be successful, it needs the full support and co-operation of the National as well the Provincial government.

Road safety programmes have, in the past, been aimed at parts of the road safety problem with the result that improvements to road safety were often fragmentary. Against this background there has been an increasing recognition of the need for much more co-operative efforts that cut across the established institutional structures, and of the requirement for more co-ordination of the various road safety elements and disciplines. Structuring a programme based on specific outcomes as stated in the Revised National Curriculum Statement will permit a firm and co-ordinated safety approach which goes beyond compartmentalized actions of limited effectiveness. The curriculum must be developed and implemented in such way that it supports existing classroom practices.

Education authorities seem not to realize the necessity and urgency of the road safety initiative. Changes in the environment or in vehicle design are indirect ways of making road users safer, but education, publicity and training can also be used to affect behaviour more directly.

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As mass media communications are monologues from a source to recipients via an electronic or print medium, there is generally no opportunity for immediate feedback from the audience to the communicator. Sustained educational programmes, which are dialogues, on the other hand will promote traffic safety and alter the road user behaviour. Its aim is to instill knowledge, to influence attitudes and to shape behaviours that are known to be associated with reduced accident likelihood. If learners learn the correct attitude towards their fellow road users from a very early age, they will most probably be considerate drivers as adults. Therefore the nurturing of positive attitudes such as thoughtfulness, caution, punctuality, attentiveness and respect, even in the role of passenger, must be strongly emphasized throughout.

By way of integrating knowledge, skills and attitudes they can be emphasized in almost every learning area. Integration leads to greater efficiency and effectiveness of safety measures by offering opportunities to reduce potential overlap. Integration also encourages more creative approaches to problem-solving, by viewing road safety from the broadest perspective and considering within one framework all factors to be integrated

## **5.2 Recommendations**

It is recommended that a cross –curricular based curriculum model be employed, empowering classroom teachers- supported by available resources- to deliver Road Safety education in schools. As with all effective curriculum delivery, there is a need for constant reinforcement if the concepts and skills are to be retained, applied and extended. Although learners can articulate the road safety messages, they do not always put them into practice. Learners need to receive frequent and purposeful inputs of road safety education throughout their school careers.

A rationale for the integration of essential skills and learning areas in a Road Safety Education context will be presented below.

### **Language, Literacy and Communication**

Communication is an essential skill which transcends all the learning areas. In all learning areas, learners can give and receive information about road safety issues and events, verbally, visually or in written form.

### **Life Orientation**

More than 90% of all accidents are caused by human factors. It is essential that sufficient time and attention be given to the development of a positive self image and positive attitudes in learners. Every Life orientation lesson offers an excellent opportunity to cultivate positive attitudes in learners. The acquisition of attitudes is closely associated with education and

moulding of the child. Road Safety Education asks learners to self appraise, adapt behaviour and develop coping strategies to deal with hazards and challenges, as well as be a good role model to others- all key concepts in this learning area. Learning from one's own experiences is a key concept in this skill and is very relevant to road safety education. In this learning area communication and information are essential skills which can be integrated with Road Safety Education.

### **Mathematics, Sciences, Economics and Management Sciences**

Number, statistics and measurement are the three aspects most applicable to road safety investigations and activities. Measurements and statistics are required in investigations, data collection and recording. Statistics are used for data gathering on road safety issues. Geometry and measurement are used for mapping. In the above learning areas learners will think critically and creatively about road safety, research and generate new ideas about road safety issues and evaluate the processes they use. Communication, numeracy, information and problem solving are essential skills which can be integrated with Road Safety Education.

### **Human and Social Sciences**

This learning area is notable for its applicability to road safety contexts. Learners are required to respect other cultures when exploring societal attitudes, and understand the rules and the laws that apply to road safety and their importance. Creating healthy environments and positive attitudes towards citizenship are key concepts in this essential skill and can be developed through this learning area within road safety topics. In any area where learners are working on road safety activities as part of a group, they would be required to demonstrate

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social and cooperative skills. In this learning area communication, information and problem solving are essential skills which can be integrated with road safety education.

### **Arts and Culture, Technology**

The design and construction process, using road safety contexts requires learners to use their initiative, manage time, persevere and evaluate what they have done. Aspects of design, construction, data collection and presentation relevant to road safety require learners to calculate, measure, estimate, graph and use equipment. In this learning area the essential skills that can be integrated with Road Safety Education are communication, information, numeracy, and problem solving.

Using a road safety context, there are more obvious links that can be made between the essential skills and the learning areas.

### **Improvements to driver instruction and examination systems**

Driver instruction should be part of integrated road safety training. The willingness of safe road use must be stimulated among learners. Systematic planning of instruction should be regarded as a major component of a comprehensive driver instruction concept. Driver instruction should not consist merely of an automatic listing and repetition of road traffic rules and other regulations.

