

Ongoing Development of the TravelSmart Curriculum Project in Victoria

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1 Introduction

1.1 Overview

The Victorian *TravelSmart Curriculum* program is designed to:

- Raise awareness of the impacts of car use on the environment, the community and the individual.
- Establish travel behaviour change and strategies to effect and maintain change.
- Promote the positive benefits of seeking and implementing travel alternatives to the car.

The *TravelSmart Curriculum* program targets students in years 5 and 6 at primary school, but also encourages a whole school approach. *TravelSmart Curriculum* promotes walking, cycling, public transport and identifies alternative and more efficient ways to use the car. The *TravelSmart Curriculum* program has the potential to achieve significant positive outcomes for school communities, in particular:

- Improving the health and fitness of students who choose to use more active ways of getting to and from school – walking or cycling rather than being driven in the family car. This will help to reduce the risk of obesity, juvenile diabetes and heart disease.
- Less traffic congestion at the start and end of the school day – improving road safety for students and reducing noise and air pollution around the school.
- Community building as families work together to plan and share responsibility for children using more active ways of getting to and from school.
- Creating a sustainable future for children by reducing greenhouse gas emissions, lessening the risk of global climate change, and restricting the demand for fossil fuels.

The program involves a number of key components designed to engage all members of the school community – school councils, administrators, teachers, students, parents/carers and other family members.

This paper outlines the *TravelSmart Curriculum* program, the delivery of the program in primary schools in Victoria to date, and the evaluation of the effectiveness of the program in terms of impact on the travel behaviour of children and their families.

1.2 The schools involved

Dynamic Outcomes Pty Ltd and GDP Consultancy Pty Ltd were contracted originally by the Department of Infrastructure in partnership with Department of Education and Training (DE&T) to develop and implement the Victorian *TravelSmart Curriculum* program in June 2002. Work on the first phase *TravelSmart Curriculum* pilot program commenced with six primary schools in late 2002 and was completed by July 2003. Schools were in locations across metropolitan Melbourne.

In phase 2 of the development and implementation the number of schools involved was to be expanded to more schools in metropolitan and rural locations. Schools were recruited from:

- Existing small-scale pilot schools
- A school cluster in a metropolitan area (Brimbank), which is a group of schools in close proximity who work collaboratively with support from the Department of Education and Training (DE&T)
- A small group of schools in one metropolitan municipality (Darebin) running VicHealth's *Walking School Bus* program
- Schools in a rural location (Warrnambool).

Following initial discussions with schools and/or local councils a total of 17 schools were recruited for the large-scale pilot program. One of the existing small-scale pilot schools chose not to be involved again – mostly due to the nature of their 2 year cyclical curriculum program. One of the *Walking School Bus* schools in Darebin chose not to participate due to the number of other commitments in place for 2004.

One of the schools involved in the TravelSmart School Travel Planning Project (Victorian Greenhouse Schools Project), was also very interested in being involved in the program. Following discussions it was decided to include this school in the program for 2004.

2 Framework for the *TravelSmart Curriculum* program

The *TravelSmart Curriculum* program is designed around the importance of engaging all members of the school community – school councils, administrators, teachers, students, parents/carers and other family members. As a result, the process for establishing the program in a school, engaging teachers and school administration, is as essential as the delivery of the classroom program to students, and through them parents and families. Without real commitment to, and understanding of the program by key stakeholders in schools, the likelihood of success in terms of a reduction in car use could be limited.

The curriculum developers for the *TravelSmart Curriculum* program drew upon the work of Prochaska and DiClemente (1986) on behaviour change, to form the basis for the scope and sequence of classroom units, topics and activities, and also for the approach to implementing the program in schools. The five key phases in the implementation of the program in schools were matched against Prochaska's and DiClemente's key stages in behaviour change.

1. Program establishment - Pre-contemplation & Contemplation
2. Teacher preparation – Preparation
3. Program delivery – Action & Maintenance
4. Teacher support – Maintenance
5. Evaluation – Maintenance

School administrations, including school councils and principals, and teaching staff are moved through the phases of the program, and provided with relevant encouragement, information and support to be able to make a commitment to the program and implement it effectively in their school – see Figure 1. The classroom program relies on these committed school personnel to focus on engaging students, their parents and families.

