

TravelSMART Schools: there really is a better way to go!

G. Di Pietro & I. Hughes

Educational Consultants, Victoria, Australia

Abstract

A recent travel study showed that 76% of personal travel in Melbourne is undertaken by private vehicle, with only 16% by walking, 6% by public transport and 2% by bicycle [1]. This love affair with the motorcar and dependence upon personalised motorised travel is having an enormous impact on personal, community and environmental health. There is evidence that vehicle exhaust emissions are contributing to an enhanced greenhouse effect, resulting in climate changes and other environmental impacts [2]. From a personal and community health perspective being a frequent passenger in a car is translating into a population with significant levels of obesity, diabetes, asthma and cardiovascular diseases. Health behaviours adopted in childhood are often carried through to adulthood [3].

The complexity of traffic, particularly around school zones at drop off and pick up times elevates the risk of road trauma occurring. Health behaviour change programs, such as anti-smoking programs, have demonstrated the positive influences children can have on the behaviour of other family members, and the Victorian *TravelSMART Schools* program combines some elements of health promoting programs to bring about changes in travel. The *TravelSMART Schools* pilot program was conducted successfully and evaluated during 2003 and the program has continued to be expanded for 2004.

Keywords: travel, school, behaviour change, health outcomes, safety outcomes, social outcomes.

1 Introduction

The Victorian Government initiated the *TravelSMART* program in 2001. The program has three components – *TravelSMART Communities*, *TravelSMART*



Workplaces and *TravelSMART Schools*. Each program component targets a particular cohort or community to share information, develop and implement strategies to rethink the over-dependence we have on individualised motorised transport – in particular the car. Work on the *TravelSMART Schools* pilot program commenced with six primary schools in Term 4 2002 and was completed at the end of Term 2 2003. Schools were in locations across metropolitan Melbourne. In 2004 the program has been expanded to 20 schools in metropolitan and rural locations, with the intention of further refining the program prior to a large-scale rollout.

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

- Addressing the health concerns about the low levels of physical activity by children.
- 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.

The pilot program involved 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.

2 Review of behaviour change theories

The implementation of a *TravelSMART Schools* pilot program was based on several assumptions, amongst which are that school communities needed to change their current patterns of travel, and that too many journeys were made in cars. In the absence of a mandate to reduce car travel and in a context where car ownership is high and a car dependent culture exists, a *TravelSMART Schools* pilot program needed to draw heavily on behaviour change theories and frameworks, and on health promoting and environmental programs already in existence.



2.1 Target populations

The *TravelSMART Schools pilot* program was directed at three distinct groups:

- young people in their middle years of schooling (and early adolescence)
- their families
- their broader school community.

Each of these groups may have a different, yet connected, agenda or motivation for bringing about a change in travel behaviours. For example:

- The young people may be future focused and be concerned about clean air and the general environment. Also, given their developmental stage and a pre-occupation with body image, fitness and health, alternatives to motorised travel may appeal to the students.
- Parents, and families, may be focussed on the present and what is most expedient. They may be motivated by possible gains in dollar savings from decreased use of the car or the freeing up of time when their child doesn't require transporting to and from school.
- Broader school communities may wish to adopt a *TravelSMART* program as a marketing/public relations exercise, or to partially resolve a common problem of many primary schools – the confusion and danger at drop off and pick up times in and around schools.

Of course schools and communities in different localities will also have different (and some similar) barriers to changing travel behaviours of their communities – such as:

- the availability of alternative forms of transport
- general perceptions of safety this alternative transport
- presence of pedestrian and cycling friendly environments
- the local geography and climate; time available (or lack of)
- distance to travel; an acceptance that personal motorised travel is the most socially acceptable mode of transport
- issues relating to duty of care and perceptions associated with responsible parenting.

School communities and individuals within them may be well intentioned about newly adopted travel behaviours, but relapses back into 'old habits' will occur. Relapses may be initiated by unexpected events, such as inclement weather, or a stressful incident in the local community, such as a pedestrian fatality or child molestation. Materials developed for the *TravelSMART Schools* pilot program needed to be cognisant of the motivations and barriers of all key stakeholders and the likelihood of, and triggers for, relapse. Understanding, and targeting, those motivations, whilst at the same time recognising the barriers, helped determine the content and processes embedded in the curriculum materials and whole school guidelines.

2.2 Stage theories of behaviour change

Mounting evidence suggests that behaviour change occurs in stages or steps and that movement through these stages is neither unitary or linear, but rather,



cyclical, involving a pattern of adoption, maintenance, relapse, and re-adoption over time.

