

**THE EDUCATIONAL ROLE AND VALUE OF JUNIOR TRAFFIC
TRAINING CENTRES WITHIN THE OUTCOMES-BASED
EDUCATION CURRICULUM**

**Sipho Johannes Molefe
B.A., H.E.D., B.Ed.(Hons)**

**Dissertation submitted in fulfilment of the requirements for the degree
Magister Educationis in Learning and Teaching at the
North-West University**

**Supervisor : Professor Dr. N.J. Vreken
Co-supervisor : Mr. K.T. Lesedi**

**POTCHEFSTROOM
2004**

DEDICATION

This dissertation is dedicated to:

The Holy Trinity: God the Father, the Son and the Holy Spirit.

My parents and parents-in-law, Shakoane's and Seshoka's family.

My wife Dintletse.

Daughter Palesa and son Mpho.

ACKNOWLEDGEMENT

The researcher acknowledges:

- ◆ The Almighty God for providing good health to finish this work.
- ◆ My wife Dintletse for her true support during the course of the study.
- ◆ Professor N J Vreken, for excellent supervision.
- ◆ Mr K T Lesedi (doctoral candidate at the Graduate School of Education Sciences) who acted as co-supervisor and to whom I am truly indebted for his unfailing support.
- ◆ Mrs Shumi Dyomfana, for her sensitive attitude.
- ◆ The financial assistance of the Department of Transport: Northern Centre of Development (NCOD), through Cenets.
- ◆ Mrs Ebeth Van der Merwe, lecturer in Traffic Safety Education.
- ◆ Mrs M van Wyk, for the technical editing as well as her concern and moral support.
- ◆ Mr J F Pienaar, Head of Cenets, for his support.
- ◆ The Ferdinand Postma library staff, for the general help.
- ◆ Many others who helped in one way or another but whose names do not appear here. May God Almighty bless you all in Jesus' name. Amen.
- ◆ My son Mpho and daughter Palesa, who did not receive the parental attention to which they were entitled during the study, though they brought joy by smiling at us after hard work.

ABSTRACT

The aim of this study was to outline the importance of Junior Traffic Training Centres in both primary and secondary schools. This would aid the effective integration of Traffic Safety Education in the school curriculum within outcomes-based education. The primary objective of this research was to determine the ways in which Junior Traffic Training Centres at schools are instrumental in the development of knowledge, skills and attitudes of learners towards safe participation in traffic environment. This research was conducted by means of a literature study and an empirical investigation through a questionnaire and observations.

Investigation focused on learners from three schools, namely Maheelo Primary School (a farm school at Hartbeesfontein), Gaenthone Secondary School (a semi-rural school in Tigane Township near Hartbeesfontein) and Phaladi Combined School situated in Ikageng Township.

It was found that more emphasis should be placed on pedestrian education. Learners should be taught traffic safety from pre-school, with the help of Junior Traffic Training Centres.

Ten recommendations are made in Section 7.5. These include more training in Traffic Safety Education and that focus must be placed on disadvantaged areas; that government should avail trained teachers in Traffic Safety Education; and that schools must have access to Junior Traffic Training Centres.

This study is of significance to the North West Province and the South African society because each day we lose learners through road accidents. This does not only cost the government money but is also painful to all of us. This study maintains that teaching our learners road safety education could contribute towards overcoming this situation.

Key concepts: Traffic, Safety, Education, Junior Traffic Training Centres and Outcomes-Based Education.

OPSOMMING

Die doel van hierdie studie was om die belangrikheid van Junior Verkeersopleidingsentrums in beide primêre en sekondêre skole aan te dui. Dit sal help met die effektiewe integrasie van Verkeersveiligheidsopvoeding in die uitkomsgebaseerde skoolkurrikulum. Die kernaspek van hierdie studie was om te bepaal hoe Junior Verkeersopleidingsentrums kan bydra tot die ontwikkeling van die kennis, vaardighede en gesindhede van leerders teenoor veilige verkeersdeelname. 'n Literatuurstudie en 'n empiriese ondersoek met behulp van 'n vraelys en waarnemings was die metodes wat gevolg is om die doel van die studie te bereik.

Die ondersoek was veral gerig op die leerders van drie skole, naamlik Maheelo Primêre Skool ('n plaasskool by Hartbeesfontein), Gaenthone Sekondêre Skool ('n semi-plattelandse skool in Tigane Township naby Hartbeesfontein) en Paladi Gekombineerde Skool in Ikageng.

Daar is bevind dat meer klem geplaas sal moet word op voetgangeropvoeding. Leerders behoort reeds vanaf die voorskoolse stadium onderrig hierin te kan ontvang met die hulp van Junior Verkeersopleidingsentrums.

Tien aanbevelings is in Afdeling 7.5 van die verslag gemaak. Dit behels onder andere meer opleiding in Verkeersveiligheidsopvoeding; dat die regering onderwysers moet laat oplei in Verkeersveiligheidsopvoeding; en dat skole toegang moet hê tot Junior Verkeersopleidingsentrums.

Hierdie studie is van betekenis vir die Noordwes provinsie sowel as die breër Suid Afrikaanse gemeenskap, want leerders sterf daaglik as gevolg van padongelukke. Dit kos die regering nie net geweldig baie geld nie, maar dit bring hartseer en pyn vir almal.

Hierdie studie bevind dat bogenoemde situasie verbeter kan word deur leerders te onderrig in Verkeersveiligheidsopvoeding.

Sleutelkonsepte: Verkeersveiligheid; Onderwys; Junior Verkeersopleidingsentrums; Uitkomsgebaseerde onderwys.

ACRONYMS AND ABBREVIATIONS

1. Assessment Criteria (AC).
2. Arts and Culture (AC).
3. Centre for Education in Traffic Safety (CENETS).
4. Critical Outcomes (CO).
5. Department of Transport (DoT).
6. Economic and Management Science (EMS).
7. Further Education and Training (FET).
8. Human and Social Sciences (HSS).
9. Junior Traffic Training Centre (JTTC).
10. Language, Literature and Communication (LLC).
11. Learning Area (LA).
12. Learning Programme (LP).
13. Life Orientation (LO).
14. Mathematics Literature, Maths, Mathematical Science (MLMMS).
15. Natural Science (NS).
16. Northern Centre of Development (NCOD).
17. Outcomes-Based Education (OBE).
18. Performance Indicators (PI).
19. Range Statement (RS).
20. South African Qualification Authority (SAQA).
21. Specific Outcomes (SO).
22. Traffic Safety Education (TSE).

INDEX

CHAPTER ONE

1	ORIENTATION TO THE STUDY	1
1.1	MOTIVATION AND PROBLEM STATEMENT	1
1.2	RESEARCH QUESTIONS	4
1.3	AIMS OF THIS RESEACH	4
1.4	HYPOTHESIS	5
1.5	METHOD OF RESEARCH	5
1.5.1	Literature review	5
1.5.2	Qualitative and quantitative research method	5
1.5.2.1	<i>Observation</i>	5
1.5.2.2	<i>Questionnaire</i>	6
1.5.2.3	<i>Population and Sampling</i>	6
1.5.2.4	<i>Statistical technique</i>	7
1.5.3	Demarcation of research	7
1.6	THE FEASIBILITY OF THE STUDY	7
1.7	DEFINITIONS OF TERMS OR CONCEPTS	8
1.7.1	Traffic	8
1.7.2	Traffic Safety	9
1.7.3	Traffic Safety Education	9
1.7.4	Junior Traffic Training Centres (JTTC)	10
1.7.5	Outcomes-Based Education (OBE)	10
1.8	PREVIEW OF CHAPTERS	11
1.9	CONCLUSION	12

CHAPTER TWO

2.	THE NATURE, AIM, OBJECTIVES, AND NECESSITY OF JUNIOR TRAFFIC TRAINING CENTRES IN SCHOOLS WITHIN OUTCOMES- BASED EDUCATION	13
2.1	INTRODUCTION	13
2.2	THE NATURE OF JUNIOR TRAFFIC TRAINING CENTRES	14
2.2.1	Definition of a Junior Traffic Training Centre	14

3.4	THE LEARNING EXPERIENCES IN OBE FOUNDATION PHASE	45
3.4.1	Integration in life skill learning area	45
3.5	PARTICIPATION OF THE LOCAL TRAFFIC OFFICER	49
3.5.1	Attitude development	50
3.6	CONCLUSION	50

CHAPTER FOUR

4.	TRAFFIC SAFETY EDUCATION THROUGH JTTC WITHIN THE OUTCOMES-BASED EDUCATION CURRICULUM	52
4.1	INTRODUCTION	52
4.2	LEARNING PROGRAMME (LP)	52
4.3	OBE STRUCTURE	53
4.4	OUTCOMES-BASED EDUCATION AND JTTC	54
4.4.1	Structure of OBE's curriculum	54
4.4.2	Critical Outcomes (CO)	54
4.4.3	Eight Learning Areas (LA)	56
4.4.3.1	<i>Language, Literacy and Communication (LLC)</i>	56
4.4.3.2	<i>Human and Social Science (HSS)</i>	56
4.4.3.3	<i>Mathematics Literacy, Maths, Mathematics Science (MLMMS)</i>	56
4.4.3.4	<i>Technology</i>	56
4.4.3.5	<i>Natural Sciences (NS)</i>	57
4.4.3.6	<i>Arts and Culture (AC)</i>	57
4.4.3.7	<i>Economics and Management Science (EMS)</i>	57
4.4.3.8	<i>Life Orientation(LO)</i>	57
4.4.4	Specific Outcomes (SO)	57
4.4.5	Assessment Criteria	58
4.4.6	Range Statements (RS)	59
4.4.7	Performance Indicators	60
4.5	THE INTERGRATION OF TRAFFIC SAFETY EDUCATION IN A LEARNING AREA	61
4.5.1	Learning experience for Grade 4	61
4.6	CONCLUSION	65

CHAPTER FIVE

5.	EMPIRICAL INVESTIGATION AND DISCUSSION OF RESULTS	66
5.1	INTRODUCTION	66
5.2	LITERATURE REVIEW	67
5.2.1	Analysis of questionnaires and observation techniques	67
5.2.1.1	<i>Aims of the questionnaire</i>	68
5.2.1.2	<i>Aim of the observation</i>	68
5.3	METHODOLOGY OF THE RESEARCH	69
5.3.1	Introduction	69
5.3.2	Sources of data	70
5.3.3	Population study and sampling techniques	70
5.3.4	Method of administering the questionnaires.....	70
5.3.5	Method of administering observations	71
5.3.6	Method of data analysis	72
5.4	EDUCATORS' AND LEARNERS' RESPONSE TO THE QUESTIONNAIRE	73
5.4.1	Interpretation and discussion of educators' and learners' responses to the questionnaire.....	73
5.4.2	Comparing learners' and educators' responses	89
5.5	OBSERVATION	89
5.5.1	Observed learners' conduct in townships	90
5.5.1.1	<i>Conclusion for learners in townships</i>	92
5.5.2	Observed learner conduct behaviour in rural farm areas	92
5.5.2.1	<i>Conclusion for learners in rural farm areas</i>	94
5.5.3	Observation of learners in semi-rural areas	94
5.5.3.1	<i>Conclusion about learners in semi-rural areas</i>	95
5.5.4	The input of Junior Traffic Training Centres.....	96
5.6	GENERAL CONCLUSION CONCERNING RURAL, SEMI RURAL AND TOWNSHIP LEARNERS	97

CHAPTER SIX

6.	ANALYSIS OF RESEARCH	98
6.1	INTRODUCTION	98
6.2	FRAMEWORK FOR THE ANALYSIS OF THE PRESENT KNOWLEDGE WITH REGARD TO TRAFFIC SAFETY	98
6.3	ANALYSIS OF HOW LEARNERS' MILIEU AFFECT THEIR CONDUCT ON THE ROAD	99
6.3.1	Introduction	99
6.3.2	Analysis of the learners in rural, semi-rural and township areas.....	100
6.4	ANALYSIS OF INFRASTRUCTURES AVAILABLE TO LEARNERS IN RURAL, SEMI-RURAL AND IN TOWNSHIP AREAS.....	100
6.4.1	Introduction	100
6.4.2	Road safety infrastructure in the semi-rural, rural and township areas	101
6.4.3	Infrastructure related to traffic safety in rural, semi-rural and township areas ..	101
6.5	EDUCATORS' AND LEARNERS' RESPONSE TO THE QUESTIONNAIRE	104
6.6	CONCLUSION	104

CHAPTER SEVEN

7.	SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	105
7.1	INTRODUCTION	105
7.2	SUMMARY	105
7.3	RESEARCH FINDINGS	107
7.3.1	Findings with regard to aim one	107
7.3.2	Empirical research findings	107
7.3.3	Junior Traffic Training Centre	108
7.3.4	Traffic Safety Education (TSE)	108
7.3.5	Findings regarding aim 2	108
7.3.6	Outcomes-Based Education (OBE)	109
7.4	CONCLUSION	109
7.5	RECOMMENDATIONS	110
7.6	FINAL REMARKS	112
8.	BIBLIOGRAPHY	113

LIST OF TABLES

Table 3.1	Learning experiences in the foundation phase.	46
Table 4.1	Learning experience in Grade four (OBE).	61
Table 5.1	Sample and school capacities.	68
Table 5.2	Comparison table for observation of different learner behaviours on the road.	72
Table 6.1	Observation of learners' conduct on the road.....	102

LIST OF FIGURES

Figure 2.1	Illustration of the JTTC.....	15
Figure 2.2	Illustration of layout models that can be used in the JTTC.....	16
Figure 2.3	Illustration of push wheel and wire cars that can be used in teaching TSE.	20
Figure 3.1	Playing on roller-skates.....	26
Figure 3.2	Traffic lights.....	27
Figure 3.3	Stop sign.....	28
Figure 3.4	Yield sign	28
Figure 3.5	Pedestrian-crossing block.....	29
Figure 3.6	Children crossing	29
Figure 3.7	Traffic lights ahead.....	30
Figure 3.8	Scholar patrol	30
Figure 3.9	Railway crossing	31
Figure 3.10	Cyclists.....	31
Figure 3.11	Pedestrian crossing.....	32
Figure 3.12	Freeway begins.....	32
Figure 3.13	Winding road.....	33
Figure 3.14	Turn left only.....	33
Figure 3.15	No left turn	34
Figure 3.16	No U-Turn.....	34
Figure 3.17	Road workers.....	35
Figure 3.18	End of freeway	35
Figure 3.19	Keep right.....	36
Figure 3.20	Turn right only	36
Figure 3.21	No right turn	37
Figure 3.22	No parking.....	37
Figure 3.23	Road marks.....	38
Figure 3.24	Scholar patrol programme	41
Figure 3.25	Demonstration of the first method which a cyclist can use as explained in Section 3.3.3.1	44
Figure 3.26	Demonstration of the second method which a cyclist can use as explained in Section 3.3.3.1	44

LIST OF APPENDIXES

APPENDIX 1	LETTER OF PERMISSION TO THE DEPARTMENT OF EDUCATION: POTCHEFSTROOM DISTRICT	117
APPENDIX 2	LETTER OF PERMISSION TO THE DEPARTMENT OF EDUCATION: KLERKSDORP DISTRICT	118
APPENDIX 3	QUESTIONNAIRE FOR EDUCATORS	119
APPENDIX 4	QUESTIONNAIRE FOR LEARNERS	124
APPENDIX 5	COMPARISONS OF EDUCATORS' MEANS OF STANDARD ERRORS IN VARIOUS GROUPS	127
APPENDIX 6	COMPARISONS OF LEARNERS' MEANS OF STANDARD ERROR IN VARIOUS GROUPS	130

CHAPTER ONE

1 ORIENTATION TO THE STUDY

This study investigated the educational role and value of Junior Traffic Training Centres (JTTC) within the Outcomes-Based Education (OBE) curriculum. The study was carried out in the North West Province of the Republic of South Africa. This chapter presents background to the research problem and the problem statement, research questions, aims of the study, methodology of the research, a list of the key terms used in the study, and an outline of the chapter division.

1.1 MOTIVATION AND PROBLEM STATEMENT

Several research studies (Du Plooy, 1986; Steyvers, 1990; Cole 1990) have placed emphasis on the fact that learners of school-going age lack fundamental skills for safe interaction in the traffic situation. The above studies recognise the importance and implementation of Traffic Safety Education (TSE) in schools and communities. The concern, however, is how effectively TSE can be implemented in Outcomes-Based Education (OBE), so as to suit the South African situation, with its mixed First and Third world cultures. Drotské (1997a:3) asserts that the implementation requires a multi-disciplinary approach in which the education of the child forms part of Road Traffic Safety. Furthermore, Du Plooy (1986:72) states that education, teaching and training (which lasts from the toddler stage to maturity in order to retain quality life) are indispensable in accomplishing meaningful TSE.

Du Plooy (1986:72) further points out that countries such as Denmark, the Netherlands, Australia and New Zealand have experienced a gradual decrease in traffic fatalities as a result of teaching TSE in schools. To inculcate knowledge and skills in learners in TSE, training is indispensable. For effective training, JTTC should be used to enhance skills and attitudes as demanded by OBE (Vermeulen, 1997).

The use of JTTC for the enhancement of traffic safety skills and attitudes should be seriously considered in the search for long-term solutions for traffic fatalities in South Africa. The countries mentioned above, namely Denmark, the Netherlands, Australia and New Zealand, suffer few fatalities per annum (Central Statistics Services, 1997). It is therefore necessary to undertake an investigation into the implementation, education and training of learners in traffic safety by means of JTTC in schools in the context of OBE.

If outcomes-based assessment emphasises more assessment by practical tasks, interviews, self-assessment, less assessment through written tests/examinations (Bertrams *et al.*, 1997), then the recognition of JTTC is necessary for practical tasks in TSE.

Spady and Marshall (1991:70) agree that an outcome is a successful demonstration of learning that occurs at the culminating point of a set of learning experiences. The term *culminating* refers to the completion point of segments of the curriculum - what students are able to do at the end, once all formal instruction has been completed and can be synthesised and applied successfully. To have such an outcome, learning materials should be supplemented with JTTC, which reveal the replica of the infrastructure that the learner faces and experiences in his or her traffic environment or disposition.

TSE is a life skill that people should use to survive in their daily involvement in traffic (Iornengen, 2000:5). Educating learners through theory and practice should be the point of departure for the teaching and learning of TSE within OBE. The use of JTTC in TSE may be used to this end. If learners are to develop the art of critical thinking and problem solving, for example, then this aim has to be incorporated into the educational process. This implies that if learners are expected to cope successfully on roads, streets and traffic at large, provision of the logistics are necessary in teaching and fulfilling this outcome. This will prevent learners from being passive consumers of content.

Curriculum 2005 demands that learners should be able to demonstrate ability (Clarke, 1997:12). To achieve this outcome in TSE, learners need to practice with the facilities available in the JTTC. This study hypothesises that the use of JTTC may bring about the effective implementation of TSE in schools when it is recognised that a certain community of learners come from a poor background, devoid of an infrastructure.

JTTC is envisaged as possible practical experiences that might get all learners on board with TSE. This kind of learning intervention seemingly suits the principles of OBE, which are co-operation, critical thinking and social responsibility (Vermeulen, 1997) towards empowering all road users to participate safely in various aspects of society.

The role of the Traffic Department or local government regarding the provision and use of JTTC for the teaching and learning of TSE is crucial and it needs to be re-evaluated. The re-examination of this role is apparently due to new directions in teaching and learning as required by the new system of education and Curriculum 2005 regarding classroom practices. It is therefore valuable for this study, which is focusing on the JTTC, so as to consider the role of providers of this facility (SENVO, 1992:6).

Statistics and research show that in South Africa the increase in road fatalities is linked to a lack of TSE Central Statistics Services (CSS, 1997). The effect of fatalities has some financial implications for the government (Department of Transport (DoT), 1997:5) due to the fact that the government spends millions of rands annually on traffic fatalities and collisions. The effective implementation of traffic safety education will gradually reduce government expenditure on road fatalities that occur as a result of a lack of traffic safety education (Central Statistics Services (CSS), 1997).

This study sought to address the gap between implementation and the actual teaching of TSE within OBE. It is therefore hoped that the outcomes of this study would fulfil specific outcomes with Traffic Safety as a learning programme. To include and use the JTTC would enhance achievement of the Specific Outcomes (SO) with learners regarding Traffic Safety (TS).

1.2 RESEARCH QUESTIONS

In view of the above, this study attempted to answer the following questions:

- 1.2.1 What is the nature, aim, objective and importance of JTTC?
- 1.2.2 Which approaches are necessary in teaching TSE effectively within OBE?
- 1.2.3 How can TSE through JTTC be integrated within OBE?
- 1.2.4 How could the JTTC and TSE be integrated in the OBE curriculum?

1.3 AIMS OF THIS RESEARCH

The aim of this research is to (1) outline the importance of JTTC in schools. This would aid the effective integration of TSE in the school curriculum within OBE. The key issue that this research addressed, was to (2) determine the ways in which JTTC at schools relate to the development of knowledge, skills and attitudes of learners towards safe participation in traffic environment/situations.

