

The DRIVE[®] for School Program
based on Ownership Learning[®]



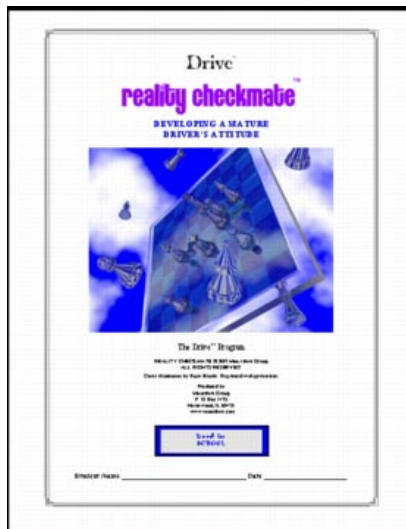
WASHINGTON II

QUALITATIVE ANALYSIS

IMPACT AND EFFECTIVENESS
OF THE
DRIVE[®] REALITY CHECKMATE[™]
CHALLENGE BOOK

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REVIEW-IN-CLASS



Funded by the Traffic Safety Commission of the State of Washington

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THE DRIVE® FOR SCHOOL PROGRAM: Qualitative Evaluation Results

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Test Group-----05-002
Institution -----Public High School
Location -----Washington
Students surveyed ----- 25

Background: No review was allowed between the group sessions in class and the taking of the survey.

Analysis

Factors	Percentage	Raw #
<u>Recognition</u> (3 situations discussed in two group sessions)		
% of all situations recognized as previously discussed in groups.....	100.0	75/75
% of students recognizing all situations previously discussed.....	100.0	25/25

CHART 1: RECOGNITION (% students) vs. Time Lapse

Time Lapse	Road Rage	Unexpected	School Bus
9 days (07/19) (1.3 weeks) Session 1	25/25 (100.0%)	25/25 (100.0%)	
7 days (07/21) (1.0 weeks) Session 2			25/25 (100.0%)

<u>Situations occurring while driving</u>		
% of students involved in one or more situations while driving.....	88.0	22/25
Total number of situations occurring while driving.....	---	47
<u>Recall</u> (Reacting to the situation per decisions through group discussions)		
% of all situations where students reacted per group discussion	85.1	40/47
% of students who reacted to at least one situation per group discussion.....	100.0	22/22

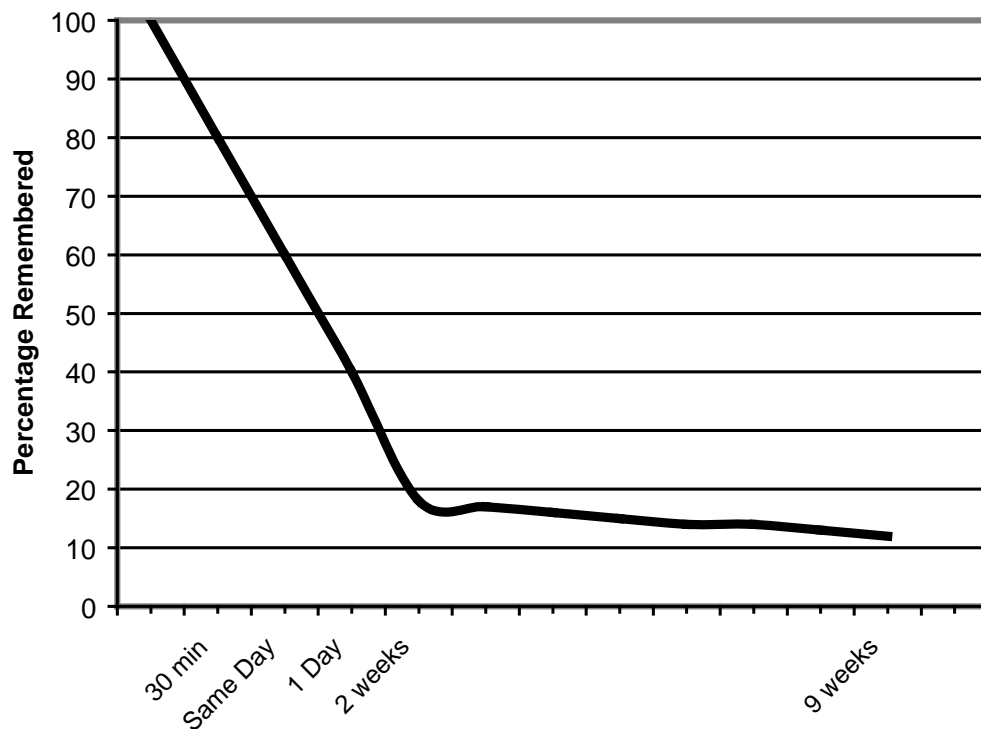
CHART 2: RECALL (% students) vs. Time Lapse

