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Examples of Manipulations  
that introduce undesirable  
difficulties for the  
Learner.

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- ✱ VARYING THE CONDITIONS OF PRACTICE
- ✱ PROVIDING CONTEXTUAL INTERFERENCE
- ✱ DISTRIBUTING PRACTICE ON A GIVEN TASK
- ✱ REDUCING FEEDBACK TO THE LEARNER
- ✱ USING TEST AS LEARNING EVENTS

Table 2

*Mean Percentage of Correct Recall of Spanish Words on First Test Trials Before and After an Increase in the Intersession Interval (Bahrick, 1979)*

Inter-session interval (days)	Session					Following the 30-day interval
	2	3	4	5	6	
After three training sessions						
0	↑ 77	↑ 89				33 ↓
1	↑ 60	↑ 87				64 ↓
30	↑ 21	↑ 51				72 ↓
After six training sessions						
0	↑ 82	↑ 92	↑ 96	↑ 96	↑ 98	68 ↓
1	↑ 53	↑ 86	↑ 94	↑ 96	↑ 98	86 ↓
30	↑ 21	↑ 51	↑ 72	↑ 79	↑ 82	95 ↓

Baddeley & Longman, (1978)

Training Schedule

<u>1x1 h</u>	<u>2x1 h</u>	<u>1x2 h</u>	<u>2x2 h</u>
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*Hours to learn keyboard*

34.9	42.6	43.2	49.7
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*Mean satisfaction rating:*

*1 (very satisfactory) to 5 (very unsatisfactory)*

2.40	1.86	2.00	1.73
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# SHEA & MORGAN (1979).

