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## APPENDICES

## Appendix 1. Research Instrument

## RESEARCH INSTRUMENT

Name :
Class
Reg. Number

## PRE-TEST

| Subject | : English |
| :--- | :--- |
| Class/Semester | $:$ VIII/I |
| Time Allotment | $: 45$ minutes |

A. Multiple Choice

Choose the correct answer by crossing (X) a, b, c, or d!

1. Ditta has many duties in the school

She is ... right now.
a. busy
b. lazy
c. smart
d. active
2. My sister publishes many novels this year

There are ten ... sellers.
a. good
b. best
c. cheap
d. expensive
3. Kiki has many friends, because she is ... to her friend.
a. bland
b. soft
c. liar
d. impatient
4. I want to surf the net, but the network is ... in this cafe.
a. fine
b. stable
c. unstable
d. fast
5. Rio stays alone in the class. His friends leave him. He is a... student.
a. rude
b. stingy
c. humble
d. bland
6. There is a... in the classroom.
a. police
b. teacher
c. doctor
d. butcher
7. ... must wear seat belts.
a. Passenger
b. Driver
c. Rider
d. Stewardess


There are ma
... in the class.
a. teachers
b. headmasters
c. students
d. crews

10. Anthony Sinisuka Ginting has a good skill in sport.
He is a ... player.
a. badminton
b. tennis
c. baseball
d. swimming

11. The teacher is in the class.

She ... the students.
a. works
b. teaches
c. sees
d. listens
12. All my friends have good score in the class.

They ... diligently at home.
a. study
b. do
c. play
d. learn
13. My sister's hobby is cooking.

She ... cakes every other day.
a. uses
b. paints
c. draws
d. makes
14. Adele will come to Indonesia.

She ... here at 5 p.m. by Garuda Indonesia.
a. arrives
b. goes
c. visits
d. sings
15. Bagas is headache.

He plans to go to doctor.
The doctor ... him medicine to drink
a. buys
b. takes
c. gives
d. puts

## B. Complete the paragraph with appropriate words.

| talk <br> experiences | places <br> famous | motorcycle <br> buy | home <br> trip | enjoy <br> happy |
| :--- | :--- | :--- | :--- | :--- |

## Going to Prambanan Temple

Today, my best friend and I go to Prambanan Temple. We go there by (1).... On the way, we have a small (2).... We talk about many (3)... one of it is holiday in Yogyakarta. We visit many tourism (4).... When we are in Prambanan Temple, we are so (5)... to see a beautiful and great temple. Prambanan Temple is (6)... with the story of Princess Roro Jongrang and Bandung Bondowoso. Bandung Bondowoso curses Princess Roro Jongrang to be the last statue in Prambanan Temple. In this place, we (7)... a lot of souvenirs for our family at (8) ... . Then, we go back to our home. We really (9)... our (10)... to Prambanan Temple today.

| Name | $:$ |
| :--- | :--- |
| Class |  |
| Reg. Number | $:$ |

## POST-TEST

| Subject | : English |
| :--- | :--- |
| Class/Semester | : VIII/I |
| Time Allotment | $: 45$ minutes |

## A. Multiple Choice

Choose the correct answer by crossing (X) a, b, c, or d!

1. Rani gets the first student in the class.

She is a... student.
a. smart
b. arrogant
c. humble
d. kind
2. My sister buys me school things, and this dictionary is the most... from others.
a. big
b. large
c. expensive
d. cheapest
3. Lisa's father likes to do sports everyday.

His body is so...
a. big
b. thin
c. fat
d. healthy
4. Joni has many fruits. He likes to bring them to the class, but he is... to his friends.
a. humble
b. stingy
c. kind
d. patient
5. My mother is a career woman. She works in the office. She is a... worker, but she loves her family.
a. hard
b. slow
c. fast
d. quite
6. Many people do... every Sunday.
a. cycling
b. driving
c. running
d. jogging

7. There are many children playing... in the field.
a. badminton
b. baseball
c. boxing
d. basketball
8. ... sells medicine to cure a patient.
a. The hospital
b. The drugstore
c. The market
d. The clinic
9. There are many... in the library.
a. tables
b. bookcases
c. chairs
d. computers
10. Mr. Afif leads the flag ceremony in the school. He is a...
a. secretary
b. staff
c. teacher
d. headmaster

11. The librarian... the book in the book case.
a. tidies up
b. prepares
c. reads
d. brings
12. Some students go to the library in their free time, they usually... books there.
a. tidy up
b. play
c. read
d. bring
13. Santi will visit her nephew, Roni. His home is in the village, then she cannot... his home.
a. understand
b. know
c. go
d. find
14. My young sister has a beautiful hobby. She likes drawing. She... a fresh mountain.
a. paints
b. writers
c. makes
d. collects
15. I have an ambition, I want to be an athlete. Every morning I... basketball to be a master player.
a. run
b. play
c. walk
d. try
B. Complete the paragraph with appropriate words.

| visit <br> biggest | help <br> place | gudeg <br> friendly | popular <br> experiences | guides <br> delicious |
| :--- | :--- | :--- | :--- | :--- |

## Yogyakarta

Yogyakarta is a very special city for its art, culture and culinary. It is a perfect 1)... to find the best batik as well as to watch puppet as well as gamelan concert. Ramayana Ballet is the most 2)... performance in Yogyakarta. The play based on an ancient Hindu love story, king Rama and princess Shinta.

