

# AN EVALUATION OF THE SCHOOLS' ROAD SAFETY PROJECT FOR THE 2010 TRANSPORT CHALLENGES: HLABISA DISTRICT, KZN

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## ABSTRACT

Concern about the carnage along the national roads network has forced the South African National Roads Agency (SANRAL) to intervene. It has initiated a Road Safety Project in an attempt to minimize the socio-economic disaster. This was achieved through a road safety education programme characterized by the skills transfer and training, spearheaded by CSIR Transportek. The University Interdisciplinary Accident Research Centre of KwaZulu-Natal (UNIARC) was tasked with the assignment of evaluating this road safety project in the Hlabisa District in KwaZulu-Natal.

Field data was collected during the second week (9-13<sup>th</sup>) of February 2004, when teachers, pupils, community members and education inspectors were interviewed. From the 36 schools that were involved in the programme, a random selection of 17 schools was included in the evaluation. This total sample was further stratified into 9 primary and 8 high schools. Finally, 398 pupils, 94 community members, 25 teachers and 3 education inspectors were interviewed.

The results indicated that the survey informants were mostly females; the majority of pupils were in one age range of 10-12 and community members in the age group 21-30. Eighty-eight per cent (88%) of the pupils confirmed that they travel by foot to school, a journey, which generally takes more than 30 minutes. Teachers involved in the programme characterized it as an "eye opener" (80%); and "improved audit skills" (68%). Such characterization of the programme was due to the teachers' observation in that it improved "awareness of road safety problems" (84%) and capability to acquire "evasive action skills" (68%).

One major transport challenge for 2010 is revealed by the study when respondents were asked to indicate their readiness to use bicycles, 59% of the school pupils responded in the affirmative as against only 21% of community members who confirmed interest. Importance for cycling experience indicated by 70% of pupils considered "jobs like small business activity/tourism" as a top priority.

## 1. INTRODUCTION AND BACKGROUND TO THE STUDY

The South African National Roads Agency Limited (SANRAL) has the task of balancing social and economic interests in the provision of a national roads network. This is partly meant to ensure reduction of the gap between the poor and the economically advantaged sectors of society. This task has unfortunately been marred by intense pedestrian activity

adjacent to some sections of the national road network where unprotected road users are exposed to greater risk of being involved in traffic collisions. This problem, characteristic of the developing countries, is compounded by perceived lack of knowledge to harness the road infrastructure.

In South Africa, in the order of 12 000 persons lose their lives annually while about 40 000 are seriously injured and 110 000 sustain minor injuries in more than 500 000 crashes.<sup>1</sup> Expressed as a percentage of total road fatalities, over the last 30 years the annual number of pedestrians killed has varied between 42 and 47 percent (Ribbens, 1996). In KwaZulu-Natal, about 40% of all pedestrian fatalities occur on rural roads outside cities and towns. It is in part against this background that SANRAL believes that:

“...the empowerment of communities bordering national highways, through road safety education and programmes is likely to result in the reduction of the high social and economic costs of road accident related injuries and deaths. For this strategy to be realized on the ground, communication and public participation are seen as key focal areas”.<sup>2</sup>

The holistic road safety regime designed by SANRAL- with technical support from the Council for Scientific and Industrial Research (CSIR) is anchored in education, skill's transfer and training. CSIR Transportek has been tasked to implement the road safety education programme in South African Provinces including KwaZulu-Natal and Free State. The road safety training subcomponent of the programme entailed development of materials, conducting of workshops with teachers and leaders of the communities, raising road safety awareness, pedestrian training, safe route to school programme training, and substance abuse education.

Hlabisa District in northern KwaZulu-Natal was earmarked for the post impact study of this programme and evaluation of teachers who are trainers. The University Interdisciplinary Accident Research Centre (UNIARC) of KwaZulu-Natal was tasked with the main assignment of evaluating this Road Safety Programme in the Hlabisa area.

