

# Group Lauron - A SURVEY ON TIME ON STUDYING AND STUDY HABITIS AMONG STUDENTS OF ISAT U (LAPAZ)

Lauron,Apuli,Sabando,Tanagon

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```
#A SURVEY ON TIME ON STUDYING AND STUDY HABITIS AMONG STUDENTS OF ISAT U (LAPAZ)
```

```
#Import the responses in Google Form Data in CSV to analyze it.
```

```
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)
library(ggplot2)
```

```
surveyData <- read.csv("/cloud/project/Group_Lauron.csv")
```

```
#The data set contains information about the personal information,
#time allocatin for studying and questions of the studying habits of -
#ISAT U students. Each column represents the questions to determine it.
```

```
head(surveyData)
```

```
##           Timestamp FULL.NAME.optional.. AGE. GENDER
## 1 11/23/2025 11:05:17             Galon   20 Male
## 2 11/23/2025 11:11:02              19 Female
## 3 11/23/2025 11:13:30              22 Female
## 4 11/23/2025 11:16:43              20 Male
## 5 11/23/2025 11:17:34              20 Male
## 6 11/23/2025 11:19:08              21 Male
##                                     COLLEGE Time.Allocation.for.Studying
## 1 College of Computing and Informatics      1 hour and 30 minutes
## 2          College of Arts and Sciences      2 hours and above
## 3 College of Computing and Informatics      2 hours and above
```

```

## 4 College of Computing and Informatics          2 hours and above
## 5 College of Computing and Informatics          2 hours and above
## 6 College of Computing and Informatics          1 hour
## How many study sessions do you usually have in a week.
## 1                      1-2 times
## 2                      1-2 times
## 3                      3-4 times
## 4                      3-4 times
## 5                      3-4 times
## 6                      1-2 times
## X1...I.allocate.time.for.studying.at.least.30.minutes.a.day.
## 1                      3
## 2                      5
## 3                      5
## 4                      3
## 5                      3
## 6                      3
## X2...I.take.notes.every.lesson. X3...I.do.an.advanced.study
## 1                      3
## 2                      3
## 3                      4
## 4                      3
## 5                      3
## 6                      2
## X4...I.tend.to.listen.to.music.while.studying
## 1                      1
## 2                      5
## 3                      4
## 4                      3
## 5                      3
## 6                      5
## X5...I.prefer.to.review.by.group.rather.than.alone
## 1                      3
## 2                      2
## 3                      3
## 4                      3
## 5                      3
## 6                      5
## X6...I.create.schedule.and.follow.it.regularly.
## 1                      4
## 2                      3
## 3                      3
## 4                      3
## 5                      3
## 6                      3
## X7..I.use.gadgets.Laptops..Cellphone..IPad..when.studying.
## 1                      5
## 2                      5
## 3                      4
## 4                      3
## 5                      3
## 6                      5
## X8..I.avoid.distraction.phone..social.media..while.studying.
## 1                      3

```

```

## 2          3
## 3          4
## 4          3
## 5          3
## 6          2
## X9...I.take.short.breaks.during.long.study.session.
## 1          5
## 2          5
## 3          5
## 4          3
## 5          3
## 6          5
## X10...I.prefer.studying.alone
## 1          5
## 2          5
## 3          4
## 4          3
## 5          3
## 6          3

#To inspect the dataset, the View() and head() functions were used. The View()
#function allows examination of the entire dataset from Group_Lauron.csv, which
#contains the respondents' timestamps, demographic information (such as full name,
#age, college, and gender), and responses to questions related to their study
#habits. Meanwhile, the head() function displays the first six rows of the
#dataset, providing a quick overview of its structure and contents.

#In checking the structure, dimensions, and Class of the data.

str(surveyData)

## 'data.frame':   51 obs. of  17 variables:
## $ Timestamp           : chr  "11/23/2025 11:05:17" "11/23/2025 11:05:17" ...
## $ FULL.NAME.optional..: chr  "Galon"  "" "" "" ...
## $ AGE.                 : int  20 19 22 20 20 21 19 19 19 20 ...
## $ GENDER               : chr  "Male"  "Female" "Female" "Male" ...
## $ COLLEGE              : chr  "College of Computing and Info" "College of Computing and Info" ...
## $ Time.Allocation.for.Studying       : chr  "1 hour and 30 minutes" "2 hours" ...
## $ How.many.study.sessions.do.you.usually.have.in.a.week. : chr  "1-2 times" "1-2 times" "3-4 times" ...
## $ X1...I.allocate.time.for.studying.at.least.30.minutes.a.day.: int  3 5 5 3 3 3 4 2 3 3 ...
## $ X2...I.take.notes.every.lesson.    : int  3 3 4 3 3 2 4 3 3 2 ...
## $ X3...I.do.an.advanced.study       : int  4 4 3 3 3 5 4 4 2 3 ...
## $ X4...I.tend.to.listen.to.music.while.studying        : int  1 5 4 3 3 3 5 4 4 3 5 ...
## $ X5...I.prefer.to.review.by.group.rather.than.alone     : int  3 2 3 3 3 5 5 4 2 2 ...
## $ X6...I.create.schedule.and.follow.it.regularly.       : int  4 3 3 3 3 3 4 3 2 2 ...
## $ X7...I.use.gadgets.Laptops..Cellphone..IPad..when.studying. : int  5 5 4 3 3 5 4 5 5 4 ...
## $ X8...I.avoid.distraction.phone..social.media..while.studying. : int  3 3 4 3 3 2 4 3 2 2 ...
## $ X9...I.take.short.breaks.during.long.study.session.    : int  5 5 5 3 3 5 4 5 4 4 ...
## $ X10...I.prefer.studying.alone         : int  5 5 4 3 3 3 4 5 5 4 ...

class(surveyData)  #to know the data type of the data.

## [1] "data.frame"

dim(surveyData)    #to know the dimensions.

```

```
## [1] 51 17
#In using str() and class(), We able to identify which class our data belong,
#in str() we are able to identified what are the integer and the character on
#the answers, in the data type, how many observation and variables.
```

*#Converted the blank lines in our survey data to NA to make it clearer and complete, because we made the name question optional and a lot chose not to put their names.*

```
surveyData[surveyData == ""] <- NA
```

*#preview of the last 6 rows of data with NA.*

```
tail(surveyData)
```

```
##           Timestamp FULL.NAME.optional.. AGE. GENDER
## 46 12/11/2025 13:21:54             <NA>   18 Female
## 47 12/11/2025 13:22:19             <NA>   19 Female
## 48 12/11/2025 13:22:35             <NA>   20 Female
## 49 12/11/2025 13:23:06             <NA>   20 Male
## 50 12/11/2025 13:23:40             <NA>   20 Female
## 51 12/11/2025 13:25:59             <NA>   18 Male
##                                     COLLEGE Time.Allocation.for.Studying
## 46          College of Arts and Sciences      30 minutes
## 47          College of Education      30 minutes
## 48 College of Engineering and Architecture      30 minutes
## 49          College of Arts and Sciences less than 30 minutes
## 50          College of Industrial Technology less than 30 minutes
## 51 College of Engineering and Architecture 1 hour and 30 minutes
## How.many.study.sessions.do.you.usually.have.in.a.week.
## 46                  1-2 times
## 47                  1-2 times
## 48                  1-2 times
## 49                  3-4 times
## 50                  1-2 times
## 51                  1-2 times
## X1...I.allocate.time.for.studying.at.least.30.minutes.a.day.
## 46                      4
## 47                      3
## 48                      5
## 49                      4
## 50                      4
## 51                      3
## X2...I.take.notes.every.lesson. X3...I.do.an.advanced.study
## 46                      5
## 47                      5
## 48                      5
## 49                      4
## 50                      4
## 51                      4
## X4...I.tend.to.listen.to.music.while.studying
## 46                      4
## 47                      4
## 48                      4
## 49                      5
```

```

## 50                               4
## 51                               4
##      X5...I.prefer.to.review.by.group.rather.than.alone
## 46                                5
## 47                                2
## 48                                4
## 49                                4
## 50                                4
## 51                                2
##      X6...I.create.schedule.and.follow.it.regularly.
## 46                                5
## 47                                4
## 48                                3
## 49                                5
## 50                                5
## 51                                2
##      X7..I.use.gadgets.Laptops..Cellphone..IPad..when.studying.
## 46                                4
## 47                                4
## 48                                3
## 49                                5
## 50                                5
## 51                                5
##      X8..I.avoid.distraction.phone..social.media..while.studying.
## 46                                4
## 47                                2
## 48                                5
## 49                                4
## 50                                5
## 51                                4
##      X9...I.take.short.breaks.during.long.study.session.
## 46                                4
## 47                                3
## 48                                5
## 49                                4
## 50                                5
## 51                                5
##      X10...I.prefer.studying.alone
## 46                                5
## 47                                5
## 48                                5
## 49                                5
## 50                                4
## 51                                2
#preview of the first 6 rows of data blank replaced with NA
head(surveyData)

```

```

##           Timestamp FULL.NAME.optional.. AGE. GENDER
## 1 11/23/2025 11:05:17          Galon    20   Male
## 2 11/23/2025 11:11:02        <NA>    19 Female
## 3 11/23/2025 11:13:30        <NA>    22 Female
## 4 11/23/2025 11:16:43        <NA>    20   Male
## 5 11/23/2025 11:17:34        <NA>    20   Male
## 6 11/23/2025 11:19:08        <NA>    21   Male

```

```

## COLLEGE Time.Allocation.for.Studying
## 1 College of Computing and Informatics      1 hour and 30 minutes
## 2          College of Arts and Sciences      2 hours and above
## 3 College of Computing and Informatics      2 hours and above
## 4 College of Computing and Informatics      2 hours and above
## 5 College of Computing and Informatics      2 hours and above
## 6 College of Computing and Informatics      1 hour
## How.many.study.sessions.do.you.usually.have.in.a.week.
## 1                      1-2 times
## 2                      1-2 times
## 3                      3-4 times
## 4                      3-4 times
## 5                      3-4 times
## 6                      1-2 times
## X1...I.allocate.time.for.studying.at.least.30.minutes.a.day.
## 1                         3
## 2                         5
## 3                         5
## 4                         3
## 5                         3
## 6                         3
## X2...I.take.notes.every.lesson. X3...I.do.an.advanced.study
## 1                         3
## 2                         4
## 3                         4
## 4                         3
## 5                         3
## 6                         5
## X4...I.tend.to.listen.to.music.while.studying
## 1                         1
## 2                         5
## 3                         4
## 4                         3
## 5                         3
## 6                         5
## X5...I.prefer.to.review.by.group.rather.than.alone
## 1                         3
## 2                         2
## 3                         3
## 4                         3
## 5                         3
## 6                         5
## X6...I.create.schedule.and.follow.it.regularly.
## 1                         4
## 2                         3
## 3                         3
## 4                         3
## 5                         3
## 6                         3
## X7..I.use.gadgets.Laptops..Cellphone..IPad..when.studying.
## 1                         5
## 2                         5
## 3                         4
## 4                         3

```

```

## 5          3
## 6          5
## X8...I.avoid.distraction.phone..social.media..while.studying.
## 1          3
## 2          3
## 3          4
## 4          3
## 5          3
## 6          2
## X9...I.take.short.breaks.during.long.study.session.
## 1          5
## 2          5
## 3          5
## 4          3
## 5          3
## 6          5
## X10...I.prefer.studying.alone
## 1          5
## 2          5
## 3          4
## 4          3
## 5          3
## 6          3

```

*#The respondents were grouped by age, gender, and college to analyze differences among them. First, the number of respondents in each group was counted.*