There are many great places to visit in Yogyakarta. Some of them are Borobudur Temple, Prambanan Temple, Kalibiru National Park, Keraton Royal Palace, Alun-Alun Selatan Keraton, Malioboro Street, etc. Among all of them, temples become one of the 3)... reasons why people 4)... Yogyakarta.

Local people in Yogyakarta are so warm and 5)... They love to greet and wave hands to many tourists. When tourists get lost along the street, they 6)... to show a way happily. In some tourism objects, there are many local 7)... You need to deal with the price before having a guidance service.

Trying 8)... is a must when visiting Yogyakarta. Gudeg is an authentic Yogyakarta cuisine. It is very (9)... while enjoying this special city. Visiting Yogyakarta gives memorable (10)... for most tourists. Tourists always want to visit it again and again.
(Adapted from https://belajar2.decorhomebestthe.me/2017/07/)

## Appendix 2. Lesson Plan

## LESSON PLAN

| School | $:$ SMP Negeri 1 Tellu Siattinge |
| :--- | :--- |
| Grade/Semester | $:$ VIII/1 |
| Subject | $:$ English |
| Theme | $:$ Our Busy Roads |
| Aspect/ Skill | $:$ Vocabulary |
| Meetings | $: 1 \& 2$ |
| Time Allotment | $: 2 \times 40^{\prime}$ |


| Standard <br> Competence | 3.6 Applying social functions, text structures, and linguistic elements of spoken and written transactional interaction texts that involve the act of giving and asking for information regarding the existence of people, objects, animals, according to the context of their use. (Note the linguistic element is/are). | 4.6 Compose spoken and written transactional interaction texts that involve the act of giving and asking for information related to the existence of people, objects, animals by paying attention to social functions, text structures, and linguistic elements that are correct and in context. |
| :---: | :---: | :---: |

## A. Learning Objectives

If Students are able to answer vocabulary questions through the digital games "Jeopardy!".
\& Students are able to match the words to their definition or corresponding pictures with digital games.

## B. Learning Method

Digital games "Jeopardy!"

## C. Learning Material

Vocabulary

| No. | Vocabulary | Meaning |
| :---: | :--- | :--- |
| 1 | Accident | Kecelakan |
| 2 | Ambulance | Ambulans |
| 3 | Bicycle/bike | Sepeda |
| 4 | Busy | Padat |
| 5 | Bus | Bus |
| 6 | Car | Dobil |
| 7 | Cart | Perempatan jalan |
| 8 | Crossroad | Pengemudi |
| 9 | Driver | Cepat |
| 10 | Fast | Sepeda motor |
| 11 | Motorcycle | Pejalan kaki |
| 12 | Pedestrian | Becak |
| 13 | Pedicab | Trotoar |
| 14 | Pavement | Orang |
| 15 | People | Polisi Wanita |
| 16 | Policewoman | Polisi |
| 17 | Policeman | Polusi |
| 18 | Pollution | Pengendara |
| 19 | Rider | Aman |
| 20 | Safe | Lambat |
| 21 | Slow | Pertigaan |
| 22 | T-junction | Rambu lalu lintas |
| 23 | Traffic sign | Lampu lalu lintas |
| 24 | Traffic light | Macet |
| 25 | Traffic jam | Truk |
| 26 | Truck | Kendaraan |
| 27 | Vehicle |  |

D. Learning Activity

| Steps | Activity | Time Allotment |
| :---: | :---: | :---: |
| Opening | 1. Teacher gives greeting and checks the attendance list. <br> 2. Teacher Motivates students to engage their learning motivation and knowledge about Our Busy Roads. <br> 3. Teacher gives the objective of the lesson. | 10 Minutes |
| Main Activity | Exploration <br> 1. Students are given learning material about Our Busy Roads. <br> 2. Students are given the examples about There Is, There Are, and Many vs Much. <br> 3. Students are given some vocabularies that support their understanding. <br> Elaboration <br> 1. Students identify the difficult words in the material of Our Busy Roads. <br> 2. Students are guided to check some the meanings in dictionary. <br> 3. Students have been introduced digital games. <br> 4. Students are guided to use digital games. <br> 5. Students are asked to memorize the words. | 60 Minutes |


|  | Confirmation <br> 1. Students discuss some vocabularies that they have learned. <br> 2. Students are allowed to ask question related to the material. |  |
| :---: | :---: | :---: |
| Closing | 1. Students and teacher reflect on learning activities. <br> 2. Students and teacher draw conclusions from the results of learning activities. <br> 3. The teacher assigns students to continue finding information related to the material/lesson that is being or will be studied. <br> 4. The teacher delivers the next learning material. <br> 5. The teacher closes the learning activity by saying greetings and praying. | 10 Minutes |

## E. Source of Media

\& English book, laptop, internet, and LCD projector.