The overall aims are broken down as to:

- 1.3.1 determine the nature, aim, objective and the importance of JTTC in TSE,
- 1.3.2 determine the approaches required in teaching TSE within OBE,
- 1.3.3 determine which approaches can be used to integrate JTTC in OBE, and
- 1.3.4 explain how JTTC and TSE can comply with and fit into the existing principles of OBE.

1.4 HYPOTHESIS

JTTC in schools will effectively bring about TSE in schools within the OBE curriculum.

1.5. METHOD OF RESEARCH

The methodology of this research consists of the following components:

1.5.1 Literature review

A literature study was conducted using various sources, such as journals, articles, web sites, books, theses and other sources related to the study. In addition a dialogue search is performed with the following key words; Educational role and value, Junior Traffic Training Centre, Curriculum and Outcomes-Based Education.

1.5.2 Qualitative and quantitative research method (empirical education)

A qualitative research method was used to accumulate empirical data and the observations and questionnaire were analysed. According to Berg (1995:176) the qualitative research finds answers to questions by examining various social settings and individuals who inhabit these settings. The questionnaire was therefore used to complement the quantitative method. The triangulation technique was used in the study, namely a literature survey, questionnaire and observation.

1.5.2.1 Observation

An observation technique was designed to examine specific situations, for example how learners conduct themselves in traffic situations, especially on their way to and from school.

The following steps were followed in the observation:

- Observe the natural phenomenon (in “townships”, rural/farm and “semi-rural”). Three schools without JTTC were compared with one with a JTTC.
- Draw conclusion(s) from the observation.
- Design a programme to test the accuracy of the conclusion(s).
- Examine the further expression, refinement and restructuring of existing theories.

In addition to the above steps the observation will be supplemented by the classification, ordering and structuring of the observed information.

1.5.2.2 Questionnaire

A structured questionnaire was used for the three schools, Gaenthone Secondary in Tigane Hartbeesfontein (a semi-rural school), Phaladi Combined School in Ikageng Potchefstroom (a township school) and Maheelo Primary (a rural/farm school at Hartbeesfontein). The questionnaires were in separate envelopes; one addressed to teachers and the other to learners.

1.5.2.3 Population and sampling

The target group comprised of learners and educators from the three different residential areas, such as township, rural or farm and semi-rural. The study was done in schools in the North-West Province of South Africa. A sample of 74 educators and 74 learners from the three identified schools was used.

1.5.2.4 Statistical technique

The computers and computer packages at the Potchefstroom University were utilised to produce frequencies. This was done after the questionnaires were returned and controlled (Mochwanaesi: 1998:4).

1.5.3 Demarcation of research

The area of investigation of this research is schools of education in the North-West Province. Schools were sampled according to the nature of location or settlement of previously disadvantaged groups on which the study is focused. The research was undertaken during the implementation of the OBE curriculum, which was adjusted as often as possible. At the time the JTTC was established in the North-West but was not yet operational. The empirical study undertaken in this report will not provide final answers to the role and value of the JTTC within OBE in the Province, but will rather provide the basis of using JTTC within OBE in TSE.

1.6. THE FEASIBILITY OF THE STUDY

This study will be feasible in that:

- The study will be conducted in South Africa.
- Literature resources to be used for information gathering will be sufficiently available at the Ferdinand Postma Library and the Centre for Education in Traffic Safety (CENETS) at Potchefstroom University for Christian Higher Education (PU for CHE).
- DIALOGUE and ERIC-Data Base searches will be used with the key words *TSE*, *JTTC*, *OBE* and *curriculum 2005*.
- Observations will be made in schools in the North-West Province of South Africa, using a sample in three schools in different areas.
- For further information both national and international data will be consulted through NEXUS, SABINET on-line and EBSCOhost WEB. This was done through the help of the personnel at the Ferdinand Postma Library of the PU for CHE.

1.7 DEFINITION OF TERMS OR CONCEPTS

In the following paragraphs a number of concepts which are used in the research are defined, namely Traffic Safety Education, Junior Traffic Training Centre, Outcomes-Based Education and Curriculum. The objective of this section will be to introduce the reader to the key concepts used in this study and the contexts in which they are used.

1.7.1 Traffic

Van der Waldt (1984: 13-14) emphasises the quality of movement of traffic by reducing traffic to the coming and going, the moving or transport of persons and goods on roads and streets, between places and regions, usually (but not always) with the idea of movement in opposite directions simultaneously and alternatively.

There are three components contained in the concept *road traffic*, namely:

- i. The static components (like roads, pavements, traffic lights, curb stones, other road signs, like the yellow line, or the traffic signs like the stop sign.
- ii. The dynamic or movement component (vehicles, pedestrians).
- iii. The traffic participant himself/herself, with his/her qualities like knowledge of traffic rules, observation of speed, personality factors, knowledge of vehicles and other peoples' behaviour, as well as the willingness to take responsibility.

1.7.2 Traffic Safety

People's inborn need to defend themselves against loss of life, injuries or harm is morally expressed in the sixth of the ten commandments which can, according to Van der Waldt (1984b: 16), be explained as follows:

That man may not only, "not harm or want to endanger another" (Heidelberg catechism, Sunday 40, question and answer 105, but neither himself. According to Steyn (1987: 208) if this is applied to traffic, it indicates that the traffic participants must survive in the street or road traffic, that he must be protected against traffic dangers to eventually return safely. This implies the accident-free movement of and interaction between the traffic elements and forms, because only then can incidents and/or collisions, with the resultant bodily injuries, death and economic loss, be prevented (Dreyer, 1986: 6). In this regard, "traffic safety", according to Du Plooy (1983: 25), usually implies the prevention of loss of life and injuries as well as measures that can be taken to prevent traffic accidents.

1.7.3 Traffic Safety Education

Education and teaching are the means used by adults to guide the child to maturity. The joined aim of education, teaching and development is the maturation of the person educated. What is understood under maturity, however, varies from culture to culture. Hence, in some cultures a child is regarded as an adult as soon as he/she reaches a particular chronological age (Mwamwenda, 1989: 57). Only the biological aspect of development is taken into consideration here, but maturity comprises much more than biological maturity.

Maturity is also measured according to aspects such as the conscious (cognitive) moral acceptance of norms on different terrains. Amongst these are norms and rules with regard to traffic safety and the willingness to accept personal responsibility for choices and to live according to these (SENVO, 1992: 4).

In nursery schools TSE is aimed at diminishing childrens' fear of traffic by means of traffic observation, and to prepare learners for participating in traffic by means of developing visual and movement skills. During the phase of starting school (primary phase) pupils must be trained to move safely from home to school and back, by means of theoretical teaching and practical exercise. The primary school child is made traffic ready as a pedestrian, cyclist and passenger. Cycling skills are also developed (SENVO, 1992:5).

TSE demands the co-operation of parents and the traffic authorities (DoT, 1996: 8-12). Learners are equipped to behave responsibly in compliance with the traffic rules. The frame of reference with various themes is thus aimed at safe and responsible behaviour in cycling and motorcycling in various traffic situations, as with a range of transport means of different roads.

1.7.4 Junior Traffic Training Centres (JTTC)

These are institutions in the schools that will see to it that the TSE operates successfully. The materials and equipment of TSE are made available, perhaps to create traffic environment within the schools. Non-formal programmes developed by Directorate Traffic Safety would also be employed in formal educational programmes such as the following:

- The Child in Traffic Programmes.
- The National Cycling Programme.
- The Scholar Patrol Programme.
- The Danny Cat Programme (SENVO, 1992: 5).

1.7.5 Outcomes-Based Education (OBE)

The key principles of OBE is founded on three basic premises:

- All students can learn and succeed (but not on the same day in the same way).
- Success breeds success.

- Schools control the conditions of success (Spady & Marshall, 1991: 67). Advocates of OBE tout it is a means of meeting the needs of their environment, ethnicity, economic status, or disabling conditions. OBE claims to create greater curriculum focus, develop better instructional methods, and assess students' achievement with clarity and validity. The common element of this work and the direction in which OBE advocates hope to shift current educational practices includes; a change in philosophy and beliefs, objectives tied to outcomes, core and extended curriculum development, mastery learning, accountability through an information management system, and criterion referenced assessment (Spady in Capper, 1993:428).

1.8 PREVIEW OF CHAPTERS

Chapter 1 outlines the purpose and motivation for the study, with research questions, the aims of the study, the methodology to be used as well as the definition of the key terms used in the study.

In Chapter 2, the nature, aim, objective and necessity of JTTC in TSE will be discussed.

In Chapter 3, the role of JTTC within OBE will be investigated and practical examples are given, as referred to in the research question in 1.2.3 and in the aim of the research (1.3.3).

In Chapter 4, the possibility of including or fitting TSE through JTTC is investigated, as referred to in research question 1.2.4 and in the aim of the research 1.3.4.

In Chapter 5, the method of research is explained, the empirical investigation is performed and the results are discussed.

In Chapter 6, data analysis and interpretation of documents, questionnaires and observations related to TSE and JTTC are analysed and interpreted.

Chapter 7 offers a summary, conclusions and recommendations on the basis of the findings. Problems and the major issues of the study are also discussed.

1.9 CONCLUSION

The aim of this study is to establish the educational role and value of the JTTC within the OBE curriculum so that TSE can be implemented successfully in the OBE curriculum, particularly in light of the view that the culture of South Africa is a mixture of First and Third World influences. It is hoped that effective implementation will benefit South Africa by reducing fatalities.

The research will address four aims, formulated in four research questions and hypotheses (see Section 1.2 and 1.3 for the questions and aims). To this end a sample of three schools were used in a rural, semi-rural and township area, and observations were made. A review of relevant literature and documents regarding the topic (the educational role and value of JTTC within the OBE curriculum) will be presented. The study is divided into seven chapters; each chapter addresses the specific aim(s) indicated in Section 1.8 in order to reach the overall aim of the study and to test the hypothesis.

CHAPTER TWO

2. THE NATURE, AIM, OBJECTIVES AND NECESSITY OF JUNIOR TRAFFIC TRAINING CENTRES IN SCHOOLS IN OUTCOMES-BASED EDUCATION

2.1 INTRODUCTION

The focus of this study is on the use of JTTC in OBE. The concept of JTTC is the key to the study. OBE in traffic safety cannot be complete if JTTCs are left out of this particular education curriculum system, this is because practicality is such a central aspect of the OBE framework. The concept of the JTTC is an important part of the study, since these centres reflect the infrastructure to which the learner is going to be exposed to throughout his/her life. OBE demands that there should be an active involvement or engagement of learners in the learning process. This study responds to the demand by emphasising the introduction of JTTCs.

This chapter presents a survey on the nature, aim, objectives and necessity of JTTCs within the OBE. The literature study provides a foundation and helps to give a picture of what the JTTC looks like. To reveal the nature, aim, objectives and necessity of JTTCs in OBE the study will attempt to answer research question 1.2.1 and to address the aim 1.3.1.

(See paragraphs 1.2 and 1.3).

The review of the literature in this regard is done under the following sub-headings:

- The nature of JTTC.
- The objective, aim and necessity of JTTC in OBE.
- The importance of JTTC in the training of learners.

2.2 THE NATURE OF JUNIOR TRAFFIC TRAINING CENTRES

The nature of JTTC centres on the following issues

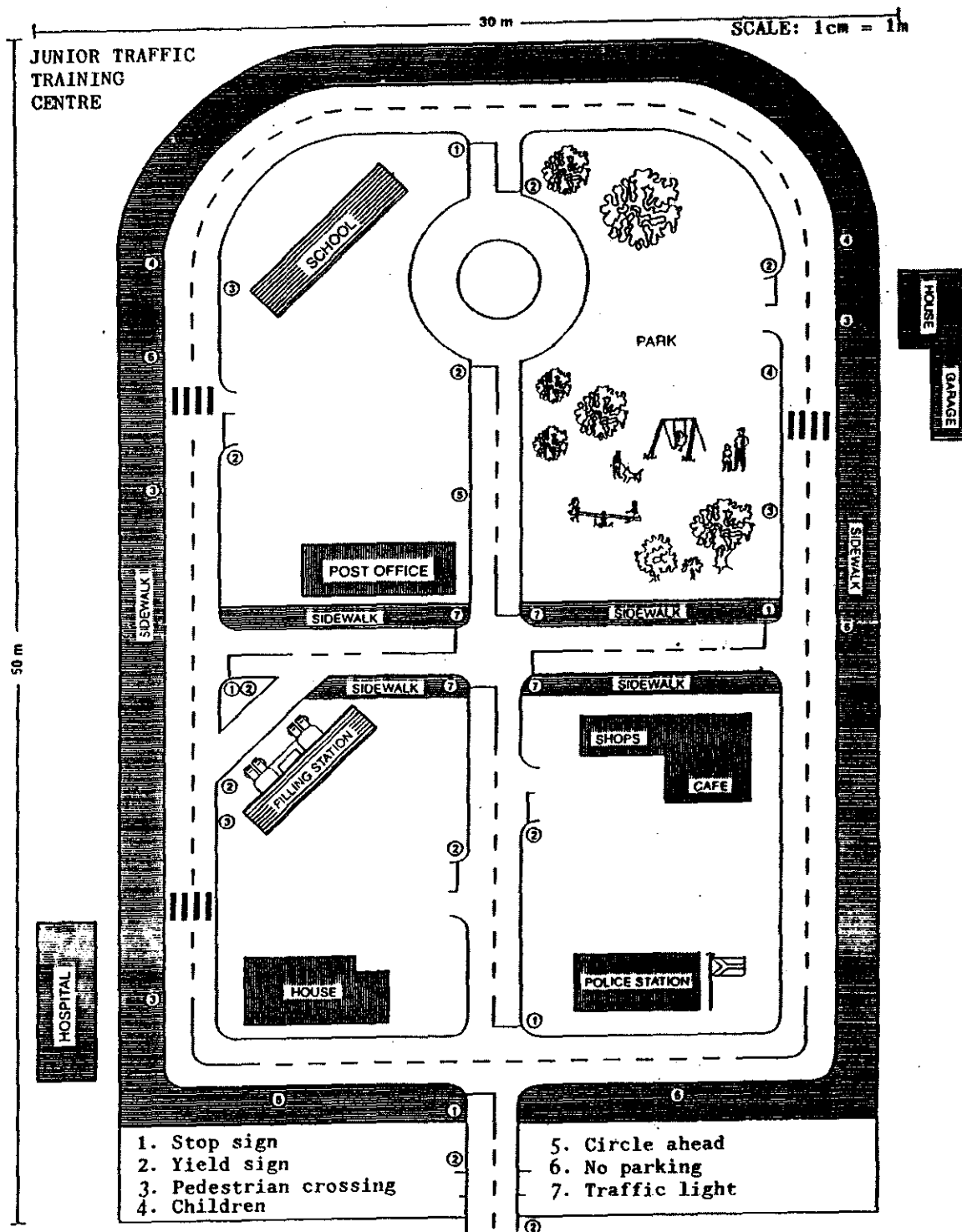
- (i) What are JTTCs?
- (ii). What do they look like?
- (iii) Where does one find them?
- (iv) What do they comprise of?
- (v) Which additional equipment is needed?

2.2.1 Definition of a Junior Traffic Training Centre

A JTTC is a miniature town designed on the school premises or near school premises, as a replica of the real traffic environment. It is used for teaching learners TSE in OBE (DoT, s.a.: 3).

2.2.2 Description of a Junior Traffic Training Centre

Figure 2.1: Illustration of the JTTC (Rabinowitz *et al.*, 1985: 3-4)

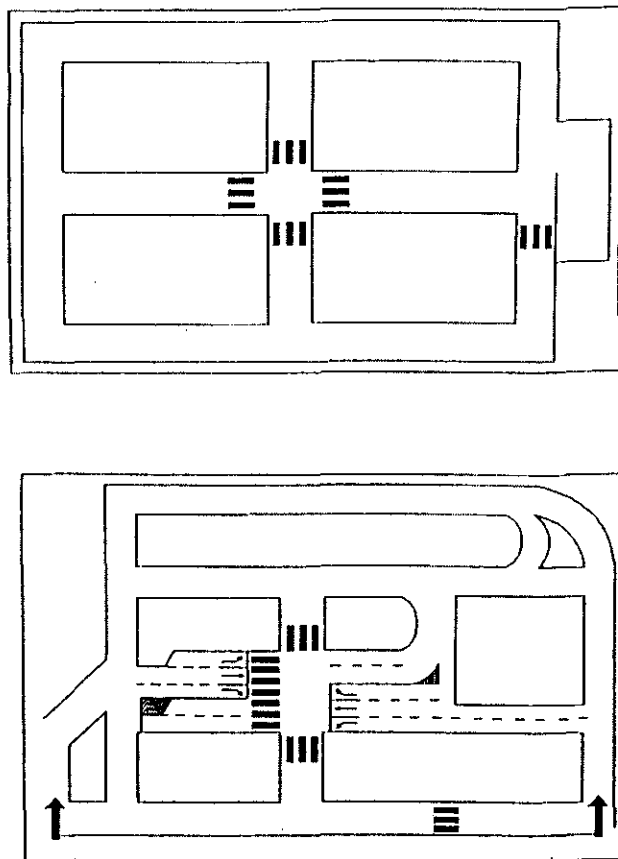


2.2.2.1 Plans for a Junior Traffic Training Centre

A JTTC can be laid out on almost any area. It is ideal to lay out the centre in a natural way, with streets going around existing trees that will provide shade for learners. Examples of the different centres are given below, but it must be kept in mind that these plans can be adapted to suit any area with its specific circumstances.

- Two different lay-outs as adopted from (Rabinowitz *et al.*, 1985:5)

Figure 2.2: Illustration of lay-out models that can be used for the JTTC
(Rabinowitz *et al.*, 1985:5.)



2.2.2.2 Content of a Junior Traffic Training Centre

- ***Width of the street***

The JTTC should contain the following:

The ideal width of each street is 75cm – 1,5m, to enable two vehicles to pass each other without difficulty. Wire model cars, scooters and tricycles will also be able to move comfortably in the centre. Unfortunately not all schools have sufficient space and adjustment to the width of the street may have to be made.

- ***Corners***

Ensure that the corners of the JTTC are not too sharp, because not all learners have the skill to negotiate a corner safely on a pedal scooter or a tricycle.

- ***Lay-out of the course***

The entire surface of the centre should not be cemented, tarred or paved, but only the streets and sidewalks. In the case of a dirt area, the following suggestions may help to demarcate the streets and sidewalks.

- Painted car tyres that have been cut in halves can be used for developmental games in nursery schools. These tyres also add to the colourfulness of the centre.
- Bricks (such as those used by gardeners around beds) can be used, although they can be dangerous for learners if they walk on them.
- Areas already paved are suitable and roads can be marked out with paint.
- Dirt roads can be marked out with pebbles, though pebbles will need to be rearranged from time to time.
- A garden hose, rope or a white string (although this is not very effective) may be used as well.

2.2.2.3 Requirements of a Junior Traffic Training Centre

It is important that the following will form part of the JTTC.

- ***Sidewalks***

Because pedestrians (and especially learners as pedestrians) are such an integral part of the total traffic pattern, there must be as many sidewalks as possible in the centre. The kerb is of utmost importance in learning pedestrian behaviour, because the child is taught to wait behind the kerb. The surface and width of the sidewalk must be of such a nature that the learner can move about safely (Rabinowitz *et al.*, 1985:6).

One of the basic pedagogic principles that must be applied is that the learner (and especially the learner as pedestrian) should be absolutely certain which section of the road surface is reserved for him, and which is forbidden (Rabinowitz *et al.*, 1985:6).

- ***Parking areas***

It is advisable to teach the child from an early age that double parking is undesirable, seeing that this not only contravenes the traffic rules, but it also is extremely inconsiderate towards other road users. It is important to provide adequate parking facilities near the post office, hospital, shop etc. for all the types of vehicles in use. Parking areas are specifically intended for the nursery school, based on the principle that young learners must be kept off the streets. Furthermore, it is preferable for all parking areas to be marked with white lines, as they are in practice.

- ***Pedestrian crossings***

Pedestrian crossings form an integral part of the training programme at the Junior Traffic Training Centre. The equipment provided limits the number of pedestrian crossings that can be installed. The pedestrian crossings at the JTTC should be placed in such a way that the learner has no reason to cross the street anywhere except at a particular pedestrian crossing. These crossings can be marked in the same way as they are in practice. It must once again be emphasised that the teacher should make a point of fixing the correct and logical use of pedestrian crossings in the learner's mind, so that he will always make use of them when he wants to cross the street.