```

surveycat <- surveyData %>%
group_by(AGE., GENDER, COLLEGE) %>%
summarise(Count = n(), .groups = 'drop')

```

surveycat

```

## # A tibble: 24 x 4
##       AGE. GENDER COLLEGE      Count
##   <int> <chr>   <chr>     <int>
## 1     18 Female College of Arts and Sciences    2
## 2     18 Female College of Computing and Informatics  1
## 3     18 Male   College of Engineering and Architecture  1
## 4     18 Male   College of Industrial Technology    2
## 5     19 Female College of Arts and Sciences    2
## 6     19 Female College of Computing and Informatics  7
## 7     19 Female College of Education            2
## 8     19 Female College of Engineering and Architecture  1
## 9     19 Male   College of Computing and Informatics  6
## 10    19 Male   College of Education            2
## # i 14 more rows

```

*#We aimed to identify the age, gender, and college groups with the highest and lowest number of respondents.*

```

#most respondent based on AGC
most_respondents <- surveycat %>%
filter(Count == max(Count))

```

```

most_respondents

## # A tibble: 1 x 4
##   AGE. GENDER COLLEGE          Count
##   <int> <chr>   <chr>          <int>
## 1    19 Female College of Computing and Informatics    7
#least respondent based on AGC
least_respondents <- surveycat %>%
filter(Count == min(Count))

least_respondents

## # A tibble: 10 x 4
##   AGE. GENDER      COLLEGE          Count
##   <int> <chr>       <chr>          <int>
## 1    18 Female    College of Computing and Informatics    1
## 2    18 Male      College of Engineering and Architecture    1
## 3    19 Female    College of Engineering and Architecture    1
## 4    19 Prefer not to say College of Computing and Informatics    1
## 5    20 Female    College of Arts and Sciences    1
## 6    20 Female    College of Engineering and Architecture    1
## 7    21 Female    College of Computing and Informatics    1
## 8    21 Female    College of Industrial Technology    1
## 9    21 Male      College of Industrial Technology    1
## 10   22 Female    College of Computing and Informatics    1

#The results showed that most respondents were 19-year-old female students from
#the College of CCI.
#The least number of respondents was shared among ten groups with different
#combinations of age, gender, and college.

#We grouped the responses by gender, age, college, and all respondents based on
#time allocation for studying to better understand and analyze the data.
#This allowed us to identify which groups spent the most time studying based on
#gender, age, and college.

#We also created table and bar graphs of the responses to determine the most
#and least common study time allocations among respondents based on it.
#But first we arrange the Time Allocation logically for a better graph outcomes.

surveyData$Time.Allocation.for.Studying <- factor(
  surveyData$Time.Allocation.for.Studying,
  levels = c("less than 30 minutes", "30 minutes", "1 hour", "1 hour and 30 minutes",
            "1 hour, 2 hours and above", "2 hours and above"),
  ordered = TRUE
)

#Table for Time Allocation for studying by GENDER.
table(surveyData$GENDER, surveyData$Time.Allocation.for.Studying)

##                                     less than 30 minutes 30 minutes 1 hour
## Female                                         3           9           3
## Male                                           5           3           9

```

```

## Prefer not to say 1 0 0
##
## 1 hour and 30 minutes 1 hour, 2 hours and above
## Female 3 1
## Male 4 0
## Prefer not to say 0 0
##
## 2 hours and above
## Female 5
## Male 5
## Prefer not to say 0

#Bar Graphs for Gender
study_gender <- surveyData %>%
group_by(GENDER, Time.Allocation.for.Studying) %>%
summarise(count = n(), .groups = "drop")

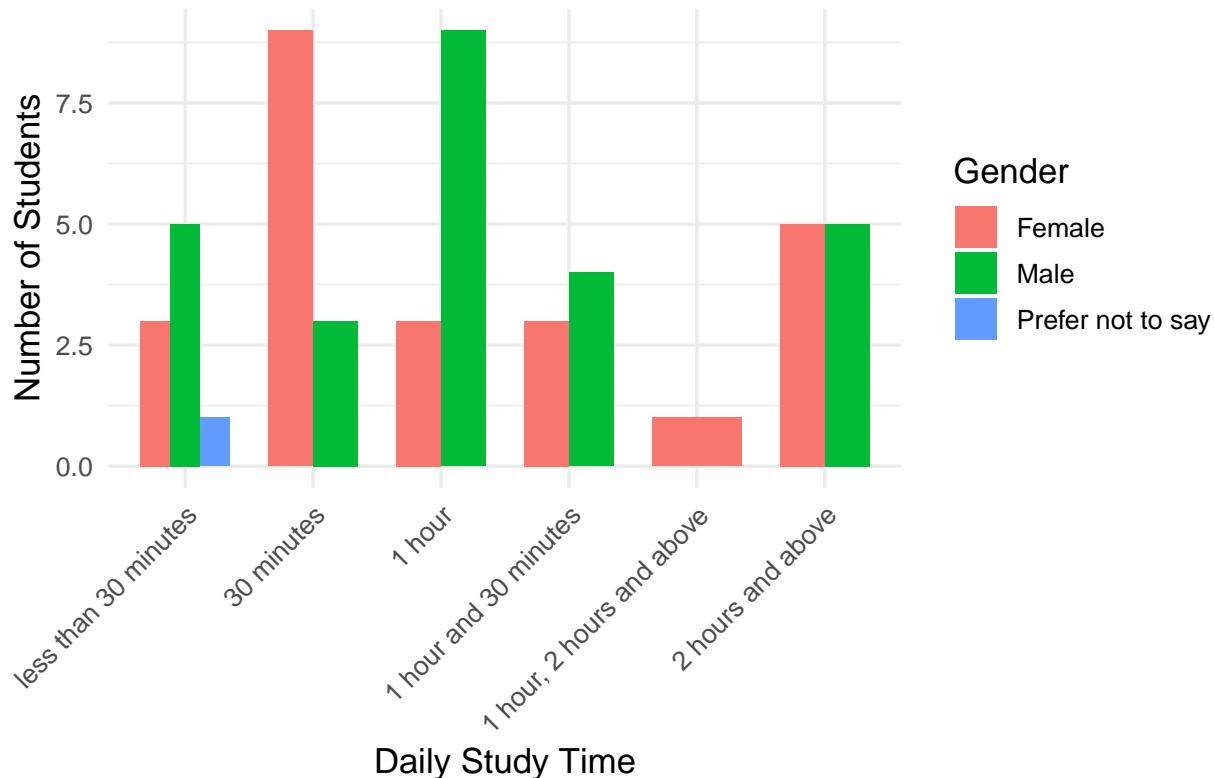
study_gender

## # A tibble: 12 x 3
##   GENDER      Time.Allocation.for.Studying count
##   <chr>      <ord>                  <int>
## 1 Female     less than 30 minutes      3
## 2 Female     30 minutes              9
## 3 Female     1 hour                 3
## 4 Female     1 hour and 30 minutes    3
## 5 Female     1 hour, 2 hours and above 1
## 6 Female     2 hours and above       5
## 7 Male       less than 30 minutes      5
## 8 Male       30 minutes              3
## 9 Male       1 hour                 9
## 10 Male      1 hour and 30 minutes    4
## 11 Male      2 hours and above       5
## 12 Prefer not to say less than 30 minutes 1

ggplot(study_gender,
  aes(x = Time.Allocation.for.Studying, y = count, fill = GENDER)) +
  geom_col(position = "dodge", width = 0.7) +
  labs(
    title = "Study Time Allocation by Gender",
    x = "Daily Study Time",
    y = "Number of Students",
    fill = "Gender"
  ) +
  theme_minimal(base_size = 13) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))

```

## Study Time Allocation by Gender



#The result indicate that male respondents reported have longer studying durations compared to female respondents.

#Male students showed a peak at one hour of study time, while female students reported studying for 30 minutes. Their peak shows is quite the opposite on the most common lowest studying time for both gender. While, prefer not to say is on less than 30 minutes spent on studying.

#This shows that time spent on studying varied based on gender of the respondents.

#Time Allocation for studying by Colleges. (Table)

```
table(surveyData$COLLEGE, surveyData$TimeAllocation.for.Studying)
```

```
##
##                                     less than 30 minutes 30 minutes
##   College of Arts and Sciences           1             3
##   College of Computing and Informatics    6             4
##   College of Education                   0             3
##   College of Engineering and Architecture 0             1
##   College of Industrial Technology       2             1
##
##                                     1 hour 1 hour and 30 minutes
##   College of Arts and Sciences           1             1
##   College of Computing and Informatics    5             4
##   College of Education                   3             0
##   College of Engineering and Architecture 1             2
```

```

## College of Industrial Technology 2 0
##
## 1 hour, 2 hours and above
## College of Arts and Sciences 0
## College of Computing and Informatics 1
## College of Education 0
## College of Engineering and Architecture 0
## College of Industrial Technology 0
##
## 2 hours and above
## College of Arts and Sciences 1
## College of Computing and Informatics 7
## College of Education 0
## College of Engineering and Architecture 1
## College of Industrial Technology 1

#Bar Graph for College.
study_college <- surveyData %>%
group_by(COLLEGE, Time.Allocation.for.Studying) %>%
summarise(count = n())