Makassar, September 2021
The Researcher


Yulia Udin Safitri
F022192009

## LESSON PLAN

| School | $:$ SMP Negeri 1 Tellu Siattinge |
| :--- | :--- |
| Grade/Semester | $:$ VIII/1 |
| Subject | $:$ English |
| Theme | $:$ Our Busy Roads |
| Aspect/ Skill | $:$ Vocabulary |
| Meetings | $: 3 \& 4$ |
| Time Allotment | $: 2 \times 45$ |


| Standard <br> Competence | 3.6 Applying social functions, text structures, and linguistic elements of spoken and written transactional interaction texts that involve the act of giving and asking for information regarding the existence of people, objects, animals, according to the context of their use. (Note the linguistic element is/are). | 4.6 Compose spoken and written transactional interaction texts that involve the act of giving and asking for information related to the existence of people, objects, animals by paying attention to social functions, text structures, and linguistic elements that are correct and in context. |
| :---: | :---: | :---: |

## A. Learning Objectives

H Students are able to understand the meaning of each vocabulary in the Our Busy Roads (Adjective, Noun, and Verb).
If Students are able to answer questions based on the Our Busy Roads properly.

## B. Learning Method

Digital games "Kahoot!"

## C. Learning Material

Vocabulary

| No. | Vocabulary | Meaning |
| :---: | :--- | :--- |
| 1 | Accident | Kecelakaan |
| 2 | Afraid | Takut |
| 3 | Bank | Sibuk |
| 4 | Busy | Berani |
| 5 | Brave | Jembatan |
| 6 | Bridge | Peduli |
| 7 | Care | Dokar |
| 8 | Cart | Ramai/sesak |
| 9 | Crowded | Gereja |
| 10 | Church | Sulit |
| 11 | Difficult | Kedisplinan |
| 12 | Discipline | Arah |
| 13 | Dry Season | Jauh |
| 14 | Direction | Keras |
| 15 | Far | Rumah Sakit |
| 16 | Hard | Hotel |
| 17 | Hospital | Mewah |
| 18 | Hotel | Pasar |
| 19 | Luxurious | Masjid |
| 20 | Market | Dilarang masuk |
| 21 | Mosque | Mobil diilarang masuk |
| 22 | No entry | Truk dilarang masuk |
| 23 | No car entry | Dilarang berputar |
| 24 | No truck | Dilarang mendahului |
| 25 | No rotate | Jalan cekung |
| 26 | No surpass |  |
| 27 | Sunken road |  |
|  |  |  |
| 1 |  |  |

D. Learning Activity

| Steps | Activity | Time Allotment |
| :---: | :---: | :---: |
|  | 1. Teacher and students pray <br> together before the teaching <br> and learning activities begin. <br> 2. Teacher gives greeting and <br> checks the attendance list. |  |
| Opening | 3. Teacher Motivates students <br> to engage their learning <br> motivation and knowledge <br> about Our Busy Roads. | 10 Minutes |$\quad$| 4. The teacher describes the |
| :--- |
| purpose of the topic to be |
| studied. |


|  | Confirmation <br> 1. Students discuss some <br> vocabularies that they have <br> learned. <br> 2. Students are allowed to ask <br> question related to the material. |  |
| :--- | :--- | :--- |
| Closing | 1. Students and teacher reflect on <br> learning activities. <br> 2. Students and teacher draw <br> conclusions from the results of <br> learning activities. |  |
| 3. The teacher assigns students to <br> continue looking for information <br> anywhere related to the <br> material/lesson that is being or <br> will be studied. <br> 4. The teacher delivers the next <br> learning material. <br> 5. The teacher closes the learning <br> activity by saying greetings and <br> prayers. |  |  |

## E. Source of Media

\& English book, laptop, internet, and LCD projector.

Makassar, October 2021
The Researcher


Yulia Udin Safitri
F022192009

## LESSON PLAN

| School | $:$ SMP Negeri 1 Tellu Siattinge |
| :--- | :--- |
| Grade/Semester | $:$ VIII/1 |
| Subject | $:$ English |
| Theme | $:$ Our Busy Roads |
| Aspect/ Skill | $:$ Vocabulary |
| Meetings | $: 5 \& 6$ |
| Time Allotment | $: 2 \times 45$ |


| Standard <br> Competence | 3.6 Applying social functions, text structures, and linguistic elements of spoken and written transactional interaction texts that involve the act of giving and asking for information regarding the existence of people, objects, animals, according to the context of their use. (Note the linguistic element is/are). | 4.6 Compose spoken and written transactional interaction texts that involve the act of giving and asking for information related to the existence of people, objects, animals by paying attention to social functions, text structures, and linguistic elements that are correct and in context. |
| :---: | :---: | :---: |

## A. Learning Objectives

H Students are able to understand the meaning of each vocabulary in the Our Busy Roads (Adjective, Noun, and Verb).
If Students are able to answer questions based on the Our Busy Roads properly.