## **2. AIMS AND OBJECTIVES**

This paper only looks into three aspects of the schools' road safety programme that are to:

- Explore feelings of participants;
- Evaluate methods and strategies for its improvement;
- Probe views on bicycle use for poverty alleviation and safety promotion.

## **3. METHODOLOGY**

Both qualitative and quantitative methods were employed to gather data for this evaluation study. A host of literature germane to the mentioned methods shows that each has its own strengths and weaknesses as a general approach to the conduct of social research (Loftland, 1971; Bryman, 1988 & Strauss et al., 1990). It is these strengths and weaknesses that lie behind the rationale for integrating the two research approaches since they complement each other.

A combination of quantitative and qualitative approaches bridge the 'macro-micro' gulf since the former research methods often tap larger scale structural features of social life while the latter tends to address small scale behavioural aspects. Also, quantitative

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<sup>1</sup> See also <http://www.transport.gov.za/comm-centre/pr/2003/pr0324.html>, 24/03/2004

<sup>2</sup> <http://www.transport.gov.za/comm-centre/pr/2003/pr0324.html>, 24/03/2004

research methods are efficient at getting to the 'structural' features of the social life while qualitative studies are usually stronger in terms of 'processual aspects' (Bryman, 1992).

### 3.1 Survey Instrument

Face to face administered questionnaire interviews was the quantitative method used. It was characterised by a combination of open and close-ended questions. These questionnaires were focused on the school pupils; community members; road safety-teaching teachers, and Hlabisa District education inspectors.

### 3.2 Survey Sample

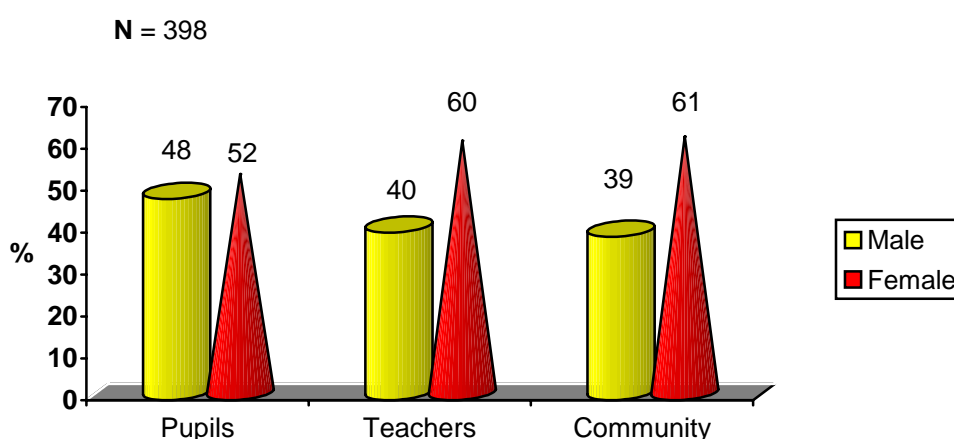
From the 36 schools that were involved in the Road Safety Programme in the Hlabisa District, a random selection of 17 schools were included in the evaluation of this programme. This total sample was further stratified into nine (9) primary and eight (8) high schools. A random selection of estimated 20 pupils from each school was selected from programme participants for interviews. A total of 398 pupils were interviewed by the end of the survey.

Thirty (30) teachers were earmarked for interview and only 25 participated as some teachers had moved to other schools that were either not part of the sampled schools or beyond the Hlabisa District. Three (3) Deputy Education Specialist (DES) inspectors who are in charge of the earmarked schools were interviewed from the total of six (6) in the Hlabisa District. Ninety-four (94) community members who were randomly selected also participated in the survey.

## 4. DATA ANALYSIS AND DISCUSSION

### 4.1 General Profile Information of Respondents

With regard to Figure 1, respondents in this survey consisted of more female than males.