## `summarise()` has grouped output by 'COLLEGE'. You can override using the
## `.groups` argument.

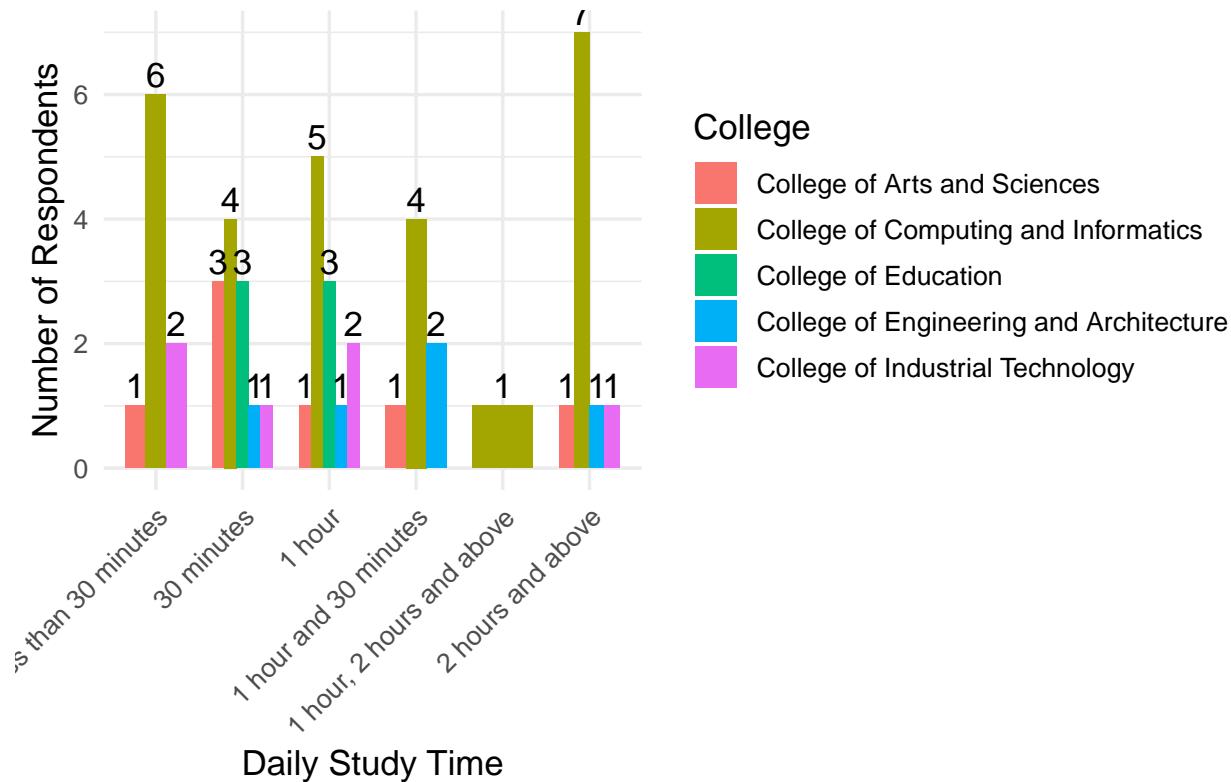
study_college

## # A tibble: 21 x 3
## # Groups: COLLEGE [5]
##   COLLEGE           Time.Allocation.for.Studying count
##   <chr>             <ord>                                <int>
## 1 College of Arts and Sciences less than 30 minutes     1
## 2 College of Arts and Sciences 30 minutes                 3
## 3 College of Arts and Sciences 1 hour                     1
## 4 College of Arts and Sciences 1 hour and 30 minutes    1
## 5 College of Arts and Sciences 2 hours and above        1
## 6 College of Computing and Informatics less than 30 minutes 6
## 7 College of Computing and Informatics 30 minutes       4
## 8 College of Computing and Informatics 1 hour           5
## 9 College of Computing and Informatics 1 hour and 30 minutes 4
## 10 College of Computing and Informatics 1 hour, 2 hours and above 1
## # i 11 more rows

ggplot(study_college,
       aes(x = Time.Allocation.for.Studying, y = count, fill = COLLEGE)) +
  geom_col(position = "dodge", width = 0.7) +
  geom_text(aes(label = count), position = position_dodge(width = 0.7),
            vjust = -0.3) +
  labs(
    title = "Study Time Allocation by College",
    x = "Daily Study Time",
    y = "Number of Respondents",
    fill = "College"
  ) +
  theme_minimal(base_size = 13) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))

```

## Study Time Allocation by College



*#This shows that the CCI spent longest time on studying than other colleges with the 2 hours and above, followed by the CEA,CIT, and CAS. While the COE peak is on 30 minutes and 1 hour which is also their lowest. For the 30 minutes and 1 hour categories, the respondents are more evenly distributed across the colleges. If we rank them based on the respondents spent on studying, it would be CCI-CEA-CIT-CAS-COE.*

```
#Table for Time Allocation for studying by AGE.
table(surveyData$AGE., surveyData$TimeAllocation.for.Studying)
```

```
##
##      less than 30 minutes 30 minutes 1 hour 1 hour and 30 minutes
##    18                  0          3      2          1
##    19                  3          5      6          2
##    20                  3          3      3          4
##    21                  3          1      1          0
##    22                  0          0      0          0
##
##      1 hour, 2 hours and above 2 hours and above
##    18                  0          0
##    19                  1          6
##    20                  0          3
##    21                  0          0
##    22                  0          1
```

```
#Bar Graph for AGE.
time_age <- surveyData %>%
```

```

group_by(AGE., Time.Allocation.for.Studying) %>%
summarise(count = n())

## `summarise()` has grouped output by 'AGE.'. You can override using the
## `.groups` argument.

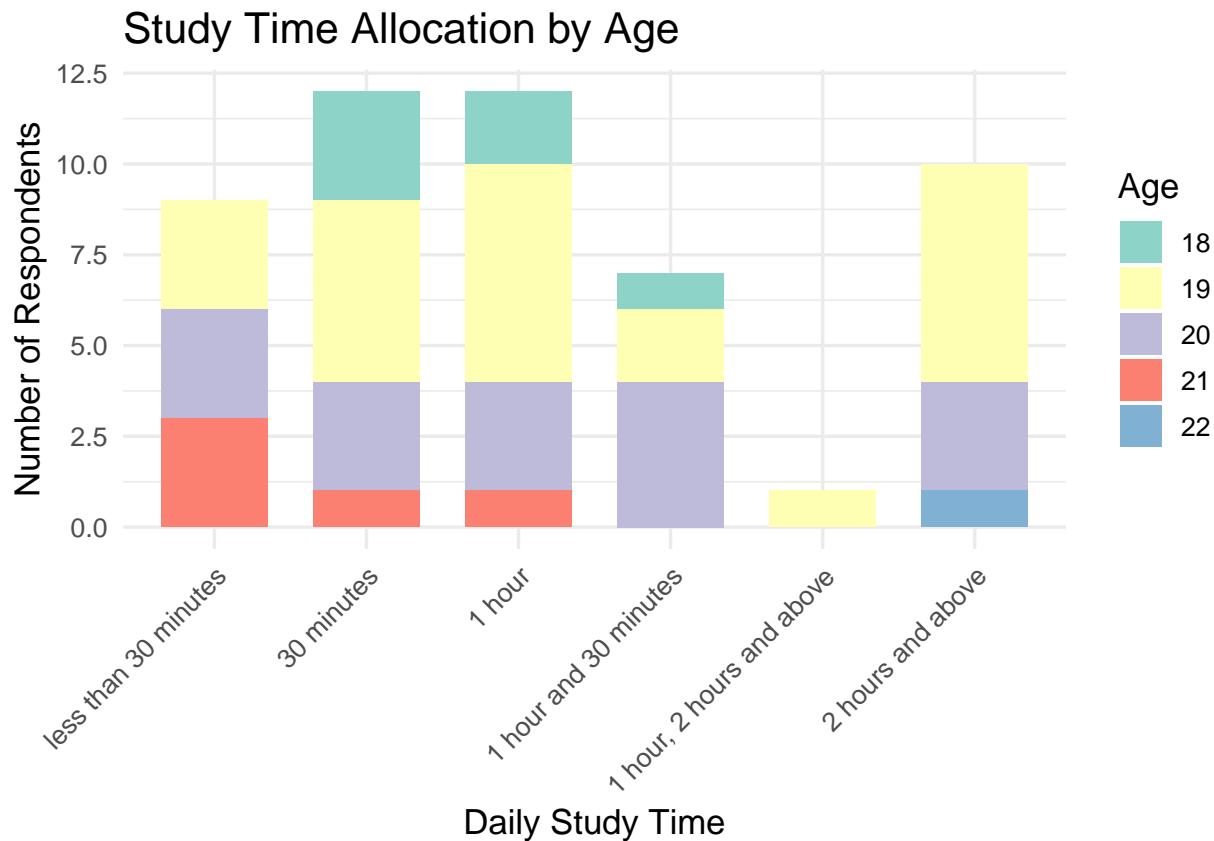
time_age

## # A tibble: 18 x 3
## # Groups:   AGE. [5]
##       AGE. Time.Allocation.for.Studying count
##       <int> <ord>                  <int>
## 1     18 30 minutes                 3
## 2     18 1 hour                     2
## 3     18 1 hour and 30 minutes     1
## 4     19 less than 30 minutes      3
## 5     19 30 minutes                 5
## 6     19 1 hour                     6
## 7     19 1 hour and 30 minutes     2
## 8     19 1 hour, 2 hours and above 1
## 9     19 2 hours and above         6
## 10    20 less than 30 minutes      3
## 11    20 30 minutes                 3
## 12    20 1 hour                     3
## 13    20 1 hour and 30 minutes     4
## 14    20 2 hours and above         3
## 15    21 less than 30 minutes      3
## 16    21 30 minutes                 1
## 17    21 1 hour                     1
## 18    22 2 hours and above         1

time_age$AGE. <- factor(time_age$AGE.)

ggplot(time_age,
       aes(x = Time.Allocation.for.Studying, y = count, fill = AGE.)) +
  geom_col(width = 0.7) + # simple single bars
  scale_fill_brewer(palette = "Set3") +
  labs(
    title = "Study Time Allocation by Age",
    x = "Daily Study Time",
    y = "Number of Respondents",
    fill = "Age"
  ) +
  theme_minimal(base_size = 13) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))

```



*#The graph shows that most of age 19 study the longest followed by the 20 and 22. For 30 minutes, all ages appear to spent time to study with that time, and also in the lowest.*

*#Time Allocation for studying of all respondents.*  
`table(surveyData$Time.Allocation.for.Studying)`

```
##  
##      less than 30 minutes          30 minutes          1 hour  
##                           9                  12                 12  
##      1 hour and 30 minutes 1 hour, 2 hours and above  
##                           7                  1                  10
```

*#Bar plot*

```
study_counts <- surveyData %>%  
  group_by(Time.Allocation.for.Studying) %>%  
  summarise(count = n())
```

`study_counts`

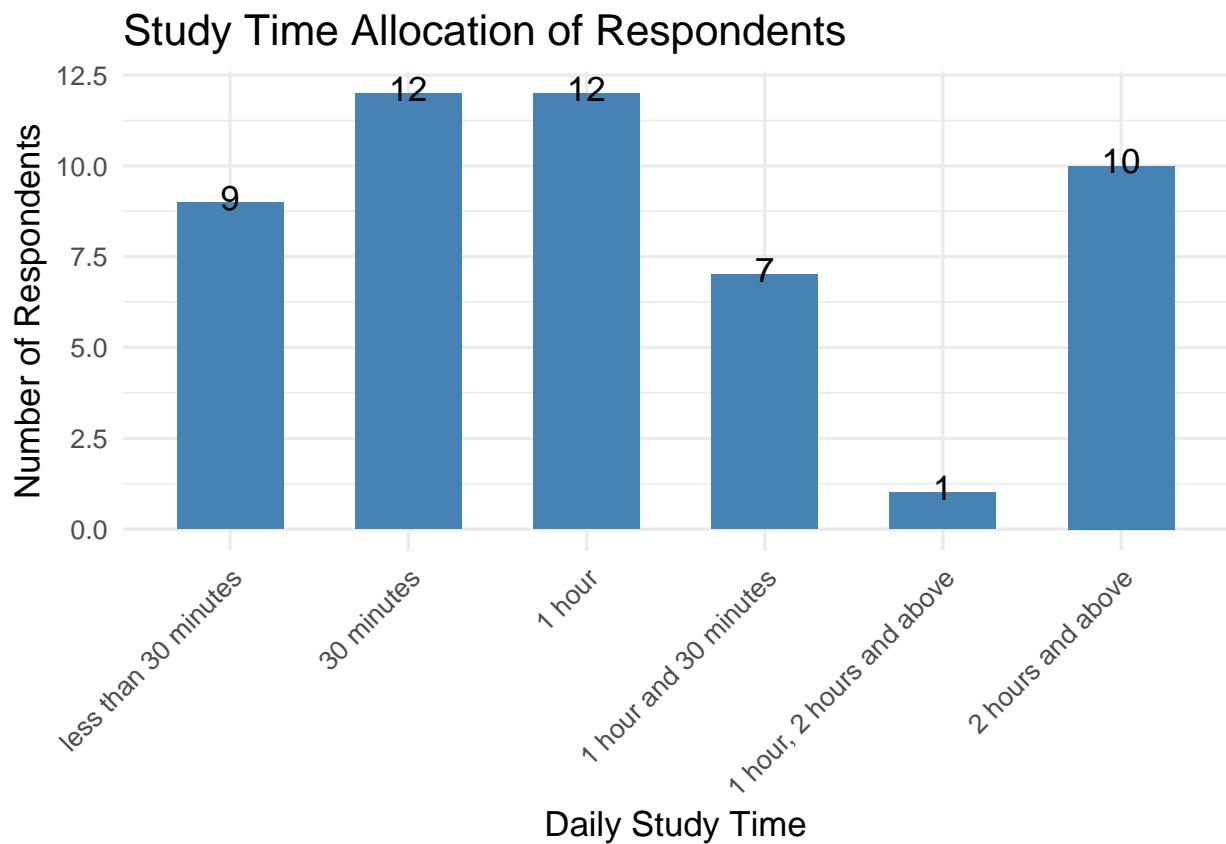
```
## # A tibble: 6 x 2  
##   Time.Allocation.for.Studying count  
##   <ord>                      <int>  
## 1 less than 30 minutes           9  
## 2 30 minutes                   12
```