## B. Learning Method

Digital games

## C. Learning Material

Vocabulary

| No. | Vocabulary | Meaning |
| :---: | :---: | :---: |
| 1 | Church | Gereja |
| 2 | Driving | Mengemudi |
| 3 | Cycling | Bersepeda |
| 4 | Horse | Kuda |
| 5 | House | Rumah |
| 6 | Mosque | Masjid |
| 7 | Passenger | Penumpang |
| 8 | People | Orang |
| 9 | Plane | Pesawat terbang |
| 10 | Pollution | Polusi |
| 11 | Rainy season | Musim hujan |
| 12 | Road | Jalan |
| 13 | Safe | Aman |
| 14 | School | Sekolah |
| 15 | Smoke | Asap |
| 16 | Steep slope | Turunan curam |
| 17 | Taxi | Taksi |
| 18 | Town | Kota |
| 19 | Train | Kereta |
| 20 | Transportation | Transportasi |
| 21 | Tree | Pohon |
| 22 | Temple | Candi |
| 23 | Violation | Pelanggaran |
| 24 | Walk | Berjalan |
| 25 | Water | Air |
| 26 | Wise | Bijaksana |
| 27 | Zoo | Kebun binatang |

## D. Learning Activity

| Steps | Activity | Time Allotment |
| :---: | :---: | :---: |
| Opening | 1. Teacher and students pray together before the teaching and learning activities begin. <br> 2. Teacher gives greeting and checks the attendance list. <br> 3. Teacher motivates the student to engage their learning and knowledge about Our Busy Roads. <br> 4. Teacher gives the objective of the lesson. | 10 Minutes |
| Main Activity | Exploration <br> 1. Students are given learning material about Our Busy Roads. <br> 2. Students are given the examples about Adjective, Noun, and Verb. <br> 3. Students are given some vocabularies that support their understanding. <br> 4. Students listen interactively the teacher gives some descriptions about objects. | 60 Minut |
|  | 1. Students identify the difficult words in the material of Our Busy Roads. <br> 2. Students are guided to use digital games. <br> 3. Students are asked to memorize the words. |  |


|  | Confirmation <br> 1. Students discuss the vocabulary that they have learned. <br> 2. Students are allowed to ask question related to the material. <br> 3. The teacher provides reinforcement on material that students do not understand. |  |
| :---: | :---: | :---: |
| Closing | 1. Students and teacher reflect on learning activities. <br> 2. Students and teacher draw conclusions from the results of learning activities. <br> 3. Assign students to continue to look for information anywhere related to the material/lesson that is or will be studied. <br> 4. The teacher presents the next learning material. <br> 5. The teacher closes the learning activity by saying greetings and prayers. | 10 Minutes |

## E. Source of Media

\& English book, laptop, internet, and LCD projector.
Makassar, October 2021
The Researcher


Yulia Udin Safitri
F022192009

## Appendix 3. The Students' Score of Pre-test and Post-test of Experimental Group

The Students' Score of Pre-test and Post-test of Experimental Group

| NO. | STUDENT'S <br> NAME | PRE-TEST <br> SCORE | POST-TEST <br> SCORE | $Y_{1}$ | $Y_{1}{ }^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | AD | 60 | 78 | 45.00 | 2025.00 |
| 2 | AFM | 64 | 76 | 33.33 | 1111.11 |
| 3 | AV | 68 | 78 | 31.25 | 976.56 |
| 4 | ALD | 64 | 82 | 50.00 | 2500.00 |
| 5 | ARP | 68 | 84 | 50.00 | 2500.00 |
| 6 | AS | 74 | 86 | 46.15 | 2130.18 |
| 7 | AP | 70 | 88 | 60.00 | 3600.00 |
| 8 | AR | 64 | 78 | 38.89 | 1512.35 |
| 9 | AN | 66 | 84 | 52.94 | 2802.77 |
| 10 | AL | 74 | 88 | 53.85 | 2899.41 |
| 11 | CL | 70 | 80 | 33.33 | 1111.11 |
| 12 | CHP | 72 | 90 | 64.29 | 4132.65 |
| 13 | FZ | 74 | 86 | 46.15 | 2130.18 |
| 14 | IDP | 60 | 84 | 60.00 | 3600.00 |
| 15 | IM | 64 | 82 | 50.00 | 2500.00 |
| 16 | MAK | 68 | 78 | 31.25 | 976.56 |
| 17 | MGA | 64 | 84 | 55.56 | 3086.42 |
| 18 | MIS | 70 | 86 | 53.33 | 2844.44 |
| 19 | MSA | 72 | 88 | 57.14 | 3265.31 |
| 20 | MA | 74 | 90 | 61.54 | 3786.98 |
| 21 | MSR | 60 | 76 | 40.00 | 1600.00 |
| 22 | NZ | 70 | 78 | 26.67 | 711.11 |
| 23 | SM | 64 | 80 | 44.44 | 1975.31 |
| 24 | SSP | 68 | 84 | 50.00 | 2500.00 |
| 25 | TAC | 80 | 96 | 80.00 | 6400.00 |
| 26 | TF | 60 | 88 | 70.00 | 4900.00 |
| 27 | WNJ | 64 | 84 | 55.56 | 3086.42 |
|  | TOTAL | 1826 | 2256 | 1340.67 | 70663.87 |