The *TravelSmart Curriculum* program is:

- Based around the Curriculum and Standards Framework II (Board of Studies 2000), the Middle Years of Schooling Framework and the Thinking Oriented Curriculum (DEET 1999).

- Cross curricula, but with an emphasis in the Study Of Society and the Environment, Science and Health and Physical Education Key Learning Areas. It includes many tasks with an English, Mathematics and Technology focus.
- Outcomes driven and containing assessment ideas.

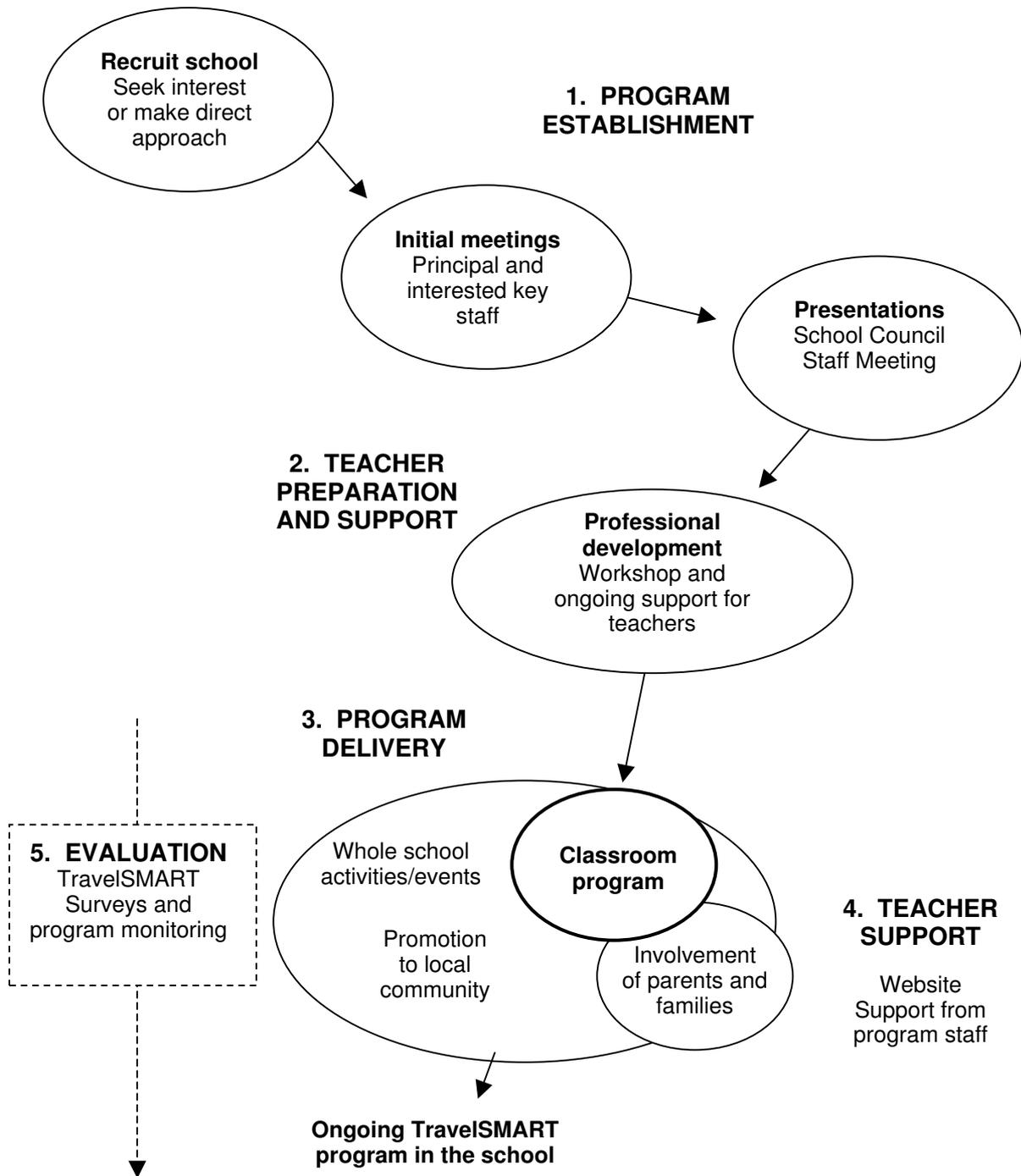


Figure 1: Process for implementing a TravelSmart Curriculum program

The key components of the program are:

- Meetings and information sessions with school councils, school administrators, teaching staff and parents/carers.
- Professional development program for teachers.
- Classroom activities for year 5 and 6 students that can be shared and adapted for use with other year levels.
- Whole school activities and events designed to engage the whole school community.
- Involvement of parents/carers and families through activities linked to the classroom program and distribution of promotional materials.
- Promotion of the program within the local community.

