

Evaluation of the Effect of the Wiser Driver Course on Driving Behaviour and Road Safety

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Biography

Susie Strain grew up in a Melbourne where kids walked and rode bikes to school, and public transport was a major determinant of urban form. She applied her maths and psychology qualifications to transport modelling in the '70's and her first exposure to a behavioural approach in transport planning was in the UK on public transport patronage projects. Her interests lie with the consumer and the usability of our transport systems and she is currently project officer for an integrated transport and mobility study supporting local government involvement in multi modal transport planning for the Victorian Local Governance Association.

Abstract

The Wiser Driver Course is an older driver education program designed to address road safety and mobility concerns that arise with the ageing process. The course is a weekly discussion based meeting over four weeks. There is no in-vehicle component. Throughout 2001 / 2002 an evaluation of the effect of the course on driver behaviour and road safety was carried out using a 'before and after' survey method, collecting data from 182 participants from 20 courses during that time.

Change was measured by

(i) comparing before and after survey data

This material covered the following items - vehicle management, health and eyesight, road rules, driving frequency and purpose, alternative transport, accidents and infringements. After a three month interval, 63% of survey records showed change in one or more of these areas.

(ii) self-assessment by participants

80% of participants reported, after three months, that they had altered driving practice and volunteered a range of changes.

Combining these two measures, raw survey data indicated that 91% of those surveyed responded to course material with at least one change to driving behaviour as measured in this study in the three month period following doing the course. Adjustments made to eliminate potential bias from the data set by allocating the unsurveyed course enrolment to the 'no change' category reduced the percentage changes to a minimum of 51%.

A suggested explanation is put forward for the positive response to the Wiser Drive Course:

- course attendants have enrolled to improve driving knowledge and skills and have a favourable orientation to course material;
- drivers attending these courses had had their licences for over forty years. During that time there have been significant changes in the driving environment yet few opportunities to upgrade knowledge;
- the format of the course which, from the many unbidden testimonials, clearly provides a satisfying learning environment.

The short time span and small sample did not allow sufficient exposure to risk factors to establish a safety impact of the course apart from some observations from anecdotal evidence.

The research concludes that the Wiser Driver Course has the capacity to positively influence driving behaviour for the older age group.

1. INTRODUCTION

The Wiser Driver Course is a driver awareness course developed by the Hawthorn Community Education Project Inc (HCEP) of Melbourne, Victoria as a refresher course for older drivers in road rules, driving skills and road safety, and related issues of mobility and lifestyle in later life. The course has been administered and delivered to the community by HCEP and also run under licence by local and regional Victorian Community Road Safety Councils which are supported by VicRoads in the implementation of road safety initiatives in partnership with local government.

In 2001 the Australian Transport Safety Bureau (ATSB), under the Road Safety Research Grants Scheme, funded an evaluation of the Wiser Driver Course to establish if participants demonstrated a change in driver behaviour that would flow into safer driving practice. The research was conducted from March 2001 to August 2002 and results are presented in this report. A more detailed report of the research can be found on the ATSB website, www.atsb.gov.au

2. BACKGROUND

The increased crash risk of older drivers, and their additional vulnerability to serious injury and fatality due to frailty has been well documented (4). In Victoria, this is coupled with a formal licensing system based largely on self-regulation. Once licensed, no further demonstration of medical fitness or driving ability is required, unless a referral is made. As the onus lies largely on the driver, a number of education programs have developed to inform older drivers of road safety issues. Both VicRoads and RACV run presentations, and the Wiser Driver Course has been developed to address safety and mobility concerns for older drivers.

3. THE COURSE

The following description of the course is taken from a paper delivered to the Saferoads Conference, 2002 (2).

“The Wiser Driver Course is run according to demand and organised in a local venue upon request. A familiar local community setting makes for easy access. Each course runs for 2 hours per week over a 4 week period for 10 – 15 people. The small enrolment fee (\$15 - \$20 on average) is seen as contributing to the dignity of participation. The short course, adult education format, has participants seated around a table with a facilitator / tutor to lead discussion. The tutors are trained, mature educators rather than safety experts. This has proved effective and acceptable to older people, as peer group learning usually breaks down inhibitions and experiences can be shared. Refreshments are included, as much useful informal discussion takes place over a cup of tea.

Topics covered include changes to road rules, driving conditions and licensing arrangements. The effects of ageing and medical conditions are also included. The facts about crashes, roadworthiness of cars, pedestrian safety, and strategies for the future are discussed.