The *TravelSMART Schools* team investigated a number of behaviour change theories and frameworks, but adopted that of Prochaska and Di Clemente [4]. This theory formally identified the dynamics and structure of staged behaviour change. In attempting to explain these patterns of behaviour, Prochaska and DiClemente developed a transtheoretical model of behavioural change, which proposes that behaviour change occurs in five distinct stages through which people move in a cyclical or spiral pattern - see Figure 1. Each of these stages of behaviour change was linked to the curriculum materials outlined later in this paper.

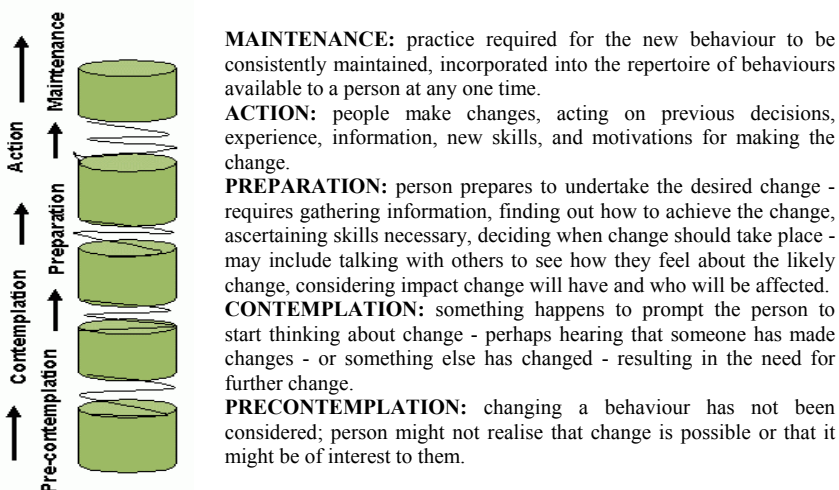


Figure 1: The behavioural change spiral [5].

3 The Victorian *TravelSMART Schools* program

3.1 Framework for the program

The *TravelSMART Schools* program was 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 school, which targeted teachers and school administration, was 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 personnel in schools, the likelihood of success in terms of a reduction in car use could be limited.

The curriculum developers for the *TravelSMART Schools* used the work of Prochaska and Di Clemente [4], 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 and Di Clemente'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 were 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. The classroom program focused on engaging students, their parents and families.

3.2 Program establishment

The process for effectively establishing the program in schools has determined the success of the program. The *TravelSMART Schools* team have placed a key emphasis on engaging all members of the school community, starting with school councils, school administrators (principals and assistant principals) and then teaching staff. Students and parents followed later.

3.3 Timing

A key consideration when engaging schools to adopt a new classroom based program has been to assess the ideal time for implementation and to provide sufficient lead time for the staff and administration to undertake the required planning. A number of issues arose when negotiating with schools to implement the *TravelSMART Schools* program. For example:

- Schools often work their learning themes across a two-year whole school cyclical program.
- Most schools need a long lead time to implement new programs and themes.
- Year 6 students usually become involved in a transition to secondary school program in the final term of their primary years.
- Many schools rarely have time to implement a comprehensive additional program late in the school year.
- Staffing and social issues can change in the school year, so it is important appoint a *TravelSMART* co-ordinator who has an ongoing commitment to the school and is in a position with responsibility with some influence on the leadership team, key committees or parent groups.
- School Council and staff meetings are often timetabled with a particular purpose from the beginning of the school year. To speak at one of these meetings requires negotiation and no expectation to take up more than 10-15 minutes of the scheduled meeting.



3.4 Teacher preparation

The professional development workshops for teachers have been held in the term before the program is to commence. The purpose of the workshop is to build an understanding of the underpinning *TravelSMART* concepts, orient teachers to the materials and identify where in the daily program *TravelSMART* could be imbedded. It also provided a valuable opportunity for teachers from different schools to exchange ideas, and formed the basis for ongoing networking opportunities available via the program website.

Provision of a small funding grant to offset costs for teacher release to attend the professional development and also to support any whole school activities/events is an important way of encouraging the involvement of schools. This recognises the tight budgets that most schools operate under, and is a practical way of ensuring participation in key program components – especially the professional development workshop.