Percentage N-Gain Score
Experimental Group

| NO. | STUDENT'S <br> NAME | PRE-TEST <br> SCORE | POST-TEST <br> SCORE | N-Gain | \% N-Gain |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | AD | 60 | 78 | 0.45 | 45.00 |
| 2 | AFM | 64 | 76 | 0.33 | 33.33 |
| 3 | AV | 68 | 78 | 0.31 | 31.25 |
| 4 | ALD | 64 | 82 | 0.50 | 50.00 |
| 5 | ARP | 68 | 84 | 0.50 | 50.00 |
| 6 | AS | 74 | 86 | 0.46 | 46.15 |
| 7 | AP | 70 | 88 | 0.60 | 60.00 |
| 8 | AR | 64 | 78 | 0.39 | 38.89 |
| 9 | AN | 66 | 84 | 0.53 | 52.94 |
| 10 | AL | 74 | 88 | 0.54 | 53.85 |
| 11 | CL | 70 | 80 | 0.33 | 33.33 |
| 12 | CHP | 72 | 90 | 0.64 | 64.29 |
| 13 | FZ | 74 | 86 | 0.46 | 46.15 |
| 14 | IDP | 60 | 84 | 0.60 | 60.00 |
| 15 | IM | 64 | 82 | 0.50 | 50.00 |
| 16 | MAK | 68 | 78 | 0.31 | 31.25 |
| 17 | MGA | 64 | 84 | 0.56 | 55.56 |
| 18 | MIS | 70 | 86 | 0.53 | 53.33 |
| 19 | MSA | 72 | 88 | 0.57 | 57.14 |
| 20 | MA | 74 | 90 | 0.62 | 61.54 |
| 21 | MSR | 60 | 76 | 0.40 | 40.00 |
| 22 | NZ | 70 | 78 | 0.27 | 26.67 |
| 23 | SM | 64 | 80 | 0.44 | 44.44 |
| 24 | SSP | 68 | 84 | 0.50 | 50.00 |
| 25 | TAC | 80 | 96 | 0.80 | 80.00 |
| 26 | TF | 60 | 88 | 0.70 | 70.00 |
| 27 | WNJ | 64 | 84 | 0.56 | 55.56 |
|  | TOTAL | 1826 | 2256 | 13.41 | 1340.67 |

## Appendix 4. The Students' Score of Pre-test and Post-test of Control Group

The Students' Score of Pre-test and Post-test of Control Group Score

| NO. | STUDENT'S <br> NAME | PRE-TEST <br> SCORE | POST-TEST <br> SCORE | $Y 2$ | $Y_{2}{ }^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | AI | 60 | 74 | 35.00 | 1225.00 |
| 2 | AM | 62 | 78 | 42.11 | 1772.85 |
| 3 | AK | 68 | 72 | 12.50 | 156.25 |
| 4 | ARU | 64 | 74 | 27.78 | 771.60 |
| 5 | AAB | 62 | 66 | 10.53 | 110.80 |
| 6 | AT | 64 | 78 | 38.89 | 1512.35 |
| 7 | CO | 62 | 72 | 26.32 | 692.52 |
| 8 | FJ | 70 | 90 | 66.67 | 4444.44 |
| 9 | FA | 64 | 68 | 11.11 | 123.46 |
| 10 | MQ | 70 | 74 | 13.33 | 177.78 |
| 11 | MI | 60 | 72 | 30.00 | 900.00 |
| 12 | MIL | 64 | 74 | 27.78 | 771.60 |
| 13 | MRA | 66 | 70 | 11.76 | 138.41 |
| 14 | MA | 60 | 64 | 10.00 | 100.00 |
| 15 | NA | 64 | 68 | 11.11 | 123.46 |
| 16 | NA | 62 | 76 | 36.84 | 1357.34 |
| 17 | NT | 60 | 70 | 25.00 | 625.00 |
| 18 | NR | 68 | 76 | 25.00 | 625.00 |
| 19 | NN | 70 | 80 | 33.33 | 1111.11 |
| 20 | NA | 72 | 78 | 21.43 | 459.18 |
| 21 | NT | 74 | 80 | 23.08 | 532.54 |
| 22 | RA | 60 | 74 | 35.00 | 1225.00 |
| 23 | RK | 62 | 68 | 15.79 | 249.31 |
| 24 | RA | 60 | 64 | 10.00 | 100.00 |
| 25 | SA | 64 | 72 | 22.22 | 493.83 |
| 26 | ZS | 70 | 96 | 86.67 | 7511.11 |
| 27 | MF | 60 | 68 | 20.00 | 400.00 |
|  | TOTAL | 1742 | 1996 | 729.24 | 27709.95 |

Percentage N-Gain Score
Control Group

| NO. | STUDENT'S <br> NAME | PRE-TEST <br> SCORE | POST-TEST <br> SCORE | N-Gain | \% N-Gain |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | AI | 60 | 74 | 0.35 | 35.00 |
| 2 | AM | 62 | 78 | 0.42 | 42.11 |
| 3 | AK | 68 | 72 | 0.13 | 12.50 |
| 4 | ARU | 64 | 74 | 0.28 | 27.78 |
| 5 | AAB | 62 | 66 | 0.11 | 10.53 |
| 6 | AT | 64 | 78 | 0.39 | 38.89 |
| 7 | CO | 62 | 72 | 0.26 | 26.32 |
| 8 | FJ | 70 | 90 | 0.67 | 66.67 |
| 9 | FA | 64 | 68 | 0.11 | 11.11 |
| 10 | MQ | 70 | 74 | 0.13 | 13.33 |
| 11 | MI | 60 | 72 | 0.30 | 30.00 |
| 12 | MIL | 64 | 74 | 0.28 | 27.78 |
| 13 | MRA | 66 | 70 | 0.12 | 11.76 |
| 14 | MA | 60 | 64 | 0.10 | 10.00 |
| 15 | NA | 64 | 68 | 0.11 | 11.11 |
| 16 | NA | 62 | 76 | 0.37 | 36.84 |
| 17 | NT | 60 | 70 | 0.25 | 25.00 |
| 18 | NR | 68 | 76 | 0.25 | 25.00 |
| 19 | NN | 70 | 80 | 0.33 | 33.33 |
| 20 | NA | 72 | 78 | 0.21 | 21.43 |
| 21 | NT | 74 | 80 | 0.23 | 23.08 |
| 22 | RA | 60 | 74 | 0.35 | 35.00 |
| 23 | RK | 62 | 68 | 0.16 | 15.79 |
| 24 | RA | 60 | 64 | 0.10 | 10.00 |
| 25 | SA | 64 | 72 | 0.22 | 22.22 |
| 26 | ZS | 70 | 96 | 0.87 | 86.67 |
| 27 | MF | 60 | 68 | 0.20 | 20.00 |
|  | TOTAL | 1742 | 1996 | 7.29 | 729.24 |