**Figure 1. Gender of respondents who participated in survey.**

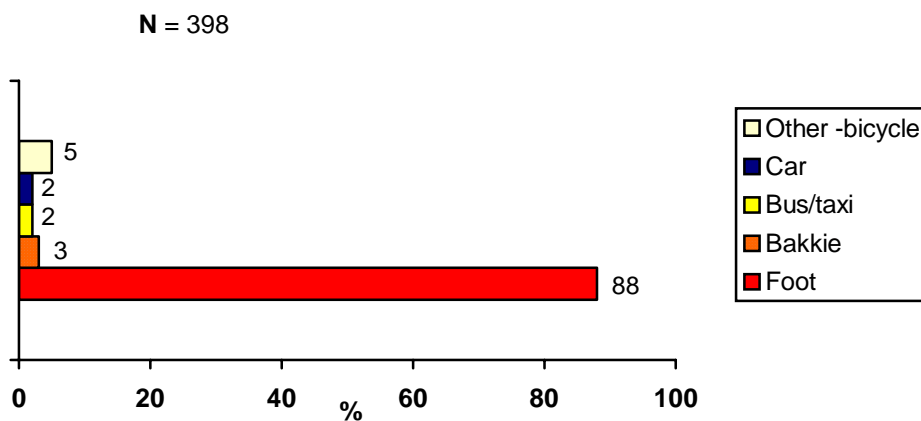
Table 1 reflects a majority of 35% of pupils in the 10-12 age group and 39% of community members in the 21-30 age21-30-age cohort who responded to the survey.

**Table 1. Age cohorts of school pupils and community members.**

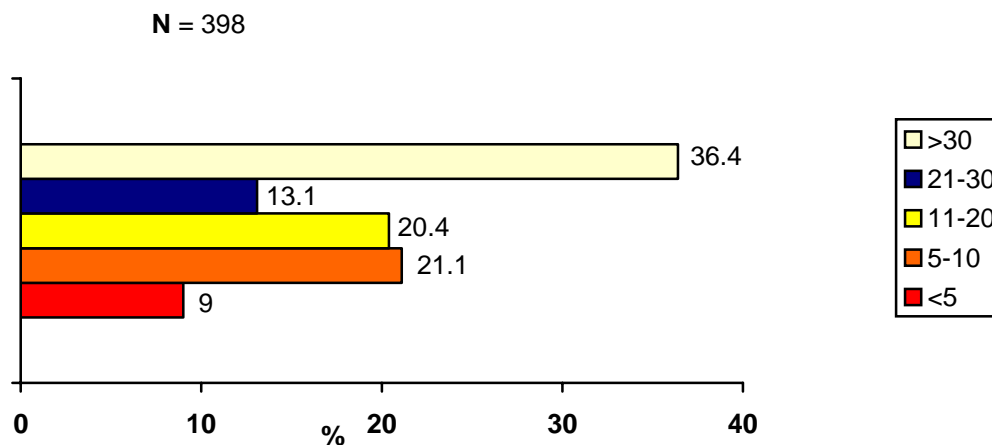
School pupils				Community members			
Age groups	N	%	*Cum %	Age groups	N	%	*Cum %
<10	58	15	14.6				
10-12	143	35	50.1	16-20	15	16	16
13-15	99	25	75.4	21-30	37	39	55.3
16-19	79	20	95.2	31-40	19	20	75.5
>19	19	5	100	>40	23	25	100
Total	398	100			94	100	

Note: \*Cum% = cumulative percent

Most of the participant pupils traveled by foot to school as demonstrated in Figure 2. This suggests that these respondents should be conversant with their environment from home to school.