3.5 Program delivery

The program is promoted to schools as something that needs to be built into the year 5 and 6 curriculum program with a long term view. Many schools have curriculum programs that operate over a two-year period in years 5 and 6, which ensures that all students participate in *TravelSMART* at some time over the two years. An ideal whole school approach would schedule age appropriate activities from prep to year 6. A holistic approach should widen the sphere of influence, and acknowledge that many families have children at different ages and stages and will need to cater for these differences as a family. In addition to these publications teachers and schools also have access to:

- The *TravelSMART* website – www.travelsmart.vic.gov.au
- Student bulletins designed to provide additional stimulus material for teachers to use during the program
- A parent/family brochure with information about the program and how families can get involved
- A series of items promoting key messages for placement in the regular school newsletter sent home to parents
- Media releases for use by the school to promote the program in the local community.

Whole school activities and events are encouraged, such as Walk to School Days. Many of the classroom activities involve students carrying out tasks at home designed to engage parents and families.



4 *TravelSMART Schools* classroom program

4.1 Framework for the *TravelSMART Schools* classroom program

The development of the *TravelSMART Schools* classroom program took into consideration a number initiatives and programs which underpin contemporary Victorian curriculum, including:

- The *Middle Years of Schooling*
- The *Victorian Curriculum and Standards Framework II (CSF II)*
- The *Thinking Oriented Curriculum*
- Howard Gardner's *Multiple Intelligences*.

The *TravelSMART Schools* classroom 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. The final unit assists the students to learn, rehearse and adopt strategies that will help them to travel smarter in the future.

5 Program evaluation

In order to measure the effectiveness of the original pilot program, key evaluation activities were built into the classroom program as activities that students, families and teachers were to undertake. The two key evaluation tools were the *TravelSMART* Survey and the *TravelSMART* Parent Survey. The *TravelSMART* Survey record travel behaviour of students and their parents for one week at the commencement and the end of the classroom program. The *TravelSMART* Parent Survey was administered following the completion of the classroom program. Both these surveys collected data that could be used by program staff to identify shifts in travel behaviour. However, they also provided useful information that is analysed by students and forms the basis of class activities and discussion. It also provided an opportunity for the school community to see the extent of positive impacts of the program and to use this as the basis for to further development. Other evaluation tools were:

- Examination of current school programs and policies that might relate to or impact upon *TravelSMART*.
- Semi-structured interviews with key school personnel – teachers and school administrators.
- Focus group discussions with students.
- Annotated teacher workbooks.

6 Key findings

Two key surveys were used to evaluate the impact of the *TravelSMART Schools* Pilot Program on the travel behaviour of students and their families. These were:

1. *TravelSMART* Survey - These surveys collected the number of trips taken using different travel modes. Travel surveys from 238 students across 4 of



the pilot schools were analysed - representing about 35% of the grade 5/6 students who participated in the pilot. Not all travel surveys could be included because of delayed finish of the program in two schools, students only doing survey 1 and some surveys being incorrectly completed. Travel details of 238 students were given, but only the travel details of 200 mothers and 175 fathers were collected.

- 2. *TravelSMART* Parent Survey – These collected parent perceptions of the impact of the program on the way their child and the family travel. 206 surveys were returned from the same 4 schools that provided completed travel surveys, and represented about a 30% response rate.

Because identification of any shift in travel behaviour was based on self-reported data, the two surveys helped to provide some verification of any changes that were observed. The results of both surveys indicate there has been some reduction in travel by car across students and also parents. The travel surveys for students show a 7.7% increase in walking, a 7.8% increase in cycling and a 158.9% increase in public transport use. There was also a 12.9% reduction in the number of trips taken by car – see Table 1.

Table 1: Number of trips taken by students over one week before and after the program

Student	BEFORE PROGRAM	AFTER PROGRAM	% Change
WALK	1408	1517	7.7
CYCLE	844	910	7.8
PUBLIC TRANSPORT	158	409	158.9
CAR PASSENGER	2658	2315	-12.9

The dramatic increase in public transport use seems to have come mainly from one school that integrated a public transport safety program as a part of their *TravelSMART Schools* program. Similarly one other school made a bicycle safety program a key focus within their *TravelSMART Schools* pilot program, and this appears to have been a significant influence on the increase in cycling. This apparent link between increasing use of alternative methods of travel and use of other relevant programs has been considered in the ongoing development of *TravelSMART Schools*.