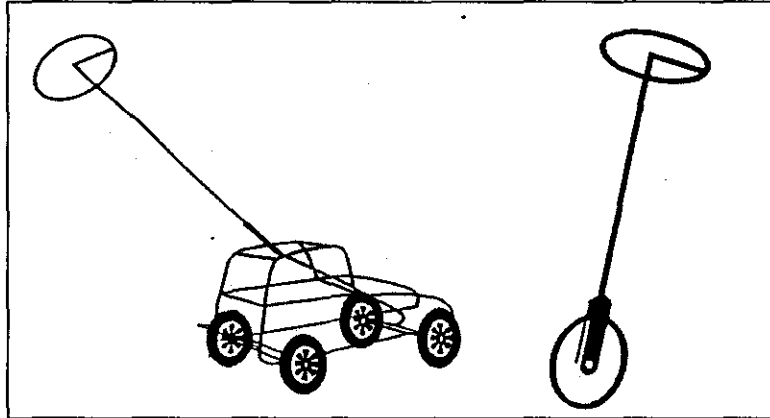
- ***Scholar patrol***

The scholar patrol forms an integral part of pedestrian traffic in junior primary schools. The importance of the scholar patrol and the compulsory obedience to it must be stressed to the primary school learners. Many nursery schools are linked to these schools and as a result many of the children have already come into contact with the scholar patrol. In the nursery school the learner can be taught about the scholar patrol equipment provided by the Traffic Safety Structure within Provinces for the JTTC. Facilitators can improvise and by so doing make learners aware of the significance of scholar patrol. Details of the scholar patrol programme are discussed in paragraph 3.3.2.2.

2.2.3 Additional equipment

The school may provide any additional equipment. Facilitators can add to their equipment with wire cars, pedal scooters and tricycles.

Figure 2.3: Illustrations of push wheel and wire cars that can be used in teaching TSE (DoT, s.a.: 10).



Facilitators can approach business companies in the immediate vicinity of the school to sponsor the JTTC for the erection of miniature buildings bearing their names. A miniature traffic light is very expensive. However, with a little creativity a parent can build a traffic light that is operated by battery and that can be manned by a learner.

2.3 THE AIMS, OBJECTIVES AND NECESSITY OF JTTC IN AN OBE CURRICULUM

The learner often has difficulty in seeing the relationships between theory and practice, due to their limited experience. The JTTC is the best, if not the only, aid in this respect. It must therefore be stressed that the JTTC is only an aid to achieving a goal, namely to introduce and familiarise learners with the traffic situation. However, it cannot replace actual experience.

2.3.1 Aims of the JTTC

The aims of a JTTC are to help the learner acquire the following:

- Knowledge with regard to safe pedestrians behaviour.
- Knowledge of traffic safety rules, traffic signs and road markings.
- Relevant pedestrian skills.

- Relevant driving skills.
- Motor skills with regard to the handling of push wheels.
- Positive attitude displayed at the JTTC (DoT, s.a.: 2).

2.3.2 Objectives of JTTC

The most important objectives in the JTTC are to give the learner opportunity to:

- Acquire knowledge.
- Practice motor skills in a safe simulated traffic situation, by the handling of push wheels.
- Develop positive attitude (DoT, s.a.: 2).

2.4 THE NECESSITY OF JTTC

Not all foundation-phase learners attended a nursery school (or Grade R) which is well equipped with traffic safety logistics like JTTC. Therefore, certain concepts will be strange to learners. These learners will inevitably have to receive training for beginners, as is done in pre-primary school. These particular learners, however, move on to more advanced work more rapidly because their level of development is higher. JTTC activities result in learners enjoying the Learning Experience (LE).

Children should progressively be taught traffic safety behaviour from an early age in order for them to eventually become safe and responsible pedestrians, cyclists, motor-cyclists and drivers. The JTTC can play a very important role in this respect.

The development of the JTTC was the result of a need to make pupils traffic safe without exposing them to the dangerous traffic situation itself, and in such a way that all the pupils will have the opportunity to master the correct traffic behaviour.

The teacher will, however, always bear in mind that the actual traffic situation still offers the best training experience. For the sake of his/her responsibility for the safety of the pupils entrusted to him/her, the basic skills are taught on the JTTC, then at a later stage and under strict supervision, applied in a quiet and safe street near the school. It is suggested that the Child in Traffic Programme initially be followed at the JTTC before taking learners into the actual street/traffic situation.

The Child in Traffic Programme offers the most basic knowledge and skills with regard to crossing the street and traffic. With this knowledge and these skills mastered, the teacher can utilise the centre much better and pupils can acquire additional skills (DoT, s.a.:1).

The earlier the learner is introduced to practical experience in traffic safety, the better equipped the particular learner will be to apply his knowledge to solving the conflict in traffic (Rabinowitz *et al.*, 1985:8).

2.5 CONCLUSION

The nature, aim, objectives and necessity of the JTTC cannot be over-emphasised. If the Department of Education and the Directorate for Traffic Safety have the road safety of the children at heart, they should help the learners to grow up to be responsible citizens and road users. TSE should be taught in schools. Each school should have a JTTC. Moreover, care should be taken to account for children's limitations, which cause problems in the traffic situation. The most important shortcoming of the child regarding traffic is the fact that his perception is different from that of an adult. For example, the child is much shorter than an adult, and therefore unable to look over shrubs and parked vehicles. For the same reason other vehicle drivers cannot see the child. Drivers should be aware of this in order to be more considerate of the child's conduct in traffic. Parents should take special note of this, in order to teach their children to be conscious of dangerous traffic situations.

CHAPTER THREE

3. APPROACHES NECESSARY IN TEACHING TRAFFIC SAFETY EDUCATION

3.1 INTRODUCTION

To ensure an effective education in road usage, the stage of physical and intellectual development of the learner must be taken into consideration. For example, the foundation phase learners, through play and therefore a JTTC, will give the foundation phase learner as well as intermediate phase learners and senior phase learners the opportunity to play habitation and moving around (DoT, s.a.: 1-2). This will not only contribute to the learner's general skill development but in particular, but it will develop the learner's skills in road usage. The senior and the further education and training presentation should depict the real traffic situation with more road signs and road marks, thus, adjusting the TSE techniques to become more abstract as the learner progresses to the higher level. (Rabinowitz *et al.*, 1985: 05.)

This chapter will focus on the following sub-headings:

- Learning through JTTC.
- Different learning phases.
- Learning experiences in the foundation phase.
- Participation of the local traffic officer.

3.2 LEARNING THROUGH JTTC

3.2.1 Step 1: Orientation

The facilitator shall take the learners through the JTTC; he/she shall demonstrate and guide the learners along all activities at the Junior Traffic Training Centre.

Learners need to explore the centre by undertaking a tour (on foot) through the little town (JTTC). Learners shall follow the facilitator. The facilitator has to point out to the learners the various features, such as the:

- side walk,
- how and what streets intersect,
- built islands and circles,
- sharp corners,
- road markings, and
- traffic signs. (Rabinowitz *et al.*, 1985.05.)

3.2.2 Step 2: Pedestrians

Because children are pedestrians in the first place, the JTTC should firstly be explored from a pedestrian point of view, that is:

- i. there must be a sidewalk with no vehicles allowed,
- ii. preferably no traffic signs should be used,
- iii. learners should not be allowed to walk across the streets, and
- iv. they should use pedestrian crossings (DoT, s.a.: 3).

3.2.3 Step 3: Drivers

Firstly, the facilitator should walk through the centre without a push wheel and learners should follow the facilitator. The facilitator shall demonstrate the correct behaviour step by step. The facilitator will keep to the left side of the street; he/she reacts towards various traffic signs and road markings and gives the appropriate hand signals. The learners will follow suit until they are quite familiar with the procedures (DoT, s.a.: 3-4).

3.2.4 Step 4: Role plays

Learners are divided into groups, for example, role players, pedestrians, drivers and traffic officers, while the other groups become observers and operate in fuel garages and shops.

3.2.5 Step 5: Imitating vehicle drivers in the use of push wheels

This step is similar to step two, except that the learners will use the push wheels and follow the facilitator through the JTTC activities. The learners must apply rules and also learn to look over their shoulders for oncoming vehicles.

3.2.6 Step 6: Integration according to OBE

The learners should by now have acquired the required skills for effective functioning at the JTTC. The facilitator may send learners on various routes to run errands, e.g. to post a letter. The Specific Outcomes (SO) of the Art and Culture (learning area) can be integrated to road education. For example, learners should be allowed to develop a bridge or a robot using card boxes/wires, crayons etc, which can help learners to cross the road safely (Rabinowitz *et al.*, 1985:8).

3.3 DIFFERENT LEARNING PHASES

When presenting TSE the learners' level of physical and intellectual development must always be kept in mind. The way in which it is presented to the groups mentioned below should differ. These groups and programmes are discussed in the following paragraphs.

3.3.1 Foundation phase

These are the grade one and two learners. It should be noted that the learners in this phase learn mostly through play. Learners shall be taught to explore different possibilities by means of informal presentation.

3.3.1.1 Danny Cat

The facilitator shall use activities such as Danny Cat (pedestrian). Danny Cat (pedestrian) uses a hand puppet, Danny Cat, which tells the learners stories. Let the learners call Danny Cat to come out of his/her house for the story. The facilitator shall introduce the traffic rules to learners by means of story telling. Use the same characters in each story, e.g. the little red man and little green man. Keep the learners' attention in all situations, and remember to have a happy ending.

- A person walking is a pedestrian.
- Always walk on the pavement – do not run.
- Walk on the side furthest away from the kerb.
- Do not play on the pavement.
- Do not play on your tricycle or roller-skates on the pavement.

Figure 3.1: Playing on roller-skates



- When walking with your dog on the pavement, use a lead.
- Never stop on the pavement and play with strange animals.
- Always walk with a grownup if possible. The red man or green man ought to be singing the above words while demonstrating in the JTTC (DoT, s.a.:23).

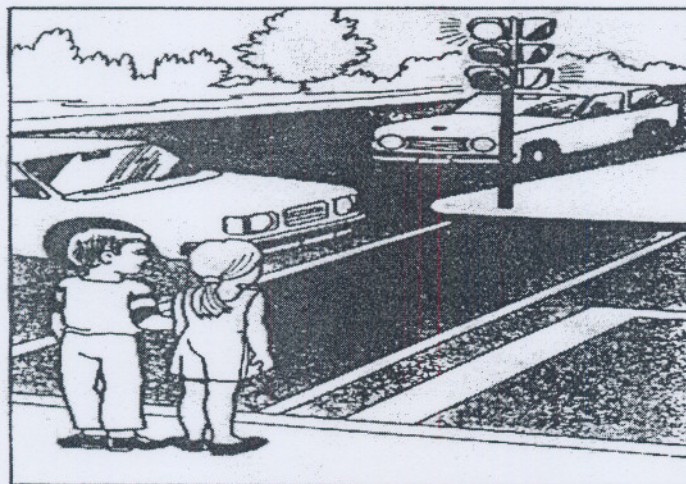
3.3.1.2 Traffic signs for the foundation phase

Grade one learners

As suggested by (DoT, s.a.: 45), the most important traffic signs to be taught to grade one learners are:

- **Traffic lights**

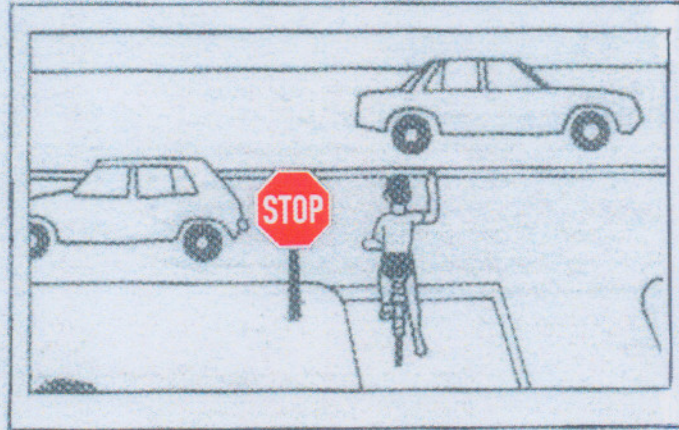
Figure 3.2: Traffic lights



The traffic light in the JTTC will help the educator to demonstrate the function and purpose of traffic lights, for example the learners follow the action of the educator as he/she takes a lead. He will stop when the light shows red and proceed only if the light shows green. This will prepare learners to practice the action or conduct needed when they are faced with a traffic light.

- Stop sign

Figure 3.3: Stop sign



Learners are shown the stop sign and the purpose of the stop sign. They notice how the educator conducts himself towards the stop. He/she stops and looks if it is safe to walk through. These demonstrations are part of the JTTC.

- Yield sign

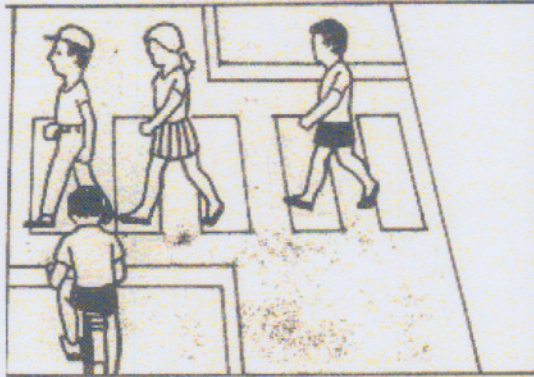
Figure 3.4: Yield sign



Learners are shown the yield sign. At this stage, learners can be told that it serves almost a similar purpose as the stop sign because the road user has to slow down to check if it is safe to pass; if it is not he/she stops till it is safe to do so.

- **Pedestrian crossing block**

Figure 3.5: Pedestrian-crossing block



Learners are shown the pedestrian-crossing block. They must know what it looks like and its purpose is demonstrated by the educator. Learners are made aware that as pedestrians they must use the pedestrian crossing block to cross the road: they should not cross anywhere else.

- **Children crossing**

Figure 3.6: Children crossing



Learners are warned to look for signs which advise them to cross in particular areas.

- **Traffic lights ahead**

Figure 3.7: Traffic lights ahead



Learners are shown the sign which warns that traffic lights are ahead. They must learn that this means that there is a danger of vehicles speeding.

- **Scholar patrol**

Figure 3.8: Scholar patrol



The purpose and importance of scholar patrol is demonstrated. The sense of obedience is inculcated among the learners. The learner must obey the scholar patrol for the benefit of all road users in traffic safety.

- **Railway crossing**

Figure 3.9: Railway crossing



The road sign of a railway crossing is shown to learners and they are taught through demonstrations about the purpose of this warning sign. The danger of ignoring the warning sign should be spelled out. Learners are made aware that there are dangerous areas on the road like where trains are crossing through the same road that is used by pedestrians and vehicles.

3.3.1.3 Traffic signs for the grades two and three

As suggested by (DoT, s.a.: 45) the most important traffic signs to be taught to grade two and three learners are:

- **Cyclists**

Figure 3.10: Cyclists



The sign for a cyclist is shown to the learners in grade two and three. The educator explains and demonstrates the meaning of the sign in the JTTC. It should be explained to learners that they should be aware of areas that are reserved for cyclists; the learner should use an appropriate road for him/herself as a pedestrian at that stage.

- **Pedestrians**

Figure 3.11: Pedestrian crossing



The pedestrian sign is shown to learners and the danger of not obeying the above sign is demonstrated to them through a role play in the JTTC. They should be warned to use the designated road mark to cross the road.

- **Freeway begins**

Figure 3.12: Freeway begins



Learners are taught to recognise very busy roads. The sign warns about the beginning of a freeway. It informs the learner that this is a dangerous road with speeding vehicles. Learners should stay away from such a busy road.

- **Winding road**

Figure 3.13: Winding road



In the JTTC the educator should focus on the winding road sign, and should include an example of real winding. He/she will demonstrate how vehicles move on the winding road and how careful road users should be on this particular winding road, because of obscured vision experienced by cyclists, vehicle drivers and pedestrians.

- **Turn left only**

Figure 3.14: Turn left only



A sense of direction should be inculcated in the learners. The educator will demonstrate the use of the sign to the learners. The demonstration will be done in the JTTC; learners are directed that if they encounter the keep left only sign they should comply with it.

- **No left turn**

Figure 3.15: No left turn



This direction sign should be discussed together with other directions/signs, e.g. right turn and left turn. The educator demonstrates how road users conduct themselves when faced with the signs. The no left turn should be demonstrated to learners, and they must learn that the sign requires of road users not to turn left. Ignoring the sign will be detrimental to the road user and other road users.

- **No U-turn**

Figure 3.16: No U-turn



The directional sign no U-turn is usually found on through-ways where traffic is moving in both directions. It is dangerous to make a U-turn in such areas. The educator should demonstrate the danger by requesting other learners as road users in the JTTC to drive using wire cars or walk behind the educator.

- **Road workers**

Figure 3.17: Road workers



The road workers sign appears only when work is being performed on the road. Road users are advised to drive carefully when they encounter a sign that directs them to keep left or right or which shows that the road narrows to the left or right. The educator can prepare and demonstrate such a circumstance or situation in the JTTC.

- **End of freeway**

Figure 3.18: End of freeway



The educator in the JTTC demonstrates the end of freeway sign. Learners are taught that the sign indicates to road users that the conditions which apply to driving on the freeway is coming to an end. It should also be indicated that speed must be reduced, as drivers will not be free to change direction or speed as on the freeway.

- **Keep right**

Figure 3.19: Keep right



The keep right sign is a directional sign. The educator must advise learners that such a sign is important for road safety. The educator or facilitator demonstrates the importance of the sign in the JTTC to learners.

- **Turn right only**

Figure 3.20: Turn right only



Drive right only is also a directional sign. The facilitator will demonstrate its use in the JTTC and indicate to the learners that the sign is important and that it must be obeyed. Ignoring the sign will be dangerous or unsafe for the road user and other road users.

- **No right turn**

Figure 3.21: No right turn



Demonstration of this sign can be combined with other directional signs to give learners a holistic overview and practical experience in the JTTC. Other signs could include No left turn and No U-turn.

- **No parking**

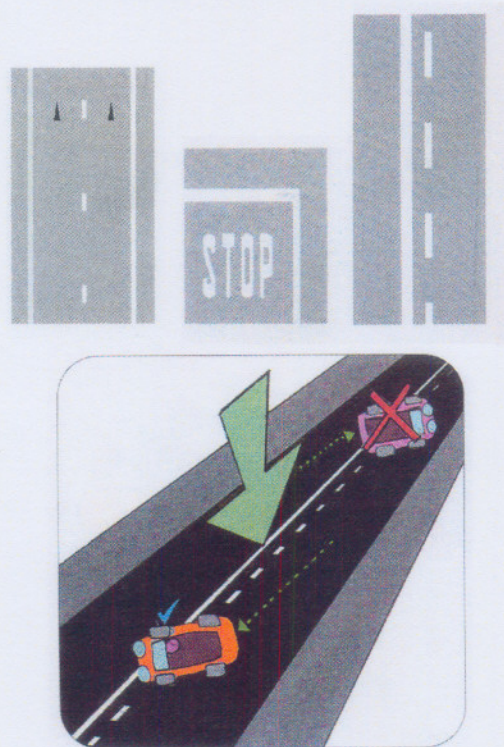
Figure 3.22: No parking



The danger of parking in a No-parking area should be demonstrated by the facilitator in the JTTC. The facilitator will advise a learner not to make a deliberate mistake of parking a wire car in the No parking area as other road users will collide with his car or will be prevented from moving in traffic because of the obstruction.

- Road marks

Figure 3.23: Road marks



Road marks are taught to learners. The facilitator classifies road marks into the “must road mark” and “should road marks”. The “must road marks” are coloured yellow and the “should road marks” are coloured white. The road markings are directional marks; arrows, centre lines (broken lines), barrier lines (solid lines), stop lines and loading zones (DoT, s.a.: 45). The role of the facilitator is to demonstrate the purpose of road markings through the JTTC. Centre lines, (broken lines), barrier lines (solid lines), stopping lines, and loading zones (DoT, s.a.: 45) are also included. The above road signs and road marks must be in the JTTC.

3.3.2 Intermediate phase

In this phase the following programmes can be utilised to educate learners in TSE.

3.3.2.1 Child in Traffic Programme

The Child in Traffic Programme can be used at Junior Traffic Training Centres. The facilitator will need the following equipment to present the Child in Traffic Programme training:

- A flip chart.
- A copy of the front page of the flip chart.
- Ten stickers.
- A registration/monitor control form.
- A practical guide manual.
- Child in Traffic certificates for all the learners in the class.

The facilitator can put a flip chart on the classroom wall for learners to record their views for the entire duration of the programme. The facilitator will use the flipchart and practical guide manual to do the learning programme practically with learners. The facilitator does activities consecutively.

Important points to be remembered by the facilitator are the following:

- He should not rush but he should focus on thoroughness (quality).
- The younger the learner, the more time should be spent on a particular activity. The facilitator should always give sound reasons “why” a particular activity is necessary.
- Make sure that all learners have mastered the activity before moving on to the next phase.

Repeat the learning programme completed with the learner in the class and take them to a safe place (JTTC) for assessment. Reward learners for completing the exercise successfully with a sticker on a loose page cover (D.O.T, sa.: 4).

The facilitator records the names of all learners participating in the programme on a registration/monitor control form for the purpose of awarding them with certificates for participating and successfully completing the programme.

Upon completion of the programme the instructor (traffic officer) will visit the school and evaluate the learners on a spot check basis. The instructor completes the registrations/monitor control forms (marking only the spot-checked activities), whereby learners are selected at random. The result of the spot check will indicate whether or not learners acquired the knowledge.

For all spot check purposes the following three aspects must be tested:

- Conduct on the pavement or side of the road.
- Stop at the kerb or verge of the road.
- Crossing the street (look to the right, left, right again, walk straight across, actions).