```

## 3 1 hour                      12
## 4 1 hour and 30 minutes       7
## 5 1 hour, 2 hours and above   1
## 6 2 hours and above           10

ggplot(study_counts, aes(x = Time.Allocation.for.Studying, y = count)) +
  geom_col(fill = "steelblue", width = 0.6) +
  geom_text(aes(label = count), vjust = 0.3) +
  labs(
    title = "Study Time Allocation of Respondents",
    x = "Daily Study Time",
    y = "Number of Respondents"
  ) +
  theme_minimal(base_size = 13) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))

```



```

#Most respondent chosen 30 minutes and 1 hour of the time allocated for studying.
#Followed by 2 hours and above, and 1 hour, 2 hour and above at the lowest
#chosen time.

```

```

=====
=====
```

```

#Analyzing 10 question about study habits.
```

```

#We rename the column names first for it to be easier to analyze.
```

```

#checking column names.
```

```

colnames(surveyData)

## [1] "Timestamp"
## [2] "FULL.NAME.optional.."
## [3] "AGE."
## [4] "GENDER"
## [5] "COLLEGE"
## [6] "Time.Allocation.for.Studying"
## [7] "How.many.study.sessions.do.you.usually.have.in.a.week."
## [8] "X1...I.allocate.time.for.studying.at.least.30.minutes.a.day."
## [9] "X2...I.take.notes.every.lesson."
## [10] "X3...I.do.an.advanced.study"
## [11] "X4...I.tend.to.listen.to.music.while.studying"
## [12] "X5...I.prefer.to.review.by.group.rather.than.alone"
## [13] "X6...I.create.schedule.and.follow.it.regularly."
## [14] "X7...I.use.gadgets.Laptops..Cellphone..IPad..when.studying."
## [15] "X8...I.avoid.distraction.phone..social.media..while.studying."
## [16] "X9...I.take.short.breaks.during.long.study.session."
## [17] "X10...I.prefer.studying.alone"

#Renaming

surveyData <- surveyData %>%
  rename(ques1 = "X1...I.allocate.time.for.studying.at.least.30.minutes.a.day.",
         ques2 = "X2...I.take.notes.every.lesson.",
         ques3 = "X3...I.do.an.advanced.study",
         ques4 = "X4...I.tend.to.listen.to.music.while.studying",
         ques5 = "X5...I.prefer.to.review.by.group.rather.than.alone",
         ques6 = "X6...I.create.schedule.and.follow.it.regularly.",
         ques7 = "X7...I.use.gadgets.Laptops..Cellphone..IPad..when.studying.",
         ques8 = "X8...I.avoid.distraction.phone..social.media..while.studying.",
         ques9 = "X9...I.take.short.breaks.during.long.study.session.",
         ques10 = "X10...I.prefer.studying.alone" )

# Q1: I.allocate.time.for.studying.at.least.30.minutes.a.day
# =====
#Shows frequency and Percentage.

freq_q1 <- surveyData %>%
  count(ques1) %>%
  mutate(Percentage = round(n / sum(n) * 100, 2)) %>%
  rename(Response = ques1, Frequency = n)

# View table
freq_q1

##   Response Frequency Percentage
## 1          1           2        3.92
## 2          2           2        3.92
## 3          3          25       49.02
## 4          4          15       29.41
## 5          5           7       13.73

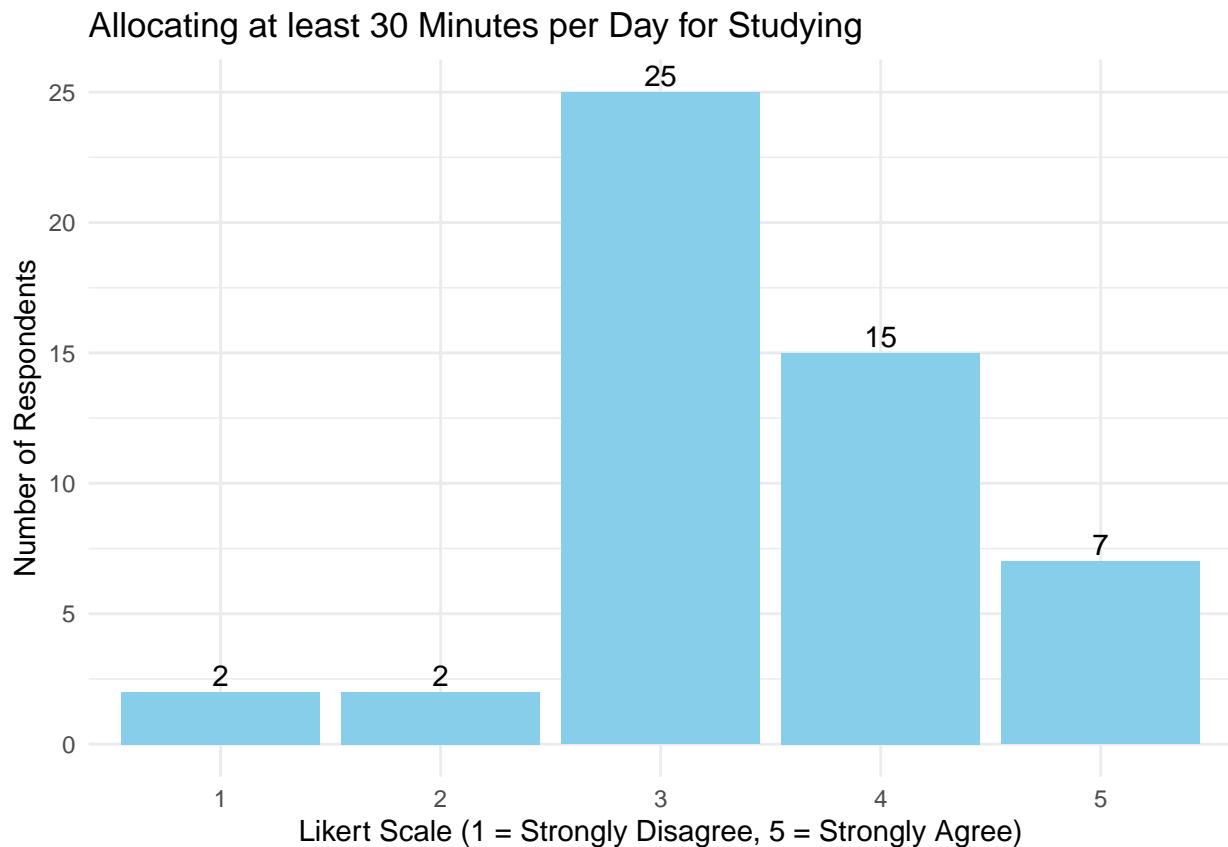
```

```

q1 <- surveyData %>%
  group_by(ques1) %>%
  summarise(Count = n(), .groups = "drop")

ggplot(q1, aes(x = factor(ques1), y = Count)) +
  geom_col(fill = "skyblue") +
  geom_text(aes(label = Count), vjust = -0.3) +
  labs(
    title = "Allocating at least 30 Minutes per Day for Studying",
    x = "Likert Scale (1 = Strongly Disagree, 5 = Strongly Agree)",
    y = "Number of Respondents"
  ) +
  theme_minimal()

```



```

#INTERPRETATION

cat("Interpretation:\n")

## Interpretation:
cat("1 = Strongly Disagree: Few students do not allocate at least 30 minutes for
studying daily.\n")

## 1 = Strongly Disagree: Few students do not allocate at least 30 minutes for
##     studying daily.

cat("2 = Disagree: Some students rarely allocate 30 minutes for studying
daily.\n")

```

```

## 2 = Disagree: Some students rarely allocate 30 minutes for studying
##     daily.

cat("3 = Neutral: Some students occasionally allocate 30 minutes for studying
    daily.\n")

## 3 = Neutral: Some students occasionally allocate 30 minutes for studying
##     daily.

cat("4 = Agree: Many students often allocate 30 minutes for studying daily.\n")

## 4 = Agree: Many students often allocate 30 minutes for studying daily.

cat("5 = Strongly Agree: Several students almost always allocate 30 minutes for
    studying daily.\n")

## 5 = Strongly Agree: Several students almost always allocate 30 minutes for
##     studying daily.

# Q2: I.take.notes.every.lesson
# =====
##Shows frequency and Percentage.

freq_q2 <- surveyData %>%
  count(ques2) %>%
  mutate(Percentage = round(n / sum(n) * 100, 2)) %>%
  rename(Response = ques2, Frequency = n)

# View table
freq_q2

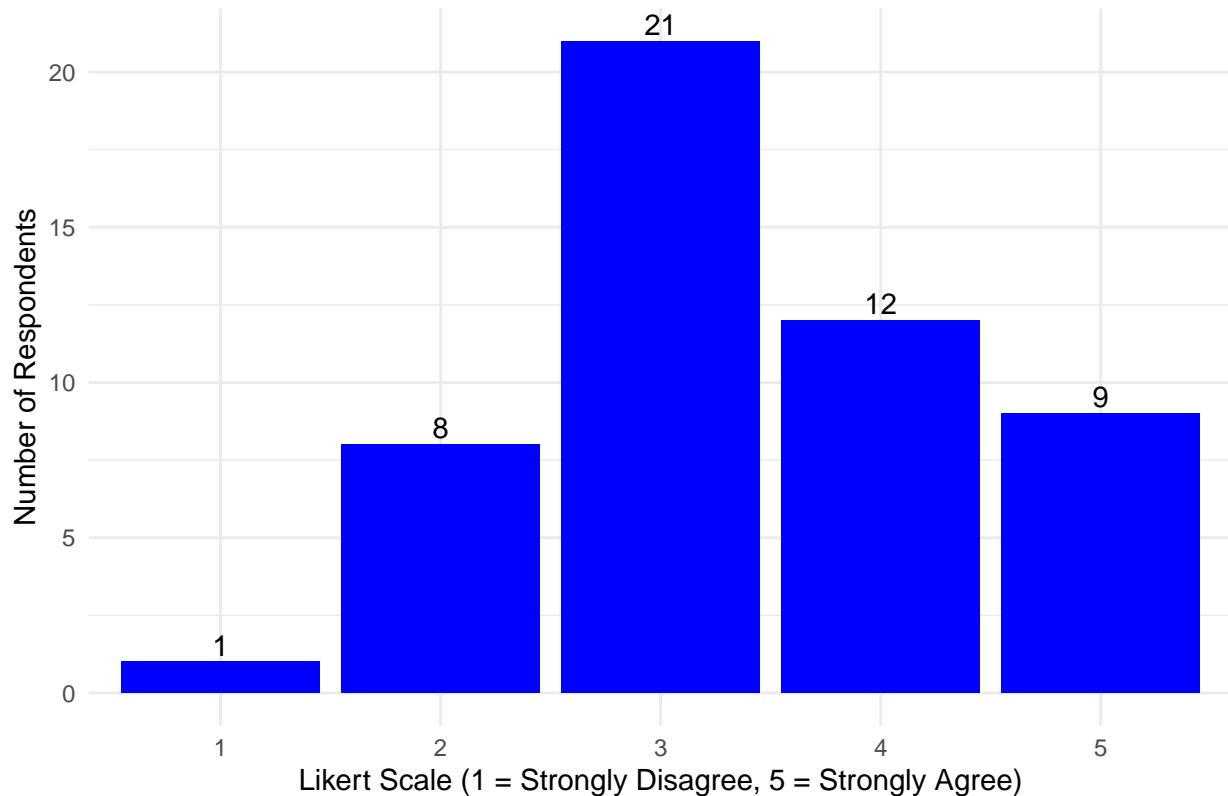
##   Response Frequency Percentage
## 1         1          1       1.96
## 2         2          8      15.69
## 3         3         21      41.18
## 4         4         12      23.53
## 5         5          9      17.65