Pure ability training, combined with learning abstract legal texts and regulations are insufficient preparation for safe participation in road traffic.

Knowledge and comprehension are generally necessary before practical driving ability can be developed. The focus of driving school instruction continues to be the development of driving ability. For this reason, the theoretical steps in training must be orientated to practical driver training. What is needed is an effectively matched practical and classroom instruction system which ensures a balanced integration of theoretical exercises. The content and forms of training should be aimed more at the safety aspects.

Currently driver instruction is aimed at the driver licence test rather than road safety. It is mistakenly assumed that the test is an end in itself or the ultimate stage in the development of a safe driver. Improvements must be more directed towards safety-orientated education than has been the case to date. This need is reflected by the results of accident statistics which show that human errors which lead to accidents are not so much due to ignorance of traffic rules and regulations or unwillingness to observe, but to a lack of knowledge or experience of the wide range of actual hazards on the road and how to cope with these situations.

Another important step in the systematic educational planning is the collection and organization of the instructional content into sequences of progressive teaching units. As a concrete example, the guidelines should propose one systematic training and teaching programme including the outcomes, definition of instructional objectives in basic car control, driving on the road and in- classroom teaching. This must be set up in sequential order with a short description of the instructional content. Apart from training in basic car control, each unit should include key areas which special reference to risk factors, traffic rules and driving techniques to be used in the various traffic manoeuvres and situations.

- ❖ The materials must meet the needs of the learners at whatever cognitive levels these learners are learning.
- ❖ It must be available in the official languages.

Ongoing development, dissemination and evaluation of Road Safety education resources must be centralized in an IT - managed resource bank and a Road Safety education web-site must be established. This must be accessible to all schools.

### **5.3 Conclusion**

The ultimate aim of Road Safety Education is to reduce the accident involvement of its target groups. However, since road safety education often forms one aspect of general, moral, social, or health education, it often has additional aims and this implies that road safety education should not only be evaluated in terms of its effect on accident rates.

Road Safety today can no longer be viewed solely on a national basis or only during the peak holiday periods. Due to worldwide tourism and international exchange and transport, road safety has become an international concern. There is now a pressing need to pool road safety efforts, both on policy and research level, and to consolidate how an effective road safety strategy can be incorporated into the Revised National Curriculum Statement in the Further Education and Training band. It is hoped that this research will provide a contribution in this direction and that where educational policy is concerned Road Safety Education will become compulsory.

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## Appendix 1

### QUESTIONNAIRE

Age: \_\_\_\_\_ Grade: \_\_\_\_\_

Male: \_\_\_\_\_ Female: \_\_\_\_\_

1. Where do you live? \_\_\_\_\_
2. Do your parents own a car? \_\_\_\_\_
3. How do you travel to school? \_\_\_\_\_

4. Have you ever been involved in a road accident?  Yes  No
5. Has any of your family or friends been involved in a road accident?  Yes  No
6. Have you experienced being in a vehicle which was dangerously driven?  Yes  No
7. Will you tell the driver of the vehicle that he/she is driving dangerously?  Yes  No
8. Do many people die as a result of road accidents?  Yes  No
9. How did you become aware of this problem? Cross the appropriate block.

During lessons at school  
 Watching the news on television

Reading the newspaper  
 Reading about it in a magazine

10. What do you think is the major cause of road accidents? Cross the appropriate Block

Drinking & Driving	Speed	Bad attitude of Drivers	Use of cell phones while driving	Buses & Taxis
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11. Do you think that only traffic police men should be responsible for the maintaining road safety?  Yes  No
12. Did you ever learn anything about Road Safety at school?  Yes  No
13. If Yes, did the lesson cover all aspects of road safety?  Yes  No
14. Were these lessons carried out on a regular basis?  Yes  No
15. Were these lessons done once in a while.  Yes  No
16. Does our school have a Road Safety Policy?  Yes  No
17. If no, do you think that we should have one?  Yes  No
18. What do you understand by the Revised National Curriculum Statement.

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19. How many learning areas are there in the Revised national Curriculum Statement? \_\_\_\_\_

20. Do you think that Road safety Education should be taught at schools? \_\_\_\_\_

21. Do you think that it can be incorporates int eh existing learning areas? \_\_\_\_\_

22. When do you think Road Safety education must begin at school?

Pre-school

Primary

Secondary

23. Do yo think that Grade 12 learners should write their learners driver's test at schools?

Yes

No

24. Do you think that driving lessons must also be part of the curriculum?

Yes

No

25. Do you think that compulsory Road Safety Education at school will reduce the number of deaths on out roads?

Yes

No