Depending on the instructor's choice, two of the following aspects must be tested:

- Conduct at the block pedestrian crossing between parked vehicles.
- Distraction and stopping.
- Crossing at a stop street.

Upon completion of the programme, certificates will be awarded to learners. The facilitator arranges with the instructor for a presentation, for example at a parents' evening meeting. Immediately after completion of the evaluation, the instructor will send the registration/monitor control form and information form to the provincial office (DoT, s.a.: 3).

3.3.2.2 Scholar patrol programme

Figure 3.24: Scholar patrol programme



The content of the programme contains the following key information:

- See and be seen.
- Stop at the kerb.
- Look and listen.
- Am I safe?
- Walk straight.

The facilitator and learners target the following outcomes:

- The purpose of a scholar patrol.
- The task of a scholar patrol.
- The task of a traffic officer on duty at a scholar patrol.
- *Task of the scholar patrol*
 - They see to it that learners cross the street, orderly, neatly and safely, at the marked pedestrian crossing near the school.
 - They supervise at the marked pedestrian crossing and help where necessary.
 - They see to it that no games are played in the street.
 - They encourage proper use of the pavement.

- Learners are made aware of the fact that as part of the scholar patrols, they are given the opportunity to contribute to promoting road safety in a practical way.
 - The scholar patrol is on duty before school starts in the morning, and every afternoon when the school breaks up.
 - The learners are proud of their scholar patrol because it is a bridge to safety, and it is gladly used by them.
 - If the scholar patrol is not at the pedestrian crossing; you must cross on your own. Wait on the pavement behind the kerb.
 - Some traffic departments place a traffic officer on duty with the scholar patrol (DoT, s.a.:21).
- ***Rules regarding scholar patrol***
 - Look right, left and right again in the street and listen.
 - If there are no vehicles approaching and it is safe, walk briskly across the street while looking and listening.
 - Learners need to know which traffic signs are used, and
 - what the responsibilities of motorists are.
 - Always encourage POSITIVE ATTITUDES in the learning content (DoT, s.a.:15).

3.3.3 Senior phase

These are the grade five, six and seven learners. In this phase the learners are introduced to the learning programme within JTTC. These learners are taken to the actual traffic situation as presented in the learners' traffic programme.

3.3.3.1 Cycling

Senior phase (DoT, s.a.: 28).

- Learners are introduced to the bicycle.
 - Learners learn skills such as balance and control to achieve self-confidence.
 - Learners learn safe handling of a bicycle on the playground or traffic training centre; not in the street. Positive attitudes are cultivated.
 - A sense of responsibility is fostered.
 - Learners are made aware of the danger of traffic and of the fact that a bicycle is a vehicle with a very vulnerable driver.
 - Compare a bicycle as a vehicle with other vehicles as far as size and weight are concerned. Learners experiment with lifting and moving vehicles.
 - Bicycles are the smallest, lightest and slowest vehicles on the road.
 - The bicycle is compared with other vehicles as far as protection is concerned.
 - Suitable hand signals are taught to indicate stop or turn movements.
 - The two methods for a cyclist to go through an intersection is described and demonstrated.
 - The two methods a cyclist can use when negotiating a bend at an intersection is described and demonstrated as follows (Fig 3.25):
- (1) The cyclist rides on the left side of the street.
 - (2) If he has to turn at the intersection, he gives a hand signal to show that he is moving to the right.
 - (3) Ride next to the barrier line up to the stop line at the intersection.
 - (4) Giving a hand signal, he/she turns right once it is safe to do so.
 - (5) He moves towards the extreme left hand side.
 - (6) He then keeps riding on the left hand side.

Figure 3.25: Demonstration of the first method which a cyclist can use, as explained in Section 3.3.3.1 (DoT, s.a.: 29)

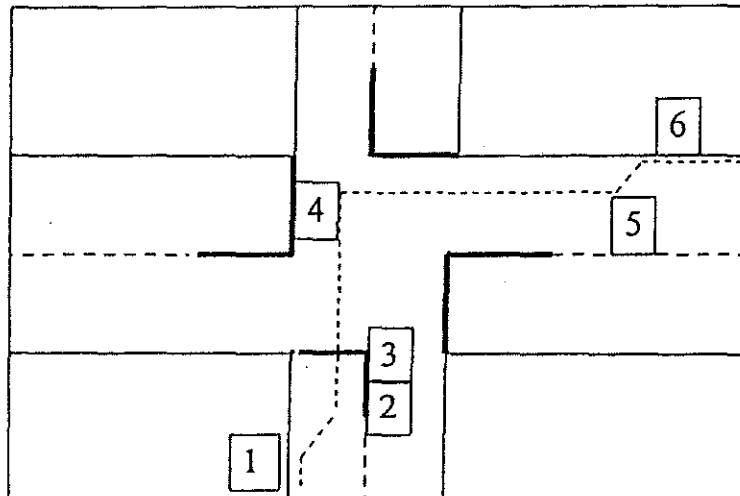
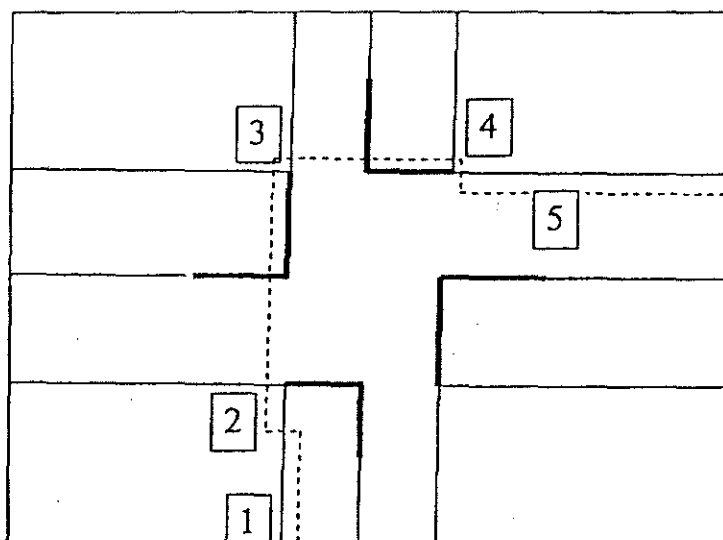


Figure 3.26 Demonstration of the second method which a cyclist can use as explained in Section 3.3.3.1 (DoT, s.a.: 29)



- (1) The cyclist keeps left up to the stop line,
- (2) climbs off his bicycle and pushes it across the pavement to the pedestrian crossing straight across the intersection.
- (3) On the other side he turns right and walks with his bicycle across the pavement to the pedestrian crossing to the other side of the street,
- (4) he pushes his bicycle to the left side of the street,
- (5) climbs on and rides away (Fig 3.26).

In the classroom the learners are given a chance to discuss both the safety and danger of the two methods.

3.3.4 The Further Education and Training Phase (FET)

At this stage learners are regarded as mature road users. They can even help lower phase learners with programmes such as scholar patrol and the cyclist programme. These learners are fit to aspire for driving licences from the Traffic Directorate. At this stage learners know that they cannot buy driving licences but that they have to pass the tests for driving, namely a learner's licence test and a driving licence test. These learners can be given an opportunity to develop JTTC at schools with the help of the traffic officer.

3.4 THE LEARNING EXPERIENCES IN OBE FOUNDATION PHASE

Here the facilitator approaches learners by engaging them in learning activities performed according to outcomes-based education.

3.4.1 Integration in life skill learning area

The expected levels of performance for health and safety are that learners are expected to have an understanding of solving problems about and interacting with aspects of their immediate and extended environment to maintain a safe and healthy life style.

Table 3.1: Learning experiences in the foundation phase

The following table demonstrate learning experience in the foundation phase:

	GRADE R	GRADE 1	GRADE 2	GRADE 3
C O R E	<i>It is expected that learners:</i> Recognise patterns for problem solving by focusing on their immediate environment	<i>It is expected that learners:</i> Understand the elements of safety and a healthy life-style in their immediate environment by focusing, e.g. on aspects such as poisons, personal body, fire, medication and appliances.	<i>It is expected that learners:</i> Identify persons from their immediate environment who represent safety and healthy life styles, e.g. doctors, firemen, athletes and priests.	<i>It is expected that learners:</i> Identify the caring components of their immediate and extended environment.
L E V E L 1	<i>This is evident when learners:</i> Match and display various patterns that relate to safety, e.g. beads may not be swallowed and scarves may strangle one.	<i>This is evident when learners:</i> Display harmful and beneficial substances from the immediate environment.	<i>This is evident when learners:</i> Act out, write about and role-play an accident to demonstrate the roles of professionals in assisting the community maintaining a safe and healthy lifestyle.	<i>This is evident when learners:</i> Display knowledge about care and the nature of safe and healthy environments by performing simple investigation of identified problems and make simple recommendations based on their findings and experiences.

	GRADE R	GRADE 1	GRADE 2	GRADE 3
L E V E L 2	<i>This is evident when learners:</i> Are aware of safety patterns in the immediate environment, e.g. necklaces, zebra crossing, fencing and paving. Use relevant terminology to describe safety patterns in their immediate environment.	<i>This is evident when learners:</i> Explore the possible hazards to their personal health in their immediate environments. Talk about the effect of dangerous substances in their immediate environments and the use of different natural resources.	<i>This is evident when learners:</i> Explain the roles that various health professionals play in maintaining a safe and healthy lifestyle in their immediate environments. Match the tools of the various professionals, which are used to promote safe and healthy lifestyles in their immediate environments.	<i>This is evident when learners:</i> Name and illustrate the various elements in different environments where health facilities and medication are available. Are aware of the costs of services and products that can be equipped at such facilities. Identify persons in the immediate environment who require care and establish why these persons require the care.

Facilitators can integrate traffic safety with these learning experiences (DoE, 1997b:77) by using JTTC in the school. The learners are taught to look for places of safety when crossing the street (DoT, s.a.:9). The facilitator uses JTTC on the school premises or near the school, where there are quiet streets without parked cars near the school, for them to practice what they have learned.

The following method can be used:

- Walk the child to the kerb ledge of the pavement and stop, calling out “stop”.
- Take the child’s head in your hands and gently turn the head to the right, asking, “can you see anything coming?”
- Repeat this action to the left and again to the right, each time asking the child if there are any vehicles approaching.
- Only on the answer “no” take the child’s hand and lead him/her across the street but keep looking both ways and listening, if a vehicle approaches, the child must stop to repeat the actions.
- Repeat a few times before asking the child to demonstrate the exercise.

Practical evaluation can be done as follows:

Crossing the street:

Complete the sentences.

While crossing the street, I look _____ and _____ and _____ again, I keep on looking until I am on the other side.

The facilitator takes the learners out to look at the pedestrian traffic light, which has a little red and a little green man.

The learners take note that all traffic rules are obeyed.

Learners cross the street when the light of the little green man appears and keep on walking even if the little red man’s light comes on.

The learners are informed that they should not turn back if the light changes, but keep on walking after the lesson on pedestrian traffic lights has been dealt with and after learners have practically implemented the rules, they do a written activity:

- When the _____ man appears, wait for the _____.
- When the _____ man appears I may walk if it is safe to do so (DoT, s.a.: 38). This learning experience using the phase organiser communication can be properly done through both traffic training centres and classroom strategies.

3.5 PARTICIPATION OF THE LOCAL TRAFFIC OFFICER

The involvement/contribution of the local authority directorate of traffic safety includes the following:

- The traffic officer is appointed to see to it that traffic rules are obeyed.
- He regulates traffic and prevents confusion.
- There is a good understanding between all road users, pedestrians and drivers of vehicles when traffic rules are obeyed.
- Learners must understand and obey the hand signals given by the traffic officer.
- The hand signal to stop vehicles is when the traffic officer holds his right hand up.
- At the time we see him from behind with his left hand stretched out. This also means that we must stop.
- When his right hand is held up and his left arm is stretched out, it means that pedestrians and vehicles from the front and from behind him must stop.
- He indicates with both hands that the road is safe and that we may continue.
- If possible, invite a traffic officer to the school to tell the learners about his work.
- The traffic officer is the learners' best friend because he helps them to cross the street safely.
- Learners can feel free to ask the traffic officer for help when they are lost or scared to cross a busy street.
- Co-operation between learners and the traffic officer is very important.
- Courteousness, respect and friendliness are stressed.
- Traffic officers are often on duty at pedestrian crossing at schools.

The above exercise basics are found in JTTC (DoT, s.a.: 3).

3.5.1 Attitude development

The facilitator fosters the following attitudes in learners by introducing the traffic officer and different road users in the JTTC. The attitudes mentioned below develop when learners learn to obey rules and traffic officers (DoT, s.a.: 24).

- Respect, when learners respect the traffic officers as well as other road users.
- Tolerance, when learners tolerate other drivers even if the other drivers or road users make mistakes.
- Consideration, when road users consider each other.
- Patience. Road users should have patience with other road users, for example, a pedestrian crossing very slowly because of health or age.
- Friendliness and self-control. The facilitator addresses the problem of road rage, which ruined many road users by fostering friendliness and self-control, especially when road users encounter slow moving drivers on the road. (DoT, s.a.: 24).

These basics of attitude start at the JTTC at schools (DoT, s.a.: 24).

3.6 CONCLUSION

The role of the teacher is crucial to the process. Zietsman (1997:40) explains the specific outcomes of the knowledge of traffic signs for the foundation phase learners through the use of a JTTC (DoT, s.a.: 45-57) as follows: "Present and prospective teachers need to be trained to be fully equipped to deal with the OBE techniques of teaching. The teaching method will relate to the learner's personal experience, which will require skills from the teacher. The innovative curriculum may be wasted should teacher presentation be inadequate", the specific outcomes of the knowledge of traffic signs for the foundation phase learners can be addressed by using JTTC (DoT, s.a.: 45-57).

lesson. They see the teacher as being better prepared in this context. The shift from objectives and towards outcomes is noticed in outcomes-based education. It describes what learners should now be able to do, and should value because of their learning experiences. Teaching for outcomes develops the skill, knowledge and attitude of learners (Bertrams *et al.*, 1997:8).

In traffic safety knowledge implies that learners should know traffic safety or traffic safety awareness; skills imply that the learner have the know-how of using the road safely.

CHAPTER FOUR

4. TRAFFIC SAFETY EDUCATION THROUGH JTTC WITHIN THE OUTCOMES-BASED EDUCATION CURRICULUM

4.1 INTRODUCTION

The challenge facing curriculum developers and educators of TSE is how educators will fit TSE or in the already existing OBE structure. This chapter attempts to address the stated challenges through outlining a learning programme involving JTTC.

4.2 THE LEARNING PROGRAMME (LP)

The appearance of a LP is developed in DoE (1997c); it contains the following features which form part of the programme:

- **Specific Outcomes (SO)**

What a learner must be able to do at the end of a learning process, in TSE using JTTC. An aspect in a learning experience can be addressed. For instance, the facilitator teaches about crossing the road and expects learners to be able to demonstrate the skills of crossing the road, e.g. look right, left and right again.

- **Assessment Criteria (AC)**

This is the evidence that a learner must provide to show that the outcome has been achieved. In this case the learner should be able to cross the road successfully, to demonstrate that he/she has the skill to cross the road.

- **Range Statement (RS)**

These are statements that indicate how much, how difficult, at what level the learner is expected to achieve. It is in the RS that examples of content, product and process will be suggested.

The crossing of the degree of difficulty will always depend on how busy the road is. The learner begins at a less busy road and progress to the most busy road.

- **Performance Indicators (PI)**

These involve a detailed breakdown of the content, process and contexts that a learner must engage with in order to achieve the outcomes. Performance criteria are the building blocks which will be used to plan lessons and assess progress (Clarke, 1997:15). The following questions will form part of the range statement: is the learner listening to the surrounding sounds before crossing, is the learner looking right, left and right again before crossing, is the learner able to identify designated spot areas for crossing? These can be regarded as performance indicators.

4.3 OBE STRUCTURE

The OBE Structure consists of the following:

- Learning Areas (LA)
- Critical Outcomes (CO)
- Specific Outcomes (SO)
- Assessment Criteria (AC)
- Range Statements (RS)
- Performance Indicators (PI) should be used to develop a learning programme. They serve as the vehicle through which the curriculum is implemented at the various sites of learning.

- **Critical Outcomes (CO)**

The relationship between JTTC and OBE should be perceived as just such a possibility, especially in view of Spady and Marshall (1991:70) who point out that advocates of OBE agree that an outcome is a successful demonstration of learning that occurs at the culminating of the learning point of a set of learning experiences. The term *culminating* refers to the completion point of a segment of a curriculum: what students are ultimately able to do at the end, once all formal instruction is over and can be synthesised and applied successfully.

After the training the learners at the JTTC will demonstrate gained skills, knowledge and values successfully. Outcomes, which are the end products of learning, are then achieved.

4.4 OUTCOMES-BASED EDUCATION AND JTTC

4.4.1 Structure of OBE's curriculum

Examples from learning are Languages, Literacy and Communication (LLC) (SA, 1997a:37).

4.4.2 Critical Outcomes (CO)

The seven broad, generic, cross-curriculum outcomes identified by the South African Qualification Authority (SAQA) are the following:

- (i) Identify and solve problems and make decisions using critical and creative thinking. Here learners are taught to identify unsafe areas on the road and learners are encouraged to think critically how to apply safety strategies to survive on the road. For example, learners as pedestrians learn to use crossing points designated for them to cross and respond to road signs and road markings available on the road (Rabinowitz *et al.*, 1985:05).

- (ii) Work effectively with others as members of a team, group organisation and community. Learners should at the end of the learning process know that they are not road users alone, they are part of the community which uses the road. There are other road users such as pedestrians, motorists and cyclists. Each group must give one another some chance on the road.
- (iii) Organise and manage themselves and their activities responsibly and effectively. Sometimes learners are on their own and they are expected to organise themselves as different role players in the JTTC and manage their roles as traffic officers, pedestrians and motorists.
- (iv) Collect, analyse, organise and critically evaluate information. As learners mature in their learning programme, they will be given a chance to demonstrate skills in collecting information for themselves in the Junior Traffic Training Centres. The collected information will be analysed and critically evaluated by them for example, they should indicate the incorrect and correct behaviour of one another on the road.
- (v) Communicate effectively using visual, symbolic and/or language skills in various modes. As road users, learners communicate with one another and indicate to one another by means of signs, their intentions on the road, for example if the learner indicates to others that he or she should reduce speed or should stop, he does that by show of hand signals.
- (vi) Use science and technology effectively and critically show the responsibility towards the environment and the health of others. Learners demonstrate that responding to traffic lights and other signs of the road are important and that they acknowledge that injuring others is careless and unacceptable.

- (vii) Demonstrate an understanding of the world as a set of related systems by recognising that a problem solving context does not exist in isolation. Learners are made to understand that Traffic knowledge applies to the rest of the country and the world.

4.4.3 Eight Learning Areas (LA)

4.4.3.1 Language, Literacy and Communication (LLC)

The phase organiser of traffic safety is integrated in the learning area (LLC), for example a comprehension test with the theme of safety on the road. The learners learn that in the classroom and demonstrate skills at the JTTC.

4.4.3.2 Human and Social Science (HSS)

Learners in grade nine learn about the urban and rural environment, including roads. Here learners will learn that there are different kinds of road users, including horse carts and donkeys. This additional or different disposition places different responsibilities on road users in the rural, urban and suburban areas.

4.4.3.3 Mathematics Literacy, Maths, Mathematical Science (MLMMS)

Integration of road education or TSE is demonstrated by calculating speed and distance per hour and its possible impact on traffic safety. This reality can also be further demonstrated at the JTTC.

4.4.3.4 Technology

The phase organiser technology is used. Learners relate to modern communication technology, for example the impact of cell-phones on traffic when they are used by road users, especially motorists.

4.4.3.5 *Natural Sciences (NS)*

The need for oil, water and petrol in the vehicle as daily service for the vehicle and the importance of the above for the smooth running of the engine of the vehicle.

4.4.3.6 *Arts and Culture (AC)*

What different cultures use for transportation, e.g. Egyptians use camels, Africans use horses and Europeans use cars, among others.

4.4.3.7 *Economics and Management Science (EMS)*

Statistics indicate that the deaths of road users cost the government a lot of money and the learners learn how to establish that.

4.4.3.8 *Life Orientation (LO)*

Careers within the transport industry such as taxi drivers, heavy-vehicle or truck drivers, train drivers and bus drivers, learners learn the etiquette needed for each career.

4.4.4 *Specific Outcomes (SO)*

Skills, knowledge and values of an outcome or set of outcomes, SO refer to the specification of what learners are able to do at the end of a learning experience. This includes skills, knowledge and values that inform the demonstration of the achievement of an outcome or a set of outcomes. The focus of OBE and training is the link between the intentions and the result of learning, rather than the traditional approach of listing content to be covered within a learning programme.

In each learning area, it is found that a set of Specific Outcomes (SO) describes what learners will be able to do at all levels of learning. The differentiation between different phases of learning would be addressed by different levels of complexities in the processes learners engage in and the kinds of evidence through which learners demonstrate outcomes. It will be left to the Learning Programme (LP) designers to select and cluster certain outcomes for inclusion in LP (Vermeulen, 1997: 47).