q2 <- surveyData %>%
  group_by(ques2) %>%
  summarise(Count = n(), .groups = "drop")

ggplot(q2, aes(x = factor(ques2), y = Count)) +
  geom_col(fill = "blue") +
  geom_text(aes(label = Count), vjust = -0.3) +
  labs(
    title = "Taking Notes Every Lesson",
    x = "Likert Scale (1 = Strongly Disagree, 5 = Strongly Agree)",
    y = "Number of Respondents"
  ) +
  theme_minimal()

```

## Taking Notes Every Lesson



```
# Interpretation
cat("Interpretation:\n")

## Interpretation:
cat("1 = Strongly Disagree: Few students never take notes.\n")

## 1 = Strongly Disagree: Few students never take notes.
cat("2 = Disagree: Some students rarely take notes.\n")

## 2 = Disagree: Some students rarely take notes.
cat("3 = Neutral: Some students occasionally take notes.\n")

## 3 = Neutral: Some students occasionally take notes.
cat("4 = Agree: Many students usually take notes.\n")

## 4 = Agree: Many students usually take notes.
cat("5 = Strongly Agree: Several students always take notes.\n")

## 5 = Strongly Agree: Several students always take notes.

# Q3: I do an advanced study
# =====
##Shows frequency and Percentage.

freq_q3 <- surveyData %>%
  count(ques3) %>%
```

```

mutate(Percentage = round(n / sum(n) * 100, 2)) %>%
  rename(Response = ques3, Frequency = n)

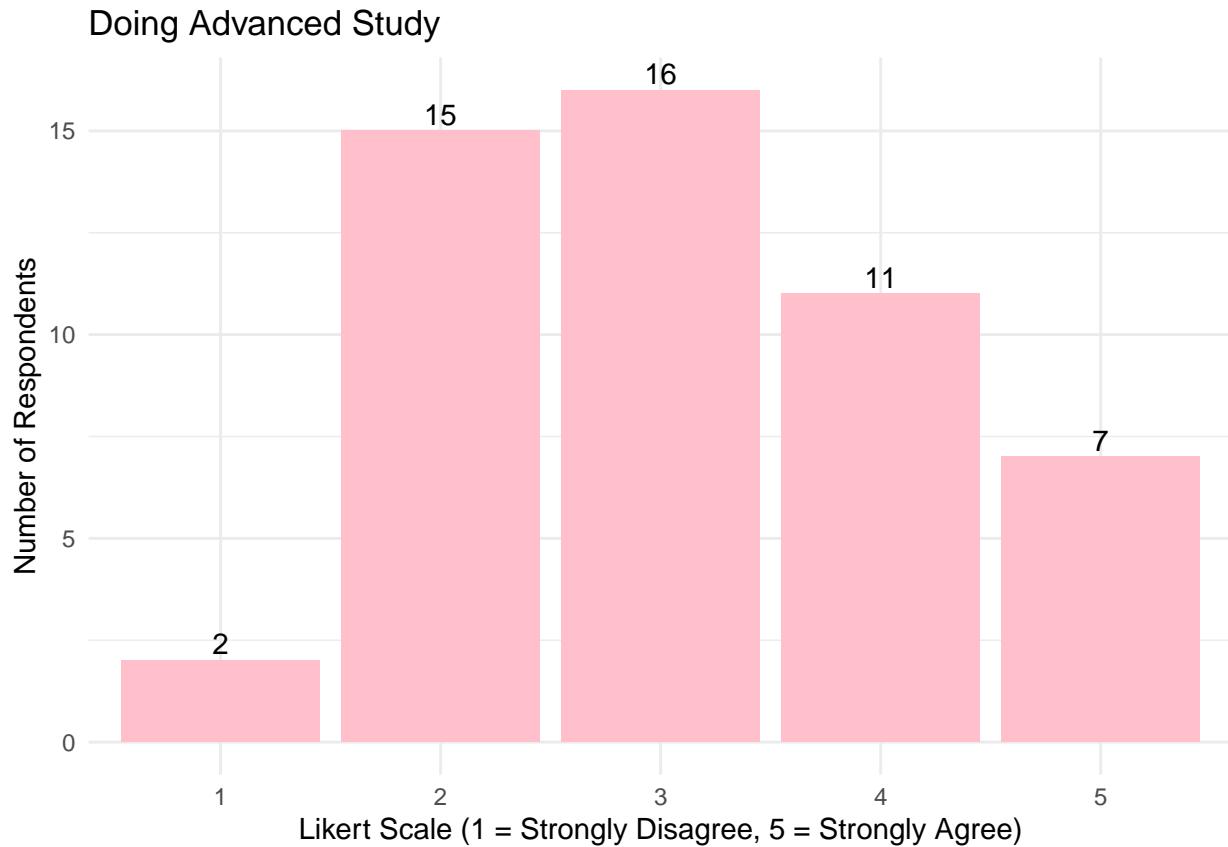
# View table
freq_q3

##   Response Frequency Percentage
## 1          1         2      3.92
## 2          2        15     29.41
## 3          3        16     31.37
## 4          4        11     21.57
## 5          5         7     13.73

q3 <- surveyData %>%
  group_by(ques3) %>%
  summarise(Count = n(), .groups = "drop")

ggplot(q3, aes(x = factor(ques3), y = Count)) +
  geom_col(fill = "pink") +
  geom_text(aes(label = Count), vjust = -0.3) +
  labs(
    title = "Doing Advanced Study",
    x = "Likert Scale (1 = Strongly Disagree, 5 = Strongly Agree)",
    y = "Number of Respondents"
  ) +
  theme_minimal()

```



```

#Interpretation

cat("Interpretation:\n")

## Interpretation:
cat("1 = Strongly Disagree: Few students never do advanced study.\n")

## 1 = Strongly Disagree: Few students never do advanced study.
cat("2 = Disagree: Some students rarely engage in advanced study.\n")

## 2 = Disagree: Some students rarely engage in advanced study.
cat("3 = Neutral: Some students occasionally do advanced study.\n")

## 3 = Neutral: Some students occasionally do advanced study.
cat("4 = Agree: Many students often engage in advanced study.\n")

## 4 = Agree: Many students often engage in advanced study.
cat("5 = Strongly Agree: Several students always do advanced study.\n")

## 5 = Strongly Agree: Several students always do advanced study.

#Q4 .I.tend.to.listen.to.music.while.studying
#=====
#Shows frequency and Percentage.

freq_q4 <- surveyData %>%
  count(ques4) %>%
  mutate(Percentage = round(n / sum(n) * 100, 2)) %>%
  rename(Response = ques4, Frequency = n)

# View table
freq_q4

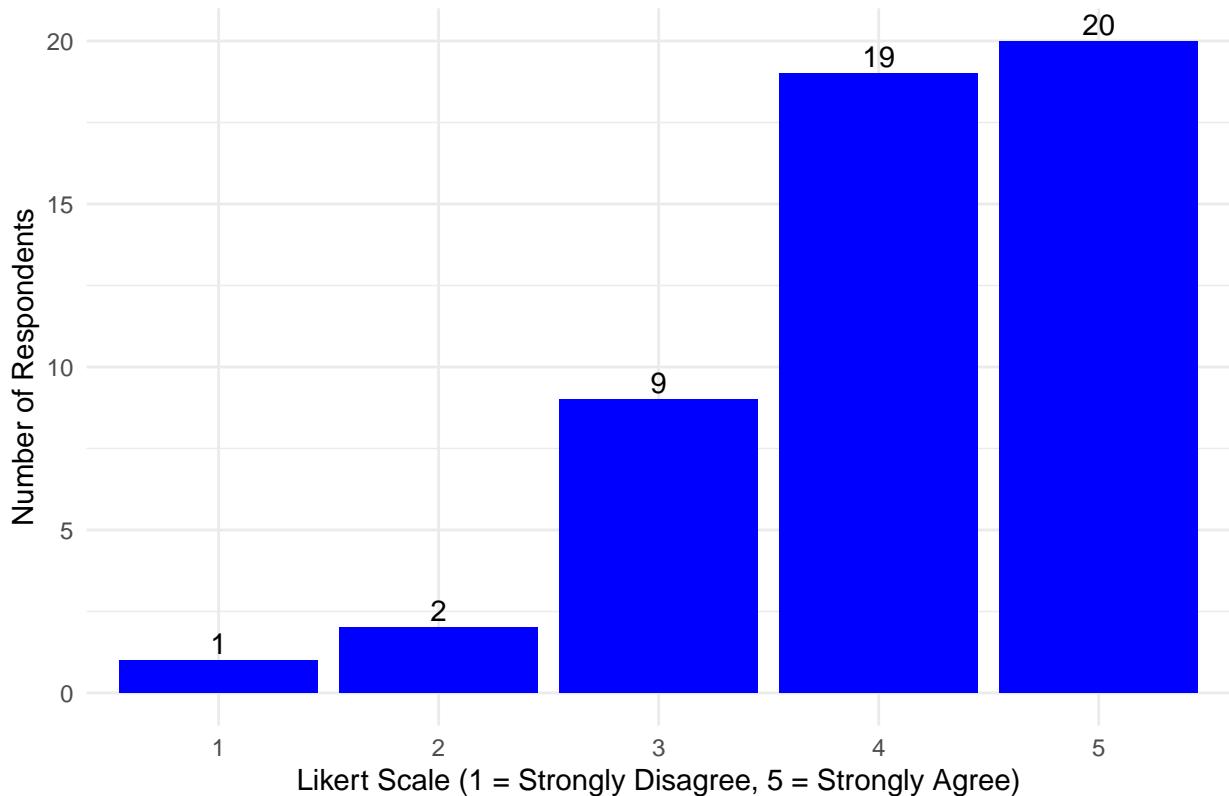
##   Response Frequency Percentage
## 1         1          1      1.96
## 2         2          2      3.92
## 3         3          9     17.65
## 4         4         19     37.25
## 5         5         20     39.22

q4 <- surveyData %>%
  group_by(ques4) %>%
  summarise(Count = n(), .groups = "drop")

ggplot(q4, aes(x = factor(ques4), y = Count)) +
  geom_col(fill = "blue") +
  geom_text(aes(label = Count), vjust = -0.3) +
  labs(
    title = "Listening to Music While Studying",
    x = "Likert Scale (1 = Strongly Disagree, 5 = Strongly Agree)",
    y = "Number of Respondents"
  ) +
  theme_minimal()

```

## Listening to Music While Studying



