

Monitoring learner driving experience: changes from 1999 to 2000

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INTRODUCTION

There is evidence from Swedish research (Gregersen, 1996) that higher levels of supervised driving experience accumulated by learner permit holders are associated with a lower risk of accident involvement during the first year of driving after acquiring a solo licence. Several Victorian organisations have taken actions intended to encourage or facilitate the accumulation of supervised experience by learner drivers, in the expectation that this will lead to reduced accident rates for new probationary licence holders. Some form of monitoring or evaluation is required to determine whether these programs have been successful in increasing the average amount and variety of experience accumulated by learner permit holders.

In 1999, VicRoads commissioned ARRB Transport Research Ltd (ARRB TR) to develop and carry out a survey of novice drivers to obtain information about the amount and variety of supervised driving experience accumulated by learner drivers in Victoria prior to obtaining a probationary licence. Using information collected from learner permit holders and newly licensed drivers, ARRB TR calculated estimates of the average amount and variety of driving experience accumulated during the learner permit period for all Victorian learners and for various sub-populations (Catchpole and Stephenson, 2001).

VicRoads commissioned Research International (a market research company) to repeat the surveys of learner permit holders and newly licensed drivers in 2000. Apart from a minor difference in sample stratification, the surveys conducted in 2000 were in all other respects identical to those that had been conducted in 1999.

In 2001, ARRB TR was commissioned by VicRoads to compare the results of the 1999 and 2000 surveys; document any changes in amount and type of learner driver experience between the two surveys; and document changes in factors addressed by the surveys that may influence the accumulation of driving experience by learner permit holders.

This conference paper summarises the methods used and the major findings of the comparison. A complete account of the project has been given by Catchpole and Coutts (2002).

METHOD

The same cross-sectional design was used for both the 1999 and 2000 surveys. This involved interviewing drivers who were at various stages of the learner permit period about the amount of driving they had recently undertaken. The four stages of the learner permit period were defined as follows:

- Stage 1: 1–91 days after obtaining a learner permit
- Stage 2: 92–212 days after obtaining a learner permit
- Stage 3: 213–1461 days after obtaining a learner permit
- Final Stage: Final preparation for the probationary licence test

Information about driving in Stages 1 to 3 was obtained by contacting drivers in each stage and asking them about professional lessons over the four weeks prior to the interview and about other supervised driving practice over the last week before the interview. Information about driving in the Final Stage of the learner permit period was obtained by contacting newly licensed drivers and asking them about their professional lessons in the last four weeks and supervised practice in the last one week prior to obtaining their licence.

In addition to stage of the learner permit period, the driver samples were stratified by sex, age group and region of Victoria (Melbourne, Provincial Centres, Rest of Victoria) to ensure adequate representation of all demographic groups in the samples. As some demographic groups were deliberately over-sampled, it was necessary to weight the interview data prior to analysis in order to yield results representative of the Victorian learner driver population. Drivers in the samples for Stages 1, 2 and 3 who were found to be in the final

preparation for their probationary licence test (that is, those who were really in the Final Stage rather than the stage for which they had been selected) were excluded from the analyses.

For the 1999 and 2000 surveys, VicRoads provided address details for some thousands of current learner permit holders and newly licensed drivers. A sub-contractor was responsible for obtaining telephone numbers for as many of these drivers as possible and for recruiting enough respondents from the VicRoads lists to fill the quota specified by VicRoads for each stratum of the population. The final sample of drivers interviewed in each year comprised just over 1300 current learner permit holders and 200 newly licensed drivers.

Interviewing of current learner permit holders and newly licensed drivers was carried out using computer-assisted telephone interviewing (CATI). The questionnaire focused on five main areas of interest: driving experience with professional instructors; practice supervised by family members or friends; the variety of driving conditions encountered during supervised practice; the impact of programs designed to increase driver knowledge and experience among novice drivers; and the effects of family and social influences on driving experience.

From the information obtained in the questionnaire, a measure of total driving experience during the whole learner permit period was calculated by summing the estimated experience gained in each of the four stages. This calculation was done separately for professional lessons and supervised practice; these two components were then summed to yield total supervised driving experience; unsupervised driving practice was excluded. The average amount of driving experience accumulated by drivers in each of the four stages was estimated by calculating the average amount of driving experience gained each week by drivers in that stage and multiplying by the average number of weeks spent in the stage. For Stage 3, there was a negative correlation between the time spent in the stage and the amount of driving done each week. To eliminate the positive bias that would otherwise have resulted from this correlation, the product of average weeks and average minutes per week for Stage 3 was multiplied by the correction factor 0.898 calculated by Catchpole and Stephenson (2001).

RESULTS

This section briefly summarises changes in learning driving experience between 1999 and 2000 surveys. This will include driving experience for male and female learners in three different regions of Victoria and also for learners who acquired the learner permit at different ages. However, it should be noted that in the 1999 survey, and to a lesser extent in the 2000 survey, very few survey respondents had acquired their learner permit at age 21 or greater. Due to the very small sample sizes, results for the 21 to 24 and 25+ age groups should be considered indicative rather than reliable.