The above SO outline can be used in JTTC by differentiating Specific Outcomes according to the level of grades and development. For instance, for learners in grades R - grade three the emphasis is placed on achieving outcomes of road users' knowledge of pedestrian skills on the usage of the road. Then at the intermediate phase, knowledge of pedestrian skills combines with the knowledge of road signs.

At the senior phase, the learning material should consider that in certain areas, learners at this stage prefer to cycle to school. This involves learning that is closer to the natural environmental setting. (Rabinowitz, *et al.*, 1985:7)

4.4.5 Assessment Criteria

The Assessment Criteria provide evidence that the learner has achieved the SO. The criteria indicate and in a broad term provide evidence that the learner has achieved the specific outcome. The criteria indicate in broad terms the observable processes and products of the learning that serve as culminating demonstrations of the learner's achievement.

The Assessment Criteria are derived directly from the SO and from a logical set look like. So the SO takes into account that the SO will take the form of statements that "learners will have full knowledge of crossing points on the road". The assessment criteria generally indicate that learners have achieved the point where they can utilise (use) the infrastructure designated for pedestrians to use. The assessment criteria are broadly stated and incorporated.

They do not themselves provide sufficient details of exactly what and how much learning marks an acceptable level of achievement of the outcome. For this reason, the assessment criteria are explained and detailed in the Range Statement (RS). The assessment criteria provide a framework for the assessment, while the RS will be applied too (SA, 1997a:16).

4.4.6 Range Statements (RS)

RS indicate the scope, depth and level of complexity and parameters of the achievement. They include indications of the CO of content, processes and context, which the learner should engage in order to reach an acceptable level of achievement. While the RS indicates the areas of content, product and process, it does not restrict learning to specific lists of knowledge, items or activities that learners can work through mechanically. The RS provides direction but allow for multiple learning strategies, for flexibility in the choice of content and process and for a variety of assessment methods.

The RS describes the level of complexity and the extent of vigour that learners are expected to master. While it is possible that the assessment criteria for an outcome may read the same for different phases and grades, they will be differentiated in the RS through description of progressively increasing complexity and sophistication as learners progress to higher grades.

The RS is an expansion and explanation of the critical terms and categories of the assessment criteria. The salient nouns and verbs of the assessment criteria are described in sufficient detail to assist in the planning of learning programmes and assessment strategies.

The RS has the additional function of ensuring that a balance is maintained between the acquisition of both knowledge and skills and the development of values. The RS should also describe the broad context of learning. It should provide broad indications that guide the choice of a range of methodologies and teaching and learning strategies that will support the achievement of outcomes (SA, 1997a:17).

4.4.7 Performance Indicators

The assessment criteria and RS give only broad indications of what evidence learners need to present before they are seen as having achieved the SO. There is therefore a need to provide much more detailed information about what learners should know and be able to do in order to show achievement. We also need to ensure that learners have formed opinions and assumed values through their learning. Because the outcome is the culmination of the learning process, there is a need to provide learners with indicators by which they can plan and measure their progress towards the achievement of the outcomes.

Performance Indicators (PI) provide the details of the content and processes that learners should master, as well as details of learning contexts in which the learner will be engaged. This will provide practitioners and learners with a breakdown of the essential stages to be reached in the process of achieving the outcome. PI will help in the planning of the learning process, the tracking of progress and the diagnosing of the problems, for example the PI such as a learner being able to cross the pedestrian crossing or a learner should look to the right and left and right again, then cross. If the learner does not perform that which is in the PI, then he did not achieve the goal or partially achieved the goal if he performs close to what is stated.

The PI will show the level of achievement that the learner finally achieves. It will allow assessment of whether the learner has achieved the outcome or not. They will also allow statements to be made about the quality of achievement, that is, whether the achievements at the level required or whether the learner has surpassed this level (Vermeulen, 1997:48).

4.5 THE INTEGRATION OF TRAFFIC SAFETY EDUCATION IN A LEARNING AREA

The integration of TSE can be done in all learning areas. The Human Social Science (HSS) will be used as an example within OBE. The following learning experience was adopted from DoT (2001: 14-16).

4.5.1 Learning experience for Grade 4

Table 4.1: Learning experience in Grade four (OBE)

Learning Programme: Human and Social Sciences							
Phase Organiser: The learner in the environment							
Programme Organiser: See and be seen							
LCC	HSS	TECH	MLMM S	NS	EMS	A + C	LO
SO 1:1,2	SO 3:2	SO 2:1				SO 1:2	SO 5:1,2
SO 4:6	SO 5:4	SO 6:1					
SO 6:1	SO 6:6						
	SO 7:3						
	SO 9:4,5						

Activity Outcomes

- To make learners aware of dangerous situations in which cyclists may find themselves on the road.

LLC SO	1:1,2
HSS SO	6:6
LO SO	5:1,2

- Understand the role the natural environment plays in safe participations in traffic HSS SO 3:2
- Decision making SO 5:4
- Use appropriate technology SO 6:6
- Attitudes, values and perceptions SO 7:3
- Strategies to address issues SO 9:4,5
- Independent and co-operative learning skills TECH SO 6:1
- Problem-solving skills
- Technological impact reviewed

- Understand the importance to be able to see and be visible in traffic LO SO 5:1,2
A+C SO 1:2
- Take note of rules and regulations for cyclists HSS SO 6:6

- Take responsibility for their behaviour LO SO 5:1,2

- Develop report writing skills LLC SO 1:1,2
SO 4:6 SO 6:1
- To enhance safe cyclist behaviour through scientific knowledge and skills regarding cycling. HSS SO 3:2
SO 5:4
SO 6:6
- Knowledge of: SO 7:3
 - § Systems and control SO 9:4,5
 - § Safety TECH SO 2:1,2
A+C SO 1:2

Learning Materials

- Poster
- Road
- Bicycles
- Paper and pencils
- JTTC

**ACTIVITY 1: (LLC 1:2; HSS SO 3:2; SO 5:4; SO 6:6; SO 7:3; SO 9:4,5;
NS SO 1:1; LO SO 5:1,2; TECH SO 6:1)**

Prior knowledge: learners discuss the scene on a poster where two cyclists are riding abreast. They refer to their previous findings. The facilitator suggests the following:

- Imagine the scene when it is night, or dawn or dusk.
- Learners discuss new potential dangers and report back to the class.

The facilitator sketches the following: a group of four boys went on a trip at six in the morning. They had to travel on a dirt road. The road ran from west to east. It was an exceptionally busy road. Being quite cool, they were all wearing their dark green school tracksuits. The bicycles were loaded with food baskets, they rode abreast and just as they topped a hill, a car coming from behind, was almost on them. It was then that one of the boys was knocked down. Luckily for him the car was not travelling too fast. He was soon released from hospital suffering only minor injuries. Learners compare their findings and advise the boys on how they could have avoided the danger (DoT, 2001:5).

ACTIVITY 2: (HSS SO 3:2; SO 5:4; SO 6:6; SO 7:3; SO 9:4,5; TECH SO 6:1)

Possibilities of what might have happened are discussed and recorded. They list the possible causes of poor visibility. Guide the learners to include the following influences:

- dust,
- dusk,
- dark clothing,
- unroadworthy bicycles,
- no light and a number of more reasons, e.g. lack of a light on the bicycle, glare of the sun, smoke, fog or rainy weather.

The facilitator lists all the possibilities on the chalkboard. Learners suggest a variety of solutions for each of the possible causes for the accident.

They suggest alternative action that could be taken. Learners record the solutions under the listed headings for inclusion on their portfolio. Another situation, like dust, can be demonstrated on the JTTC.

ACTIVITY 3: (LLC SO 4:6; NS 2:1; TECH SO 2:1)

Class discussion: discuss the list on the chalkboard. Learners discuss and explain how the bicycle can be made more visible. One of the reasons suggested for not being able to see or be seen is the absence of a light on the bicycle. Sources of light are also discussed.

The question can be put: how is light generated for a bicycle?

Answer:

- A lamp and batteries.
- A dynamo on the hind wheel, or
- a dynamo/magneto built-in in the cog. Other outcomes are possible, discuss innovative thoughts e.g. a flashlight, lantern.

A visit to the library is arranged and the facilitator responsible for natural science facilitates this part of the research. Before going to the library learners investigate how the mechanisms of bicycles may be employed to generate light. The learners question parents or mechanics on a dynamo and how it operates. Learners go to the library and research the dynamics of a dynamo and how it operates. They report and compare their findings (DoT, 2001: 16).

Learners visit bicycle dealers to investigate the latest inventions, record them and report back.

Assignment: Draw and explain how a dynamo operates. Learners demonstrate the working of a dynamo in class (DoT, 2001:16).

ACTIVITY 4: (LLC SO 1:1,2; A+C 1:2)

Learners in groups compose a jingle for *See and be Seen*. They rap, dance, etc. and present their jingle to the class. The class select a leader to contact the nearest radio station to present the jingle to them (DoT, 2001: 16)

Assessment: Outcomes for this learning experience will be achieved when:

- The facilitator assesses the participation of learners in arriving at findings and the advice the learners would give to cyclists to be safe.
- The recorded solutions to problems stated in Activity 2 have been assessed (attention to terminology).
- Learners' demonstration of how a dynamo operates assessed.
- The jingle is assessed in class (DoT, 2001: 16).

4.6 CONCLUSION

Learning programmes are the vehicles through which the curriculum is implemented at the various sites of learning, such as schools. They are the sets of learning activities in which a learner will be involved while working towards the achievement of one or more SO's. These curriculum systems or methods suit the use of JTTC within OBE.

CHAPTER FIVE

5 EMPIRICAL INVESTIGATION AND DISCUSSION OF RESULTS

5.1 INTRODUCTION

The aim of this study is to (1) outline the importance of JTTC in schools. This would aid the effective integration of TSE in the school curriculum within OBE. The key issue that this research intends to address is to (2) determine the ways in which JTTC at schools relate to the development of knowledge, skills and attitudes of learners towards safe participation in traffic environment/situations.

The empirical investigation in this study is done by means of a questionnaire administered to the educators and learners. Observations were made according to the location of learners namely (i) farm (ii) semi-rural (iii) or township. The questionnaire is administered in the following manner: an appointment is made, for example seven days before the questionnaire is conducted and distributed at the place of employment of the respondent, learners at the guidance teacher's office or any space per arrangement. Random sampling of learners was done by selecting one learner per classroom. Gender was considered by ensuring that 50% of learners are females and the other 50% are males.

The following are presented in this chapter:

- Report on the methodology.
- Educators' and learners' responses to the questionnaire.
- Interpretation and discussion of educators' responses to the questions.
- General conclusions concerning educator and learner responses.
- Interpretation and discussion concerning observation of learners at farms, semi-rural areas and township.
- General conclusions concerning different places observed with regard to the need for traffic education.
- Comparisons of educators and learners.

Outcomes-Based Education is stated at the beginning of the questionnaire. The questionnaires are presented in Appendixes 3 and 4.

The questionnaire for educators contains 40 items or statements and for learners 19 items or statements. For each statement, three options are provided, namely (a) Agree, (b) Disagree, (c) Unsure. The importance and approaches necessary for teaching TSE through JTTC within OBE are identified by “agree” responses to the statements. The option of “disagree” indicates that the JTTC and TSE are not important. The “agree” category is valued with one (1) and the “disagree” category is valued with zero (0).

The third category, “unsure”, has no significant bearing to the study and as a result it will not be counted.

5.2 LITERATURE REVIEW

To achieve the aims of this study a survey of literature was done in addition to the data collected through the questionnaire and observations (triangulation). Various studies on the implementation of TSE were studied. The research materials, journals and books which were consulted mainly appeared in 1990 - 2001.

5.2.1 Analysis of questionnaires and observation techniques

This is done to achieve the fourth aim of the study of JTTC within OBE as well as to address the research question in section 1.2.3. One learner per class was identified through random sampling. The respondents were chosen in the following manner: Gaenthone Secondary School at Hartbeesfontein Tigane had 40 classes, therefore 40 learners were used; Phaladi Combined School at Ikageng had 24 classes and 24 learners were used and Maheelo Combined School a farm school at Klerksdorp had 10 classes and 10 learners were used.

The questionnaire for educators was administered to 40 educators from Gaenthone Secondary School, to 24 educators in Potchefstroom from Phaladi Combined school and to 10 educators from a farm school.

Table 5.1: Sample and school capacities

Name of school	Area	Capacity	No of teachers
Gaenthone Secondary	Semi Rural	1150	40
Phaladi Combined	Township	600	24
Maheelo Primary	Rural/farm	100	10

5.2.1.1 Aims of the questionnaire

To achieve the aims of the study, a structured questionnaire was designed for learners and for educators. This was done to ensure that JTTC in schools will effectively bring about TSE in schools in Outcomes-Based Education. Learners' questionnaires were based on the importance of JTTC, and educators' questionnaires were based on importance as well as approaches necessary to teach TSE, as the aims and questions of the research demand.

The questionnaire sought information to confirm or to disagree with the above hypothesis. The methodology is given in Section 5.3. The result of educators' and learners' responses to the questionnaires are presented in Appendixes 5 and 6.

5.2.1.2 Aims of the observation

Observations were made in schools identified according to three different residential areas, namely rural/farm, semi-rural and township.

The researcher observed the learners who go to and from school in the morning and in the afternoon after school. The three schools are classified as one primary, one combined and one high school. Observations were made in Potchefstroom and Klerksdorp districts. The learners who attended school during the day of observation were observed. A school using a JTTC, Matseke

Primary school was observed. The learners of the Matseke Primary School, were used or observed in comparison with the learners of the three mentioned schools.

5.3 METHODOLOGY OF THE RESEARCH

5.3.1 Introduction

To reach the aim, the following methods were employed in this section

Methodology may be defined as the sequence of operation for the accomplishment of a particular task. This implies the design of such procedures to be taken towards achieving the purported objectives of the study. *Design of the study* is a phrase used to describe a number of decisions which need to be taken regarding the methodology for the study, or for collection of data before the data are collected (Nwana, 1991:54).

This section presents the methods that are employed in carrying out the proposed research to determine the educational role and value of JTTC within the OBE curriculum. Section 5.3 is concerned with the sources of data, population study, method of interpretation and analysis of data.

5.3.2 Sources of data

Primary and secondary sources of data are utilised. The primary sources are the questionnaire(s) designed and administered to educators and learners and observations made at learners' behaviours, their reaction to traffic to and from school and their reaction to traffic in general. The secondary sources involve content analysis of information obtained from textbooks, journals, magazines, pamphlets, dissertations, theses and other printed documents.

5.3.3 Population study and sampling techniques

The learners and educators who constitute part of the population for this study were from three schools, namely one secondary, one combined and one primary school. The schools are Gaenthone Secondary (a semi rural school at Tigane Hartbeesfontein,) Maheelo Primary (a rural/farm school in Hartbeesfontein, in the Klerksdorp district, and Phaladi Combined (a township school at Ikageng in Potchefstroom). These schools were randomly selected through balloting. The balloting was done using the system of balloting with replacement. Names of schools in the NorthWest Province were written on separate sheets of paper, which were shuffled thoroughly. One was then picked at a time by the researcher and the name found on it recorded. The rest were shuffled again so that none of the papers maintained a permanent position.

The schools selected were the following:

- i. Gaenthone Secondary School.
- ii. Maheelo Combined School.
- iii. Phaladi Combined School.

5.3.4 Method of administering the questionnaires

The questionnaire as described in Section 5.3 and 5.3.1 was administered to educators and learners. The answering techniques of all 40 items on the questionnaire were administered by the principle of “on the spot collection” before proceeding to another school, that is, by giving questionnaires to respondents to complete, and to collect them before proceeding to another school or group of respondents. Learners were also given a different questionnaire with 19 items (Appendix 4). This principle was used very successfully since all questionnaires handed out had been returned.

5.3.5 Method of administering observations

Observations were done in three residential areas, namely rural, semi-rural and township. The principal and the circuit managers inform the aware of observation, but not the learners, who were the respondents' subject in this case. The observer chose a place where he could observe learners as they went to and from school.

The following table was used to indicate which responses or variables the observer wished to study or how learners responded to particular traffic situations and traffic furniture.

Table 5.2: Comparison table for observation of different learner behaviours on the road

DO LEARNERS CAREFULLY OBSERVE THE FOLLOWING WHEN ON THE ROAD?

1	Stop sign.	Yes	No	Not applicable
2	Traffic light.	Yes	No	Not applicable
3	Use designated crossing points.	Yes	No	Not applicable
4	School patrol.	Yes	No	Not applicable
5	Cross accordingly, look right then left and right again.	Yes	No	Not applicable
6	Expect cars to stop where there is no pedestrian crossing/stop block to stop them to pass.	Yes	No	Not applicable
7	Only signs recognisable of oncoming vehicle itself.	Yes	No	Not applicable
8	Traffic officer.	Yes	No	Not applicable
9	Use available infrastructure on the road.	Yes	No	Not applicable
10	Playing on the road while walking to school is dangerous.	Yes	No	Not applicable

The observation technique was successful because the learners behaved naturally and as usual. This helped the researcher to obtain true data and respondent behaviour.

5.3.6 Method of data analysis

The analysis and interpretation of the data were made using statistical techniques. The data was analysed by cross tabulation and the use of percentages. The differences were checked with standard deviations.

Educators' responses were treated separately from those of the learners. However, in order to test the third research question of the study, all educators' responses were compared in Appendix 5 and all learners' respondents were compared in Appendix 6.

The data analysis was based on copies of questionnaires, using 50% as the significant level of accepting "agree" responses as fairly good for each item of the questionnaire. However, any item for which the percentage of "agree" answers was below 50%, or where there was a high percentage of "not sure" answers indicated that some respondents did not know about TSE or were not interested in traffic matters.

5.4 EDUCATORS' AND LEARNERS' RESPONSE TO THE QUESTIONNAIRE

Educators' and learners' responses to the questionnaire are tabulated in Appendixes 5 and 6. Appendix 6 presents responses of various groups of learners who responded to the questionnaire, whereas Appendix 5 presents various groups of educators. The frequency distribution of each question should be interpreted as that the "missing frequencies" were respondents who left some of the questions blank and did not choose any of the three options. These were not included in frequencies and percentages of these specific questions. However, the total number of the subjects (designated by N) who responded to the questionnaires for educators and learners are indicated respectively.

5.4.1 Interpretation and discussion of educators' and learners' responses to the questionnaire

The educators' and learners' responses are presented in Appendixes 5 and 6. The interpretation of the educators' and learners' responses presented in this section is based on Appendixes 5 and 6 respectively. Note that efforts are made in this section to answer the research question and aim 1 of the study (refer to paragraph 1.2.1 and 1.3.1)

The statements with regard to the JTTC and TSE are classified under three categories, as presented by the options “Agree” “Disagree” and “Unsure”.

**Item 1. Junior Traffic Training Centres are necessary for teaching learners
Traffic Safety Education (item for educators only)**

The statement in Item 1 is correct according to OBE principles of practicality, as explained by (Rabinowitz *et al.*, 1985). Therefore, disagreeing with this statement signals a lack of understanding and knowledge in OBE and learner education, because Junior Traffic Training Centres do allow the learner to participate in learning. All the respondent educators agreed with the statement.

It was found that 100% of the educators’ population (N= 74) agreed with the statement.

**Item 2. We need Traffic Safety Education in our schools (item for learners
and educators)**

The statement, as it reads in Item 2, is made against the background of an escalating death toll, injury and carnage due to road traffic accidents on South African roads. This situation may be ascribed to a low level of TSE society (Trinca *et al.*, 1988:10). The Road Traffic Foundation (1998:21) clearly indicates that yearly the death toll and injuries increase on South African roads.

All respondents agreed with the statement in item 2, which implies that there is a need for Traffic Safety Education in schools. On the whole, this statement was therefore not problematic since all the respondents (educators and learners) agreed with the statement.

Item 3. It is very urgent that we include the subject in our curriculum (item for learners and educators)

Given the statistics of road collisions due to a lack of relevant knowledge, it is essential to include the subject or to integrate the subject in the school curriculum. The respondents agreed with the statement, in Item 3

71 educators agreed with this statement and only 3 educators disagreed. All the learners agreed with the statement in Item 3. On the whole 99,3% agreed with the statement; the agree response is therefore above 50%.

Item 4. Junior Traffic Training Centres will support the principle of Outcomes-Based Education (item for educators only)

Curriculum 2005 or OBE promotes learning that is active participatory and learner centred (Bertrams *et al.*, 1997:1). In this sense Junior Traffic Training Centres comply with OBE, which implies that the statement in Item 4 is correct. It was found that 50% of the educators, representing 37 educators, disagreed with the statement and 50% agreed with the statement. On the whole respondents scored above the average of 50%.

Item 5. Traffic Safety Education Centres should be included from pre-school to high school (item for educators only)

Given the statistics of collisions, injuries, death toll and vehicle damages on the road, we cannot dispute the fact that intensive learning from pre-school to high school regarding road education is important (Drotské, 1997). It was found that 100% of educators (N= 74) agreed with the statement.