As part of the program schools are provided with:

- A Schools Guide with a wide range of activities and background information.
- Student Workbooks for each student in grades 5 and 6.
- A small grant to support events and activities.
- Professional development for participating teachers.
- Brochures and newsletter items for parents.
- Promotional items to support events and activities
- Access to the program website.

A key part in the success of the *TravelSmart Curriculum* program is the involvement of a student's family. The program is designed to encourage students to work with their own family to:

- Analyse their current travel behaviour.
- Raise awareness about the impacts of car use.
- Explore the positive benefits of alternatives to car travel.
- Promote walking, cycling, public transport use, car pooling and other smart car use.
- Identify safety strategies for use when commuting.

Schools are encouraged to conduct community activities and events, including, for example, Walk and Ride to School Days.



Figure 2: Framework of the TravelSmart Curriculum classroom program

The *TravelSmart Curriculum* program complements the other travel/road safety related and environmental education programs conducted by schools. The program consists of five major units sequenced to lead the students to understand why the issue is important, to understand how the issue impacts upon their environment, their travel choices and their health – see Figure 2. The final unit assists the students to learn, rehearse and adopt strategies that will help them to travel smarter in the future.

The *TravelSmart Curriculum* classroom program has three interrelated components.

1. Schools Guide
2. Student Workbook
3. Family Bulletins

The *Schools Guide* provides background information, outlines lessons and makes links to other useful resources.

Within each of the five units (see Figure 2), the classroom program materials offer teachers a number of activities to select from to ensure that they best cater for the needs, interests and abilities of their students.

Throughout the *Schools Guide* there are a number of suggestions on how to adapt the activity to implement it as either a whole class task or an activity for small groups. It also assumes that teachers will appropriately adapt some of the language and activities to cater for learners at different levels or with special needs or simply, to address local contexts.

The program acknowledges that some schools are already undertaking activities that complement the content and processes within the *TravelSmart Curriculum* program. Excellent classroom programs already exist in the fields of, for example, environmental education, public transport, road safety, bicycle education, and physical activity.

A *Student Workbook* is provided for each grade 5/6 student to record some of their classroom and out of school activities. This is designed to reduce preparation time for teachers and to serve as a record of progress and participation in the program for students.

A series of *Family Bulletins* on different related themes are provided for each grade 5/6 student to take home. These provide interesting information that students can share with their families. These publications also provide additional classroom material around which teachers may choose to develop their own activities. There are 4 *Family Bulletins*:

- *The Impact of Cars*
- *Leave the Car at Home and Try Walking*
- *Cycling is a Great Way to Travel*
- *Take the Environmentally Friendly Alternative – Public Transport.*

There is no expectation that all the activities in the *Schools Guide* will be undertaken. Teachers are encouraged to choose topics and activities from each of the 5 units that will best meet the needs and interests of students, as well as link with any other relevant units or topics currently or previously studied. They are also able to develop or adapt their own activities using the provided activities as a basis for development.

It suggested that teachers encourage grade 5/6 students to take a leadership role in organising whole school activities, such as Walk/Ride to School Days. This provides an opportunity for students to develop organisational skills and to be involved in a practical activity designed to really make a difference and for them to take ownership of the program and its outcomes.

3 Evaluation of the TravelSmart Curriculum program

Three key evaluation methods were used to measure the effectiveness and provide feedback on the program:

- *TravelSmart* Surveys – to record travel behaviour of students and their families for one week at the commencement and the end of the classroom program.
- Parent Surveys – to gather response to the program and also changes in travel behaviour for children and families from the parent perspective.
- Teacher Feedback – written feedback from teachers was collected on the program, materials and student response.

