The DRIVE® for School Program
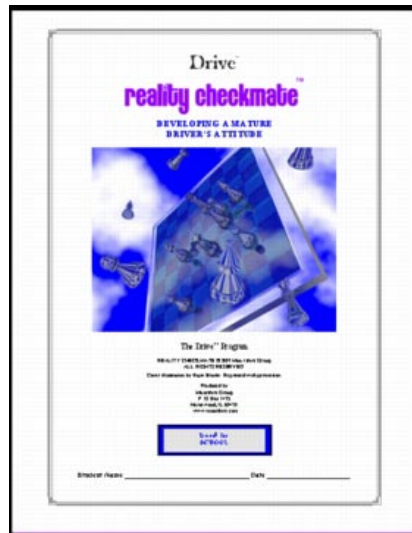## based on Ownership Learning®

QUALITATIVE ANALYSIS

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

Funded by the Division of Traffic Safety, Illinois Department of Transportation

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THE DRIVE® FOR SCHOOL PROGRAM: Qualitative Evaluation Results

> **Test Group------------- 07-015**
> **Institution -------------- Public High School**
> **Location ---------------- Illinois**
> **Students surveyed ----- 23 (22 valid)**

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

Analysis

Factors	Percentage	Raw #
Recognition (4 situations discussed in two group sessions)		
% of all situations recognized as previously discussed in groups	96.6	85/88
% of students recognizing all situations previously discussed	86.4	19/22

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

Time Lapse	Road Rage	Jogger	School Bus	Police
8 days (05/16) (1.1 weeks) Session 1	20/22 (90.9%)	22/22 (100.0%)		
6 days (05/18) (0.9 weeks) Session 2			22/22 (100.0%)	21/22 (95.5%)

Situations occurring while driving		
% of students involved in one or more situations while driving	68.2	15/22
Total number of situations occurring while driving	---	24

| Recall (Reacting to the situation per decisions through group discussions)		
% of all situations where students reacted per group discussion	87.5	21/24
% of students who reacted to at least one situation per group discussion	80.0	12/15

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

| Time Lapse	Road Rage	Jogger	School Bus	Police
8 days (05/16) (1.1 weeks) Session 1	5/6 (83.3%)	9/10 (90.0%)		
6 days (05/18) (0.9 weeks) Session 2			4/4 (100.0%)	3/4 (75.0%)

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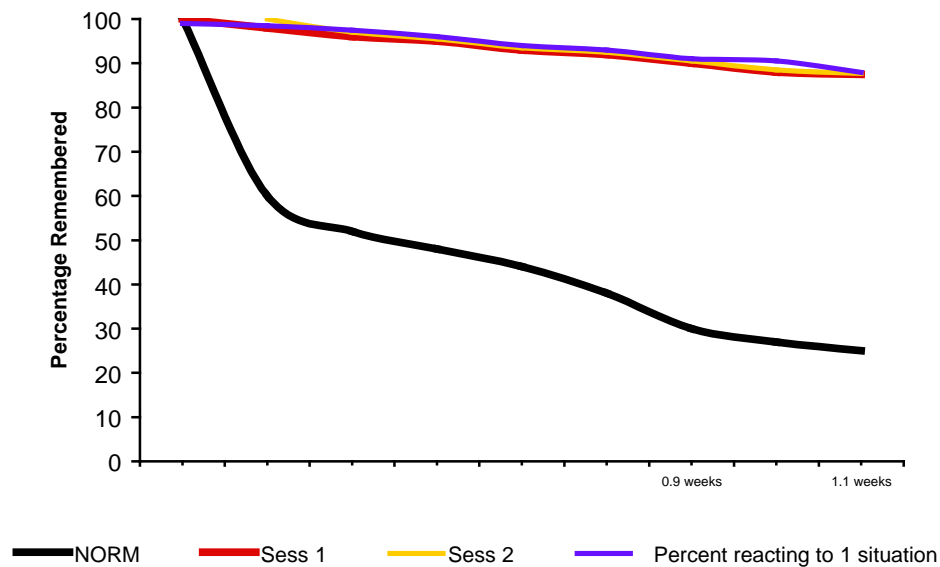
Forgetting Curve
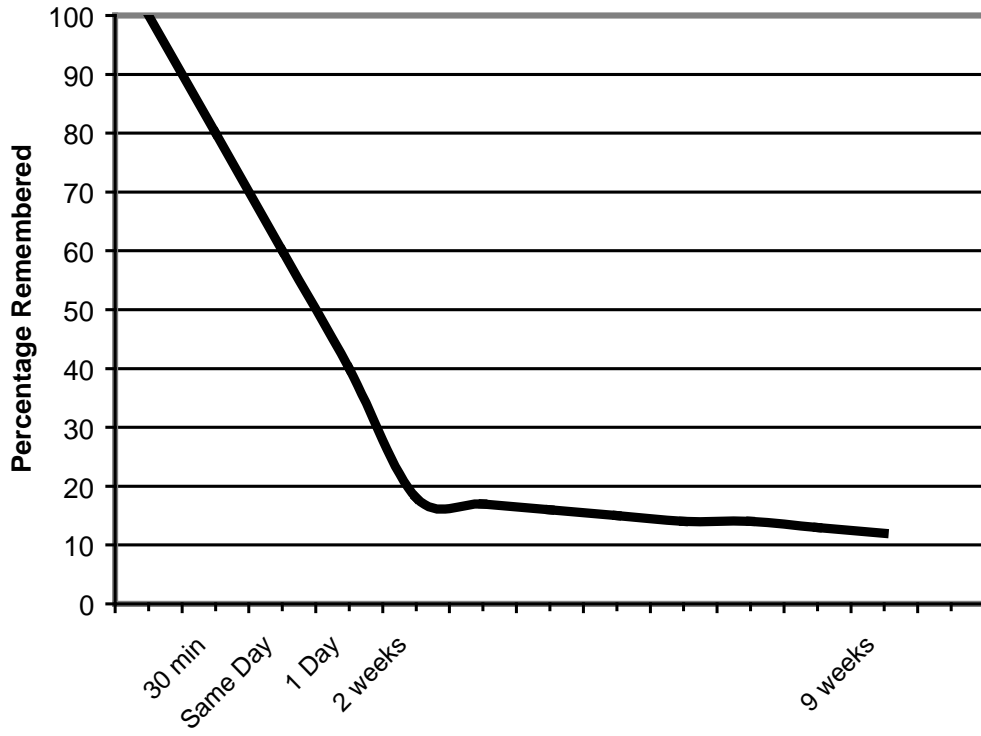
Forgetting Curve vs. Drive®: RECOGNITION
(% students recognizing situations)