Item 6. Road accidents involving learners will decrease when Traffic Safety Education is put into place or used at school (item for educators only)

Research studies (Du Plooy, 1986; Steyvers, 1990; Cole 1990) place emphasis on the fact that learners at the school-going age lack fundamental skills in order to interact safely with the traffic situation. Research therefore agrees with this statement. 100% respondents (N=74 educators) agree with the statement.

Item 7. A trained educator specialising in Traffic Safety Education should teach the subject using Junior Traffic Training Centres (item for educators only)

This statement in Item 7 is correct, because an educator who specialises in the subject is most likely to be enthusiastic in teaching the learners Traffic Safety Education.

It was found that all respondents agreed with the statement.

Item 8. Every school in the Province should at least have one educator specialising in Traffic Safety Education (item for educators only)

This statement in Item 8 is correct, in the context that Traffic Safety Education should be implemented fully in the school curriculum.

It was found that all respondents (N=74 educators) agreed with the statement in Item 8.

**Item 9. Children lack the skills to participate in the traffic environment
(item for educators only)**

This statement is correct, as research studies (Department of Transport, sa.: 1997) indicated that many children of school-going age annually are victims of road accidents in townships.

It was found that 70% of the educators' population responded correctly by agreeing with the statement, while only 3 disagreed. On the whole the number of responses in agreement with the statement is above 50%. This statement agrees with the hypothesis and the importance of Junior Traffic Training Centres.

Item 10. Learners cycling to school should be skilled and re-skilled to use the bicycle in traffic (item for educators only)

Learners at senior phase and Further Education and Training in some towns (such as Potchefstroom) prefer to use bicycles to travel to and from school. These learners must be taught skills, values and attitudes regarding the use of bicycles.

It was found that all educators (N=74) agreed with the statement in Item 10. On the whole there is a 100% positive response to this item.

Item 11. Each school, especially primary schools and pre-schools, must have Junior Traffic Training Centres (item for educators only)

The primary school years are critical stages for learning. It is very important to inculcate the knowledge and understanding of traffic safety. The point of departure should be to present education through play (Rabinowitz *et al.*, 1985: 6). Learners in this stage (primary phase) enjoy playing in Junior Traffic Training Centres.

It was found that 100% of the respondents (N = educators) agreed with the statement.

Item 12. If traffic education is introduced in schools, learners will know the importance of a valid driving licence (item for educators only)

An understanding of the seriousness of valid driving licences may be developed from an early age if learners are taught the importance of driving licences.

It was found that 50% of educators (N=37) disagreed with the statement in Item 12, while 50% educators agreed.

Item 13. If learners are taught Traffic Safety Education, learners will grow up to be responsible road users (item for educators only)

This statement is correct because the ultimate outcome of education is to see to it that children grow up to be responsible citizens.

It is a fact that the Outcomes-Based curriculum is influenced by the needs of a community. It should be planned by parents, teachers, education authorities and learners. It will vary from place to place and will respond to very specific community needs and wants (DoE, 1997c:9). Thus, each learner will develop into a responsible road user because his/her community denounces reckless road users.

It is found that 25% educators (N=18) disagreed, while 75% agreed. On the whole less than 50% therefore disagreed with the statement in Item 13.

Item 14. Scholar patrol is necessary for schools in the urban and rural areas (item for educators only)

All educators and learners agreed with statement in Item 14, (n=74). It may therefore be concluded that all respondents have a positive attitude towards the scholar patrol in both rural and urban areas.

Item 15. Junior Traffic Training Centres are the safest for practically training learners in Traffic Safety Education (item for educators only)

All respondents agreed with the statement in Item 15

Item 16. Parents have little time to educate their kids about road safety (item for learners and educators)

Parents do indeed not have time to teach their children road safety, because of limited time due to work schedules, etc. With regard to traffic safety awareness, very little is done even to educate the parents and society at large in South Africa.

It was found that all respondents, both learners and educators agreed with this statement.

Item 17. Traffic Safety Education can be more effectively integrated in a life orientation learning area. (item for educators only)

The statement in Item 17 is correct. The learning outcomes of life orientation are very broad, compared to other learning areas. As a result learning in life orientation can accommodate Traffic Safety Education more effectively.

It was found that all educators (N=74) agreed with the statement, although some explanation of what integration is, was needed.

Item 18. Introduction of Traffic Safety Education through Junior Traffic Training Centres is a waste of money (item for educators only)

This statement is incorrect, if it is kept in mind that the government spends millions of rands annually because of road accidents and injuries. Junior Traffic Training Centres are cost effective; some of the items can be hand made by the teachers and learners.

75% of the population (N=55) disagreed with the statement in Item 18, and 25% educators agreed. On the whole more than 50% of the respondents therefore disagreed with the statement.

Item 19. Traffic officials must visit schools and present lessons on traffic safety (item for learners and educators)

This statement is made against the background that the traffic department must be fully involved in the implementation of Traffic Safety Education using Junior Traffic Training Centres.

It was found that all educators and learners agreed with the statement.

Item 20. In my area I heard of learners being knocked over by a vehicle recently (within the past four months) (item for learners and educators)

Statistics confirm that the statement in Item 20 is true for most schools in South Africa.

It was found that 84% of educators (N=64) agreed with the statement, while 16% (N=10) disagreed with this statement.

100% of (N=74) learners agreed with the statement. Positive response to this statement therefore was more than 50%.

Item 21. Most learners in my residential area walk to school (item for learners and educators)

The statement in Item 21 is true, since walking to and from school is a way of life in most parts of the country, especially in the previously disadvantaged areas.

100% of educators' (N=74) and 100% of learners agreed with the statement in this item. Thus respondents agreed positively with the statement. This implies that pedestrian education is necessary.

Item 22. Most learners in my residential area cycle to school (item for educators only)

This statement in Item 22 is not necessarily true, as learners mostly walk to school. However in upmarket areas, such as certain areas in Potchefstroom, cycling is preferred as a mode of transport.

It was found that 12% of educators (N=9) and 25% of learners (N=19) agreed with the statement. On the whole the respondents disagreed with the statement in Item 22. This confirms that pedestrian education is important, but that cycling education should not be ignored, as learners are going to cycle at some stage in their lives.

Item 23. Most learners in my residential area travel by bus or mini-bus (item for learners and educators)

Most learners in townships attend school in town or in upmarket places which are quite a distance from their residential areas. As a result they use buses and mini-buses to go to school.

It was found that 100% of the educators (N=74) and 100% of learners (N=74) agreed with the statement in Item 23. This statement is true of most areas in South Africa and also in North-West Province.

Item 24. Parents accompany learners to school (item for learners and educators)

This statement is false because parents do not accompany learners to school. The parents only accompany the learners on the first day of schooling.

100% of educators and learners in the sample population correctly disagreed with the statement. This implies that learners are at risk of being victims of road accidents if they are not empowered with the skills in traffic safety. More than 50% of the sample population thus disagreed with the statement. This implies that skills in using the road to school must be emphasised.

Item 25. Pedestrians wear brighter clothing or reflectors when it is dark so that motorist can see them (item for learners and educators)

The truth is that pedestrians do not consider wearing brighter clothes or reflectors when they walk in dark places or in bad light. It was found that 50% of educators (N=37) agreed with the statement while 50% of (N=37) educators disagreed with the statement in Item 25.

However, 75% of learners in the sample population (N=55) disagreed, while 25% of the learner (N=19) agreed with the statement in Item 25. More than 50% of the respondents therefore disagreed with the statement. Thus learners should be taught when to wear brighter clothes or reflectors for their own safety.

Item 26. When crossing the street or road the pedestrian should cross very fast (item for learners and educators)

This statement was made against the background that many children are told that they should run to the shop and come back quickly. The children tend to believe that they should cross very fast, but in fact they should cross the road or street carefully and only when there is no oncoming traffic, if there is no pedestrian crossing or traffic light. As a result the statement is false, as was also indicated by all educators (N=74). On the other hand 75% of learners' indicated that the statement in Item 26 is correct, while 25% indicated that it is false. Thus, most learners incorrectly indicated that the statement was true. This indicates the urgency of education in traffic safety in schools.

Item 27. When crossing the road the pedestrian should do so when it is safe to cross (item for learners and educators)

This statement reflects the misconception which most road users have in this country. The statement in Item 27 is correct, in that road users should cross the road when it is safe to do so, for example when there are no other approaching vehicles or when the approaching vehicle indicates clearly that one should pass or cross.

It was found that 50% of the educator population (N=37) regarded the statement in Item 27 to be true, while 50% regarded it as false. 50% of the learner population (N=37) agreed with the statement and 50% disagreed. The fact that 50% believe the misconception in this statement shows that traffic safety awareness is necessary in our schools and communities.

Item 28. Departments of Transport and Education must take responsibility for the subject or learning area (item for educators only)

This statement is correct in the sense that Traffic Safety Education can be effective when the two departments (Transport and Education) can help each other by developing Junior Traffic Training Centres in schools according to the standard set by the departments of traffic/transport.

It was found that 100% of educators (N=74) agreed with the statement.

Item 29. Junior Traffic Training Centres give learners from the disadvantaged areas a picture of what the traffic environment looks like (item for educators only)

It was found that 75% educators (N=75) agreed with the statement, while 25% (N=19) disagreed. On the whole then more than 50% agreed with the statement.

The programme should focus on the fact that learners and people from disadvantaged areas, like rural areas and semi-rural areas are not exposed to the actual traffic environment. It is therefore correct to state that Junior Traffic Training Centres will expose learners to the traffic environment.

Item 30. Responding to the traffic light is not necessary when there is no oncoming traffic (item for learners and educators)

This statement is incorrect but in practice people simply ignore the traffic light when the road is not busy. It was found that 100% of educators (N=74) disagreed with the statement in Item 30.

All learners (N=74) disagreed with the statement. The statement is false: learners should be careful and not take for granted that there is no oncoming Traffic.

Item 31. The traffic official must control traffic near schools daily, especially near primary schools in the morning and in the afternoon when schools close (item for educators only)

Traffic becomes very busy when school is about to start and when school closes in the afternoon. The presence of traffic officers or scholar patrol activities are necessary at those periods and the statement is thus true.

It was found that 50% of educators (N=37) agreed with the statement. 12% of educators (N=9) indicated that the statement did not apply to them. In Item 31, 38% of educators (N=28) disagreed with the statement.

On the whole, more than 50% of the respondents correctly agreed with the statement, thus the statement did not represent a problem or misconception to the respondents.

Item 32. Private companies should be involved in traffic education, e.g. Coca-Cola, by sponsoring equipment for learner traffic education (item for educators only)

The fact is that not only the government or department of transport, but all members of society are affected by government expenditure on road collisions and accidents. Therefore it is important to involve private companies to help with projects of road safety awareness and education. Private companies can help by donating money to the schools to develop Junior Traffic Training Centres. Thus the statement is true.

It was found that 100% of educators (N=74) agreed with the statement.

Item 33. Pedestrian education must be emphasised in disadvantaged areas for learners staying in those areas (rural, semi-rural and township areas) (item for educators only)

This statement is true and correct, especially when disadvantaged areas are described as poor economic areas, because learners in those areas do not use vehicles and parents do not accompany learners by means of vehicles. The only mode of transport in those areas is walking.

88% of educators (N=65) agreed with the statement. while 12% (N=9) disagreed with the statement in Item 33.

Item 34. Cyclist education should be taught at school from the foundation phase with the purpose of preparing learners to use the bicycle at the senior phase and Further Education and Training phase (item for educators only)

It is true that learners at the foundation phase and intermediate phase are not ready to use bicycles in traffic. It is important to teach or train learners at this stage so that learners can develop skills, values and attitudes needed to ride a bicycle in any traffic situation.

It was found that 100% of educators (N=74) agreed with the statement. On the whole more than 50% agreed with the statement. As a result this statement emphasises that junior traffic training centres will help in educating and training learners with regard to cycling.

Item 35. Traffic Safety Education can be integrated in all eight learning areas (item for educators only)

This statement is correct but the respondents have been guided as to how to integrate traffic safety in other learning areas. For example, the impact of high speed in collision can be calculated, in mathematics.

88% of educators (N=59) agreed with the statement, while 20% (N=14) disagreed with the statement in Item 35.

On the whole more than 50% correctly agreed with the statement.

Item 36. There is a pedestrian crossing or a pedestrian crossing block at your school or at schools in your area (item for educators only)

80% of educators (N=59) indicated that it is true there are pedestrian crossing facilities at their school or in schools in their residential areas, and 20% (N=14) disagreed with the statement in Item 36. This is an indication that schools in urban and in semi-rural areas use pedestrian crossings blocks, while there are no such facilities on the farms or rural areas, Junior Traffic Training Centres should therefore be fully developed in order to teach learners to cross the roads. More emphasis should be placed in rural areas and disadvantaged areas.

Item 37. In my area learners have to cross some busy roads used by vehicles when going to the school (item for learners and educators)

This statement is true and correct for many places in South Africa, including rural areas on the farms.

It was found that 90% of educators (N=66) agreed with the statement with 10% (N=7) disagreeing.

All learners (N=74) agreed with the statement in Item 37. On the whole then, more than 50% agreed with the statement, indicating that most scholars have to cross a busy road.

Item 38. The schools in your area have enough road safety infrastructure for learners to be used when walking to school, e.g. pedestrian traffic lights, pedestrian crossings, bridges and scholar patrols (item for educators only)

Such infrastructure is limited to suburbs and more affluent areas, but the statement does not describe the situation in previously disadvantaged areas.

It was found that 100% of educators (N=74) disagreed with the statement in Item 38. This implies that Junior Traffic Training Centres are essential to teach learners about these facilities.

Item 39. Parents have time to teach kids about safety on the road (item for learners and educators)

Parents do not have time to teach the children about traffic safety. 80% of educators (N=59) correspondingly disagreed with the statement, while 20% of educators (N=15) agreed with the statement.

100% of learners (N=74) disagreed with the statement in Item 39. Thus more than 50% disagreed with the statement.

Item 40. Learners must obtain driving licences through schools when they are in grade twelve (item for educators only.)

Through Traffic Safety Education learners can be helped to obtain driving licences when they finish schooling. This will also give learners an added advantage when applying for jobs for which driving licences are required. Learners from advantaged backgrounds are more likely to have driver's licences; as a result their chances are better to be employed by departments like the South African Police Services.

It was found that 100% of educators (N=74) agreed with the statement in Item 40. On the whole more than 50% agreed with the statement.

5.4.2 Comparing learners' and educators' responses

Both the educators' and learners' responses to the questionnaire revealed that there is a need for Traffic Safety Education. Both groups of respondents agreed with the questionnaire assessing the importance of traffic safety. The questionnaire further enquired about the manner in which traffic safety can be taught in schools. More than 50% agreed with the method of using Junior Traffic Training Centres. Learners, more so than educators appeared to lack knowledge about TSE

5.5 OBSERVATION

Observation involved the following:

- Learners from town, rural and semi-rural areas were observed when walking to and from school.
- Learners' conduct or behaviour corresponded with their response to the following on the road (see Table 5.2 - observation table).

5.5.1. *Observed conduct of learners in townships*

The observer chose to park his vehicle in a strategic place, where learners were going to walk across the road to school to Phaladi School at Potchefstroom, because the school is situated on the main road in Ikageng. Scholars have to cross a busy road to get to the school.

At the time of the observation there was no scholar patrol. There was only a pedestrian crossing or crossing block. Learners responded to the following way to the elements below:

- **Stop sign**

Except for a few learners, most learners did not stop at all at the stop sign. They only stopped when they noticed the oncoming cars.

- **Traffic lights**

Traffic lights are not available; as a result behavioural conduct response towards the traffic lights could not be observed and recorded.

- **Designated crossing points**

There is a pedestrian crossing block, like at most urban schools, but it appeared that the learners did not know the purpose of the crossing block because they crossed anywhere. Drivers did not show respect for or recognise the pedestrian crossing.

- **Scholar patrol**

Scholar patrol was not available or not developed at the time of the study. As a result there was no data gathered with regard to the learner response to the scholar patrol.

- **Crossing the road**

The correct manner to cross the road is to look to the right, then to the left and to the right again, and then to cross the road. Most learners did not do this before crossing, with the result that the vehicles (especially taxis) were hooting at the learners because they were not crossing carefully.

- **Expecting vehicles to stop**

Learners expected vehicles to stop for them, even if they have crossed in an area not designated for crossing. The vehicle drivers hooted because the learners were unaware of the danger of crossing without first looking carefully for oncoming traffic.

The observer found this conduct displayed by most learners. Only a few who were very careful.

- **Recognisable signs**

Vehicles travelling at high speed were recognised as dangerous by the learners. They waited and crossed after these vehicles had passed. Relatively slow-moving vehicles were however, not perceived as dangerous. Learners would cross the road without avoiding the danger of being run over by such a slow moving vehicle. It appeared that the learners expected the vehicles to stop for them.

Data was not recorded with regard to the learner conduct in response to the traffic officer, because traffic officers were not on duty at the time of the study.

- **Use of available road safety infrastructure on the road**

The only recognisable infrastructure for traffic safety was the stop sign a few metres from the school and a pedestrian crossing in front of the entrance of the school. Learners did not use the pedestrian crossing block but crossed everywhere.

- **Behaviour while walking to school**

Most learners behaviour while walking to school was characterised by playing. They would sing, laugh and make fun, especially when walking from school in the afternoon. They also sometimes chased each other in the road, which could result in serious accidents.

5.5.1.1 Conclusion for learners in townships

The learners in town appear to lack fundamental skills, values and attitudes regarding the use of the road. Yet, Outcomes-Based Education with the use of Junior Traffic Training Centres, pledges to teach the learners these skills. The lack of infrastructure and Traffic Safety Education possibly has a significant bearing on the growing learner, who uses the road daily.

5.5.2 Observed learner conduct behaviour in rural/farm areas

This study was conducted using Maheelo Farm School in the Klerksdorp district, between Tigane Hartbeesfontein and Coligny as a sample. About 90% of learners had to cross the busy road which runs from Hartbeesfontein to Coligny and Lichtenburg. Learners in Maheelo School must deal with speeding vehicles and trucks on the road along which they walk and cross.

By the time the observation was done, infrastructure like stop signs, bridges, traffic lights and pedestrian crossings were not available. Furthermore, there were no activities such as scholar patrols.

The observed behaviour of learners included that they expected vehicles to stop where there was no pedestrian crossing. Ideally, before the road is crossed, children ought to look right, then left and right again, and only then should they cross the road if it is safe to do so. The following observations were made concerning learners in the rural area:

- Learners expected the vehicles to stop where there was no stop sign. Vehicles passing along the road to Coligny usually travel at a relatively high speed. Learners were observed crossing this road; most of the learners were very careful when crossing the road and did not expect any vehicle to stop where there was no stop sign.
- The only recognisable sign was oncoming vehicles.
For these learners at Maheelo school the only road sign they could use for crossing the road was the vehicles and the sounds of speeding vehicles. When there were no vehicles approaching, they crossed the road.
- Cross accordingly: look right then left and right again.
The learners at Maheelo school are very careful when they cross the road; they look to the right, then left and right again and then they cross the road. Their skill in crossing the road may be attributed to the fact that many learners had been knocked down by vehicles on that road.
- Playing on the road while walking to and from school on their way back from school.

- Learners play next to the road, which is dangerous because they chase each other and run after one another. However, they walk to school in the morning, such behaviour is very rare.

5.5.2.1 Conclusion for learners in rural farm areas

Learners in the rural areas are confronted by a situation in which they have to cross a national road where the provincial works department cannot place a pedestrian crossing. Instead the provincial works department should develop a bridge for learners to cross safely over the road. However, this is unlikely to happen because bridges are very expensive for developing countries. The problem could be addressed by giving learners intensive training with regard to TSE. The learners in rural/farm areas will at some stage in their lives be exposed to the massive traffic environment. This should place some responsibility on the education department to introduce comprehensive traffic safety education in schools by means of Junior Traffic Training Centres.

5.5.3 Observation of learners in semi- rural areas

Tigane village was chosen for the study because it appeared to be semi-rural, in the sense that it is a small township surrounded by small farms, with three primary schools and one high school. These schools are Bakang Primary School, Tigane Primary School and Gaenthone Secondary School.

The three schools are in the Klerksdorp district. The area has traffic infrastructure in the form of crossing sections for pedestrians and stop signs on one busy road used by local taxis to take commuters to the nearby town of Hartbeesfontein. There are no scholar patrols or traffic lights.

Learners' conduct or behaviour are checked against their response to the following:

- **Stop signs**

There are very few stop signs, and these are regularly ignored by motorists. As a result learners are in jeopardy of being run over by vehicles.

- **Pedestrian crossing**

This structure is available to allow learners of the three schools to cross the main road in the township to their different schools. However learners do not appear to know the purpose of the pedestrian crossing, because they cross anywhere and at any time. Motorists also do not observe the pedestrian crossing because they do not slow down when approaching it.

- **Crossing the road in the correct manner**

Learners do not look to the right then left and right again when crossing. They do not use or have this skill when crossing the street or road. Vehicles have to brake or stop for learners to pass.

- **Recognisable signs**

The learners recognise speeding oncoming vehicles, but they do not seem to judge the distance correctly. Learners simply walk across the road without trying to avoid these vehicles.