BOBYN L. MORGAN

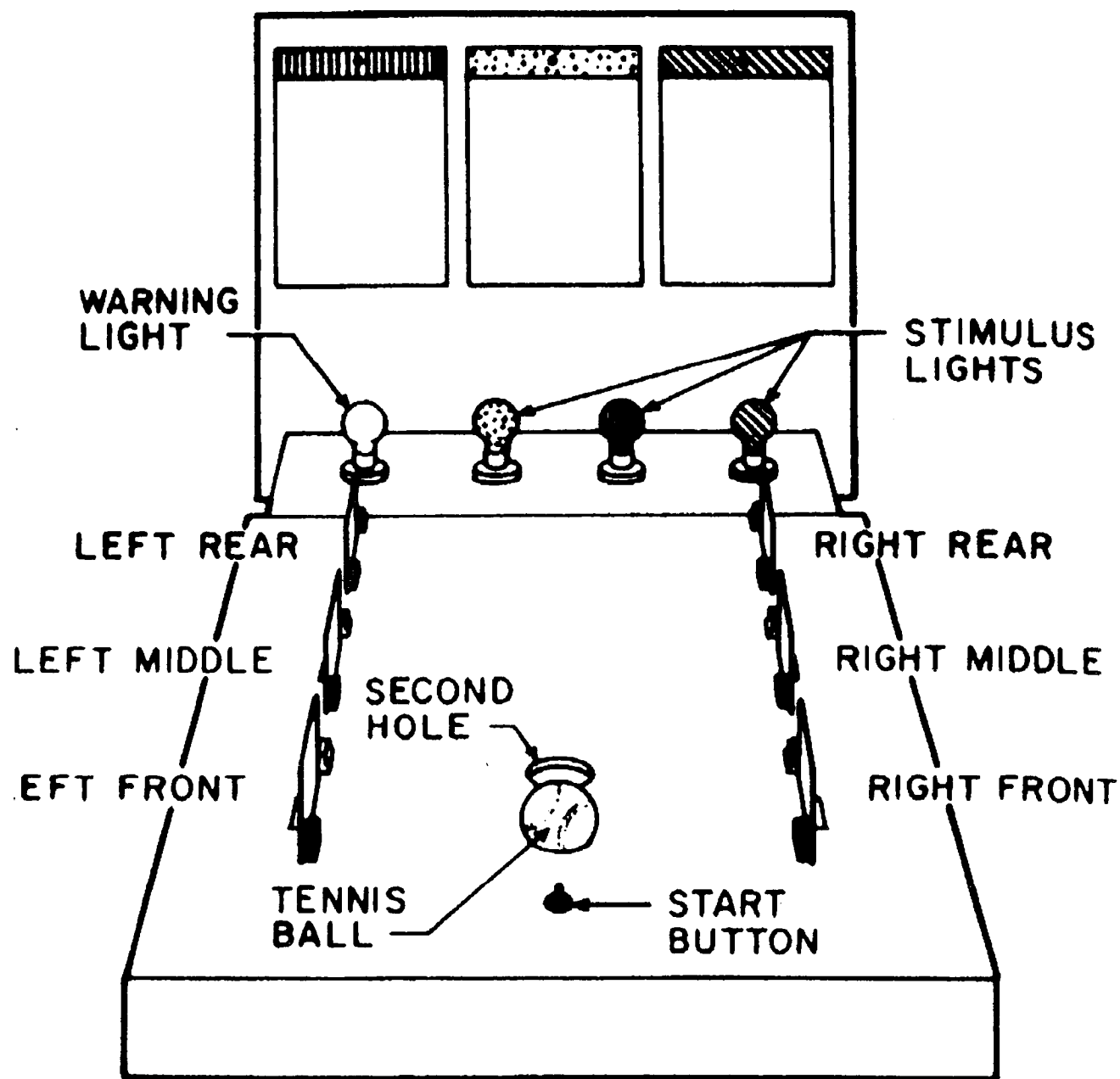


Figure 1. Diagram showing the apparatus used in the experiment from the perspective of the subject.

conditions between acquisition and retention on performance.