## Appendix 5. Normality of Test Experimental Group

## Normality Test

## Experimental Group

| $\boldsymbol{X}$ | $\boldsymbol{F}$ | $\boldsymbol{Z}$ | $\boldsymbol{F}(\mathbf{Z})$ | $\boldsymbol{F} \boldsymbol{K}$ | $\boldsymbol{S}(\boldsymbol{Z})$ | $\mid \boldsymbol{F}(\boldsymbol{Z})-\boldsymbol{S}(\mathbf{Z}) /$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 26.67 | 1 | -1.83209 | 0.033469 | 1 | 0.037037 | 0.003568233 |
| 31.25 | 2 | -1.46681 | 0.071214 | 3 | 0.111111 | 0.039897172 |
| 33.33 | 2 | -1.30077 | 0.096668 | 5 | 0.185185 | 0.088516882 |
| 38.89 | 1 | -0.858 | 0.195445 | 6 | 0.222222 | 0.026777153 |
| 40.00 | 1 | -0.76945 | 0.220813 | 7 | 0.259259 | 0.038446362 |
| 44.44 | 1 | -0.41524 | 0.338984 | 8 | 0.296296 | 0.042688017 |
| 45.00 | 1 | -0.37096 | 0.355334 | 9 | 0.333333 | 0.022000344 |
| 46.15 | 2 | -0.279 | 0.390122 | 11 | 0.407407 | 0.017285208 |
| 50.00 | 4 | 0.027531 | 0.510982 | 15 | 0.555556 | 0.044573746 |
| 52.94 | 1 | 0.261937 | 0.603315 | 16 | 0.592593 | 0.010722445 |
| 53.33 | 1 | 0.293191 | 0.615312 | 17 | 0.62963 | 0.0143176 |
| 53.85 | 1 | 0.334062 | 0.630834 | 18 | 0.666667 | 0.035833002 |
| 55.56 | 2 | 0.470298 | 0.680929 | 20 | 0.740741 | 0.059811699 |
| 57.14 | 1 | 0.596803 | 0.724681 | 21 | 0.777778 | 0.053097137 |
| 60.00 | 2 | 0.824512 | 0.795176 | 23 | 0.851852 | 0.056676119 |
| 61.54 | 1 | 0.947125 | 0.828212 | 24 | 0.888889 | 0.060676475 |
| 64.29 | 1 | 1.166076 | 0.878208 | 25 | 0.925926 | 0.047717827 |
| 70.00 | 1 | 1.621494 | 0.947544 | 26 | 0.962963 | 0.015418853 |
| 80.00 | 1 | 2.418475 | 0.992207 | 27 | 1 | 0.007792852 |
|  | Lcount |  |  |  |  |  |

## Appendix 6. Normality Test of Control Group

## Normality Test

## Control Group

| $\boldsymbol{X}$ | $\boldsymbol{F}$ | $\boldsymbol{Z}$ | $\boldsymbol{F}(\boldsymbol{Z})$ | $\boldsymbol{F} \boldsymbol{K}$ | $\mathbf{S}(\mathbf{Z})$ | $\|\boldsymbol{F}(\boldsymbol{Z})-\boldsymbol{S}(\mathbf{Z})\|$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10.00 | 2 | -0.96887 | 0.166306 | 2 | 0.074074 | 0.092231958 |
| 10.53 | 1 | -0.93889 | 0.173894 | 3 | 0.111111 | 0.062783077 |
| 11.11 | 2 | -0.90558 | 0.182579 | 5 | 0.185185 | 0.002605723 |
| 11.76 | 1 | -0.86835 | 0.192601 | 6 | 0.222222 | 0.029621056 |
| 12.50 | 1 | -0.82647 | 0.204269 | 7 | 0.259259 | 0.054990338 |
| 13.33 | 1 | -0.779 | 0.217989 | 8 | 0.296296 | 0.078307598 |
| 15.79 | 1 | -0.63911 | 0.261377 | 9 | 0.333333 | 0.071956213 |
| 20.00 | 1 | -0.39928 | 0.344844 | 10 | 0.37037 | 0.025526869 |
| 21.43 | 1 | -0.31791 | 0.375276 | 11 | 0.407407 | 0.032130963 |
| 22.22 | 1 | -0.27271 | 0.39254 | 12 | 0.444444 | 0.051904515 |
| 23.08 | 1 | -0.22402 | 0.41137 | 13 | 0.481481 | 0.070111622 |
| 25.00 | 2 | -0.11449 | 0.454426 | 15 | 0.555556 | 0.101129604 |
| 26.32 | 1 | -0.03954 | 0.484229 | 16 | 0.592593 | 0.108363166 |
| 27.78 | 2 | 0.043732 | 0.517441 | 18 | 0.666667 | 0.149225859 |
| 30.00 | 1 | 0.170306 | 0.567615 | 19 | 0.703704 | 0.136088353 |
| 33.33 | 1 | 0.360168 | 0.640639 | 20 | 0.740741 | 0.100101386 |
| 35.00 | 2 | 0.455099 | 0.675481 | 22 | 0.814815 | 0.139333715 |
| 36.84 | 1 | 0.560023 | 0.712268 | 23 | 0.851852 | 0.139583707 |
| 38.89 | 1 | 0.676605 | 0.750672 | 24 | 0.888889 | 0.138217188 |
| 42.11 | 1 | 0.859805 | 0.805052 | 25 | 0.925926 | 0.120874136 |
| 66.67 | 1 | 2.258789 | 0.988052 | 26 | 0.962963 | 0.02508877 |
| 86.67 | 1 | 3.397961 | 0.999661 | 27 | 1 | 0.000339451 |
|  | Lcount |  |  |  |  |  |