5.5.3.1 Conclusion about learners in semi -rural areas

Junior Traffic Training Centres will help to expose learners from semi- rural places to the dynamics of the traffic environment. The learners will learn the skills, values and attitudes necessary for traffic safety. Learners will utilise the road safety infrastructure fully to the benefit of the society or community.

The statistics for children at school-going age reveal that learners are victims. This places a huge responsibility on the Departments of Education and Transport to start Traffic Safety Education, which will unlock knowledge, skills and attitude through Junior Traffic Training Centres within Outcomes-Based Education.

5.5.4 The input of Junior Traffic Training Centres

Learners in Matseke Primary School stay in a township in the Pretoria district. The school has the advantage of having a JTTC on the school grounds. The Traffic officials teach learners through the JTTC. The learner does not receive intensive training however, because the subject Traffic Safety Education is not yet fully implemented in the school curriculum.

AN OBSERVATION OF LEARNERS OF THIS SCHOOL FOCUSED ON THE FOLLOWING:

- Do learners use pedestrian crossing blocks?
- Do learners cross correctly, e.g. look right and left and then right?
- Do learners play on the busy road while going to school or when they are returning from school?
- Do learners expect vehicles to stop where there is no stop sign?
- Do learners see the vehicles as their only road sign of danger?
- Do learners obey the traffic officer?
- Do learners obey the scholar patrol?

Most learners of Matseke Primary School observed the above road safety measures. The learners in this school have the necessary skills to conduct themselves safely on the road, because a traffic education official taught them this by means of the JTTC. This was especially visible in the fact that learners were able to cross busy roads to school. Learners were able to recognise designated areas, e.g. pedestrian crossing blocks. This is evidence that the use of a JTTC can help in training learners how to participate safely in traffic.

5.6 GENERAL CONCLUSION CONCERNING RURAL, SEMI -RURAL AND TOWNSHIP LEARNERS

It was observed that the exposure to the traffic situation of the learners in the three areas differed and this had an influence on their conduct in traffic situations. The farm/rural learners appeared how to need more training or emphasis should be on pedestrian education, especially how to cross the roads. The farm learners depended mostly on the sound of vehicles when they crossed; for example, when the sound was louder it indicated danger and they would wait until the vehicle had passed.

The semi- rural learners appeared to be deficient concerning crossing the road; they failed to use the designated areas such as the pedestrian crossing or the pedestrian crossing blocks. The learners crossed anywhere and when they felt like it. This implies that pedestrian education should be emphasised.

The semi-rural and township learners did not appear to know how to cross the streets or roads and they did not use designated areas for crossing. Learners in the township did not walk next to the curb or to the left of the yellow line when walking to school. Instead they walked right in the middle of the road. Vehicles had to hoot for learners to walk to the left of the yellow line.

Learners of Matseke Primary school in the Pretoria district were compared with comparison with the learners in the other schools namely Gaenthone, Maheelo and Phaladi in the North West. It was found that learners in Matseke Primary School were skilful with regard to the usage of the road safety infrastructure available to them. Learners in Matseke Primary were able or skilful in crossing the road more so than the learners who did not have or did not use a JTTC. This implies that educators should be taught thoroughly on how to use a JTTC, and how to transfer the knowledge to the learners through the OBE curriculum.

CHAPTER SIX

6. ANALYSIS OF RESEARCH

6.1 INTRODUCTION

This chapter analyses the learners' background and how the Department of Education and the Traffic Department can implement TSE by using the JTTC. The purpose of this chapter is therefore to address the fourth goal of the study (see paragraph 1.2.4)

The analysis of learner background or location is done in a manner that could link the findings of this research to environmental background and knowledge and understanding of TSE. The purpose of this is to determine whether availability or lack of road/traffic infrastructure has an influence on the learners' conduct in traffic.

The concerns (questions) used for the analysis are presented in section 6.2. The following are the main issues dealt with in this chapter:

- Framework for the analysis of present knowledge with regard to TSE.
- Analysis of learners' and educators' response to questions.
- Analysis of available road/traffic infrastructure.

6.2 FRAMEWORK FOR THE ANALYSIS OF THE PRESENT KNOWLEDGE WITH REGARD TO TRAFFIC SAFETY

The following concerns, influenced by various studies (Ribbens, 1996:22), are set to evaluate the knowledge, skills, values and attitudes and how they can be demonstrated by learners in traffic in different areas namely rural, semi-rural and township areas.

The concerns are formulated to prove or contradict the hypothesis of this study, namely that the JTTC is essential in the implementation of TSE within the OBE.

The concerns are:

- i. Are the learners taught traffic safety skills, values and attitudes?
- ii. Do the learners have the necessary skills to cross busy roads?
- iii. Is infrastructure available for safe crossing, e.g. pedestrian crossing blocks?
- iv. Are scholar patrols available?
- v. Do learners have to cross a busy road when going to school?
- vi. Are traffic officers available to help learners to cross the road?

In context of these questions, learners' skills, value and attitudes are analysed according to the following sub-headings:

- Crossing the road.
- Responding to the road.
- Responding to the traffic safety officers' commands.
- Conduct towards scholar patrol.
- Use of pedestrian crossing or crossing block.

6.3 ANALYSIS OF HOW LEARNERS' MILLIEU AFFECTS THEIR CONDUCT ON THE ROAD

6.3.1 Introduction

In this section an analysis is made of learners with their respective milieus. The analysis is made to address the six questions in Section 6.2 and to offer an analytical approach to describing, comparing, evaluating and criticising traffic behaviour, as well as to draw a conclusion about the relationship between these skills, attitudes and values, and TSE. The link between TSE and skills, values and attitudes suggests that infrastructure which can be used for education could influence the learners' conduct on the road. The ultimate aim is to determine whether there is a need for using relevant logistics, like JTTC, in schools where there is no or poor traffic infrastructure in the learner millieu.

6.3.2 Analysis of the learners in rural, semi- rural and townships areas

The Maheelo Combined School near Hartbeesfontein in the North West was selected to be used in this research as a sample representing a rural or farm area. In the semi- rural Gaenthone Secondary School, Tigane Primary and Bakang Primary in Tigane near Klerksdorp were used as samples (the reason for including Bakang Primary and Tigane Primary is that the learners of the two schools were observed together with the learners of Gaenthone Secondary School as they normally walk together to school in the morning and in the afternoon). Phaladi Combined School in Ikageng Potchefstroom, represents a township school.

In view of questions posed in Section 6.2, certain factors were observed during observations when learners go to and from school. It was found that learners in the farm areas lack skills, attitude and values in a number of aspects of traffic safety. The findings revealed that there are poor or unavailable safety infrastructure and that this affects the learners' knowledge, skills and attitudes regarding traffic safety. It was found that the JTTC were not available and that there was no TSE. Neither was partial or full training done in TSE in the schools from the disadvantaged areas. See Appendixes 5 and 6.

6.4 ANALYSIS OF INFRASTRUCTURES AVAILABLE TO LEARNERS IN RURAL, SEMI-RURAL AND TOWNSHIP AREAS

6.4.1 Introduction

This section analyses the conduct and traffic knowledge, skills and attitude of learners in township, rural and semi-rural areas with regard to TSE. The learners were observed and an analysis was made against the six questions in Section 6.2. The analysis was made to determine the status quo of the learners in the three distinguished areas in the North West Province.

6.4.2 Road safety infrastructure in the semi -rural, rural and township areas

It was found that JTTC were not available in the semi -rural, rural and township schools, that there was no TSE, and that no partial or full training was given to the learners.

As a result learner participation in traffic was poor. Learners could not cross the road appropriately, especially learners from grade 0 up to grade 4

The pedestrian crossing block was available for learners but was not utilised in semi- rural, rural and township areas. Perhaps the purpose of the pedestrian crossing was not taught to the learners. While learners in rural areas had no pedestrian crossing or any other available traffic safety- related infrastructure to use for safe crossing.

Scholar patrols were not available or no attention was given to scholar patrol training. Even if it was felt that the scholar patrols were not necessary in the rural areas, training was still necessary.

There were no traffic lights available for scholars crossing the busy roads to the schools in the three distinguished areas. Neither were traffic officers on duty to observe or to assist learners to cross safely to the school.

6.4.3 Infrastructure related to traffic safety in rural, semi -rural and township areas

The observation structure used in this research revealed the infrastructure of learners' milieu as shown in Table 6.1.

Table 6.1: Observation of learners' conduct on the road

	Maheelo Primary School: Farm/Rural	Gaenthone Secondary School: Semi -Rural	Phaladi Combined School: Township	Matseke Primary School: Township
Infrastructure				
Scholar patrol	Nil	Nil	Partial	Partial
Knowledge to cross	Nil	Nil	Nil	Yes
Pedestrian crossing	Nil	Nil	Present	Yes
Traffic officer assisting learners crossing the road	Nil	Nil	Nil	Partial

Glossary for the terms used in Table 6.1

Infrastructure – refers to the road furniture and road marks found on the road to aid the flow of traffic and help with road safety.

Scholar patrol – the structure composed of learners is created to help learners with traffic safety in the morning when learners go to school and in the afternoon when they leave school. It helps learners to cross busy roads by stopping the cars to let learners cross or vice versa.

Knowledge to cross – implies that a learner shows the skill to cross the road, e.g. listen, look right and look left and right again.

Pedestrian crossing – the area designated for learners or pedestrians to cross the road.

Traffic officer – an individual employed by the traffic departments as a traffic officer usually in the local municipality to help learners to cross the traffic light or to help learners with scholar patrol.

Pedestrian traffic light – traffic light designed to help pedestrians, especially learners. The traffic light has a control button that is used to turn the traffic light red for the cars to stop and green for learners to cross.

Junior Traffic Training Centres – the availability of a JTTC is checked whether that school is situated ideally to help learners to train in road traffic education.

Nil – the term indicates that the structure or item is not available.

Present – the term present indicates that the structure or item is available.

Partial – the term indicates that the structure is either available or not used. Sometimes less attention is given to the item or structure.

Available – the term implies that the structure is present for utilisation by the learners.

6.5 EDUCATORS' AND LEARNERS' RESPONSES TO THE QUESTIONNAIRE

There was no discrepancy between the learners' responses and those of the educators with regard to the implementation of JTTC. Both were in favour of the implementation of JTTC and TSE. Thus the respondents confirmed the hypothesis that JTTC will facilitate the effective implementation of TSE. All the respondents highly valued that the role of JTTC within OBE .

6.6 CONCLUSION

The analysis of the rural, semi-rural and township learners confirms the assertion that JTTC in schools will effectively bring about TSE in schools within OBE. Owing to a lack of logistics necessary to train learners in relatively disadvantaged areas, namely rural, semi-rural and township areas in the North West Province, it is necessary to use the JTTC in schools in teaching Traffic Safety Education, especially from grades 0-9. The provision of JTTC will make the implementation of TSE possible and will address the lack of knowledge, skills, values and attitude in the disadvantaged areas. Thus it will bring disadvantaged learners to the same level as learners in suburbs and affluent areas.

CHAPTER SEVEN

7 SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

In this final chapter, a summary of the previous chapters of this study is presented. The summary is followed by the findings of both the literature study and the empirical research. This is followed by a set of recommendations for the improvements and the use of JTTC in TSE.

7.2 SUMMARY

- i. In Chapter one, the background and the formulation of the problem was discussed. The research aims and the research questions were identified from both a theoretical and an empirical perspective. The methodology used to achieve these aims was explained. In addition, the definitions of key concepts of the study and the division of chapters were provided.
- ii. Chapter two addressed the first aim of this research, the nature of the study, objectives, aims and the necessity of JTTC in schools within OBE. The nature was spelled out and explained by answering and addressing possible questions relating to the nature of JTTC see Section 2.2. Then, the aim, objective and necessity of a traffic training centre was investigated. The chapter concluded with a discussion of the importance of JTTC in relation to Traffic Safety Education and the OBE and the possible role of the Traffic Safety Department and the Department of Education.
- iii. Chapter three addressed the research question 1.2.2 and aim 1.3.2, to determine approaches to investigate the necessity of teaching TSE. The approaches for effective teaching using JTTC were investigated and

analysed, with the aim of explaining them. Four approaches were given in Section 3.1. The chapter ended with a discussion focused on the educator with skills, knowledge, value and attitude and how the educator can inculcate the four developmental aspects in the learners within Outcomes-Based Education.

- iv. Chapter four addressed the third aim and question 3.3 of this study, namely the integration of TSE using JTTC in the Outcomes-Based Education curriculum. The inclusion of Traffic Safety Education and JTTC was investigated and analysed with the aim of attempting to fit the subjects into the existing OBE curriculum. An example of a learning programme was given in Section 4.1. Finally the OBE structure and TSE with the use of JTTC were discussed.
- v. Chapter five dealt with the empirical aspects of the survey. The chapter included a discussion of the empirical design of the study, a literature review and qualitative research methods, such as observations and the questionnaire as methods used to accumulate empirical data, population and sample, advantages and disadvantages of questionnaires as research tools, development of the questionnaire items, format and content of the questionnaire, the covering letter, administrative procedure and statistical techniques used in analysing the data, observations and statistical technique used in analysing data.
- vi. In Chapter six, attention was given to the presentation, analysis and interpretation of data. The responses to each question item were presented in a form of tables indicating frequencies and percentages, followed by analysis and interpretation of the data presented.

The overall aims of this research survey, as stated in Chapter one, have been achieved as indicated in the following findings.

7.3 RESEARCH FINDINGS

7.3.1 Findings with regard to aim one

Regarding Aim 1, namely to determine the nature, objective, aim and importance of JTTC in TSE (see Section 1.3.1), the following were found:

- i. The definition, which clearly stated what JTTC is and how to perceive it (see Section 2.2.1).
- ii. The nature of the appearance and description of JTTC. In addition, a vivid picture was provided (see Section 2.2.2).
- iii. The aim, objective and necessity of JTTC were pointed out, together with relevant skills needed for learners to participate safely in traffic. The JTTC were identified as the appropriate educating tool which complies with the principle of OBE (see Section 2.3).

7.3.2 Empirical research findings

- *Biographical data*

- i. The empirical research has revealed that children from disadvantaged backgrounds particularly in the urban, semi- rural and farm areas are victims of traffic.
- ii. Due to a lack of TSE and their exposure to the real world of road usage learners are prone to be victims of traffic accidents (see Section 6.2.1.).
- iii. Evidence of lack of skills, knowledge and value in TSE is revealed in learners who live in disadvantaged areas like farms, rural, semi- rural and township areas.
- iv. Respondents are educators and learners.
- v. JTTC is necessary for TSE in schools.
- vi. Learners and educators agree that there is a need of TSE in schools.

7.3.3 Junior Traffic Training Centre

- The majority of educators and learners believe that JTTC will be useful in OBE.
- JTTC is seen as one of the safest facilities that can be used for training the learners.
- The Department of Education and Department of Transport must play a role in the development of TSE.

7.3.4 Traffic Safety Education (TSE)

- TSE can be effectively implemented through JTTC.
- There is little Traffic Safety Education in the school curriculum.
- JTTC serves as a logistic necessary for OBE.
- Learners could improve knowledge, skills and attitudes through JTTC.

7.3.5 Findings regarding aim 2

With regard to aim 2, namely approaches necessary for teaching TSE, the following were found from the literature:

- The first approach is the approach in steps through the JTTC, which involves seven steps (see Section 3.2.1).
- The point of departure is to relate the learning approach with the learning stage or phase of the learner (see Section 3.3.1).
- JTTC can be complemented with programmes such as the Danny Cat and Child in Traffic Programmes, especially from foundation phase to senior phase (Grade 0-7). (See Section 3.3.2 to 3.3.3).
- Senior phase learners can be introduced to a cycling programme. These learners can be taken to a real traffic environment after they have developed skills in the JTTC (see Section 3.3.3).

- The further education and training phase learner (grade 10, 11, and 12) are perceived as matured road users. Learners are prepared for driving licences from the Traffic Directorate (see Section 3.3.4).
- Learning approaches using JTTC match learning experiences in OBE found in the (DoE, 1997b-d:77).
- The role of the Traffic Directorate in the development of TSE by authorising the official traffic officer to visit and evaluate traffic learning with the aim of improving or developing TSE (see Section 3.4.1).
- JTTC does not only help with evaluating the learner with regard to TSE but also foster important attitudes among learners with regard to traffic and use of the road (see Section 3.4.1).
- Learners who are not yet in the senior phase should not cycle independently to school or anywhere without supervision (see Section 3.3.3.1).

7.3.6 Outcomes-Based Education (OBE)

The principles of OBE, namely skills, attitude and values, must be included in TSE. OBE curriculum can be functional when trained educators in the particular subject are used.

Equipments and logistics found in JTTC are suitable for skills development in learners, which match the principles of Outcomes- Based Education.

7.4 CONCLUSIONS

Based on the evidence in this study, the following conclusions are made:

- JTTC is an essential instrument for the implementation of TSE.
- Curriculum designers should always engage educators or an implementer of the curriculum (Carl, 1995:2).
- Practical training skills are best achieved through JTTC.

- Effective implementation of the TSE within the OBE is possible with the use of JTTC.
- More efforts to educate learners in TSE should be made in schools in disadvantaged areas.
- Learners from poor urban and rural areas lack the skills to participate in traffic.

7.5 RECOMMENDATIONS

On the basis of the findings of the literature study, as well as the empirical study, the following recommendations are made:

- More efforts should be made to teach TSE to learners in disadvantaged areas (rural, semi-rural and farm areas where inhabitants are blacks who were previously disadvantaged).

Motivation: Previously and presently, areas that were predominantly inhabited by blacks lacked infrastructure for the traffic; thus learners from these areas lack traffic safety knowledge, skills and values. Well-equipped JTTC's will help in teaching TSE.

- Educators specialising in TSE should teach the subject.

Motivation: Educators who are not qualified to teach the TSE will not effectively utilise JTTC, unless they are assisted by traffic education officials.

- Involvement of the Departments of Transport and Education is crucial.

Motivation: This is necessary to see to it that the JTTC is checked and monitored by traffic officers, and to ensure that they comply with the national standard. Traffic officials should come and evaluate the progress of learners with the aim of developing the learners.

- All primary and middle schools that educate from grade 0 to grade 9 should have access to JTTC.

Motivation: Since training of the learners in TSE is important, the safest areas are the JTTC foundation phase to the senior phase of learning these are the crucial stages of learning.

- Schools offering Further Education and Training (grade 10-12) should see to it that learners get driving licences before they leave school.

Motivation: This will help to avoid discrimination against learners at the employment sectors because of lack of driving licences, e.g. the South African Police Service, Metropolitan Police, Traffic Department among others.

- TSE should be compulsory for all learners.

Motivation: Compulsory education in TSE will guarantee fully skilled drivers and road users in the province and the country as a whole.

- Scholar patrol should be emphasised in primary schools.

Motivation: Learners, especially from lower grades, should not be left alone at the busy roads and streets because they have little knowledge and skills to cross the roads.

- Poor provinces or countries should cluster schools to have access to JTTC, e.g. all schools in one town should share one JTTC.

Motivation: By implication, no learners should be left out because they do not have the necessary logistics to learn TSE. The Department of Education and Transport should share the responsibility with regard to TSE.

- Intrinsic and extrinsic rewards should be provided to learners in TSE.

Motivation: The Intrinsic reward should be exercised by educators and learners by enjoying the success of meeting the daily objectives, e.g. by being able to cross the road and respond to the instruction of the scholar patrol.

The extrinsic should be exercised by providing learners with certificates after successful completion of a particular task. Certificates may be issued by traffic officers during parents' meetings; this will encourage TSE in schools.

- The infrastructure of roads and streets should be improved to encourage traffic flow with minimal accidents, e.g. cyclists should be accommodated as well as pedestrians and motorists on the roads.

Motivation: If pedestrians, cyclists and motorists use the same space on the road, and the infrastructure does not allow the mentioned parties to operate without each operating on separate roads, the level of traffic safety will always be in jeopardy.

7.6 FINAL REMARKS

There is serious concern about the high incidence of road accidents in South Africa. Although the law deals with offenders, the importance of road education from a very young age, is often overlooked. This education may be provided by educators specialising in TSE. The way children are brought up and the life skills inculcated in them can make them responsible citizens.

Thus traffic safety should be a priority and should be compulsory for learners, so that they can develop the necessary skills and become responsible road users.

JTTC can be used from the foundation phase to the senior phase. However, this does not mean that TSE should stop at senior phase. The learning can continue to further the education and training level of grades 10, 11 and 12. More advanced learning centres in traffic safety can be used, and the Department of Transport can for example enter into an agreement with the Department of Education to use existing driving licence testing grounds. The governing bodies and schools will raise funds to meet the requirements, such as booking registration, hiring vehicles and organising with the Department of Transport.

8 BIBLIOGRAPHY

BAILEY, K.D. 1987. *Methods of social research*. 3rd ed. New York : Free Press. 533 p.

BERG, B.C. 1995. *Qualitative research methods for the social sciences*. 2nd ed. Boston : Allyn and Bacon. 252 p.