```
# Interpretation
cat("Interpretation:\n")

## Interpretation:
cat("1 = Strongly Disagree: Few students never listen to music while
studying.\n")

## 1 = Strongly Disagree: Few students never listen to music while
##     studying.

cat("2 = Disagree: Some students rarely listen to music while studying.\n")

## 2 = Disagree: Some students rarely listen to music while studying.

cat("3 = Neutral: Some students occasionally listen to music while studying.\n")

## 3 = Neutral: Some students occasionally listen to music while studying.

cat("4 = Agree: Many students often listen to music while studying.\n")

## 4 = Agree: Many students often listen to music while studying.

cat("5 = Strongly Agree: Several students almost always listen to music while
studying.\n")

## 5 = Strongly Agree: Several students almost always listen to music while
##     studying.

# Q5: I prefer to review by group rather than alone
=====
```

```

##Shows frequency and Percentage.

freq_q5 <- surveyData %>%
  count(ques5) %>%
  mutate(Percentage = round(n / sum(n) * 100, 2)) %>%
  rename(Response = ques5, Frequency = n)

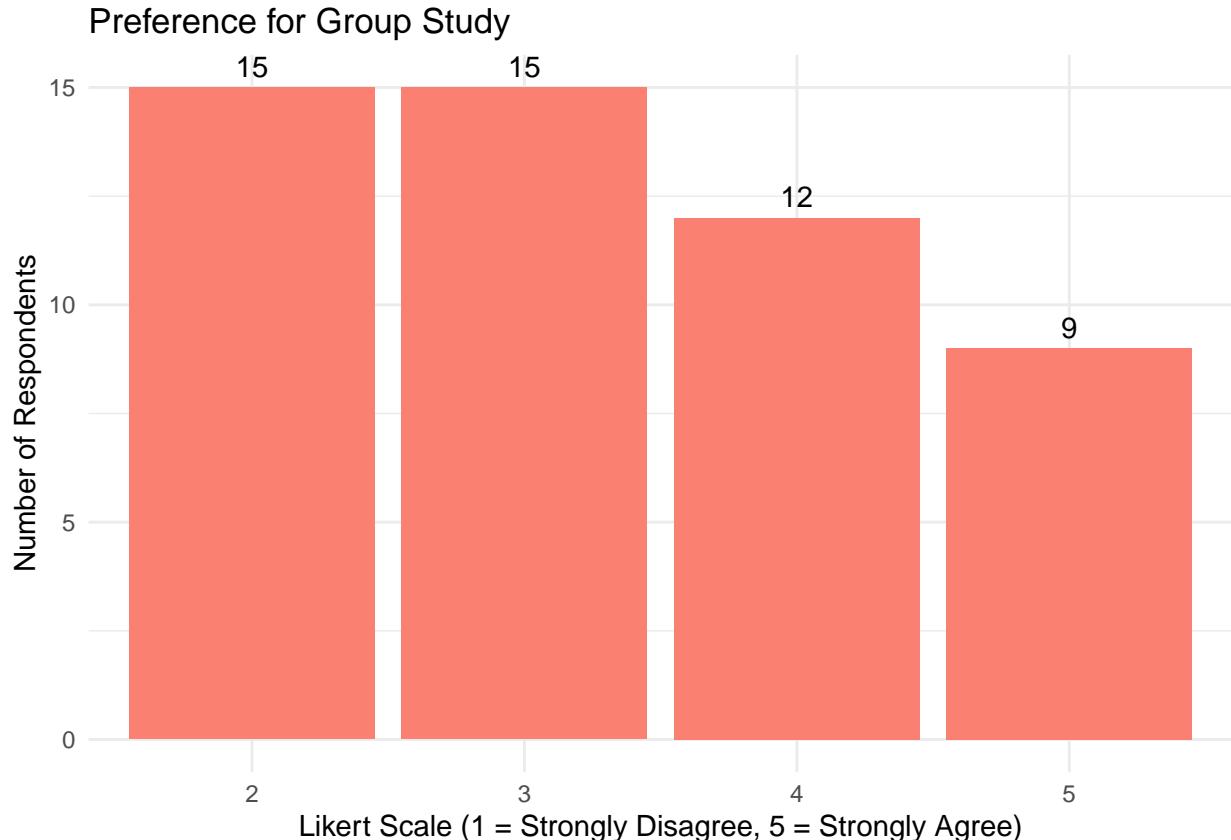
# View table
freq_q5

##   Response Frequency Percentage
## 1         2          15      29.41
## 2         3          15      29.41
## 3         4          12      23.53
## 4         5           9      17.65

q5 <- surveyData %>%
  group_by(ques5) %>%
  summarise(Count = n(), .groups = "drop")

ggplot(q5, aes(x = factor(ques5), y = Count)) +
  geom_col(fill = "salmon") +
  geom_text(aes(label = Count), vjust = -0.5) +
  labs(title = "Preference for Group Study",
       x = "Likert Scale (1 = Strongly Disagree, 5 = Strongly Agree)",
       y = "Number of Respondents") +
  theme_minimal()

```



```

# Interpretation
cat("Interpretation:\n")

## Interpretation:
cat("1 = Strongly Disagree: Few students strongly dislike group study.\n")

## 1 = Strongly Disagree: Few students strongly dislike group study.
cat("2 = Disagree: Some students prefer studying alone more often.\n")

## 2 = Disagree: Some students prefer studying alone more often.
cat("3 = Neutral: Some students are indifferent about group study.\n")

## 3 = Neutral: Some students are indifferent about group study.
cat("4 = Agree: Many students like studying in groups.\n")

## 4 = Agree: Many students like studying in groups.
cat("5 = Strongly Agree: Several students strongly prefer group study.\n")

## 5 = Strongly Agree: Several students strongly prefer group study.
#Mostly of the respondents listen to music while studying with the strongly agree.

# Q6 I.create.schedule.and.follow.it.regularly
#####
##Shows frequency and Percentage.

freq_q6 <- surveyData %>%
  count(ques6) %>%
  mutate(Percentage = round(n / sum(n) * 100, 2)) %>%
  rename(Response = ques6, Frequency = n)

# View table
freq_q6

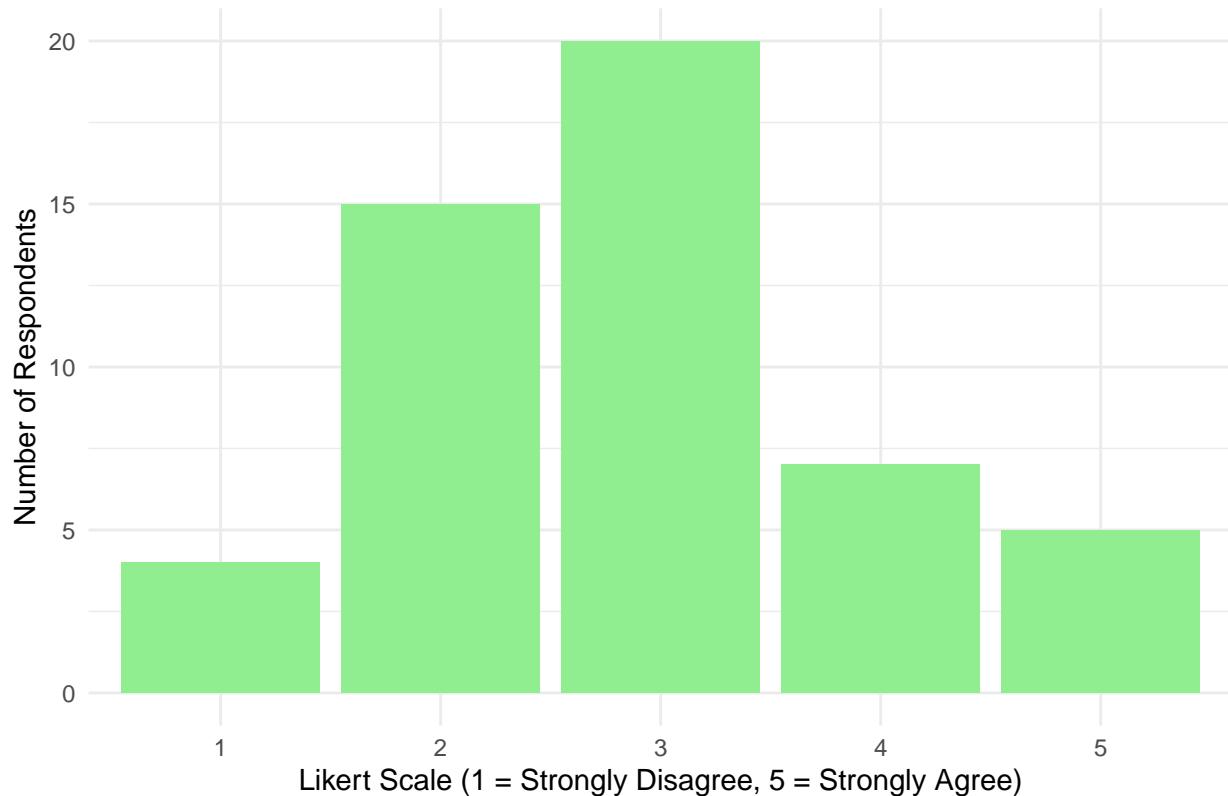
##   Response Frequency Percentage
## 1         1          4        7.84
## 2         2         15       29.41
## 3         3         20       39.22
## 4         4          7       13.73
## 5         5          5        9.80

q6 <- surveyData %>%
  group_by(ques6) %>%
  summarise(Count = n(), .groups = "drop")

ggplot(q6, aes(x = factor(ques6), y = Count)) +
  geom_col(fill = "lightgreen") +
  labs(title = "Creating and Following a Study Schedule",
       x = "Likert Scale (1 = Strongly Disagree, 5 = Strongly Agree)",
       y = "Number of Respondents") +
  theme_minimal()

```

## Creating and Following a Study Schedule



```
# Interpretation
cat("Interpretation:\n")

## Interpretation:
cat("1 = Strongly Disagree: Few students never make a study schedule.\n")

## 1 = Strongly Disagree: Few students never make a study schedule.
cat("2 = Disagree: Some students rarely follow a study schedule.\n")

## 2 = Disagree: Some students rarely follow a study schedule.
cat("3 = Neutral: Some students occasionally create/follow schedules.\n")

## 3 = Neutral: Some students occasionally create/follow schedules.
cat("4 = Agree: Many students regularly create and follow schedules.\n")

## 4 = Agree: Many students regularly create and follow schedules.
cat("5 = Strongly Agree: Several students always follow a planned schedule.\n")

## 5 = Strongly Agree: Several students always follow a planned schedule.

# Q7: I.use.gadgets.Laptops..Cellphone..IPad..when.studying
#####
##Shows frequency and Percentage.

freq_q7 <- surveyData %>%
  count(ques7) %>%
```

```

mutate(Percentage = round(n / sum(n) * 100, 2)) %>%
  rename(Response = ques7, Frequency = n)

