

Statistics on Determinants (UTAUT)

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```
library(readr)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

```
library(tidyr)
```

```
#Reading the file from csv for easy navigation.
```

```
messRespon<-read.csv('C:/Users/User/Documents/Rstudio Files/midtermsurvey/FINAL EXCEL/RESPONDENTS.csv')
```

```
#FACTORS AND THEIR MEAN AND STANDARD DEVIATION
```

```
#ABOUT: This survey is about Messaging Applications Platforms in which it testifies the satisfaction, e
```

```
#FACTOR: PERFORMANCE EXPECTANCY
```

```
#Performance Expectancy Questionnaire
```

```
#X1...I.find.the.messaging.system.useful.in.terms.of.communication.
```

```
#X2...Using.the.messaging.system.enables.me.to.communicate.efficiently.
```

```
#X3...Using.the.messaging.system.increases.my.productivity.
```

```
#X4...If.I.use.the.messaging.system..I.will.increase.my.chances.of.online.interaction.
```

```
#Getting the Mean and Standard Deviation of the Performance Expectancy (PE)
```

```
PE_meanstd <- messRespon %>%
```

```
  summarise(
```

```
    Factors = c("U6", "RA1", "RA5", "OE7"),
```

```
    Mean = c(
```

```
      mean(X1...I.find.the.messaging.system.useful.in.terms.of.communication.),
```

```
      mean(X2...Using.the.messaging.system.enables.me.to.communicate.efficiently.),
```

```
      mean(X3...Using.the.messaging.system.increases.my.productivity.),
```

```

    mean(X4...If.I.use.the.messaging.system..I.will.increase.my.chances.of.online.interaction.)
  ),
  Standard_Dev = c(
    sd(X1...I.find.the.messaging.system.useful.in.terms.of.communication.),
    sd(X2...Using.the.messaging.system.enables.me.to.communicate.efficiently.),
    sd(X3...Using.the.messaging.system.increases.my.productivity.),
    sd(X4...If.I.use.the.messaging.system..I.will.increase.my.chances.of.online.interaction.)
  )
) %>%
mutate(Questionnaire_Type = "Performance Expectancy") %>%
select(Questionnaire_Type, Factors, Mean, Standard_Dev)

```

```

## Warning: Returning more (or less) than 1 row per 'summarise()' group was deprecated in
## dplyr 1.1.0.
## i Please use 'reframe()' instead.
## i When switching from 'summarise()' to 'reframe()', remember that 'reframe()'
## always returns an ungrouped data frame and adjust accordingly.
## Call 'lifecycle::last_lifecycle_warnings()' to see where this warning was
## generated.

```

```

TotalresultPE <- PE_meanstd %>%
  summarise(Mean = mean(Mean),
            Standard_Dev = mean(Standard_Dev),
  )

PE_all<- bind_rows(PE_meanstd, TotalresultPE)
PE_all[5, 1] <- "PERFORMANCE EXPECTANCY"
PE_all[5, 2] <- "TOTAL"
View(PE_all)
PE_all

```

```

##      Questionnaire_Type Factors      Mean Standard_Dev
## 1 Performance Expectancy      U6 4.704762      0.7711606
## 2 Performance Expectancy      RA1 4.552381      0.7963976
## 3 Performance Expectancy      RA5 3.857143      0.9243352
## 4 Performance Expectancy      OE7 4.400000      0.8157111
## 5 PERFORMANCE EXPECTANCY     TOTAL 4.378571      0.8269011

```

#INSIGHTS: The data shows that "Performance Expectancy" has a mean score range from 3.86 to 4.70 across

#FACTOR: EFFORT EXPECTANCY

```

#Effort Expectancy Questionnaire(EF)
#X5..My.interaction.with.the.messaging.system.is..clear.and.understandable.
#X6..It.is.easy.for.me.to.become.skillful.at.using.the.messaging.system.
#X7...I.find.the.messaging.system.easy.to.use.
#X8..Learning.to.operate.the.messaging.system.is.easy.for.me.

#Getting the mean and Standard Deviation
EE_meanstd <- messRespon %>%
  summarise(
    Factors = c("EQU3", "EQU5", "EQU6", "EU4"),