Participants are provided with a folder and a variety of printed information at each session. Video segments are shown, and in this setting it is possible to discuss sensitive topics such as ‘life after driving’. Sometimes, people have never openly expressed apprehension about the transition to non-driver, or even considered alternatives. While the Course is about continued driving, it aims to encourage wise and dignified decision-making when the time arrives. On the third week, a member from the local Police Station or Traffic Branch is invited to join the group for tea, so that local road conditions and black spots can be discussed. This always rates as a highlight of the Course.

Participants have completed course evaluation since the Program started. Positive feedback, with high satisfaction levels has been evident. Reasons for attending include: keeping up to date with current road rules and maintaining confidence. They agree that licence testing was less stringent years ago and revisiting the rules is so important for safety. Appreciation is often expressed about the opportunity to discuss problems, to question information and share experiences. The strength of The Wiser Driver Program has been the voluntary participation of older people and their general desire to be responsible road users. The positive nature of the Program brings a positive response from older people.”

Adult education principles are a key feature of the course which is designed to maximise engagement and empowerment of attendants.

4. RESEARCH METHOD

The research examined changes to reported behaviour by comparing survey data taken at course commencement (‘before’ survey) with survey data collected three months later(‘after’ survey). Participants at five courses which were not surveyed were invited to group discussions instead, and also completed the ‘after’ survey. (See Appendix for sample survey forms).

‘Before’ data was collected as part of course delivery. Participants were asked to complete a questionnaire at the start of the course on their current driving practices and three months later the ‘after’ questionnaire was mailed to them with a return envelop. Participation was voluntary and all signed a consent form.

Over the period of the grant participants at 20 courses were surveyed. These ranged from the inner Melbourne metropolitan area (Northcote, Hawthorn, Glen Eira, Kingston) middle (Balwyn, Knox, Wantirna), outer (Morningson Peninsula, Werribee) and regional (Bendigo and surrounds). Some details of the survey sample follow:

Table 1: Number of participants in survey

Total course enrolments	269
Participants who completed ‘before’ survey	177 (66% of total course enrolments)
Participants who completed before and after surveys	151 (56% of total course enrolments)
Participants who attended group discussions and completed ‘after’ survey	34

The group surveyed was one third male, two thirds female. Participants’ ages ranged from 60 to 85 and the 75 to 79 age group was most represented. Half of the participants came from households where they were the only licensed driver. The group was generally very active, reporting to drive most days of the week, and 80% had been licensed for over 40 years.

Generally the questionnaire was completed to a high standard and few questions left unanswered. Participants were generous with their time and often provided extensive notes. Likewise at the group discussions those who attended were interested and offered constructive material and opinions to expand the research data.

5. RESULTS

The survey provided a data set with 151 records of ‘before’ and ‘after’ data. The ‘after’ survey also included a self-assessment of change to driving since doing the course. Two measures of change were developed from this data. Both indicate that there has been a considerable response to course material in terms of altered driver behaviour in the period three months after doing the course.

5.1 'Before' and 'after' survey data

The survey form covered many aspects of driver behaviour – driving history, car details, health and eyesight, information, driving frequency and purpose, accidents and infringements, alternative transport. The same data was collected for the 'before' and the 'after' survey. Change over that period was identified by comparing data items. This measure does rely on consistent reporting and some allowances were made for reporting variation over the three month interval.

Table 2: Number of course participants for whom change was identified by comparing 'before' and 'after' data sets.

	Number of participants
Change	94 (63%)
No change	57 (37%)

Table 3: Number of changes recorded by comparing 'before' and 'after' data sets.

Number of changes	Number of participants
0 (no change)	57(37%)
1	53 (35%)
2	26(18%)
3	13(9%)
4	2 (1%)
Total	151

Reporting and measuring change by this method identifies that 63% of the sample group changed 1 – 4 items of reported driver behaviour in the three month period after doing the course. The specific items of behaviour and number of participants for who changes were identified are as follows:

Table 4: Nature of changes to driver behaviour from the recorded data in 'before' and 'after' survey

Item of driver behaviour addressed in the survey	Number of participants for whom change was recorded
Discussing driving with others Raising awareness, identifying issues by talking to health professionals, family and friends	36
Managing difficult driving conditions Recognising, avoiding or developing strategies to manage difficult driving conditions such as dark, wet, busy,demanding	25
Regular checks on health and eyesight Checking medication for side effects, and vision for driving	21
Use of Citylink E-tag purchase and use of citylink when had not previously	12
Car purchase, regular maintenance New car and better maintenance arrangements	11
Driving assessment Undertaken, or considering undertaking, a driving assessment since doing the course	11
Keeping up with changes to road rules Taking steps to keep informed about the road rules	9
Frequency and mode of travel Reduced car use, additional public transport use	9

5.2 Self-assessed behaviour change

The 'after' survey also asked participants to record if they felt they had changed their driving behaviour in any way since doing the course and to rate and describe the change.