# View table
freq_q7

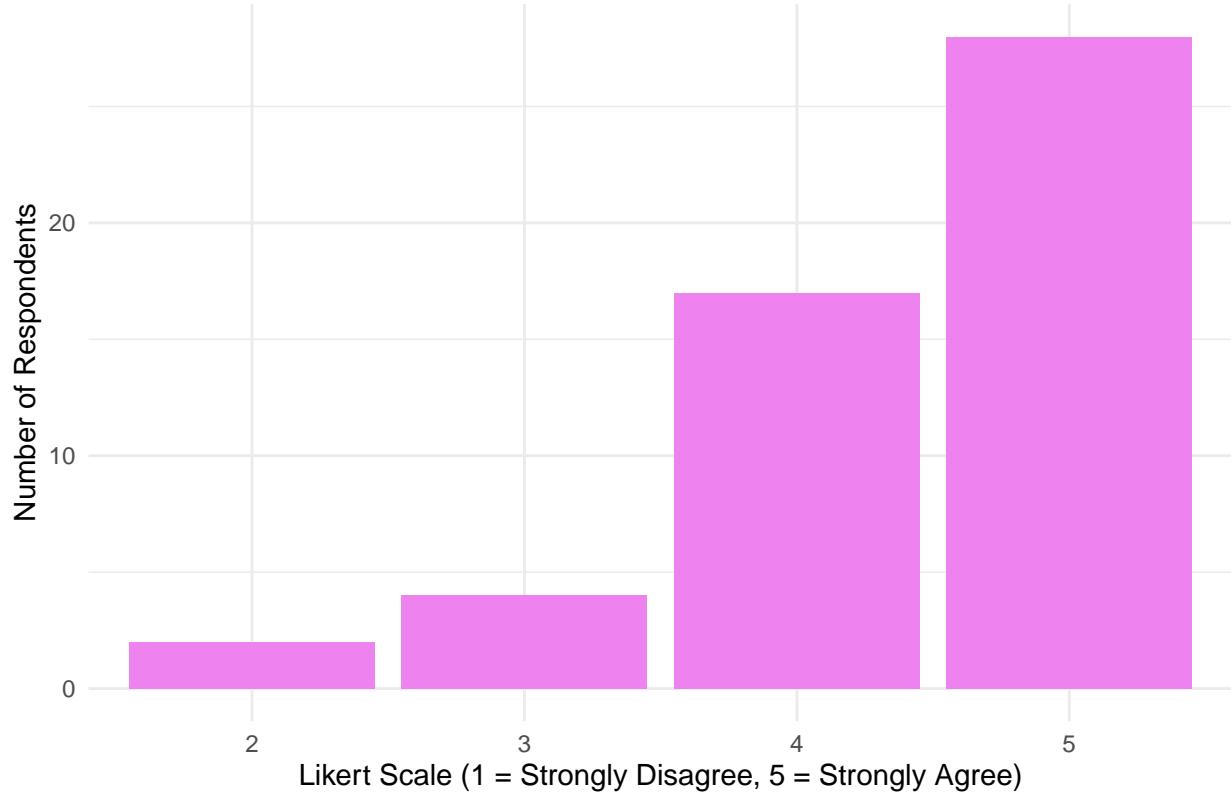
##   Response Frequency Percentage
## 1          2         2      3.92
## 2          3         4      7.84
## 3          4        17     33.33
## 4          5        28     54.90

q7 <- surveyData %>%
  group_by(ques7) %>%
  summarise(Count = n(), .groups = "drop")

ggplot(q7, aes(x = factor(ques7), y = Count)) +
  geom_col(fill = "violet") +
  labs(title = "Use of Gadgets While Studying",
       x = "Likert Scale (1 = Strongly Disagree, 5 = Strongly Agree)",
       y = "Number of Respondents") +
  theme_minimal()

```

Use of Gadgets While Studying



```

# Interpretation
cat("Interpretation:\n")

## Interpretation:

```

```

cat("1 = Strongly Disagree: Few students never use gadgets while studying.\n")
## 1 = Strongly Disagree: Few students never use gadgets while studying.
cat("2 = Disagree: Some students rarely use gadgets while studying.\n")
## 2 = Disagree: Some students rarely use gadgets while studying.
cat("3 = Neutral: Some students sometimes use gadgets while studying.\n")
## 3 = Neutral: Some students sometimes use gadgets while studying.
cat("4 = Agree: Many students often use gadgets while studying.\n")
## 4 = Agree: Many students often use gadgets while studying.
cat("5 = Strongly Agree: Several students almost always use gadgets while
studying.\n")
## 5 = Strongly Agree: Several students almost always use gadgets while
studying.

# Q8: I.avoid.distraction.phone..social.media..while.studying.
# =====
##Shows frequency and Percentage.

freq_q8 <- surveyData %>%
  count(ques8) %>%
  mutate(Percentage = round(n / sum(n) * 100, 2)) %>%
  rename(Response = ques8, Frequency = n)

# View table
freq_q8

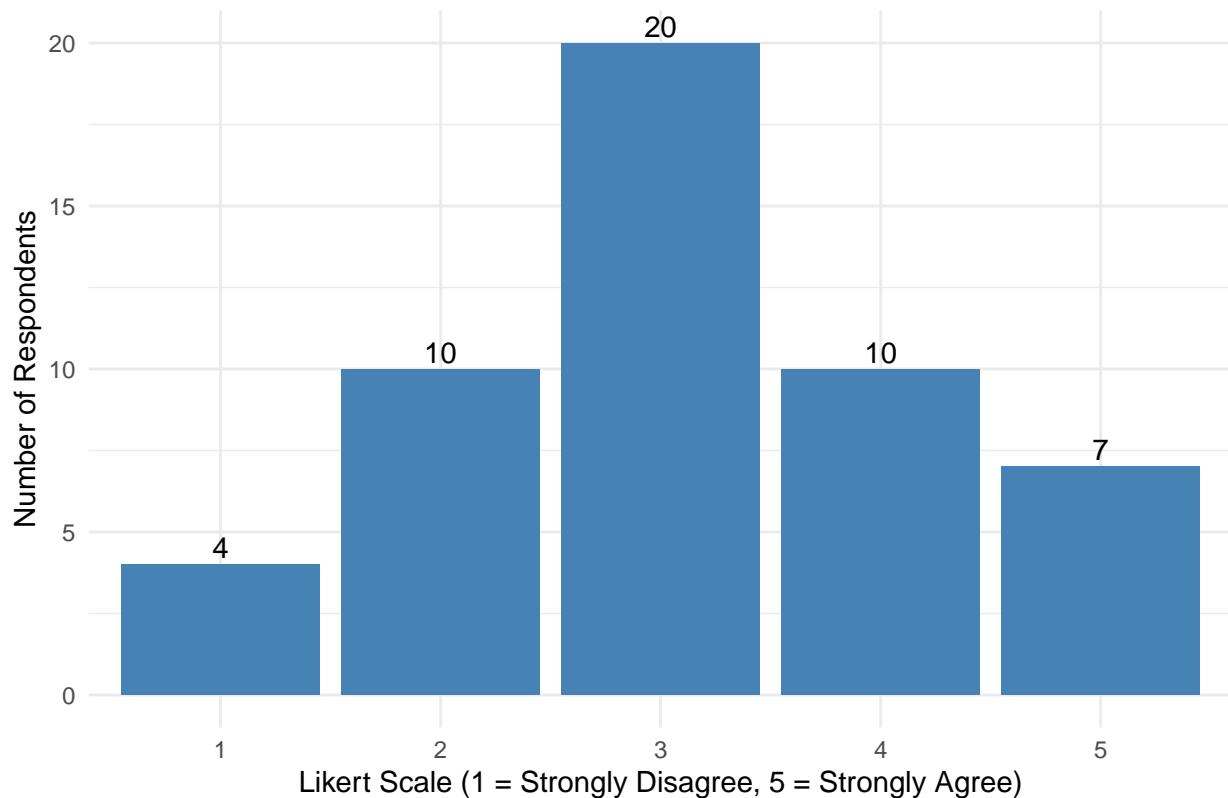
##   Response Frequency Percentage
## 1         1          4       7.84
## 2         2         10      19.61
## 3         3         20      39.22
## 4         4         10      19.61
## 5         5          7      13.73

q8 <- surveyData %>%
  group_by(ques8) %>%
  summarise(Count = n(), .groups = "drop")

ggplot(q8, aes(x = factor(ques8), y = Count)) +
  geom_col(fill = "steelblue") +
  geom_text(aes(label = Count), vjust = -0.3) +
  labs(
    title = "Avoiding Distractions (Phone/Social Media) While Studying",
    x = "Likert Scale (1 = Strongly Disagree, 5 = Strongly Agree)",
    y = "Number of Respondents"
  ) +
  theme_minimal()

```

### Avoiding Distractions (Phone/Social Media) While Studying



```
# Interpretation (tailored to q8)
# -----
cat("Interpretation:\n")

## Interpretation:
cat("1 = Strongly Disagree: Few students do not avoid phone/social media
distractions while studying.\n")

## 1 = Strongly Disagree: Few students do not avoid phone/social media
##     distractions while studying.

cat("2 = Disagree: Some students rarely avoid phone/social media distractions
while studying.\n")

## 2 = Disagree: Some students rarely avoid phone/social media distractions
##     while studying.

cat("3 = Neutral: Some students occasionally avoid phone/social media
distractions while studying.\n")

## 3 = Neutral: Some students occasionally avoid phone/social media
##     distractions while studying.

cat("4 = Agree: Many students often avoid phone/social media distractions
while studying.\n")

## 4 = Agree: Many students often avoid phone/social media distractions
##     while studying.
```

```

cat("5 = Strongly Agree: Several students almost always avoid phone/social
media distractions while studying.\n")

## 5 = Strongly Agree: Several students almost always avoid phone/social
##      media distractions while studying.

# Q9: I.take.short.breaks.during.long.study.session.
#=====
##Shows frequency and Percentage.

freq_q9 <- surveyData %>%
  count(ques9) %>%
  mutate(Percentage = round(n / sum(n) * 100, 2)) %>%
  rename(Response = ques9, Frequency = n)