```

```

Mean = c(
  mean(X5..My.interaction.with.the.messaging.system.is..clear.and.understandable.),
  mean(X6..It.is.easy.for.me.to.become.skillful.at.using.the.messaging.system.),
  mean(X7...I.find.the.messaging.system.easy.to.use.),
  mean(X8..Learning.to.operate.the.messaging.system.is.easy.for.me.)
),
Standard_Dev = c(
  sd(X5..My.interaction.with.the.messaging.system.is..clear.and.understandable.),
  sd(X6..It.is.easy.for.me.to.become.skillful.at.using.the.messaging.system.),
  sd(X7...I.find.the.messaging.system.easy.to.use.),
  sd(X8..Learning.to.operate.the.messaging.system.is.easy.for.me.)
)
) %>%
mutate(Questionnaire_Type = "Effort Expectancy") %>%
select(Questionnaire_Type, Factors, Mean, Standard_Dev)

```

```

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## dplyr 1.1.0.
## i Please use 'reframe()' instead.
## i When switching from 'summarise()' to 'reframe()', remember that 'reframe()'
## always returns an ungrouped data frame and adjust accordingly.
## Call 'lifecycle::last_lifecycle_warnings()' to see where this warning was
## generated.

```

```

TotalresultEE <- EE_meanstd %>%
  summarise(Mean = mean(Mean),
            Standard_Dev = mean(Standard_Dev),
  )

EE_all<- bind_rows(EE_meanstd, TotalresultEE)
EE_all[5, 1] <- "EFFORT EXPECTANCY"
EE_all[5, 2] <- "TOTAL"
View(EE_all)
EE_all

```

```

##   Questionnaire_Type Factors      Mean Standard_Dev
## 1 Effort Expectancy   EOU3 4.361905    0.8100785
## 2 Effort Expectancy   EOU5 4.285714    0.9376145
## 3 Effort Expectancy   EOU6 4.704762    0.6923179
## 4 Effort Expectancy    EU4 4.561905    0.7711606
## 5 EFFORT EXPECTANCY  TOTAL 4.478571    0.8027928

```

#INSIGHTS: The data shows that on average, participants rated "Effort Expectancy" between 4.28 and 4.70

#FACTOR: SOCIAL INFLUENCE

```

#Social Influence Questionnaire
#X13..People.who.influence.my.behavior.think.that.I.should.use.the.messaging.system.
#X14...People.who.are.important.to.me.think.that.I.should.use.the.messaging.system.
#X15..The.student.management.of.the.institution.had.been.helpful.in.the.use.of.the.messaging.system.
#X16..In.general..the.organization.has.supported.the.use.of.the.messaging.system.

```

```

#Getting the mean and standard deviation
SI_meanstd <- messRespon %>%
  summarise(
    Factors = c("SN1", "SN2", "SF2", "SF4"),
    Mean = c(
      mean(X13..People.who.influence.my.behavior.think.that.I.should.use.the.messaging.system.),
      mean(X14...People.who.are.important.to.me.think.that.I.should.use.the.messaging.system.),
      mean(X15..The.student.management.of.the.institution.had.been.helpful.in.the.use.of.the.messaging.sy.),
      mean(X16..In.general..the.organization.has.supported.the.use.of.the.messaging.system.)
    ),
    Standard_Dev = c(
      sd(X13..People.who.influence.my.behavior.think.that.I.should.use.the.messaging.system.),
      sd(X14...People.who.are.important.to.me.think.that.I.should.use.the.messaging.system.),
      sd(X15..The.student.management.of.the.institution.had.been.helpful.in.the.use.of.the.messaging.system.),
      sd(X16..In.general..the.organization.has.supported.the.use.of.the.messaging.system.)
    )
  ) %>%
  mutate(Questionnaire_Type = "Social Influence") %>%
  select(Questionnaire_Type, Factors, Mean, Standard_Dev)

```

```

## Warning: Returning more (or less) than 1 row per 'summarise()' group was deprecated in
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## i When switching from 'summarise()' to 'reframe()', remember that 'reframe()'
## always returns an ungrouped data frame and adjust accordingly.
## Call 'lifecycle::last_lifecycle_warnings()' to see where this warning was
## generated.