# SHEA & MORGAN (1979)

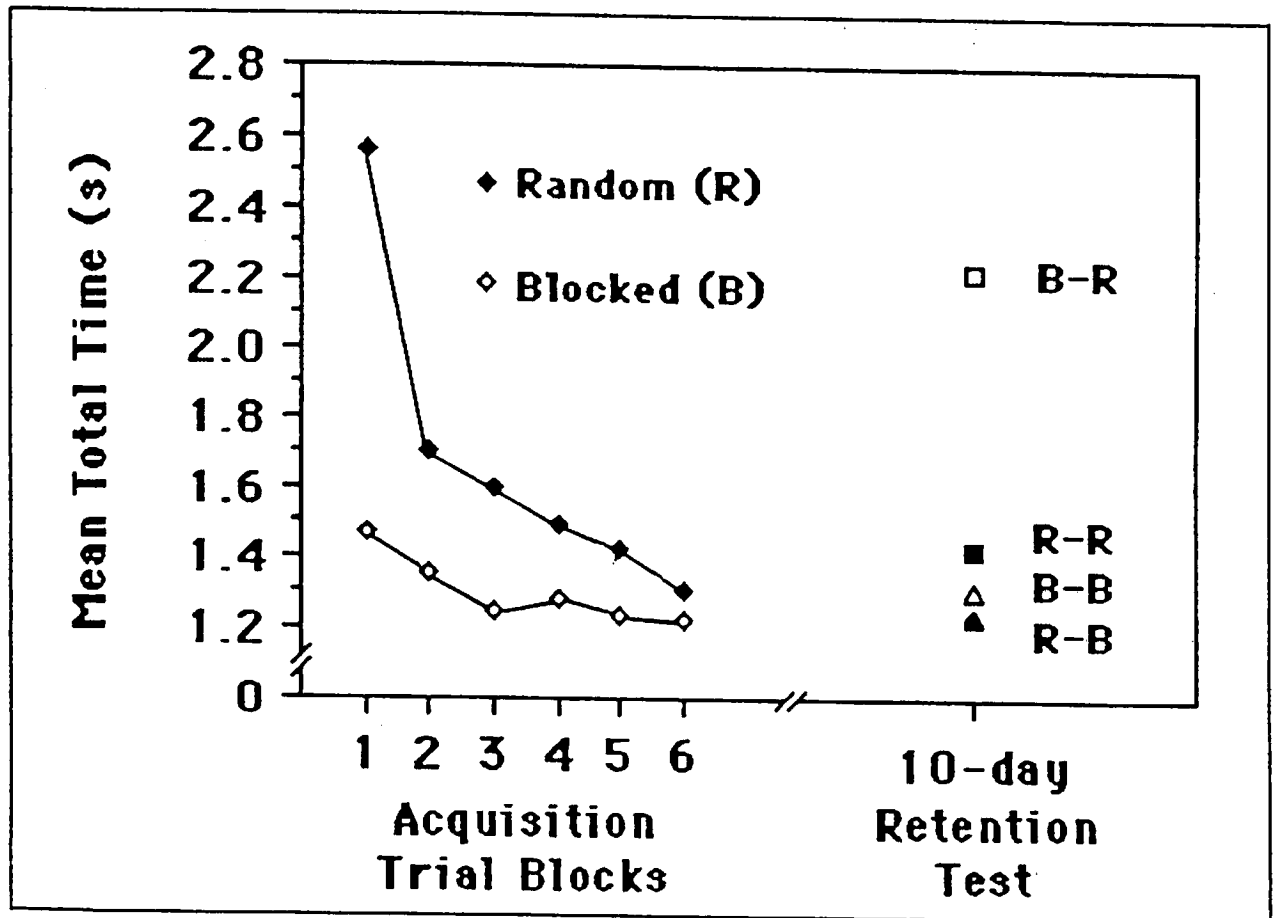


Fig. 1. Performance on movement speed tasks under random (R) and blocked (B) conditions in acquisition and, after 10 days, in retention tests under random or blocked conditions; in retention, the first letter indicates the acquisition condition, and the second represents the retention condition. Redrawn from Shea and Morgan (1979).

LEVY & BJORK (1999)  
 SIMON & BJORK (1999) <sup>2001</sup>

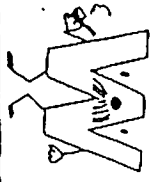
Table 2

*To-Be-Learned Keystroke Sequences. Note:* The key labeled “S” was the first in each sequence, and subjects had to follow the line to press the subsequent keys in the correct order.

Keys	Color	Goal MT	Keyboard Pattern
9-5-1-2-3	Green	900 ms	
3-6-5-8-4	Red	1200 ms	
4-2-5-8-9	White	1500 ms	

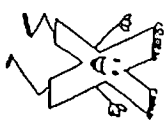
**STE-MARIE, TAYLOR, & CUMMINGS (1999)**  
**LEWIS & STE-MARIE (1996)**

Writing Capital Letters



Say the name of each capital letter below.  
Now trace over the letters with your crayon.  
Next, practice writing each letter 3 more times.

1 2 3



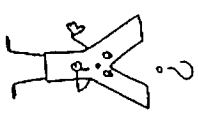
Tracing practice for the letter W: A row of four horizontal lines (top, dashed middle, bottom) with a dashed W shape between the top and middle lines.

Tracing practice for the letter X: A row of four horizontal lines (top, dashed middle, bottom) with a dashed X shape between the top and middle lines.

Tracing practice for the letter W: A row of four horizontal lines (top, dashed middle, bottom) with a dashed W shape between the top and middle lines.

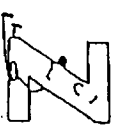
Tracing practice for the letter X: A row of four horizontal lines (top, dashed middle, bottom) with a dashed X shape between the top and middle lines.

Writing Capital Letters



Say the name of each capital letter below.  
Now trace over the letters with your crayon.  
Next, practice writing each letter 3 more times.

1 2 3



Tracing practice for the letter Z: A row of four horizontal lines (top, dashed middle, bottom) with a dashed Z shape between the top and middle lines.

Tracing practice for the letter Z: A row of four horizontal lines (top, dashed middle, bottom) with a dashed Z shape between the top and middle lines.

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