**Figure 2. Mode of travel by pupils to school.**

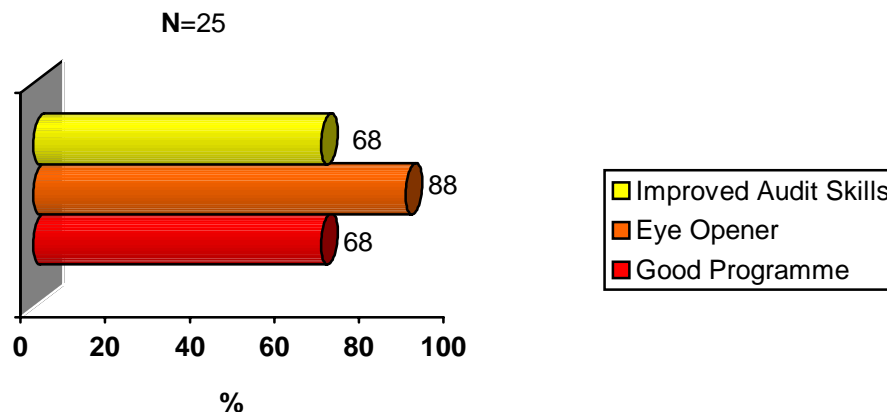


**Figure 3. Time it takes to reach school from home.**

According to Figure 3, most of these pupils (36.4%) indicated that it takes more than 30 minutes to reach school from home.

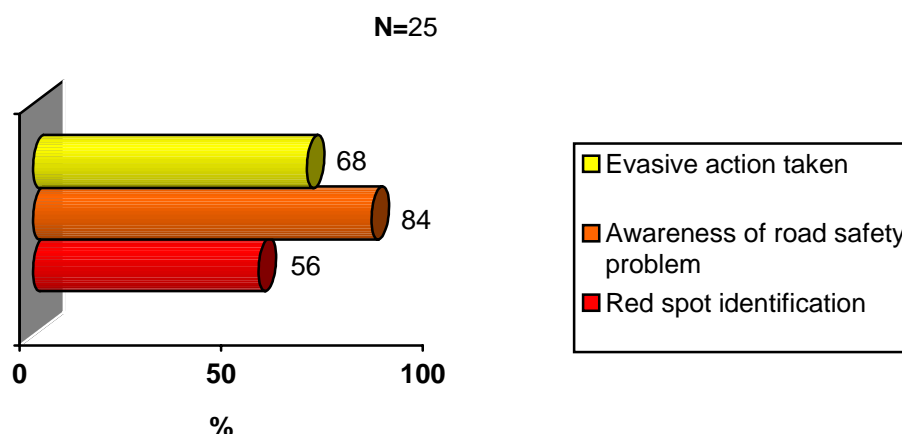
#### 4.2 Feelings on the Schools' Road Safety Programme

Teachers were asked how they felt about the schools' road safety programme. As illustrated in Figure 4, 88% characterised it as an "eye opener" followed by epithets such as "good programme" (68%) and further felt that it "improved [their road safety] audit skills". Education inspectors also felt that the programme was necessary since it dealt with safety to save pupils' lives.



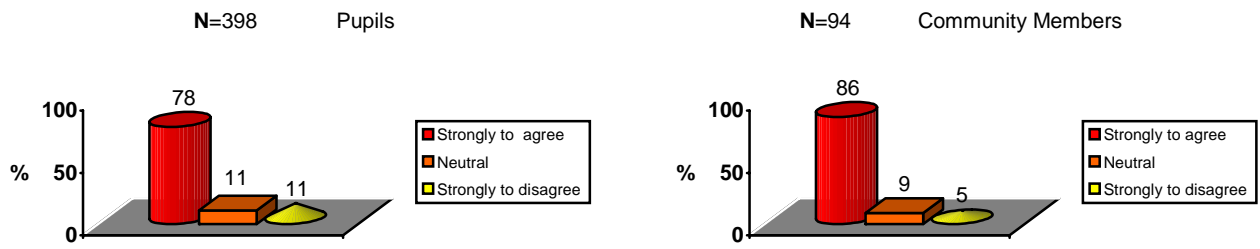
**Figure 4. Teachers' feelings about the schools' road safety programme.**

Educators were further asked to demonstrate the above characterization of the programme by asking the question: 'what they have observed to feel like that?' Respondents observed three things, as demonstrated in Figure 5. Firstly, it sharpened and sensitised their "awareness of the road safety problem" (84%). Secondly, it provided them with skills to take "evasive actions" to avoid being victims of road trauma (68%). Thirdly, such skills were demonstrated in "identification of red spots" on the road (56%).