3.1 Methodology

Two different surveys were used to measure the impact of the *TravelSmart Curriculum* program on the travel behaviour of students and their families. These were:

1. Travel surveys for one week at the start of the program and one week at the end of the term, conducted by the students of their own travel (both to/from school and other) and their parents' travel. Travel surveys of 307 students from across the schools were collected and analysed.
2. Surveys of parents following the program on their perceptions of the impact of the program on the way their child and the family travel. 300 surveys were returned from parents across the schools.

Because identification of any shift in travel behaviour was based on self-reported data, the two surveys have helped to provide some verification of any changes that were observed.

3.2 Distance between school and home

The survey of parents asked them to estimate the distance between school and home. Across all schools 80.3% reported living within 3 kilometres of their school – see Table 1. Three kilometres is a distance that can be easily walked or cycled and the significant number of children living within this proximity of their school is consistent with other research findings.

It is interesting to note that the Catholic schools that participated had a higher percentage living over 3 kilometres from the school – an average of 30.6% compared with 13.2% for government schools. This reflects the larger catchment area that Catholic schools tend to have compared with government schools. As the rural location was a reasonably large regional centre there was little difference in distances between school and home compared with metropolitan schools.

Table 1: Estimate by parents of distance between school and home – all schools

Distance	N	%
Less than 0.5km	66	22.0
0.5 to 1km	81	27.0
1 to 3 km	94	31.3
Over 3 km	55	18.3
Not given	4	1.3
TOTAL	300	100.0

3.3 Changes in travel behaviour as a result of the program

The results of both surveys indicate there has been some reduction in travel by car across students and also parents. The travel surveys completed by students looked at all trips, including school related and other trips, whereas the parent surveys focused only on school related travel. The travel surveys for students show 24.9% increase in walking, 48.0% increase in cycling and 8.0% reduction in the number of trips taken by car – see Table 2. There was a reduction in public transport use (11.5%), but the total number of trips taken before and after the program were relatively small. The change in walking for the small-scale pilot program in 2002-03 was a 7.7% increase, cycling saw a 7.8% increase and there was a 12.9% reduction in trips by car (Di Pietro and Hughes 2003).

Table 2: Number of trips taken by students over one week before and after the program – all schools

TRAVEL MODE	Survey 1 BEFORE		Survey 2 AFTER		Difference		Change
	N	Mean	N	Mean	N	Mean	%
WALK	2235	7.28	2792	9.09	557	1.81	24.9
CYCLE	641	2.09	949	3.09	308	1.00	48.0
PUBLIC TRANSPORT	182	0.59	161	0.52	-21	0.07	-11.5
CAR PASSENGER	4465	14.54	4106	13.37	-359	1.16	-8.0

In the surveys of parents, when asked about the usual journey to and from school, there was an increase in the number of students reported to be walking and cycling. The number of students travelling by car reduced by 11.7% for travel to school and 11.7% for travel from school – see Table 3. In the small-scale project in 2002-03 the reduction for travel to school was also 10.2% and 8.7% for travel from school (Di Pietro and Hughes 2003).

Table 3: How students usually travel to and from school as reported by parents before and after the TravelSMART Schools program

TRAVEL MODE	TO SCHOOL			FROM SCHOOL		
	BEFORE %	AFTER %	Difference %	BEFORE %	AFTER %	Difference %
Walk	31.7	35.3	3.6	38.7	43.7	5.0
Bicycle	6.0	10.7	4.7	5.7	10.7	5.0
Car	54.7	43.0	-11.7	47.7	36.0	-11.7
Car Pool	3.3	3.3	0.0	4.0	4.3	0.3
Combination car & walk	14.3	17.7	3.4	14.3	19.7	5.4
Public Transport	2.0	2.0	0.0	2.3	3.0	0.7
Other	0.7	0.7	0.0	0.3	0.3	0.0

Parents were asked why there had been a change in their travel behaviour and the main reasons cited were:

- Because of the *TravelSmart* program
- It's better for the environment
- To keep fit and improve health
- Changes in living/working conditions that have allowed alternatives modes of travel.

Where there had been no change in the way the child travelled to and from school parents cited the following reasons:

- Child is already being *TravelSmart*
- Distance is too far to use an alternative to the car
- Time constraints
- Convenience of using the car
- Safety concerns.