Total driving experience

Table 1 and Table 2 show the estimates from the 1999 and 2000 surveys of the total driving experience accumulated over the whole learner permit period. On average, total driving experience accumulated during the learner permit period is higher for males than for females and higher in country Victoria than in Melbourne. Drivers who acquire a learner permit at age 16 years acquire on average twice as much experience during the learner permit period as those who acquire the learner permit when aged 17 years or more.

Across the whole sample, the average for 2000 is 3.5 per cent higher than the average for 1999. The increase is mainly confined to males from Melbourne and Provincial Centres. In the 1999 survey, drivers who acquired the learner permit at age 17 years or at age 25 years or more accumulated the least driving experience during the learner permit period. In the 2000 survey, both these groups have shown an increase in total driving experience, whereas drivers who acquire the permit at ages 18 to 24 years have shown a very substantial decrease in driving experience. As a result of these changes, there is much less variation in total driving experience among drivers who acquire the learner permit at age 17 years or more in the 2000 survey than in the 1999 survey.

Professional lessons

Table 3 and Table 4 show the total time spent in professional lessons over the whole learner permit period in the 1999 and 2000 surveys. The total time spent in professional lessons over the whole learner permit period is higher for females than for males and higher for respondents from Melbourne than for those from country Victoria. The average time spent in professional lessons was 8 per cent lower in the 2000 survey than in the 1999 survey. The drop is mainly confined to respondents from Provincial Centres and those who acquired the learner permit when aged 18 to 24 years.

Table 1**Total hours driving experience over the whole learner permit period by region and sex: 1999 v 2000**

Region	Sex	1999	2000
Metro Melbourne	Male	82.1	92.0
	Female	73.0	69.0
	All	77.2	80.2
Provincial Centres	Male	95.8	117.3
	Female	88.2	86.4
	All	91.1	100.3
Rest of Victoria	Male	114.7	100.7
	Female	94.1	102.0
	All	104.7	101.2
Whole of Victoria	Male	89.0	96.2
	Female	77.6	76.0
	All	83.0	85.9

Table 2**Total hours driving experience over the whole learner permit period by age at learner permit acquisition: 1999 v 2000**

Age at permit acquisition	1999	2000
16 years	108.1	121.9
17 years	48.7	62.8
18 to 20 years	73.8	46.9
21 to 24 years	101.2	55.1
25+ years	52.8	61.4
All	82.9	86.0

Table 3**Total hours spent in professional lessons over the whole learner permit period by age at learner permit acquisition: 1999 v 2000**

Region	Sex	1999	2000
Metro Melbourne	Male	8.0	8.6
	Female	18.6	16.6
	All	13.5	12.7
Provincial Centres	Male	7.9	3.2
	Female	12.2	9.3
	All	10.2	6.1
Rest of Victoria	Male	3.1	4.1
	Female	8.5	8.3
	All	5.8	6.2
Whole of Victoria	Male	7.3	7.2
	Female	16.2	14.5
	All	11.9	10.9

Table 4

Total hours driving experience over the whole learner permit period by age at learner permit acquisition: 1999 v 2000

Age at permit acquisition	1999	2000
16 years	8.8	7.8
17 years	10.5	8.7
18 to 20 years	12.3	9.4
21 to 24 years	18.5	12.2
25+ years	24.0	24.1
All	11.9	10.9

Supervised practice

Table 5 and Table 6 show the total time spent in supervised practice over the whole learner permit period and comparisons with the corresponding averages from the 1999 survey. Across the whole sample, the average for 2000 is 5 per cent higher than that for 1999. The increase is mainly confined to male respondents from Melbourne and Provincial Centres and respondents who acquired their learner permit when aged 16 or 17 years.

Table 5

Total hours spent in supervised practice over the whole learner permit period by region and sex: 1999 v 2000

Region	Sex	1999	2000
Metro Melbourne	Male	74.1	83.5
	Female	54.4	52.3
	All	63.7	67.6
Provincial Centres	Male	87.8	114.0
	Female	76.0	77.0
	All	81.0	94.2
Rest of Victoria	Male	111.6	96.6
	Female	85.6	93.7
	All	98.9	95.1
Whole of Victoria	Male	81.7	89.1
	Female	61.3	61.5
	All	71.1	75.0

Table 6

Total time (hours) spent in supervised practice over the whole learner permit period by age at learner permit acquisition

Age at permit acquisition	1999	2000
16 years	99.3	114.0
17 years	38.2	54.1
18 to 20 years	61.5	37.4
21 to 24 years	82.7	42.9
25+ years	28.8	37.3
All	71.1	75.1

Variety of driving conditions experienced in supervised practice

Respondents were asked whether they had experienced each of 10 different driving conditions (driving in heavy traffic, in the dark, with extra passengers, on a freeway, on a main road in a city or town, on a country road, on an unsealed road, on unfamiliar roads, into low sun, and drives that included reversing) during their supervised practice drives. The variety score assigned to each respondent was the number of different conditions the respondent reported having experienced at least once. The maximum possible variety score for each respondent was therefore 10. Table 7 shows the mean variety score for respondents in each stage of the 1999 and 2000 surveys. Except in Stage 3, the table shows a slight improvement in variety scores between the 1999 and 2000 surveys.