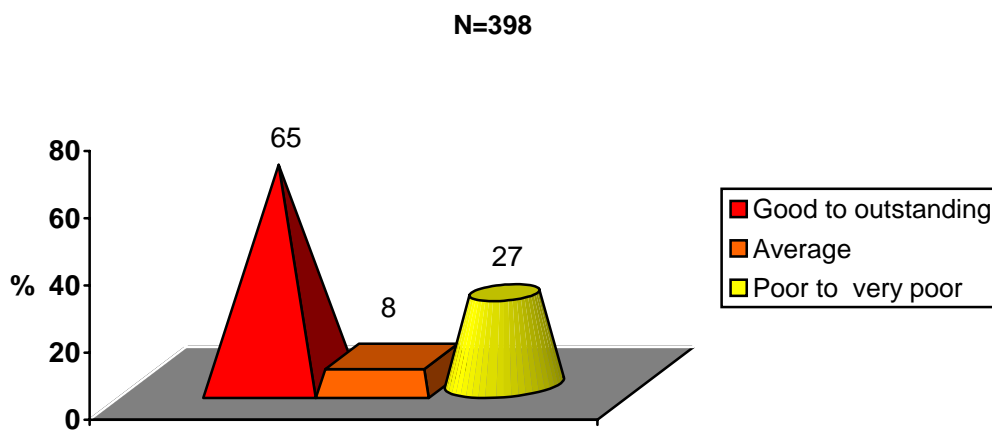
**Figure 5. Teachers' observed feelings for the road safety programme.**

Teachers did not keep the information to themselves but transferred the skills and expertise to the pupils as well as community members at large. Figure 6 illustrates respondents' confirmation that 'their teachers/school road safety training encouraged them to be actively involved in road safety' as well.



**Figure 6. Approval of teacher/school road safety training as source of encouragement for commitment.**

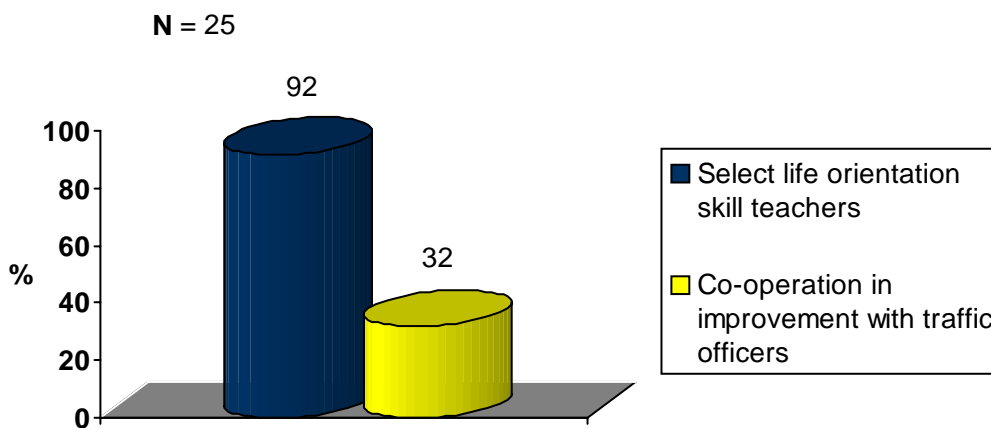
In Figure 7 pupils further rated their ‘training regarding road safety education’ as generally “good to outstanding” (65%). Such rating confirms the feelings of teachers about the road safety programme they have gone through.



**Figure 7. Rating of road safety training by pupils.**

#### 4.3 Evaluation of Methods and Strategies for Improvement

This section looks into what teachers thought could have been done to improve the programme. This was achieved by asking engaging questions as to what strategy/ies could have been used, as well as what support they would need. Figure 8 reflects teachers’ views as to what could be done to improve the Road Safety Programme.