Parents were asked to indicate the extent to which the *TravelSmart Curriculum* program had impacted on the way their family travelled. 25.3% of parents responded that there had been a degree of change as a result of the program. For the small-scale pilot project in 2002-03 21.8% of parents indicated that the program had impacted on the way they travelled (Di Pietro and Hughes 2003). The nature of the change is indicated in the following selected comments:

- *We used to travel by car to the shopping centre, now we walk.*
- *If going to the milk bar, walking now, whereas before we drove the car. Keeping fit in that way by walking.*
- *We now know what we are doing and don't take the car for short trips.*
- *Encourage kids to walk and ride to local shops/park instead of being driven.*
- *My daughter gets out of the car and walks part of the way.*
- *It has provoked thought in how we use the car and opt to walk or cycle if possible.*
- *It has made us more aware of how we travel and we have made the effort to walk to local shops instead of taking the car.*

- We tend to try to get more out of the one trip rather than keeping coming and going
- There is a change. I still take him to school in the morning with a car but he always walks home with friends.
- We still use the car but now on nice days we walk to places which aren't very far.
- We try to do shopping, etc, whilst we are en route. Try not to unnecessarily use the car for trips that are not as important.
- We now use bicycles and walk more often instead of using the cars as much on the weekends.
- Whenever we can we try to walk instead of taking the car, and sometimes we even use public transport.

Where there was no change in the way the family travelled the main reasons cited for this were that:

- Family is already *TravelSmart*
- Time constraints
- Convenience of using the car
- Safety concerns
- Work commitments
- Distance between places.

The indicated impact of the program on family travel reported through the parent surveys was reinforced by changes also shown in the travel surveys. Travel by car by mothers showed a reduction of 12.4% as a passenger and 2.8% as a car driver. Travel by car by fathers showed a reduction of 2.9% as a passenger and 5.1% as a car driver. There were also reported increases in walking and cycling by both mothers and fathers, and increased use of public transport by fathers – see Tables 4 and 5.

Table 4: Number of trips taken by mothers of students over one week before and after the TravelSMART Schools program

TRAVEL MODE	Survey 1 BEFORE N	Survey 2 AFTER N	Difference N	% Change
WALK	1540	1968	428	27.8
CYCLE	73	104	31	42.5
PUBLIC TRANSPORT	178	145	-33	-18.5
CAR PASSENGER	782	685	-97	-12.4
CAR DRIVER	4210	4092	-118	-2.8

Table 5: Number of trips taken by fathers of students over one week before and after the TravelSMART Schools program

TRAVEL MODE	Survey 1 BEFORE N	Survey 2 AFTER N	Difference N	% Change
WALK	1008	1150	142	14.1
CYCLE	82	120	38	46.3
PUBLIC TRANSPORT	90	112	22	24.4
CAR PASSENGER	207	201	-6	-2.9
CAR DRIVER	3235	3070	-165	-5.1

3.4 Response to the program

Overall the response to the program from participating school communities, including teachers, students and parents was very positive.

Generally, parents were particularly positive, as indicated by the reported changes to their own travel behaviour and their comments that their children had reacted positively to the program. The following selected comments are an endorsement of the program by parents:

- *I believe this program has been helpful in that it's changed other lifestyle situations, for example, my child prefers to walk to other places (eg. Shops) instead of using the car.*
- *TravelSMART is a good program to be introduced to schools. It brings home the importance of looking after our health by walking/cycling and looking after our environment.*
- *Great program in making the kids more aware in ways of smarter travel*
- *I have valued the motivation to walk to school with my daughters. It's a wonderful time to talk and listen to them. I miss spending that time with my older daughter now in high school.*
- *Thankyou for encouraging my child to walk or cycle more.*
- *Keep this as part of the curriculum*
- *Keep going, I support any program that gets kids and people moving*
- *Program is brilliant, especially for those people that live close and were using their car to drop children off.*
- *I think it has been fantastic to see my daughter exercise and to be more conscientious about the environment. Thankyou!*
- *I support children walking safely to school. Their brains are awake when they get there.*
- *I'm sure with more education on the environment, people will start taking notice of what we have and appreciate it.*

Overall teachers appear to have found the materials and the topics relevant, useful and interesting. They also reported generally that students responded very well to most activities. Teachers were asked to complete a feedback questionnaire following the program

and to give details of which activities they undertook, rate these, comment on their usefulness and make suggestions for improvement. These responses have been analysed with a view to further refining the classroom program materials.

Most activities were rated by teachers as being either 4 or 5 from a 5 point rating scale, where 1 was 'poor' and 5 'excellent'.