Time Lapse	Road Rage	Unexpected	School Bus
9 days (07/19) (1.3 weeks) Session 1	11/12 (91.7%)	14/20 (70.0%)	
7 days (07/21) (1.0 weeks) Session 2			15/15 (100.0%)

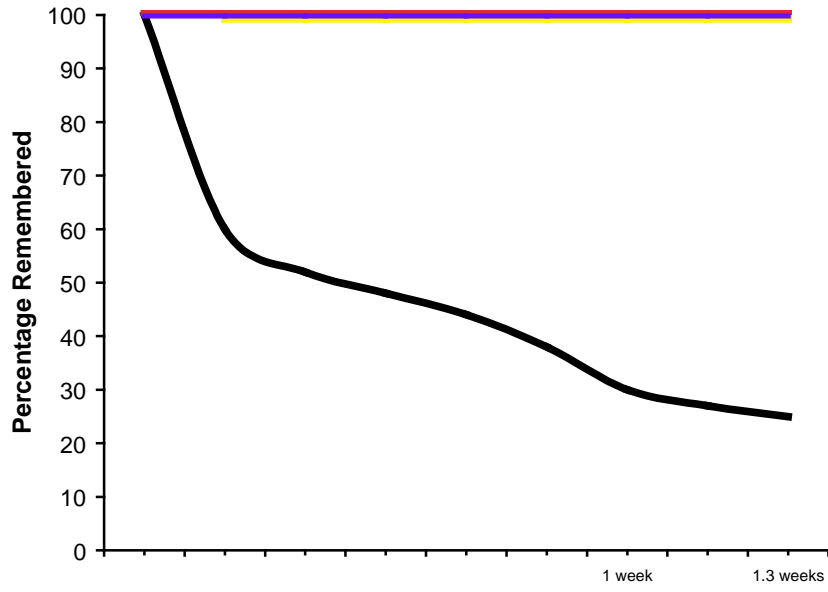
Forgetting Curve

Below is the well-known Ebbinghaus Forgetting Curve, upon which the Drive Program results for Recognition and Recall are compared and contrasted in the subsequent two graphs. The Curve is given as the NORM. More than **22%** of what is “learned” in a teaching experience is forgotten in the first 30 minutes; **40%** is forgotten in the first 24 hours; and **70%** in the first week. To be an effective learning tool (as compared to ‘teaching tool’, which relates to short-term memorization to pass a test), students must be able to remember both what they learned and then apply it to those driving situations when they are behind-the-wheel. That necessarily means greatly *exceeding* the extremely low memory rate of less than 20% by the end of a 2-week period.

Forgetting Curve

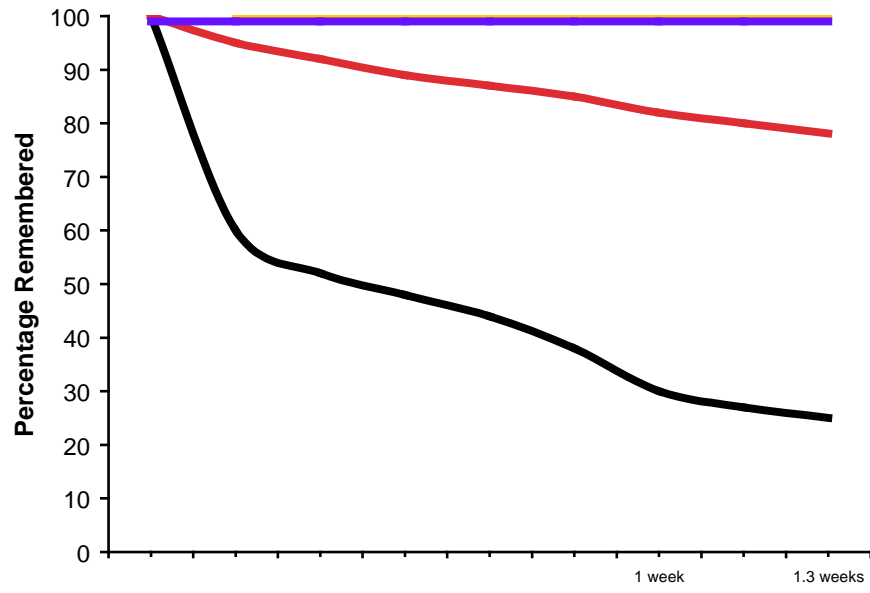


Forgetting Curve vs. Drive®: RECOGNITION
 (% students recognizing situations)