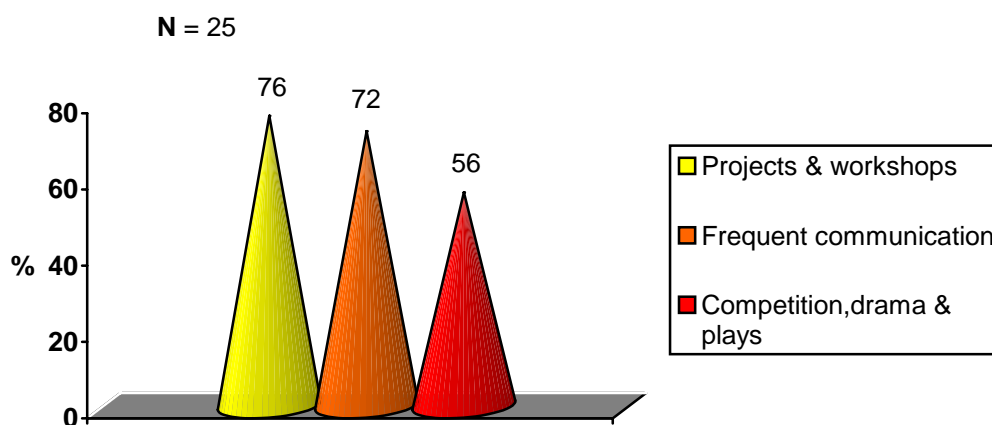
**Figure 8. Improve road safety programme.**

The majority of the educators seem to be of the feeling that the life orientation skills teachers should be the ones involved in the programme. This reasoning is informed by responsibilities teachers have as well as more dedicated time given to the subject as one teacher in the questionnaire argued:

“Select educators offering life orientation. A principal offering biology and business economics has less time to help learners about road safety.”

It should be recalled that educators who participated in this programme were seniors in their respective schools and had a long experience teaching life orientation skills subject besides their ordinary teaching exposure.

The next question was on strategies that could be used to guarantee the success of the programme. Most educators (76%) suggested frequent communication, followed by the creation of more projects accompanied by workshops (72%) then establishment of competitions, drama and plays (56%) as presented in Figure 9.



**Figure 9. Proposed strategies to use for success.**

These strategies were mostly focused on both road safety teachers and facilitators of the programme as one teacher summarized as following:

“I think dramatization to the learners will play vital role if there may the materials for these to help the educators and learners...”

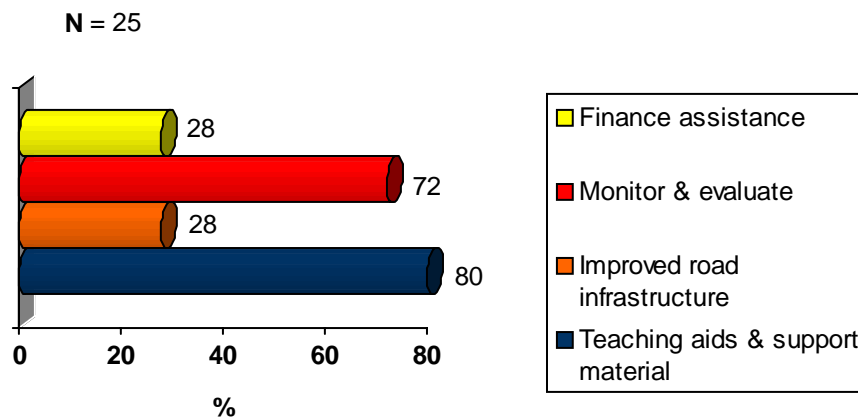
With regard to these strategies, teachers are of the view that to make road safety teaching fun, understandable and of interest to both pupils and the community there need to be projects and workshops devised.