Teachers were asked to comment on how the students in their class reacted to the program:

- *They were enthusiastic about the program. They were surprised at the effect humans are having on the environment and are eager to help somehow.*
- *Very positive. Interested – TravelSmart became a commonly used word in our classrooms. Really enjoyed the surveys and working with them at home - very excited about the results. Participated well in all activities and discussions. Enjoyed the workbooks and many of the activities.*
- *Children were interested and really thought about what they were doing to travel to and from places. Some were excited about the changes they had made to their mode of travel.*
- *Enjoyed activities and home/school links. Used methods other than car for TravelSmart Day. Made decisions, eg., walk with friend to corner to meet parent instead of being picked up in the car park.*
- *They enjoyed the program. We linked it across the curriculum so that the children realized that being TravelSmart had implications in more than one way – traffic congestion, health, environment and safety.*

Teachers were also asked what they liked about the program:

- *It was very easy to implement. No or little preparation was needed – just a quick read of the teacher notes provided all information. It was easy to modify lessons to suit our needs.*
- *The promotional gear was excellent and raised awareness with other staff in the school and parents. We all enjoyed the healthy breakfast funded by the grant.*
- *Well organised. Resources were fantastic! Workbooks were attractively presented and easy to use. Teacher manual – great. Newsletter ideas and parent handouts – excellent. Great classroom/discussion activities.*
- *We liked the excellent resources in support of the program. We liked the scope and flexibility of the program, to align content to our existing curricula. Thank you to the program developers and coordinators for the opportunity to participate in this purposeful, authentic program.*
- *Well prepared and easy to follow. We could relate it to our curriculum. The kids were really excited when they got their drink bottles, t-shirts and magnets. The newsletter items were supplied and this made it easier.*

4 Conclusion

Overall the phase 2 of the *TravelSmart Curriculum* program was very successful with the majority of schools approached being willing to commit to take part in the program. All schools that made the commitment to be involved have continued with implementation of the program. The impact of the program on student travel was consistent with the earlier small-scale pilot and indicates the value of the program.

It is also interesting that again an impact was seen on the way families travelled following the program. This indicates that a well-designed school based travel behaviour program can have results that extend beyond the school trip. It also shows that working through schools can be an effective means of bringing about travel behaviour change in the community.

There were a few issues which emerged during the implementation of the program which need to be considered for the future.

4.1 Timing

This timing of program implementation emerged once again as it had with the small-scale project. There are two dimensions to this. The first is that schools need a significant lead time for planning to incorporate a significant program like the *TravelSmart Curriculum* into the broader school program, cross linking it with other curriculum initiatives and imperatives. Most schools operate on a two year cyclical curriculum program meaning that they are planning up to two years in advance. An ideal lead in time would be at least eighteen months prior to anticipated implementation.

The second dimension of this issue is that again, because of the usual two year cyclical curriculum program most schools run, it is not realistic to run a the classroom program of *TravelSmart Curriculum* on an annual basis. Since schools mostly organise around composite grades, such as a grade 5/6 class, two years is required before the program can run again. This was certainly an issue for schools that were involved in the small-scale pilot in 2003 in trying to run the program again in 2004. Hence it was agreed with many of these schools to delay much of the classroom program until early 2005.

4.2 Involvement of local government

While the involvement of local government in some cases lead to slight delays in establishing the program in schools, there appeared to be advantages in working with councils. Councils are taking a much greater interest in schools, particularly through the *TravelSmart* related programs such as *School Travel Planning* and *Walking School Bus*. There are benefits in having local government directly involved in the implementation of any future *TravelSmart Curriculum* programs. Local government is able to provide expertise in related issues such as community safety, health and wellbeing, environmental sustainability and traffic management. The experiences with the involvement of councils with the program indicates how beneficial this can be.

4.3 Direct approaches to schools

A significant difference between the small-scale pilot and the phase 2 program was that invitations were made directly to schools rather conducting an expression of interest process. This invitation process had the potential to make recruitment more difficult, in that schools were not “volunteering” but being actively targeted.

While the effort required to “sell” the program to the school was greater, in particular to the school principal, there was a high level of success in recruiting schools in most of the targeted locations. This goes a long way to proving that with a respectful and timely approach, specific schools can be successfully targeted for the program in the future.

5 References

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