```

```

TotalresultSI <- SI_meanstd %>%
  summarise(Mean = mean(Mean),
            Standard_Dev = mean(Standard_Dev),
  )

SI_all<- bind_rows(SI_meanstd, TotalresultSI)
SI_all[5, 1] <- "SOCIAL INFLUENCE"
SI_all[5, 2] <- "TOTAL"
View(SI_all)
SI_all

```

```

##   Questionnaire_Type Factors      Mean Standard_Dev
## 1   Social Influence   SN1 3.857143    0.8925824
## 2   Social Influence   SN2 4.171429    0.9246324
## 3   Social Influence   SF2 4.238095    0.8718218
## 4   Social Influence   SF4 4.409524    0.8168330
## 5   SOCIAL INFLUENCE  TOTAL 4.169048    0.8764674

```

#INSIGHTS: The data shows that the average scores for different aspects of Social Influence are all above 3.85

#FACTOR: FACILITATING CONDITIONS

```

#Facilitating Conditions Questionnaire
#X17...I.have.the.resources.necessary.to.use.the.messaging.system.

```

```

#X18..I.have.the.knowledge.necessary.to.use.the.messaging.system.
#X19..The.messaging.system.is.not.compatible.with.other.systems.I.use.
#X20...A.specific.person..or.group..is.available.for.assistance.with.messaging.system.difficulties.

#Getting the mean and standard deviation
FC_meanstd <- messRespon %>%
  summarise(
    Factors = c("SN1", "SN2", "SF2", "SF4"),
    Mean = c(
      mean(X17...I.have.the.resources.necessary.to.use.the.messaging.system.),
      mean(X18..I.have.the.knowledge.necessary.to.use.the.messaging.system.),
      mean(X19..The.messaging.system.is.not.compatible.with.other.systems.I.use.),
      mean(X20...A.specific.person..or.group..is.available.for.assistance.with.messaging.system.difficulties.)
    ),
    Standard_Dev = c(
      sd(X17...I.have.the.resources.necessary.to.use.the.messaging.system.),
      sd(X18..I.have.the.knowledge.necessary.to.use.the.messaging.system.),
      sd(X19..The.messaging.system.is.not.compatible.with.other.systems.I.use.),
      sd(X20...A.specific.person..or.group..is.available.for.assistance.with.messaging.system.difficulties.)
    )
  ) %>%
  mutate(Questionnaire_Type = "Facilitating Conditions") %>%
  select(Questionnaire_Type, Factors, Mean, Standard_Dev)

```

```

## Warning: Returning more (or less) than 1 row per 'summarise()' group was deprecated in
## dplyr 1.1.0.
## i Please use 'reframe()' instead.
## i When switching from 'summarise()' to 'reframe()', remember that 'reframe()'
## always returns an ungrouped data frame and adjust accordingly.
## Call 'lifecycle::last_lifecycle_warnings()' to see where this warning was
## generated.

```

```

TotalresultFC <- FC_meanstd %>%
  summarise(Mean = mean(Mean),
            Standard_Dev = mean(Standard_Dev),
  )

FC_all <- bind_rows(FC_meanstd, TotalresultSI)
FC_all[5, 1] <- "FACILITATING CONDITIONS"
FC_all[5, 2] <- "TOTAL"
View(FC_all)
FC_all

```

##	Questionnaire_Type	Factors	Mean	Standard_Dev
## 1	Facilitating Conditions	SN1	4.409524	0.8285209
## 2	Facilitating Conditions	SN2	4.609524	0.7002093
## 3	Facilitating Conditions	SF2	2.904762	1.3764769
## 4	Facilitating Conditions	SF4	3.695238	1.0107481
## 5	FACILITATING CONDITIONS	TOTAL	4.169048	0.8764674

