**Lampiran 11**

**HASIL ANALISIS STATISTIK INFERENSIAL *POSTTEST* KELAS EKSPERIMEN DAN KELAS KONTROL**

1. **UJI MANUAL NORMALITAS**
2. ***Posttest* KelasKontrol**

(Rata-rata) = 79,20

Sd (Standar deviasai) = 7,59387

K (Interval kelas) = 1+3,3 log(n)

= 1+3,3 log (25)

= 1+4,61

= 5,61 (6)

R (Range) = 90 – 65

= 25

P (Panjang kelas) = =

=

= 4,16

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Kelas  Interval | Batas  Kelas | Zbatas  Kelas | Luas Z  tabel | Ei | Oi |  |
|  | 64,5 | -1,9357 |  |  |  |  |
| 65 - 69 |  |  | 0,0741 | 1,8525 | 2 | 0,0117 |
|  | 69,5 | -1,2773 |  |  |  |  |
| 70 - 74 |  |  | 0,0548 | 1,37 | 3 | 1,9393 |
|  | 74,5 | -0,6189 |  |  |  |  |
| 75 - 79 |  |  | 0,6145 | 15,3625 | 5 | 6,9898 |
|  | 79,5 | 0,0395 |  |  |  |  |
| 80 – 84 |  |  | 0,098 | 2,45 | 6 | 5,1438 |
|  | 84,5 | 0,6979 |  |  |  |  |
| 85- 89 |  |  | 0,1551 | 3,8775 | 5 | 0,3249 |
|  | 89,5 | 1,3563 |  |  |  |  |
| 99 - 94 |  |  | 0,0647 | 1,6175 | 4 | 3,5093 |
|  | 94,5 | 2,0147 |  |  |  |  |
|  | | | | | | 17,9188 |

Jika maka data berdistribusi normal.

17,9188 37,652, data *pretest* kelas kontrol yang di peroleh berdistribusi normal.

1. ***Posttest*KelasEksperimen**

(Rata-rata) = 85,40

Sd (Standar deviasai) = 9,88686

K (Interval kelas) = 1+3,3 log(n)

= 1+3,3 log (25)

= 1+4,61

= 5,61 (6)

R (Range) = 100 – 70

= 30

P (Panjang kelas) = =

=

= 5

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Kelas  Interval | Batas  Kelas | Zbatas  Kelas | Luas Z  tabel | Ei | Oi |  |
|  | 69,5 | -1,6081 |  |  |  |  |
| 70 - 75 |  |  | 0,102 | 2,55 | 6 | 4,6676 |
|  | 75,5 | -1,0013 |  |  |  |  |
| 76 - 81 |  |  | 0,1896 | 4,74 | 5 | 0,0142 |
|  | 81,5 | -0,3944 |  |  |  |  |
| 82 - 87 |  |  | 0,5386 | 13,465 | 3 | 8,1333 |
|  | 87,5 | 0,2124 |  |  |  |  |
| 88 - 93 |  |  | 0,093 | 2,325 | 3 | 0,1959 |
|  | 93,5 | 0,8192 |  |  |  |  |
| 94 - 99 |  |  | 0,1279 | 3,2425 | 5 | 0,9525 |
|  | 99,5 | 1,4261 |  |  |  |  |
| 100 -105 |  |  | 0,0552 | 1,38 | 3 | 1,9017 |
|  | 105,5 | 2,033 |  |  |  |  |
|  | | | | | | 15,8553 |

Jika maka data berdistribusi normal.

15,8553 37,652, data *pretest* kelas kontrol yang di peroleh berdistribusi normal.

Sumber (Sundaya, 2015)

1. **UJI MANUAL HIPOTESIS**
2. ***UjiManual Independent Sample t-Test Posttest* Kelas Eksperimen dan Kelas Kontrol**

thitung =

thitung =

thitung =

thitung =

thitung =

thitung =

thitung =

thitung =

thitung =

jika maka data tersebut terdapat pengaruh.

2,1016, maka data *posttest* kelas eksperimen dan kelas kontrol terdapat pengaruh.

( Utsman, 2015: 153 )