Using SPSS
One-Sample Kolmogorov-Smirnov Test

|  |  | Experiment | Control |
| :--- | :--- | ---: | ---: |
| N |  | 27 | 27 |
| Normal Parameters ${ }^{\text {a }}$ | Mean | 49.6544 | 27.0093 |
|  | Std. Deviation | 12.54790 | 1.75576 E 1 |
| Most Extreme | Absolute | .104 | .166 |
| Differences | Positive | .089 | .149 |
|  | Negative | -.104 | -.166 |
| Kolmogorov-Smirnov Z |  | .538 | .864 |
| Asymp. Sig. (2-tailed) |  | .934 | .444 |

a. Test distribution is Normal.

## Appendix 7. Homogeneity Test

Homogeneity Test


Using SPSS
Test of Homogeneity of Variances
Percentage n Gain Score

| Levene Statistic | df1 | df2 | Sig. |  |  |
| ---: | ---: | :--- | :--- | :---: | :---: |
| .749 |  | 1 | 52 |  | .391 |

## Appendix 8. The Mean Score

The Mean Score
A. Experimental Group

$$
\overline{X_{1}}=\frac{\sum X_{1}}{n_{1}}=\frac{1.340,67}{27}=49,65
$$

B. Control Group

$$
\overline{X_{2}}=\frac{\sum X_{2}}{n_{2}}=\frac{729,4}{27}=27,01
$$

## Appendix 9. Variance and Standard Deviation

## Variance and Standard Deviation

A. Variance Experimental Group

$$
\begin{gathered}
S_{1}{ }^{2}=\frac{\sum Y_{1}^{2}-\frac{\left(\sum Y_{1}\right)^{2}}{n_{1}}}{n_{1}-1}=\frac{70.663,87-\frac{(1.340,67)^{2}}{27}}{26}=\frac{70.663,87-66.570,22}{26} \\
=157,44
\end{gathered}
$$

## Standard Deviation Experimental Group

$$
S_{1}=\sqrt{\frac{\sum Y_{1}^{2}-\frac{\left(\sum Y_{1}\right)^{2}}{n_{1}}}{n_{1}-1}}=\sqrt{157,44}=12,55
$$

B. Variance Control Group

$$
\begin{gathered}
S_{2}{ }^{2}=\frac{\sum Y_{2}{ }^{2}-\frac{\left(\sum Y_{2}\right)^{2}}{n_{2}}}{n_{2}-1}=\frac{27.709,95-\frac{(729,24)^{2}}{27}}{26}=\frac{27.709,95-19.695,96}{26} \\
=308,23
\end{gathered}
$$

## Standard Deviation Control Group

$$
S_{1}=\sqrt{\frac{\sum Y_{1}^{2}-\frac{\left(\sum Y_{1}\right)^{2}}{n_{1}}}{n_{1}-1}}=\sqrt{308,23}=17,56
$$

## Appendix 10. T-test and T-table

## 1. T-test

$\bar{X}_{1}=49,65$
$S_{1}=157,44$
$\bar{X}_{2}=27,01$
$S_{2}=308,23$

## The Significance Different

$$
\begin{aligned}
& t=\frac{\bar{X}_{1}-\bar{X}_{2}}{\sqrt{\frac{\left(n_{1}-1\right) s_{1}{ }^{2}+\left(n_{2}-1\right) s_{2}{ }^{2}}{n_{1}+n_{2}-2}\left(\frac{1}{n_{1}}+\frac{1}{n_{2}}\right)}} \\
&=\frac{49,65-27,01}{\sqrt{\frac{26 \cdot 157,44+26 \cdot 308,23}{52} \cdot\left(\frac{1}{27}+\frac{1}{27}\right)}} \\
&=\frac{22,64}{\sqrt{\frac{4.093,44+8.013,98}{52}} \cdot(0,037+0,037)} \\
&=\frac{22,64}{\sqrt{\frac{12.107,42 \cdot 0,074}{52}}} \\
&=\frac{22,64}{\sqrt{17,7}} \\
&=\frac{22,64}{4,15} \\
&=5,453
\end{aligned}
$$