There should be frequent communication with the Road Safety Programme facilitators. Competitions between pupils as well as schools should be promoted. Drama, especially stage plays would dramatise road safety behaviour. Some teachers expanded as follows:

“...the plays can play a vital role to this if it can be drama, poems etc. about this so that everyone would see the importance of road safety.”

“Follow up on the side of officials to see to it that the information is well delivered to the grass-root and to check on the effectiveness.”

Educators were also asked for the kind of assistance they would need and Figure 10 reflects on the responses.



**Figure 10. Support needed by educators.**

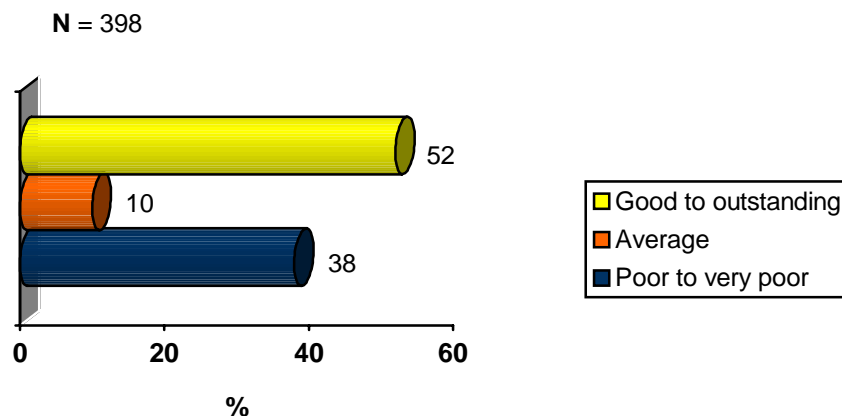
The majority (80%) of teachers seem to need the support of learning and teaching aids they referred to as “support materials” as some excerpts from teachers’ questionnaires, indicated as follows:

“I think if we can get the teaching aids such as charts and the pamphlets so that we can use those charts in teachings our learners and it can help them not to forget that they have been taught...”

“I think the booklets for our learners will play a vital part if they may get them in both isiZulu and English languages. And also our roads if that must be the things that they look at first as to improve them for both motorists and learner [s] and also road signs to be added [improved and constructed?].”

“Books and pamphlet[s] that talk about road and safety. Video cassettes which have guides of road and safety e.g. people crossing the road and the results of those who do not cross the road in a safe place.”

“The support of aids such as road signs and certificate[s or certification?] of learners just to motivate them to know better about this and even tell other”



**Figure 11. Pupils rating of road safety education teaching aids.**



Even though the majority (52%) of school pupils rated the road safety education teaching aids as “good to outstanding” as shown in Figure 11, 38% see them as “poor to very poor” thus supporting the educators’ plea for increased support.

Following the teaching aids request is support through monitoring and evaluation of the programme and its progress in schools. Suffice it is to cite teachers who said:

“Schoolboy [CSIR’s school Road Safety Programme director] should visit school[s] at least 4 times a year. Road safety should be done now and then because we always get new comers every year and most of them are very young”

“I think monitoring should be done as to see whether the educators are doing it well or when not, where to help them.”

“Follow up on the side of officials to see to it that the information is well delivered to the grassroots and to check on the effectiveness.

The financial assistance requested refers to leveling of the grounds to construct the Little and Informed Centres and some teachers in the questionnaire have better articulated the concern as:

“Our schools have grade R and foundation learners. The grounds can be used for multipurpose e.g. playground, place to seat when eating, educational...We therefore need support of having concrete and durable materials. We need to have long lasting and perfect ground therefore we need to construct the signs and road perfectly.”

“As the school that is willing to implement this programme, we need financial support. We need to have centres in schools where learners are going to see all these road signs and where demonstrations are going to take place.”

#### 4.4 Probing Bicycle Use for Poverty Alleviation and Safety

With SANRAL’s commitment to poverty relief and dedication to job creation and empowerment, coupled with the National and Provincial Departments of Transport’s *Shova Kalula* Bicycle Programme, it was thought prudent to include this section (Enterprise, 2003; Mpanza, 2002; Mashiri et al., 2002). Bicycle use readiness was included to establish interest in the mode of transport, as it is a cheap mode of transport, as well as to anticipate potential infrastructural and road safety problems.