In the surveys of parents, when asked about the usual journey to and from school, there was a modest increase in walking and the number of students reported to be cycling increased by 12.1%. The number of students travelling by car reduced by 10.2% for travel to school and 8.7% for travel from school – see Table 2. While changes in the way students travelled to and from school were relatively modest, parents were also asked to indicate the extent to which the *TravelSMART Schools* program had impacted on the way their family travelled. 21.8% of parents responded that there had been a change. 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 mums showed a reduction of 14.5% and 11.1% for dads. There were also reported



increases in walking, cycling, and use of public transport by both mums and dads.

Table 2: Usual mode of school travel reported by parents before and after the program.

STUDENT TRAVEL MODE	BEFORE To School %I	AFTER To School %I	Change %	BEFORE From School %	AFTER From School %	Change %
Walk	38.8	37.4	-1.5	41.3	43.7	2.4
Bicycle	13.6	25.7	12.1	13.1	25.2	12.1
Car	54.9	44.7	-10.2	50.0	41.3	-8.7
Car Pool	3.4	3.4	0.0	2.9	2.9	0.0
Combination Car & Walk	15.1	18.5	3.4	17.0	18.0	1.0
Public Transport	1.5	1.5	0.0	3.4	2.9	-0.5
Other	1.0	1.0	0.0	1.0	1.0	0.0

7 The future for the *TravelSMART Schools* program

The future for the program is exciting. Program materials have been redeveloped in the light of the pilot program and feedback from schools. There are also plans to develop a secondary school *TravelSMART Schools* that will complement and extend the existing primary school program. In 2004 a total of 20 schools across metropolitan Melbourne and rural Victoria are to be involved. This phase of development will enable the methodology to be further refined, in particular, the best approach for strategically rolling the program out to all schools in Victoria.

In 2004 *TravelSMART Schools* will be closely aligned with other complementary programs, such as *Walking School Bus* that is delivered by VicHealth in Victoria. *Walking School Bus* involves establishing “walking bus routes” along which volunteer parents escort groups of younger children to and from school each day. One group of schools, in a Melbourne metropolitan municipality have been selected to be involved in the program are also establishing the *Walking School Bus* with their school communities. This will provide an opportunity to see the impact of the two programs working in tandem on travel behaviours within these school communities.

An associated pilot program – the Victorian Greenhouse Schools Project – that focuses on the development of school travel plans seems likely to become more closely linked with *TravelSMART Schools*. This program involves school communities collecting and analysing data on how students travel to and from school, and identifies opportunities for increasing walking and cycling. It is likely that this process in the future will become a preliminary key activity undertaken by schools, prior to adopting the *TravelSMART Schools* curriculum program.

In 2004 a deliberate strategy has been to work through the local municipal council where each school is located. This is providing a valuable link and



networking which offers the potential for a variety of assistance to schools, including the possibility of traffic engineering treatments if this is needed in order to improve safety for children walking and cycling.

8 Conclusion

The evaluation findings showed a very positive response overall to the program from school communities involved in the pilot program. There is an indication of a degree of change in travel behaviour, showing that children and their families can be persuaded to reduce their dependence on the motorcar. Teachers across the pilot schools had a wide range of teaching experience yet all embraced, adapted and implemented the *TravelSMART Schools* materials with integrity and success. Overall students and their parents were co-operative and enthusiastic about the concepts within *TravelSMART Schools*. Indicators of success are:

- All pilot schools remained with the pilot program for more than the expected and agreed time period.
- Schools took the provided materials, and were able to deliver and further enhance them to meet their local needs.
- The theoretical framework and teaching and learning approaches were welcomed by the schools.
- Five of the six schools in the pilot continued delivering the curriculum program without any guarantee of ongoing support (which is now to be provided).
- Requests for the *TravelSMART* program are now coming from schools outside the pilot.
- The program has secured further funding to continue development during 2004 with the likelihood of a large-scale rollout in 2005.

A well-structured, empowering and respectful school curriculum program can help school populations to recognise there really is a better way to go!

References

- [1] Victorian Greenhouse Gas Inventory 1999. www.greenhouse.vic.gov.au/vggi.htm
- [2] Australian Greenhouse Office, 1998. www.greenhouse.gov.au
- [3] Australian Diabetes, Obesity & Lifestyle Study 2000. www.diabetes.com.au/diabetesity.htm
- [4] Prochaska, J.O. and Di Clemente, C.C. (1986). Towards a comprehensive model of change. In: W.R. Miller and N. Heather (Eds), *Treating addictive behaviours: Processes of change*. New York: Plenum Press.
- [5] The Behaviour Change Spiral from "What do they want us to do now?" AFAO 1996.