BERTRAMS, C., BOTHA, W., DESMOND, S., DLAMINI, T., JOHNSTONE, M., NTSHIGILA-KHOSA, R., & SEERY, U. 1997. Support material for curriculum 2005 orientation programme. Johannesburg : Media in Education Trust.

CARL, A.E. 1995. *Teacher empowerment through curriculum development: theory into practice*. Kenwyn : Juta. 275 p.

CLARKE, N. 1997. Curriculum 2005: introduction to the main issues. *Educator's link*, 2(3):10-15, March / June.

COLE, W.M. 1990. Cole's comments. *Journal of traffic safety education*, 37(2):5, Winter.

DU PLOOY, H.G. 1983. *Verkeersveiligheid: 'n handleiding vir onderwysers, sekondêr*. Pretoria : NVVR. 162 p.

DU PLOOY, H.G. 1986. *Die opvoeding en onderrig van verkeersveiligheid in skoolverband*. Pretoria : UNISA. (Proefskrif - D.Ed.)

DREYER, L.A. 1986. *Die opvoedings- en opleidingstaak van die Nasionale Verkeersveiligheidsraad*. Potchefstroom : PU vir CHO. (Proefskrif - D.Ed.)

DROTSKÉ, L. 1997. The inclusion of traffic safety education in the proposed new curriculum for South African schools. Potchefstroom : PU vir CHO. (Unpublished article.)

IORNENGEN, K.T.A. 2000. CENETS' diploma programmes going international. *Newsletter*, 1(3):4-5, September.

MOCHWANAESI, M.P. 1998. The role of colleges of education in the North West Province. Potchefstroom : PU for CHO. (Dissertation - M.Ed.) 194 p.

MWAMWENDA, T.S. 1989. Educational psychology: an African perspective. Durban : Butterworths.

NWANA, O.C. 1999. Introduction to educational research. Lagos : Apapa.

POTCHEFSTROOM UNIVERSITY FOR C.H.E. Centre for Education in Traffic Safety. s.a. Manual for the integration of traffic safety education with the learning programmes in the foundation phase (Book 1). Pretoria : Directorate Road Traffic Education and Communication. 83 p.

POTCHEFSTROOM UNIVERSITY FOR C.H.E. Centre for Education in Traffic Safety. s.a. Manual for the integration of traffic safety education with the learning programmes in the foundation phase (Book 2). Pretoria : Directorate Road Traffic Education and Communication. 60 p.

POTCHEFSTROOM UNIVERSITY FOR C.H.E. Centre for Education in Traffic Safety s.a. Manual for the integration of traffic safety education with the learning programmes in the foundation phase (Book 3). Pretoria : Directorate Road Traffic Education and Communication. 126 p.

RABINOWITZ, R., MULLER, F.V., DE WET, S., WESSELS, E. & THEUNISSEN, S. 1985. Handleiding vir praktiese onderrig op die junior verkeersopleidings- terrein. Johannesburg : Perskor. 44 p.

RIBBENS, H. 1996. Pedestrian safety: the community approach. *Robot*, 1:22, Autumn.

SENVO, 1992. Funksieterrein: Verkeersveiligheidsopvoeding. Potchefstroom, PU vir CHO. 6 p.

SOUTH AFRICA. CSS (CENTRAL STATISTICAL SERVICES). 1997. Road traffic collision. Pretoria : CSS. (P71/61/01.)

SOUTH AFRICA. Department of Education. 1997a. Call for comments on the draft statement on the national curriculum for grade 1-9. *Government gazette*, 18051, 6 June 1997.

SOUTH AFRICA. Department of Education. 1997b. Policy document: foundation phase (grades R to 3). Pretoria : Department of Education.

SOUTH AFRICA. Department of Education. 1997c. Policy document: intermediate phase (grades 4 to 6). Pretoria : Department of Education.

SOUTH AFRICA. Department of Education. 1997d. Policy document: senior phase (Grades 7 to 9). Pretoria : Department of Education. 77 p.

SOUTH AFRICA. (North West Province) Department of Education, 1997e. An introduction to Outcomes-Based Education (OBE). Mmabatho: Sub-Directorate: Curriculum Development.

SOUTH AFRICA. Department of Transport. s.a. Child in traffic: practical guide. Pretoria : Directorate traffic safety education and communication. 23 p.

SOUTH AFRICA. Department of Transport. 1996. Green paper on national transport policy. Pretoria : Department of Transport. 79 p.

SOUTH AFRICA. Department of Transport. 1997. Abridged business plan towards implementation of the road traffic management strategy. Pretoria : Department of Transport. 16 p.

SOUTH AFRICA. Department of Transport. 2001. Safety in traffic educational programmes for the intermediate phase (Grade 4). Pretoria : Directorate Road Traffic Education and Communication. 102 p.

SPADY, W.G. & MARSHALL, K.J. 1991. Beyond traditional outcome-based education. *Leadership*, 49(2):67-71, Oct.

STEYVERS, F.J.J.M., *ed.* 1990. Annual report. Groningen : University of Groningen, Traffic Research Centre. 87 p.

STEYN, H.J. 1987. Ondersoek na die wenslikheid van 'n instelling vir verkeersveiligheidsopvoeding in die RSA: kernverslag. Potchefstroom : PU vir CHO. 12 p.

TRINCA, I.R., JOHNSTON, B.J., CAMPBELL, F.A., HAIGHT, P.R., KNIGHT, G.M., MACKAY, A.J., PETRUCELLI, M.E. 1988. Reducing traffic injury: a global challenge. Melbourne : Royal Australia College of Surgeons. 136 p.

VAN DER WALT, J.L. 1984. Gronsae van 'n sentrum / buro / department vir verkeersveiligheidsopvoeding in die RSA. Potchefstroom : PU vir CHO.

VERMEULEN, L.M. 1997. Curriculum 2005 and outcomes-based education: a guide for teachers, students and parents. Pretoria : Instoprint.

ZIETSMAN, D. 1997. Making tomorrow happen today curriculum: what will make it work? *Educator's link*, 1(2):36-42, May/June.

APPENDIX 1

LETTER OF PERMISSION TO DEPARTMENT OF EDUCATION POTCHEFSTROOM DISTRICT

Northwest Dept of Education
Klerksdorp District
P. O Box 550
HARTBEEFONTein
2600

29 July 2002

A. The District Manager
Northwest Department of Education
POTCHEFSTROOM

B. THE Principal
Phaladi Combined School



PERMISSION TO CONDUCT RESEARCH: POTCHEFSTROOM DISTRICT

- A.1 The author hereof is busy with a research for his M.Ed studies at Potchefstroom University.
2. As a result, it would be highly appreciated if you can grant permission to conduct a research in your district schools.
 3. The purpose of the research is to determine the extent to which Junior Traffic Training Centres can contribute in the implementation of traffic/road safety education in the school curriculum within Outcomes-Based Education.
 4. The attached research questionnaire will cover the following aspects:
 - 4.1 The value and the role of Junior Traffic Training Centres
 - 4.2 The need for traffic safety education.
 5. The questionnaire will be completed by the educators and learners. Should you require further information, please contact me at 082 766 9425 or 018- 431 0450

B.1 For your information

Yours faithfully

S.J MOLEFE

APPENDIX 2

LETTER OF PERMISSION TO DEPARTMENT OF EDUCATION KLERKSDORP DISTRICT

Northwest Dept of Education
Klerksdorp District
P. O Box 550
HARTBEEFONTEIN
2600

29 July 2002

B. The District Manager
Northwest Department of Education
KLERKSDORP

C. THE Principal
Maheelo Primary School/Gaenthone Secondary School



PERMISSION TO CONDUCT RESEARCH: KLERKSDORP DISTRICT

- A.1 The author hereof is busy with a research for his M.Ed studies at Potchefstroom University.
2. As a result, it would be highly appreciated if you can grant permission to conduct a research in your district schools.
3. The purpose of the research is to determine the extent to which Junior Traffic Training Centres can contribute in the implementation of traffic/road safety education in the school curriculum within Outcomes-Based Education.
4. The attached research questionnaire will cover the following aspects:
- 4.1 The value and the role of Junior Traffic Training Centres
- 4.2 The need for traffic safety education.
5. The questionnaire will be completed by the educators and learners. Should you require further information, please contact me at 082 766 9425 or 018- 431 0450

B.1 For your information

Yours faithfully

S.J MOLEFE

QUESTIONNAIRE FOR THE EDUCATORS

SURVEY QUESTIONNAIRE: Junior Traffic Training Centres

The purpose of this questionnaire is to determine the extent to which Junior Traffic Training Centres can contribute to the implementation of traffic safety education in the curriculum of the school.

Please note that you are not compelled to furnish us with your particulars, you can do so voluntarily. This questionnaire has to be completed by educators.

Your name: _____ Name of your school: _____
 Place : _____ Date : August 2002
 Contact numbers : _____
 Forty (40) items/statements

QUESTIONS:

1. Junior Traffic Training Centres are necessary for teaching learners Traffic Safety Education.

Agree	Disagree	Unsure
-------	----------	--------

2. We need Traffic Safety Education in our schools.

Agree	Disagree	Unsure
-------	----------	--------

3. It is very urgent that we include the subject in our curriculum.

Agree	Disagree	Unsure
-------	----------	--------

4. Junior Traffic Training Centres will help to comply with the principles of Outcomes-Based Education.

Agree	Disagree	Unsure
-------	----------	--------

5. Traffic Safety Education should begin from pre school through to high school:

Agree	Disagree	Unsure
-------	----------	--------

6. Road accidents involving learners will decrease when traffic education is put into place or used at school.

Agree

Disagree

Unsure

7. A trained educator specialising in Traffic Safety Education should teach the subject using Junior Traffic Training Centres.

Agree

Disagree

Unsure

8. Every school in the Province should at least have an educator specialising in Traffic Safety Education.

Agree

Disagree

Unsure

9. Children lack the skills to participate in the traffic environment.

Agree

Disagree

Unsure

10. Learners cycling to school should be skilled and re-skilled to use the bicycle in traffic.

Agree

Disagree

Unsure

11. Each school especially primary schools and pre schools must have a Junior Traffic Training Centre.

Agree

Disagree

Unsure

12. If Traffic Safety Education is introduced into schools learners will know the importance of a valid driving licence.

Agree

Disagree

Unsure

13. If learners are taught Traffic Safety Education, learners will grow to be responsible road users.

Agree

Disagree

Unsure

14. Scholar patrol is necessary for schools in the urban and rural areas

Agree

Disagree

Unsure

15. Junior Traffic Training Centres are the safest for training learners Traffic Safety Education practically.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
16. Parents have little time to teach their children about road safety.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
17. Traffic safety education can be integrated in a life orientation learning area more effectively.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
18. Introduction of Traffic Safety Education through Junior Traffic Training Centres is a waste of money.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
19. Traffic officials must visit schools and present lessons on traffic safety.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
20. In my Area I heard of learners recently being knocked over by vehicles recently (within the past four months).
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
21. Most learners in my area walk to school.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
22. Most learners in my area cycle to school.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
23. Most learners in my area travel by bus or minibus.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
24. Parents accompany learners to school
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|

25. Pedestrians wear brighter clothes or reflectors when it is dark so that motorists can see them.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
26. When crossing the street or road the pedestrian should cross very fast.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
27. When crossing the road the pedestrian should do so when it is safe to cross.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
28. Departments of Transport and Education must take responsibility of the subject or leaning area of Traffic Safety Education.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
29. Junior Traffic Training Centres give a learner from the disadvantage area a chance for exposure in the traffic environment.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
30. Responding to the traffic light is not necessary when there is no oncoming traffic.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
31. Traffic officers must control traffic near schools daily especially primary schools in the morning and in the afternoon when schools knock off.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
32. Private companies should be involved in Traffic Safety Education e.g. Coca-Cola sponsoring equipment to learners.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|
33. Pedestrian education must be emphasized in disadvantaged areas for learners staying in disadvantaged areas.
- | | | |
|-------|----------|--------|
| Agree | Disagree | Unsure |
|-------|----------|--------|

34. Cyclist education should be taught at school from foundation phase with the purpose of getting learners to be ready to use the cycle at senior phase and higher phases.

Agree

Disagree

Unsure

35. Traffic Safety Education can be integrated in all eight learning areas/subjects e.g. language comprehension with traffic news.

Agree

Disagree

Unsure

36. There is a pedestrian crossing or a pedestrian crossing block at your school or at schools in your area.

Agree

Disagree

Unsure

37. In my area learners have to cross some busy roads used by vehicles when going to the school

Agree

Disagree

Unsure

38. The schools in your area have enough infrastructure to be used by learners when walking to school e.g. pedestrian traffic lights, pedestrian crossings, bridges and scholar patrols.

Agree

Disagree

Unsure

39. Parents have time to teach children about safety on the roads.

Agree

Disagree

Unsure

40. Learners must obtain driving licences through schools when doing Grade twelve.

Agree

Disagree

Unsure

QUESTIONNAIRE FOR THE LEARNERS

SURVEY QUESTIONNAIRE: Junior Traffic Training Centres

The purpose of this questionnaire is to determine the extent to which Junior Traffic Training Centres can contribute to the implementation of Traffic Safety Education in the curriculum of the school which is Outcomes-Based Education (OBE).

OBE education is based on outcomes instead of objectives that is what should a learner be able to do at the end of a learning activity.

Please note that you are not compelled to furnish us with your particulars, you can do so voluntarily. This questionnaire has to be completed by learners.

Your name: _____ Name of your school: _____
 Place : _____ Date : August 2002
 Contact numbers : _____
 Forty (19) items/statements

QUESTIONS:

1. We need Traffic Safety Education in our schools.

Agree	Disagree	Unsure
-------	----------	--------

2. It is very urgent that we include the subject in our curriculum.

Agree	Disagree	Unsure
-------	----------	--------

3. Scholar patrol is necessary for schools in the urban and rural areas

Agree	Disagree	Unsure
-------	----------	--------

4. Junior Traffic Training Centres are the safest for training learners Traffic Safety Education practically?

Agree	Disagree	Unsure
-------	----------	--------

5. Traffic officials must visit schools and present lessons on traffic safety.

Agree	Disagree	Unsure
-------	----------	--------

6. In my area I heard of learners recently being knocked over by vehicles (within the past four months).

Agree

Disagree

Unsure

7. Most learners in my area walk to school.

Agree

Disagree

Unsure

8. Most learners in my area cycle to school.

Agree

Disagree

Unsure

9. Most learners in my area travel by bus or minibus.

Agree

Disagree

Unsure

10. Parents accompany learners to school.

Agree

Disagree

Unsure

11. Pedestrian wear brighter clothes or reflectors when it is dark so that motorists can see them.

Agree

Disagree

Unsure

12. When crossing the street or road the pedestrian should cross very fast.

Agree

Disagree

Unsure

13. When crossing the road the pedestrian should do so when it is safe to cross.

Agree

Disagree

Unsure

14. Responding to the traffic light is not necessary when there is no oncoming traffic.

Agree

Disagree

Unsure

15. Traffic Safety Education can be integrated in all eight learning areas/subjects e.g. language comprehension with traffic news.

Agree

Disagree

Unsure

16. There is a pedestrian crossing or a pedestrian crossing block at your school or at schools in your area.

Agree

Disagree

Unsure

17. In my area learners have to cross some busy roads used by vehicles when going to school.

Agree

Disagree

Unsure

18. Parents have time to teach children about safety on roads.

Agree

Disagree

Unsure

19. Traffic officials must visit schools and present lessons on traffic safety.

Agree

Disagree

Unsure

APPENDIX 5

COMPARISONS OF EDUCATORS MEANS OF STANDARD ERROR IN VARIOUS GROUPS

TEACHER N = 74										
GROUP 1(N=40)			GROUP 2 (N=24)		GROUP 3 (N=10)		Total number of respondents			
S/NO	F	%	F	%	F	%	F	%	Mean(%)	Standard error of mean (%)
Q01 a	40	100	24	100	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0	0	0.00	0	0.00	0.00	0.00
Q02 a	40	100	24	100	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0	0	0.00	0	0.00	0.00	0.00
Q03 a	40	100	23	95.83	8	80.00	71	95.95	95.95	2.29
b	0	0	1	4.17	2	20.00	3	4.05	4.05	2.29
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q04 a	15	37.5	19	79.17	10	100.00	44	59.46	59.46	5.71
b	25	62.5	5	20.83	0	0.00	30	40.54	40.54	5.71
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q05 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q06 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q07 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q08 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q09 a	20	50	12	50.00	10	100.00	42	56.76	56.76	5.76
b	20	50	12	50.00	0	0.00	32	43.24	43.24	5.76
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q10 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q11 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q12 a	20	50	12	50.00	5	50.00	37	50.00	50.00	5.81
b	20	50	12	50.00	5	50.00	37	50.00	50.00	5.81
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q13 a	29	72.5	20	83.33	7	70.00	56	75.68	75.68	4.99
b	11	27.5	4	16.67	3	30.00	18	24.32	24.32	4.99
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00

Q14 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q15 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q16 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q17 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q18 a	25	50	20	83.33	10	100.00	55	74.32	74.32	5.08
b	15	50	4	16.67	0	0.00	19	25.68	25.68	5.08
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q19 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q20 a	40	100	15	62.50	10	100.00	65	87.84	87.84	3.80
b	0	0	10	41.67	0	0.00	10	13.51	13.51	3.97
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q21 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q22 a	3	7.5	4	16.67	2	20.00	9	12.16	12.16	3.80
b	37	92.5	20	83.33	8	80.00	65	87.84	87.84	3.80
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q23 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q24 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q25 a	20	50	12	50.00	5	50.00	37	50.00	50.00	5.81
b	20	50	12	50.00	5	50.00	37	50.00	50.00	5.81
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q26 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q27 a	14	35	13	54.17	10	100.00	37	50.00	50.00	5.81
b	16	40	11	45.83	0	0.00	27	36.49	36.49	5.60
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q28 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q29 a	30	75	20	83.33	10	100.00	60	81.08	81.08	4.55
b	10	25	4	16.67	0	0.00	14	18.92	18.92	4.55
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q30 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00

c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q31 a	20	50	12	50.00	10	100.00	42	56.76	56.76	5.76
b	20	50	12	50.00	0	0.00	32	43.24	43.24	5.76
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q32 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q33 a	23	50	22	91.67	10	100.00	55	74.32	74.32	5.08
b	17	50	2	8.33	0	0.00	19	25.68	25.68	5.08
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q34 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q35 a	28	70	23	95.83	7	70.00	58	78.38	78.38	4.79
b	11	27.5	1	4.17	3	30.00	15	20.27	20.27	4.67
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q36 a	30	75	21	87.50	8	80.00	59	79.73	79.73	4.67
b	10	25	3	12.50	2	20.00	15	20.27	20.27	4.67
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q37 a	37	92.5	21	87.50	8	80.00	66	89.19	89.19	3.61
b	3	7.5	3	12.50	2	20.00	8	10.81	10.81	3.61
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q38 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q39 a	30	75	19	79.17	10	100.00	59	79.73	79.73	4.67
b	10	25	5	20.83	0	0.00	15	20.27	20.27	4.67
c	0		0	0.00	0	0.00	0	0.00	0.00	0.00
Q40 a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00

APPENDIX 6

COMPARISON OF LEARNER'S MEANS OF STANDARD ERROR IN VARIOUS GROUPS

STUDENT CN = 74											
GROUP 4(N=41)			GROUP 5 (N=24)		Σ		Total number of respondents				
S/NO		F	%	F	%	F	%	F	%	Mean(%)	Standard error of mean(%)
Q01	a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q02	a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q03	a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q04	a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q05	a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q06	a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q07	a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q08	a	4	10	4	16.67	1	10.00	9	12.16	12.16	3.80
	b	36	90	20	83.33	9	90.00	65	87.84	87.84	3.80
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q09	a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q10	a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q11	a	25	62.5	20	83.33	10	100.00	55	74.32	74.32	5.08
	b	15	37.5	4	16.67	0	0.00	19	25.68	25.68	5.08
	c			0	0.00	0	0.00	0	0.00	0.00	0.00
Q12	a	26	65	20	83.33	10	100.00	56	75.68	75.68	4.99
	b	14	35	4	16.67	0	0.00	18	24.32	24.32	4.99
	c			0	0.00	0	0.00	0	0.00	0.00	0.00
Q13	a	13	32.5	14	58.33	10	100.00	37	50.00	50.00	5.81
	b	21	52.5	10	41.67	0	0.00	31	41.89	41.89	5.74
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00

Q14	a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q15	a	40	100	10	41.67	10	100.00	60	81.08	81.08	4.55
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q16	a	20	50	12	50.00	5	50.00	37	50.00	50.00	5.81
	b	20	50	12	50.00	5	50.00	37	50.00	50.00	5.81
	c	0	0	0	0.00	50	500.00	50	67.57	67.57	5.44
Q17	a	20	50	8	33.33	9	90.00	37	50.00	50.00	5.81
	b	20	50	16	66.67	1	10.00	37	50.00	50.00	5.81
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q18	a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
Q19	a	40	100	24	100.00	10	100.00	74	100.00	100.00	0.00
	b	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00
	c	0	0	0	0.00	0	0.00	0	0.00	0.00	0.00