Table 7
Mean variety score (out of 10) for breadth of experience
during supervised practice, by stage: 1999 v 2000

	Stage of the learner permit period			
	1	2	3	Final
1999 survey	2.7	2.7	2.5	4.1
2000 survey	3.1	3.1	2.4	4.8

DISCUSSION

The average number of weeks holding the learner permit increased slightly, from 82.7 weeks to 83.9 weeks, between the 1999 and 2000 surveys. The average duration of the learner permit period is derived from the population of newly licensed drivers supplied by VicRoads, and is not influenced by information supplied during the interviews. Any increase in the average time holding the learner permit implies increased time, and hence increased driving experience, in Stage 3, leading to an increase in estimated total driving experience across the whole learner permit period. Thus the 1.5 per cent increase in average time holding the permit contributed directly to the increase in estimated total driving experience across the whole learner permit period.

Despite the slightly increased duration of the learner permit period, a 40 per cent drop in the average number of minutes of professional lessons per week in Stage 3 led to an 8 per cent fall in the estimated total time spent in professional lessons across the whole learner permit period. The decrease in weekly lesson time in Stage 3 was largely attributable to falls among females in Melbourne and males and females in Provincial Centres. Increased lesson time among Melbourne learners in the Final Stage, which lasts on average less than three weeks, was not enough to compensate for the effect of reduced weekly lesson time in Stage 3, which lasts on average just over 50 weeks.

The estimated amount of driving experience accumulated during the learner permit period by means of professional lessons and supervised practice increased from 83.0 hours in the 1999 survey to 85.9 hours in the 2000 survey, a 3.5 per cent increase. This increase in total driving experience was attributable to an increase in the average time spent in supervised practice each week in all stages by learners who acquired the permit at age 16 or 17 years, an increase in supervised practice during the Final Stage by learners living in Melbourne and a 1.5 per cent increase in the average period holding the learner permit from 82.7 weeks to 83.9 weeks.

In both the 1999 and 2000 surveys, various groups were found to devote comparatively high amounts of time to supervised driving practice and comparatively low amounts of time to professional driving lessons. These groups include males, learners who live outside Melbourne, learners who live with one or both parents, those who live in a home where only English is spoken and those who acquire the learner permit at age 16 years. By contrast, females, learners living in Melbourne, those not living with a parent, those who come from a home where a language other than English is spoken and those who are older when they acquire the learner permit tended to place more reliance on professional lessons and to spend comparatively less time in supervised practice.

The groups with more lesson time generally spent less time in supervised practice and vice versa. This suggests that learner drivers perceive some form of trade-off, so that those who have difficulty gaining experience by one of these methods feel an increased need to gain driving experience by the other method. The groups who placed more reliance on supervised practice tend to have a higher total of driving time during the learner permit period,

since their excess of practice time is, on average, more than is required to compensate for their deficit in lesson time. This suggests that the trade-off is weighted such that learner drivers equate an hour spent in professional driving lessons with more than an hour of practice supervised by a family member or friend. The trade-off may be driven by learners' perceptions of their own driving skill or readiness to take the probationary licence test. In that case, the weighting in favour of professional lessons would imply that learners perceive a greater skill increase following an hour of professional instruction than following the same amount of supervised driving practice.

Ideally, learners and their supervisors and professional instructors would plan a graduated approach to learning to drive, in which the range and difficulty of the tasks attempted would gradually increase over the course of the learner permit period, using the whole of the time available to acquire a broad range of skills and experience. However, there is no evidence from the surveys that this occurs. The average weekly time spent in professional lessons varies little between Stages 1, 2 and 3 and then suddenly leaps by a factor of 10 in the Final Stage. The average weekly time spent in supervised practice decreases from 66 minutes in Stage 1 to 59 minutes in Stage 2 to 48 minutes in Stage 3, before jumping by factor of more than 3 to 167 minutes in the Final Stage. The average variety score for the range of conditions experienced in the previous week remains steady in Stages 1 and 2, then decreases in Stage 3 before doubling in the Final Stage. Thus it seems that, far from being governed by a graduated plan, driving experience during the first 97 per cent of the learner permit period is probably governed by convenience. Only during the last three per cent of the available time (in other words, during the final preparation for the licence test) do most learners make a concerted effort to improve their driving skills.

In view of the apparently unplanned approach to learning to drive taken by many learners and their supervisors, any effort to lengthen the learner permit period by encouraging earlier acquisition of the learner permit is likely to result in an extra three quarters of an hour or so of driving time for every extra week holding the learner permit, but no improvement in the range of driving conditions experienced. This is not to say, however, that the additional experience would not be valuable. Even extra driving in very familiar conditions can potentially benefit learner drivers by helping them to automate performance of routine driving actions, leaving more free capacity to cope with more demanding conditions that may be encountered later on.

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