# View table
freq_q9

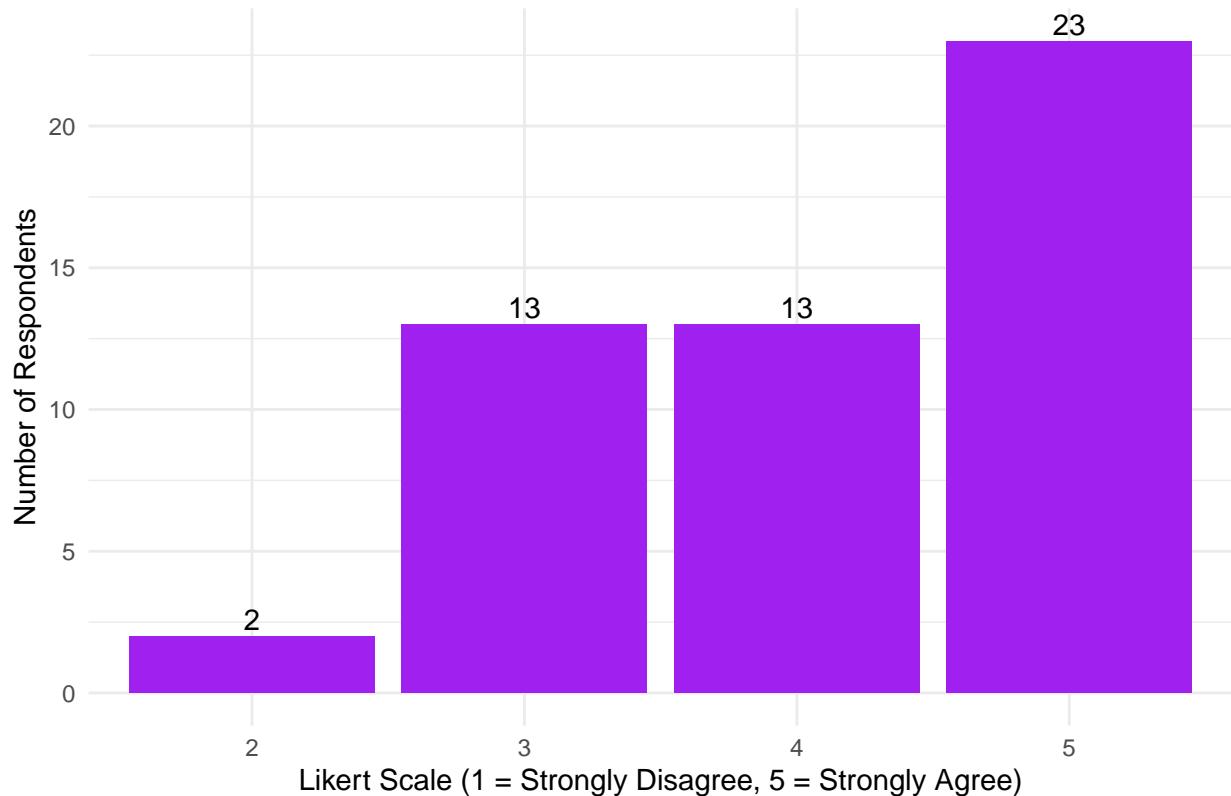
##   Response Frequency Percentage
## 1          2         2       3.92
## 2          3        13      25.49
## 3          4        13      25.49
## 4          5        23      45.10

q9 <- surveyData %>%
  group_by(ques9) %>%
  summarise(Count = n(), .groups = "drop")

ggplot(q9, aes(x = factor(ques9), y = Count)) +
  geom_col(fill = "purple") +
  geom_text(aes(label = Count), vjust = -0.3) +
  labs(
    title = "Taking Short Breaks During Long Study Sessions",
    x = "Likert Scale (1 = Strongly Disagree, 5 = Strongly Agree)",
    y = "Number of Respondents"
  ) +
  theme_minimal()

```

## Taking Short Breaks During Long Study Sessions



```
# Interpretation

cat("Interpretation:\n")

## Interpretation:
cat("1 = Strongly Disagree: Few students never take short breaks
during long study sessions.\n")

## 1 = Strongly Disagree: Few students never take short breaks
##       during long study sessions.

cat("2 = Disagree: Some students rarely take short breaks during
long study sessions.\n")

## 2 = Disagree: Some students rarely take short breaks during
##       long study sessions.

cat("3 = Neutral: Some students occasionally take short breaks
during long study sessions.\n")

## 3 = Neutral: Some students occasionally take short breaks
##       during long study sessions.

cat("4 = Agree: Many students often take short breaks during
long study sessions.\n")

## 4 = Agree: Many students often take short breaks during
##       long study sessions.
```

```

cat("5 = Strongly Agree: Several students almost always take
short breaks during long study sessions.\n\n")

## 5 = Strongly Agree: Several students almost always take
##     short breaks during long study sessions.

# Q10:
#=====
##Shows frequency and Percentage.

freq_q10 <- surveyData %>%
  count(ques10) %>%
  mutate(Percentage = round(n / sum(n) * 100, 2)) %>%
  rename(Response = ques10, Frequency = n)

# View table
freq_q10

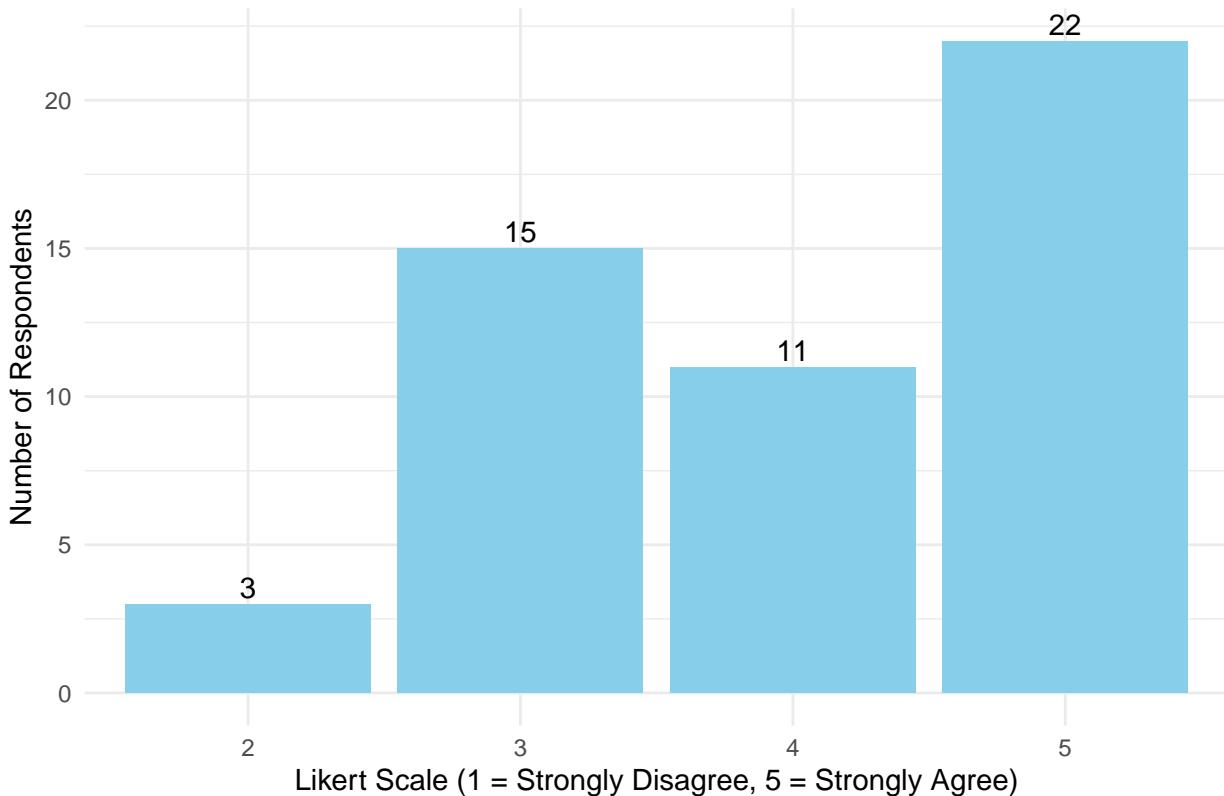
##   Response Frequency Percentage
## 1         2          3       5.88
## 2         3         15      29.41
## 3         4         11      21.57
## 4         5         22      43.14

q10 <- surveyData %>%
  group_by(ques10) %>%
  summarise(Count = n(), .groups = "drop")

ggplot(q10, aes(x = factor(ques10), y = Count)) +
  geom_col(fill = "skyblue") +
  geom_text(aes(label = Count), vjust = -0.3) +
  labs(
    title = "Preferring to Study Alone",
    x = "Likert Scale (1 = Strongly Disagree, 5 = Strongly Agree)",
    y = "Number of Respondents"
  ) +
  theme_minimal()

```

## Preferring to Study Alone



```
# Interpretation
cat("Interpretation:\n")

## Interpretation:
cat("1 = Strongly Disagree: Few students never prefer studying alone.\n")
## 1 = Strongly Disagree: Few students never prefer studying alone.

cat("2 = Disagree: Some students rarely prefer studying alone.\n")
## 2 = Disagree: Some students rarely prefer studying alone.

cat("3 = Neutral: Some students occasionally prefer studying alone.\n")
## 3 = Neutral: Some students occasionally prefer studying alone.

cat("4 = Agree: Many students often prefer studying alone.\n")
## 4 = Agree: Many students often prefer studying alone.

cat("5 = Strongly Agree: Several students almost always prefer studying alone.\n")
## 5 = Strongly Agree: Several students almost always prefer studying alone.

#Getting the mean, median and sd of 10 question regarding to study habits.

# Convert Likert questions to numeric
likert_cols <- paste0("ques", 1:10)
surveyData[likert_cols] <- lapply(surveyData[likert_cols],
```

```

        function(x) as.numeric(as.character(x)))

study_habits <- surveyData %>%
  select(all_of(likert_cols)) %>%
  summarise(across(everything(), list(mean = mean, median = median, sd = sd),
                  na.rm = TRUE))

## Warning: There was 1 warning in `summarise()` .
## i In argument: `across(...)` .
## Caused by warning:
## ! The `...` argument of `across()` is deprecated as of dplyr 1.1.0.
## Supply arguments directly to ` .fns` through an anonymous function instead.
##
##   # Previously
##   across(a:b, mean, na.rm = TRUE)
##
##   # Now
##   across(a:b, \(x) mean(x, na.rm = TRUE))

study_habits_table <- study_habits %>%
  pivot_longer(
    cols = everything(),
    names_to = c("Question", "Statistic"),
    names_sep = "_",
    values_to = "Value"
  ) %>%
  pivot_wider(names_from = Statistic, values_from = Value)

study_habits_table

## # A tibble: 10 x 4
##   Question  mean median     sd
##   <chr>     <dbl>  <dbl> <dbl>
## 1 ques1      3.45    3 0.923
## 2 ques2      3.39    3 1.02
## 3 ques3      3.12    3 1.11
## 4 ques4      4.08    4 0.956
## 5 ques5      3.29    3 1.08
## 6 ques6      2.88    3 1.07
## 7 ques7      4.39    5 0.802
## 8 ques8      3.12    3 1.13
## 9 ques9      4.12    4 0.931
## 10 ques10    4.02    4 0.990

#CONCLUSION:
#INTERPRETATION ON QUESTIONS:

#1 Students sometimes allocate 30+ minutes; the typical student is
#neutral-to-agree. Majority allocate some study time, but not consistently daily.
#2 Note-taking is a moderate habit; some students do it
#more consistently than others.
#3 Advanced study is not a strong habit; many students may need
#encouragement to explore challenging topics.
#4 Students often listen to music while studying.
#5 Some prefer group work while others prefer studying alone.

```

#6 Students do not consistently follow a schedule  
#Time management and planning could be improved. Prefer independent study and  
#often take short breaks to maintain focus.  
#7 Technology is heavily integrated into their study routines.  
#8 Some students manage distractions, others do not.  
#9 Students often take breaks during long study sessions.  
#10 Independent study is a dominant preference.

**#OVERALL:**

**#Strong habits:**

#Music while studying (Q4), using gadgets (Q7), taking breaks (Q9),  
#studying alone (Q10) → widely practiced.

**#Moderate Habits:**

#Allocating daily study time (Q1), taking notes (Q2), group study (Q5),  
#avoiding distractions (Q8) → practiced sometimes, not consistently.

**#Weak Habit:**

#Creating and following a study schedule (Q6) → students do not  
#consistently plan their study time.

#Advanced study (Q3) → students rarely go beyond regular study material.

**#GENERAL CONCLUSIONS:**

**#Students at ISAT U (La Paz) generally:**

#Rely heavily on gadgets and music while studying.

#Prefer independent study and often take short breaks to maintain focus.

#Are moderately consistent in allocating study time and note-taking,  
#but planning and advanced study habits are weaker.

#Group study and avoiding distractions show high variability, reflecting  
#individual differences in study style.

**#Recommendation:** Encourage structured study plans, advanced study practices,  
#and focus strategies to further improve students' study effectiveness.