When respondents were asked to indicate their readiness to use bicycles, 59% of school pupils responded in the affirmative as against only 21% of community members who confirmed interest. The poor interest from community members can be gleaned from the comments they voluntarily expressed such as:

“...because many cars are speeding in the area”

“...there is a problem of road safety with the young children”

“...There is a big problem with N2”

“...too many cars speeding on the township roads”

These issues raised by the community members support the road safety audit matters raised earlier by pupils. Irrespective of the elders’ concern, pupils have indicated that they are ready. It has been noted in Figure 2 that 88% of these pupils travel by foot to school and for the majority (36%) this took more than 30 minutes (Figure 3).

A further probe focused on the prioritization of certain issues that they consider of importance for cycling experience and these are indicated in Table 2.

**Table 2. Prioritisation of issues pertaining to cycling experience.**

	Pupils			Community		
	Top Priority	Medium Priority	Low Priority	Top Priority	Medium Priority	Low Priority
More infrastructure like separate cycling tracks	65	14	21	66	35	0
Training in safe use of bicycles on the road	69	19	12	36	46	18
Support/funding of bicycle purchase	65	20	15	66	21	14
Jobs like small business activity /tourism	70	20	10	33	22	45
Sport training and fitness	64	21	15	82	11	7
<b>Total</b>	<b>67</b>	<b>19</b>	<b>14</b>	<b>57</b>	<b>27</b>	<b>16</b>

Seventy per cent (70%) of pupils consider “jobs like small business activity/tourism” as a top priority, compared to 82% of community members who prefer “sport training and fitness.” This is followed by 69% of school children that again indicate “training in safe use of bicycles on the road” as top priority.

The third top ranking priority for pupils are both “more infrastructure like separate cycling tracks” (65%) and “support/funding of bicycle purchase” (65%) similarly with community at 66% each.

## 5. CONCLUSION AND RECOMMENDATIONS

It is therefore concluded that the SANRAL Poverty Alleviation-Road Safety Project has made a resounding impact in the Hlabisa District, so much so informants are pleading that it should continue. This project has opened a can of worms for private and public enterprises as inhabitants are demanding improvement of road and pedestrian infrastructure, as they currently do not represent the ideal situation in which to practice the newly acquired skills.

This programmes’ impact is also seen and felt in the identification of the pupils’ business acumen to use bicycles in order to exploit the tourism market business in their region not to mention the health and sporting related bicycle experience of community members.

It is recommended that the teachers’ advanced strategies to improve the success of the program be taken into consideration.

These are:

- Select the life orientation teachers to teach the road safety education since they have been earmarked as the most dedicated, people in view of the time available at their disposal;
- There should be frequent communication with the road safety educators;
- More projects and workshops coupled with competitions drama, plays and reading of poems to make the programme as interesting to pupils as possible;

- Teachers need to be supported with the road safety teaching aids and support material like books videos and pamphlets;
- Closely monitor and evaluate the programme to keep a momentum with the educators.

With the benefit of hindsight it is recommended that:

- The bicycle project should be taken into serious consideration, as it shows two benefits. *Firstly*, it would serve as a good tool to inculcate good road safety behaviour at an early age and make responsible vehicle drivers who will have compassionate feelings for other road users' in the near future. This is important that pupils identify that they lack certain safety skills to ride a bicycle. *Secondly*, the business acumen that needs to be harnessed in this generation to encourage job creators rather than job seekers. This would advance South Africa's economy thus simultaneously solving the unemployment problem that manifests itself even in crime.

## 6. ACKNOWLEDGEMENTS

Sincere gratitude is expressed to SANRAL (South African National Roads Agency Ltd) for funding this research study and CSIR, Transportek for recommending UNIARC to evaluate their Road Safety Training Programme.

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