## 2. T-table

For level of significance (D) $=0.05$
Degree of freedom $(\mathrm{df})=(\mathrm{N} 1+\mathrm{N} 2)-2=(27+27)-2=52$
T-table $=2.007$

Independent Samples Test


## Appendix 11. The Distribution of T-table

The Distribution of T-table

| Df | $t_{0.10}$ | ${ }^{t} 0.05$ | ${ }^{t} 0.025$ | $t_{0.01}$ | ${ }^{t} 0.005$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 3,078 | 6,314 | 12,706 | 31,821 | 63, 657 |
| 2 | 1,886 | 2,920 | 4,303 | 6,965 | 9,925 |
| 3 | 1,638 | 2,353 | 3,182 | 4,541 | 5,841 |
| 4 | 1,533 | 2,132 | 2,776 | 3,747 | 4,604 |
| 5 | 1,476 | 2,015 | 2,571 | 3,365 | 4,032 |
| 6 | 1,440 | 1,943 | 2,447 | 3,143 | 3,707 |
| 7 | 1,415 | 1,895 | 2,365 | 2,998 | 3,499 |
| 8 | 1,397 | 1,860 | 2,306 | 2,896 | 3,355 |
| 9 | 1,383 | 1,833 | 2,262 | 2,821 | 3,250 |
| 10 | 1,372 | 1,812 | 2,228 | 2,764 | 3,169 |
| 11 | 1,363 | 1,796 | 2,201 | 2,718 | 3,106 |
| 12 | 1,356 | 1,782 | 2,179 | 2,681 | 3,055 |
| 13 | 1,350 | 1,771 | 2,160 | 2,650 | 3,012 |
| 14 | 1,345 | 1,761 | 2,145 | 2,624 | 2,977 |
| 15 | 1,341 | 1,753 | 2,131 | 2,602 | 2,947 |
| 16 | 1,337 | 1,746 | 2,120 | 2,583 | 2,921 |
| 17 | 1,333 | 1,740 | 2,110 | 2,567 | 2,898 |
| 18 | 1,330 | 1,734 | 2,101 | 2,552 | 2,878 |
| 19 | 1,328 | 1,729 | 2,093 | 2,539 | 2,861 |
| 20 | 1,325 | 1,725 | 2,086 | 2,528 | 2,845 |
| 21 | 1,323 | 1,721 | 2,080 | 2,518 | 2,831 |
| 22 | 1,321 | 1,717 | 2,074 | 2,508 | 2,819 |
| 23 | 1,319 | 1,714 | 2,069 | 2,500 | 2,807 |
| 24 | 1,318 | 1,711 | 2,064 | 2,492 | 2,797 |
| 25 | 1,316 | 1,708 | 2,060 | 2,485 | 2,787 |
| 26 | 1,315 | 1,706 | 2,056 | 2,479 | 2,779 |
| 27 | 1,314 | 1,703 | 2,052 | 2,473 | 2,771 |
| 28 | 1,313 | 1,701 | 2,048 | 2,467 | 2,763 |
| 29 | 1,311 | 1,699 | 2,045 | 2,462 | 2,756 |
| 30 | 1,310 | 1,697 | 2,042 | 2,457 | 2,750 |
| 31 | 1,309 | 1,696 | 2,040 | 2,453 | 2,744 |
| 32 | 1,309 | 1,694 | 2,037 | 2,449 | 2,738 |
| 33 | 1,308 | 1,692 | 2,035 | 2,445 | 2,733 |
| 34 | 1,307 | 1,691 | 2,032 | 2,441 | 2,728 |
| 35 | 1,306 | 1,690 | 2,030 | 2,438 | 2,724 |
| 36 | 1,306 | 1,688 | 2,028 | 2,434 | 2,719 |
| 37 | 1,305 | 1,687 | 2,026 | 2,431 | 2,715 |
| 38 | 1,304 | 1,686 | 2,024 | 2,429 | 2,712 |
| 39 | 1,303 | 1,685 | 2,023 | 2,426 | 2,708 |
| 40 | 1,303 | 1,684 | 2,021 | 2,423 | 2,704 |
| 41 | 1,303 | 1,683 | 2,020 | 2,421 | 2,701 |
| 42 | 1,302 | 1,682 | 2,018 | 2,418 | 2,698 |
| 43 | 1,302 | 1,681 | 2,017 | 2,416 | 2,695 |
| 44 | 1,301 | 1,680 | 2,015 | 2,414 | 2,692 |
| 45 | 1,301 | 1,679 | 2,014 | 2,412 | 2,690 |
| 46 | 1,300 | 1,679 | 2,013 | 2,410 | 2,687 |
| 47 | 1,300 | 1,678 | 2,012 | 2,408 | 2,685 |
| 48 | 1,299 | 1,677 | 2,011 | 2,407 | 2,682 |
| 49 | 1,299 | 1,677 | 2,010 | 2,405 | 2,680 |
| 50 | 1,299 | 1,676 | 2,009 | 2,403 | 2,678 |
| 51 | 1,298 | 1,675 | 2,008 | 2,402 | 2,676 |
| 52 | 1,298 | 1,675 | 2,007 | 2,400 | 2,674 |

## Appendix 12. Documentation

## Documentation