Table 5: Course participant response to question of behaviour change after doing course

	Number of participants
Change	149 (80%)
No change	36 (20%)

Table 6: Degree of driving behaviour change as perceived by course participants

Degree of change	Number of participants
Little	92 (52%)
Moderate	47 (26%)
Major	4 (2%)
No change	36 (20%)
Total	179

Reporting and measuring change by this method indicates that 80% of the survey group felt that they had changed their driver behaviour since doing the Wiser Driver Course, mainly to a little or moderate degree. The specific items of behaviour and number of participants for who changes were identified are as follows:

Table 7: Changes identified by self-assessed participant changes

	Participant response
Increased awareness Frequent mention of greater awareness of the whole driving task	70
Knowledge of road rules Participants appreciated being up to date with road rules	35
Attitude changes Increased tolerance, concentration, confidence, caution were all mentioned	68
Improved driving practice Particular skills for a range of traffic situations	86
Greater trip planning Planning in breaks and recognising and avoiding fatigue	12
Consideration of alternative transport	8

Having independently examined two measures of change it is possible to identify participants who recorded both, either or none. Table 8 below shows that 138, or 91% of the survey group, could be identified by the survey data as having demonstrated change to some degree in the three months after doing the Wiser Driver Course.

Table 8: Combined survey response to both change measures

		change reported 'before' and 'after' survey by	
		change	no change
self-assessed			
behaviour	change	82 (54%)	44 (29%)
change	no change	12 (8%)	13 (9%)

These high levels of change need to be qualified by consideration of potential bias.

Inaccuracies and bias can be due to:

- inconsistent reporting over the three month interval between the 'before' and 'after' surveys;
- those motivated to complete both surveys may include a disproportionate number who are well disposed towards the course;
- self-assessed change can be biased by positive orientation of the subjects. However most participants supported a 'yes' answer to the change question with a description of items of driving behaviour that they had adopted after doing the course. These comments were made three months later and confirms to some extent that the 'yes' answer has a behavioural basis;
- participants enrolled in the course voluntarily to update driving skills which may influence the response to course material.

It cannot be assumed that the unsurveyed component of the full course enrolment over this period would demonstrate the same behavioural response. To establish a minimum figure for possible expectation of behavioural change in response to doing the course, the device of allocating the unsurveyed component of 131 participants to the 'no change' category, as in Table 9 below, can be utilised. In this case the total of the three change categories reduces to 51% of total course enrolments. This can provide a base or minimum figure for change expectation in the case of voluntary course enrolment.

Table 9: Unsurveyed enrolment added to combined survey response to both change measures

		change reported 'before and 'after' survey by	
		change	no change
self-assessed			
behaviour	change	82 (31%)	44 (16%)
change	no change	12 (4%)	131 (49%)

A statistical analysis was conducted to establish if behavioural change could be related to driver characteristics. Variables selected were gender, age and number in household. Tests used were chi-square, T-tests and a regression analysis. No evidence of the likelihood of a participant adopting changes to driving behaviour according these variables was found, though it may be that these variables exert an influence at the course selection stage.

6. ANALYSIS OF CHANGE

Even with some adjustment for potential bias, the level of reported change in this study is worth further discussion. Evaluations of other similar educational resource for older drivers - Years Ahead (RACV) (3), Overdrive (COTA) (1) – also reported high levels of satisfaction and awareness raising.

A suggested explanation for the positive response to the Wiser Driver Course is threefold, as follows:

- participants come to the course with a favourable orientation and when asked in the survey why they enrolled, answered predominantly that they wanted to update road rules and maintain driving skills with age. Course material closely matches participant expectations.
- the drivers attending these courses reported to have had their licences for over forty years. During that time there have been significant changes in the driving environment (vehicle design, road design, road rules, car ownership) yet there is a perception that

there have been few opportunities to upgrade driving knowledge and experience. It is suggested that the course is providing a solution to a latent need for education, information and support that has been largely unrecognised and is driving the capacity for change.

- the format of the course, which is small group, discussion based for two hours a week over a four week period. Participants are actively engaged in the learning process and have time over the four week period to absorb material, revisit issues at subsequent sessions and put ideas into practice. Participants clearly enjoyed the course and numerous unbidden testimonials were included with the survey responses.

7. SAFETY

Eight accidents were reported in the three months following course participation, only one of a serious nature and the driver commented that the course material helped her adjust her subsequent driving to include safer practices. However the short time span and small sample does not allow sufficient exposure to risk factors to establish a safety impact. While drivers reported to have changed driving behaviour, the transfer to safer in-vehicle practice is limited without a practical element in the course, and a voluntary in-vehicle opportunity is recommended. It can only be suggested that a better informed, resourced and more aware group of drivers would perform more safely over time. However increased confidence and techniques to maintain driving safely may cause increased kilometres and hence greater exposure to accident risk in the interest of maintaining mobility.