— NORM — Session 1 — Session 2 — Combined

Forgetting Curve vs. Drive®: RECALL
 (% students reacting to situations)



— NORM — Sess 1 — Sess 2 — Percent reacting to 1 situation

Discussion

Recognition

- The survey, which lists **15** possible situations (and an illustration of each) that can be assigned in the classroom using the Drive[®] for School Program's Reality Checkmate™ Challenge Book, was taken **9** days after groups discussed Road Rage and Unexpected, and **7** days after discussing School Bus. All students (**100%**) recognized the **3** situations as having been discussed in their groups when they were surveyed, without any class review of those situations prior to taking the survey.
- Although this high recognition number may be in part because of the short time period between group discussions and the survey, it should be noted that (a) there was no review of the situations prior to the survey, and (b) normal memory recall drops to just over **40%** after **24** hours if no review of the initial exposure to material is held. It is clear that recognition is part of that memory loss. (See below)

Situations occurring while driving

- Teachers are encouraged to: (1) Assign only two or three situations ("scenarios") because of short attention spans; (2) Pick situations that are likely to occur locally during driving while students are still in high school.
- Almost **9** out of **10** students (**88%**) were involved in at least one situation when driving a motor vehicle that they discussed in their groups using the Drive[®] for School Program's Challenge Book. The fact that these occurred in the period of about a week after discussing them attests to the frequency of these particular driving situations in their geography.

Recall

- The Forgetting Curve' is such that just **24** hours after a learning experience, only a little more than **40%** of the information *learned* is recalled if not reinforced by review. After **2** weeks, memory loss increases to where less than **20%** can be recalled.
- Given these facts, and knowing that 'review' is impossible during a driving occurrence, **85.1%** of all situations confronted by students were handled based on what they recalled learning in their groups using the Drive[®] Program, without benefit of review. Moreover, it is most telling that a full **100%** of all students confronted with at least **1** situation reacted based on what they recalled from their group experience.
- There was both encouraging and anticipated results regarding students reacting to these specific situations based on what they learned in their groups using the Drive[®] Program. For the potentially-dangerous situation of Road Rage, **91.7% (11/12)** of students involved in a road rage incident knew how to react and act based on their group discussions from using the Drive Program. For School Bus, all students (**15/15**) recalled what to do. However, for the Unexpected, **6** of the **20** students in this situation did not recall what to do. Although clearly the nature of the unexpected is that it is indeed unexpected, and experience is the best teacher, fully **70%** of the students nonetheless recalled what to do in such a situation.

Conclusion

- Students had perfect (**100%**) recognition of scenarios discussed in their groups the previous **7** and **9** days. Factors influencing this result could include the small number of scenarios (**3**) and the relatively short time span between group discussions and the survey. However, the Forgetting Curve suggests that about **70%** or more of what was imparted in a learning experience should be forgotten **9** days later. Hence, the perfect scores strongly suggest that Ownership Learning[®] techniques used from the program were the major factor.
- Recall rates were between **250%** and **350%** the normal Forgetting Curve at this time period between learning experience and surveying.
- The situations chosen by the teacher were common occurrences in the driving experiences of students in the class: **88%** of the students were involved in at least **1** situation they discussed in their groups within **7** to **9** days of that discussion. A full **100%** of the students recalled what to do and did it in at least **1** situation.
- The learning experience as conceived and structured by the Drive Program through the Reality Checkmate™ Challenge Book positively impacted both the memories of what to do in a given situation and then actually executing those behaviors and actions.
- Because review and repetition increase the development of prolonged memory, students encountering the same situations in the future will not only know what to do, but will exhibit the correct, safe behavior during those occurrences as learned during their group exercises using the Drive[®] for School Program.