The Role of Consolidation in Learning & Categorization

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Memory

Explicit
“Rule Based Learning”

Procedural
“Information Integration Learning”
Memory

Explicit
“Rule Based Learning”

Procedural
“Information Integration Learning”

vs.

vs.

vs.
Memory

Explicit
“Rule Based Learning”

vs.

Procedural
“Information Integration Learning”

vs.

Cat vs. Dog

Black vs. Circle

Caudate Nucleus
Putamen
Memory

Explicit
“Rule Based Learning”

vs.

Procedural
“Information Integration Learning”

vs.

vs.

vs.

vs.
Relevance of Procedural Learning in Medicine
Stimulus On A Single Trial
Explicit Memory Task
“Rule – Based Category Learning”

Orientation

Bar Width

A

B
Procedural Memory Task

“Information Integration Learning”
## The Current Study

<table>
<thead>
<tr>
<th>Condition 1</th>
<th>Session 1</th>
<th>Break</th>
<th>Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>600 Trials w/ feedback</td>
<td>1 hr</td>
<td>200 Trials w/out Feedback</td>
</tr>
<tr>
<td>Condition 2</td>
<td>600 Trials w/ Feedback</td>
<td>3+ hrs</td>
<td>200 Trials w/out Feedback</td>
</tr>
</tbody>
</table>
No Difference Observed Between Conditions

Proportion Correct

Block (50 Trials per Block)
Discussion & Conclusions

• 1 hour vs. 3+ hour consolidation time

• In the future, a larger sample size could show that increased consolidation times lead to improvement in learning and memory
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