

Study 1 Perception Means

Cognitive Awareness & Study Approach Decision Making

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Load Packages

```
library(psych)
library(tidyverse)
```

```
## — Attaching core tidyverse packages — tidyverse 2.0.0 —
## ✓ dplyr      1.1.2      ✓ readr      2.1.4
## ✓ forcats    1.0.0      ✓ stringr   1.5.0
## ✓ ggplot2    3.4.2      ✓ tibble    3.2.1
## ✓ lubridate  1.9.2      ✓ tidyr     1.3.0
## ✓ purrr      1.0.1
## — Conflicts — tidyverse_conflicts() —
## * ggplot2::%>%() masks psych::%>%()
## * ggplot2::alpha() masks psych::alpha()
## * dplyr::filter() masks stats::filter()
## * dplyr::lag() masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

Disable Scientific Notation

```
options(scipen = 999)
```

Study 1 Set Up

Read in Data

```
list1 <- read.csv("list1_exp1.csv")
list2 <- read.csv("list2_exp1.csv")
study1 <- read.csv("study1-final.csv")
# Blocked -> Interleaved (list_one) rows 2-180
# Interleaved -> Blocked (list_two) rows 181-329
```

Variables of Interest

Mental Effort (X)

Familiarity/Habits (X)

Perceived Learning (M)

Final Strategy (Y)

*Blocked Averages**## Mental Effort*

```
study1$effort_blocked <- ((study1$TiredBlocked + study1$MentallyExhaustingBlocked +
                          study1$DifficultBlocked + study1$BoringBlocked) / 4)
summary(study1$effort_blocked) # mean of 3.10, less mentally effortful
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
##	1.000	2.250	3.000	3.098	3.750	6.000	1

Perceived Learning

```
study1$learn_blocked <- ((study1$RememberAnswersBlocked + study1$MemoryAnswersBlocked +
                          study1$HelpingToLearnBlocked + study1$LearnAnswersBlocked) /
4)
summary(study1$learn_blocked) # mean of 3.45, perceive more learning
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
##	1.000	2.750	3.500	3.447	4.062	6.000	1

Familiarity/Habits

```
study1$habits_blocked <- ((study1$ClassStructureBlocked + study1$FamiliarBlocked +
                          study1$NewBlocked + study1$StudyHabitsBlocked) / 4)
summary(study1$habits_blocked) # mean of 3.29, more familiar/habitual
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
##	1.000	2.500	3.375	3.290	4.250	6.000	1

*Interleaved Averages**# Mental Effort*

```
study1$effort_interleaved <- ((study1$TiredInterleaved + study1$MentallyExhaustingInterl
eaved +
                             study1$DifficultInterleaved + study1$BoringInterleaved)
/ 4)
summary(study1$effort_interleaved) # mean of 3.73, more mentally effortful
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
##	1.000	2.750	3.750	3.733	4.750	6.000	1

Perceived Learning

```
study1$learn_interleaved <- ((study1$RememberAnswersInterleaved + study1$MemoryAnswersIn
terleaved +
                             study1$HelpingToLearnInterleaved + study1$LearnAnswersIn
terleaved) / 4)
summary(study1$learn_interleaved) # mean of 2.84, perceived less learning
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
##	1.000	2.000	2.750	2.838	3.750	6.000	1

```
## Familiar/Habits
```

```
study1$habits_interleaved <- ((study1$ClassStructureInterleaved + study1$FamiliarInterleaved +
```

```
study1$NewInterleaved + study1$StudyHabitsInterleaved) / 4)
```

```
summary(study1$habits_interleaved) # mean of 2.70, less familiar/habitual
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
##	1.000	2.000	2.500	2.697	3.250	5.750	1