#INSIGHTS: This result from RStudio indicates that respondents perceive high facilitating conditions over

```
#FACTOR: BEHAVIORAL INTENTION TO USE THE SYSTEM
```

```
#Behavioral Intention Questionnaire
```

```
#X29...I.intend.to.use.the.messaging.system.in.the.future.
```

```
#X30...I.predict.I.would.use.the.messaging.system.in.the.future.
```

```
#X31...I.plan.to.use.the.messaging.system.in.the.next.future.
```

```
#Getting the mean and standard deviation
```

```
BI_meanstd <- messRespon %>%  
  summarise(  
    Factors = c("BI1", "BI2", "BI3"),  
    Mean = c(  
      mean(X29...I.intend.to.use.the.messaging.system.in.the.future.),  
      mean(X30...I.predict.I.would.use.the.messaging.system.in.the.future.),  
      mean(X31...I.plan.to.use.the.messaging.system.in.the.next.future.)  
    ),  
    Standard_Dev = c(  
      sd(X29...I.intend.to.use.the.messaging.system.in.the.future.),  
      sd(X30...I.predict.I.would.use.the.messaging.system.in.the.future.),  
      sd(X31...I.plan.to.use.the.messaging.system.in.the.next.future.)  
    )  
  ) %>%  
  mutate(Questionnaire_Type = "Behavioral Intention") %>%  
  select(Questionnaire_Type, Factors, Mean, Standard_Dev)
```

```
## Warning: Returning more (or less) than 1 row per 'summarise()' group was deprecated in  
## dplyr 1.1.0.
```

```
## i Please use 'reframe()' instead.
```

```
## i When switching from 'summarise()' to 'reframe()', remember that 'reframe()'  
## always returns an ungrouped data frame and adjust accordingly.
```

```
## Call 'lifecycle::last_lifecycle_warnings()' to see where this warning was  
## generated.
```

```
TotalresultBI <- BI_meanstd %>%  
  summarise(Mean = mean(Mean),  
            Standard_Dev = mean(Standard_Dev),  
            )  
BI_all <- bind_rows(BI_meanstd, TotalresultBI)  
BI_all[4, 1] <- "BEHAVIORAL INTENTION"  
BI_all[4, 2] <- "TOTAL"  
View(BI_all)  
BI_all
```

```
##      Questionnaire_Type Factors      Mean Standard_Dev  
## 1 Behavioral Intention    BI1 4.361905    0.9106613  
## 2 Behavioral Intention    BI2 4.485714    0.8333700  
## 3 Behavioral Intention    BI3 4.457143    0.8551717  
## 4 BEHAVIORAL INTENTION  TOTAL 4.434921    0.8664010
```

```
#INSIGHTS: This result, analyzed through RStudio, indicates that the overall behavioral intention score
```

```

final_combined_data <- bind_rows(PE_all, EE_all, SI_all, FC_all, BI_all)
View(final_combined_data)

overall <- final_combined_data %>%
  summarise(Mean = mean(Mean),
            Standard_Dev = mean(Standard_Dev),
  )

stats_overall<- bind_rows(final_combined_data, overall)
stats_overall[25, 1] <- "OVERALL RESULT"
stats_overall[25, 2] <- "OVERALL SUMMARY"
View(stats_overall)
stats_overall

```

##	Questionnaire_Type	Factors	Mean	Standard_Dev
## 1	Performance Expectancy	U6	4.704762	0.7711606
## 2	Performance Expectancy	RA1	4.552381	0.7963976
## 3	Performance Expectancy	RA5	3.857143	0.9243352
## 4	Performance Expectancy	OE7	4.400000	0.8157111
## 5	PERFORMANCE EXPECTANCY	TOTAL	4.378571	0.8269011
## 6	Effort Expectancy	EOU3	4.361905	0.8100785
## 7	Effort Expectancy	EOU5	4.285714	0.9376145
## 8	Effort Expectancy	EOU6	4.704762	0.6923179
## 9	Effort Expectancy	EU4	4.561905	0.7711606
## 10	EFFORT EXPECTANCY	TOTAL	4.478571	0.8027928
## 11	Social Influence	SN1	3.857143	0.8925824
## 12	Social Influence	SN2	4.171429	0.9246324
## 13	Social Influence	SF2	4.238095	0.8718218
## 14	Social Influence	SF4	4.409524	0.8168330
## 15	SOCIAL INFLUENCE	TOTAL	4.169048	0.8764674
## 16	Facilitating Conditions	SN1	4.409524	0.8285209
## 17	Facilitating Conditions	SN2	4.609524	0.7002093
## 18	Facilitating Conditions	SF2	2.904762	1.3764769
## 19	Facilitating Conditions	SF4	3.695238	1.0107481
## 20	FACILITATING CONDITIONS	TOTAL	4.169048	0.8764674
## 21	Behavioral Intention	BI1	4.361905	0.9106613
## 22	Behavioral Intention	BI2	4.485714	0.8333700
## 23	Behavioral Intention	BI3	4.457143	0.8551717
## 24	BEHAVIORAL INTENTION	TOTAL	4.434921	0.8664010
## 25	OVERALL RESULT OVERALL SUMMARY		4.277447	0.8662014

#INSIGHTS: These results from RStudio indicate that overall, participants rated performance expectancy