NORM — Session 1 — Session 2 — Combined
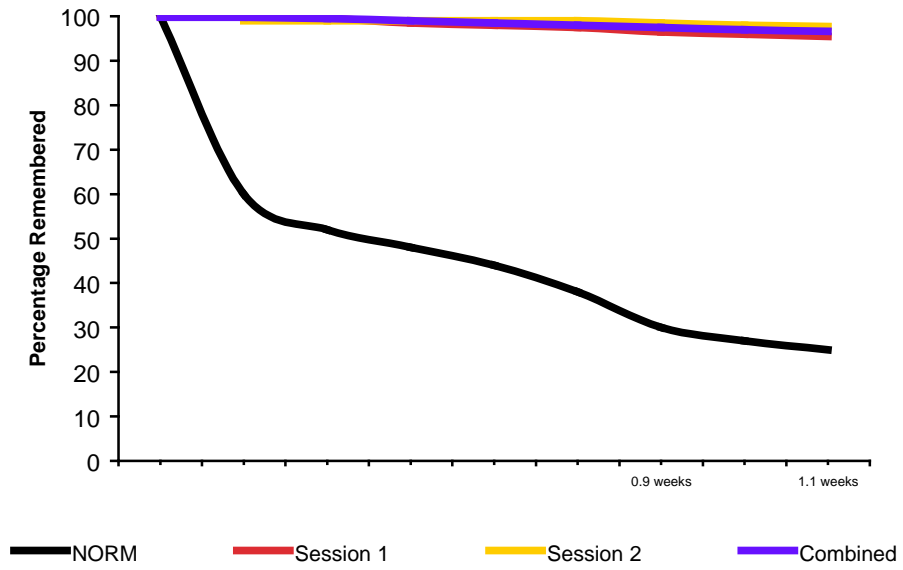
**Forgetting Curve vs. Drive®: RECALL
(% students reacting to situations)**

Legend: 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 Program's Challenge Book, was taken **8** days after groups discussed Road Rage and Jogger, and **6** days after discussing School Bus and Police. Nineteen of **22** students (**86.4%**) recognized the **4** situations as having been discussed in their groups when they were surveyed, without any class review of those situations prior to taking the survey. Of **88** possible correct responses, students recognized **85**, or **96.6%** of all scenarios assigned.
- 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 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.

Situations occurring while driving

- More than two-thirds (**68.2%**) of the students were involved in at least one situation when driving a motor vehicle that they discussed in their groups using the Drive® 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, with Jogger occurring to two-thirds (**66.7%**) of the students.

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, **87.5%** of all situations confronted by students were addressed based on what they recalled learning in their groups using the Drive® for School Program, without benefit of review. This is a very large result. Moreover, it is most telling that **80.0%** of all students confronted with at least **1** situation recalled what to do and did it based on their group experience.
- The School Bus scenario had the best recall – **90%**. Recall (knowing what to do and then doing it) was also high for Jogger (**90.0%**) and Road Rage (**83.3%**).

- Of the **3** students who encountered <u>Police</u>, **2** of them knew what to do and then did it. Curiously, the student who could not remember what to do was also the only student of these **3** who <u>received</u> <u>a</u> <u>traffic</u> <u>ticket</u> (moving violation).

<p style="text-align:center"><u>Conclusion</u></p>

- Students had a near-perfect (**96.6%**) recognition of scenarios discussed in their groups the previous **6** and **8** days. Factors influencing this result could include the small number of scenarios (**4**) 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 will be forgotten **8** days later. Hence, these results strongly suggest that Ownership Learning® techniques used from the Drive Program were the major factor. The total Recognition percentage (**96.6%**) was **<u>222%</u>** over the expected memory rate.

- Recall rates were more than **<u>190%</u>** over the normal Forgetting Curve at this time period between learning experience and surveying.

- <u>School Bus</u> and <u>Jogger</u> were the most common occurrences in the driving experiences of students in the class. Students encountering these scenarios and remembering what to do (and then doing it) were **<u>233%</u>** and **<u>200%</u>** higher than the expected norm for memory.

- The learning experience as conceived and structured by the Drive® for School Program through the Reality Checkmate™ Challenge Book positively impacted both the memories of what to do in a given situation and then <u>actually executing those behaviors and actions</u>.

<p style="text-align:center">✱</p>