8. CONCLUSION

In conclusion, the research supports the contention that the Wiser Driver Course has the capacity to stimulate change to driving behaviour for a minimum of 51% of course participants, presupposing a voluntary and well disposed enrolment. In the context of an ageing population and few perceived opportunities to update driving skills and road rule knowledge, it is recommended that mechanisms be explored to enable broader course participation throughout Victoria. An opportunity may exist to combine with short courses currently provided for older drivers by VicRoads (Safedrive) and RACV (Years Ahead) to offer a more extensive program and provide ongoing support and communication.

Other issues related to older drivers that emerged during the research are:

- variation between correct and current driving practice on the roads, to an extent that causes older drivers to lose confidence and become uncomfortable driving;
- little awareness among course participants of the legal obligation, under the Road Safety (Drivers) Regulations 1999, for drivers to report to VicRoads any permanent or long-term injury or illness that may impair the ability to drive safely;
- the perception that there is limited effective mechanism for ongoing driver education throughout licence holding period;
- relatively little discussion between drivers and health professionals on the subject of health, medication and driver performance;
- an opportunity to enhance the relationship and information exchange between licensing authority and licence holders.

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Judith Elsworth Wiser Driver Program Coordinator

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No. _____

Date: _____

WISER DRIVER COURSE: SURVEY TWO

Thank you for participating in the second survey. This questionnaire seeks to establish whether the Wiser Driver Course has changed the way you think about your driving. As with the first survey, your answers will remain strictly confidential.

A. ABOUT YOURSELF

1. Male / Female _____ 2. Postcode _____

B. YOUR HOUSEHOLD

3. In the last three months have there been any major changes to your household?
Change of address Yes No
Other.....

4. Are there other licensed drivers in your household? Yes No

5. How many cars are kept at your house?

C. ABOUT YOUR CAR

6. Have you changed cars in the last three months? Yes No
If so, please describe

7. How often do you service your car?

8. Do you have your car serviced at the same place each time? Yes No

D. YOUR HEALTH

9. Do you take regular medication? Yes No

If yes, have you checked for side effects which may affect driving? Yes No

10. Do you wear glasses when driving? Yes No

11. Do you have your eyes checked regularly by an eye specialist? Yes No

E. CURRENT DRIVING PATTERNS

12. How often would you use your car each week?
Daily Once a week 2-4 times per week 5-6 times per week
Other.....

13. For what purposes do you use your car?
Work Personal business Shopping
Recreation / sport Health Education
Social / family Voluntary work Driving others
Other.....

14. Where do you drive? (circle more than one if you wish)
Locally Suburban or regional center Melbourne CBD Country Victoria

F. DRIVING AROUND MELBOURNE: In the last three months -

15. Have you used freeways? Often Sometimes Never

16. Have you used Citylink? Yes No

17. Have you bought an E-tag? Yes No

18. Have you travelled to the Melbourne CBD? Often Sometimes Never
If so, how did you get there?.....

G. LONGER TRIPS: In the last three months -

19. Have you made any longer trips in regional Victoria? Yes No
How did you travel?.....

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G. LONGER TRIPS (cont'd): In the last three months -

20. Have you travelled interstate? Yes No
If so, how did you travel?.....

H. KEEPING INFORMED

21. How do you keep up with changes to the road rules?
.....

22. Have you discussed your driving with others in the last three months? Yes No
If yes, with whom? Family Friends Doctor
Pharmacist Optometrist Garage Staff Other

I. DRIVING CONDITIONS

23. Do you avoid driving in any of the following conditions?
Wet weather Peak period Night driving
Traffic with trucks Freeway Highway
Comment.....

24. How would you get home from a function where alcohol was served and you had been drinking?
.....

J. DRIVING HISTORY: In the last three months -

25. Have you had a driving assessment? Yes No
Comment.....

26. Have you had a car accident? Yes No
Comment.....

27. Have you had a driving infringement? Yes No
Comment.....

K. TRANSPORT OPTIONS

28. Which alternative means of transport do you use and how often?
Tram..... Train..... Bus..... Taxi.....
Lifts with others..... Walking..... Bike..... Other.....

L. SINCE DOING THE COURSE

29. Since doing the Wiser Driver Course, do you think that you have changed your driving behaviour in any way?
Yes No
If yes, would you describe the changes as
A little moderate major

Please describe.....
.....

30. Has the course encouraged further reflections on your future transport options?
.....

31. Any further comments are welcome.....
.....

Thank you for your participation in the survey