

# **INTERPRETASI HASIL HITUNG MANUAL**

**“PEMBELAJARAN KOLABORATIF TERINTEGRASI PROFIL PELAJAR  
PANCASILA BERBASIS KEBERAGAMAN BUDAYA UNTUK MENINGKATKAN  
KEMAMPUAN BERPIKIR KRITIS”**

**“COLLABORATIVE LEARNING INTEGRATED PANCASILA PROFILE BASED ON  
CULTURAL DIVERSITY TO IMPROVE CRITICAL THINKING ABILITY”**

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## A. Nilai Pretest

No	Nama	Hasil Skor Pretest
1	Adhiyasta Zhafran Alvaro	85
2	Aditya Nauval Haryanto	75
3	Alzena Diva Dwi Anugrah	60
4	Azzam Rais Alfareza	70
5	Deva Auliya Pratama Putri	70
6	Dimas Indra Kurniawan	80
7	Fernando Firas Athallah	60
8	Khadijah Qatrunnada Hainda	80
9	Khoirunnisa Khanza Azzahra	90
10	Kurnia Putri	55
11	Muhammad Al Fatih Wicaksono	90
12	Muhammad Azhad Zulhilmi	60
13	Mutia Indira Lavani	75
14	Nariratana Chanasya Ayundya	90
15	Paramayoga Ammar Maulana	75
16	Radhika Hanan Hafidz Landza`I	80
17	Rizky Wahyudi	50
18	Zafran Alif Naril Simon	85

Diketahui :

N = 18

Nilai Minimum = 50

Nilai Maximum = 90

### 1. Mencari Nilai Mean

$$\bar{X} = \frac{X_1 + X_2 + X_3 + \dots + X_n}{n}$$

Keterangan :

$\bar{X}$  = mean

x1 = nilai data pertama

x2 = nilai data kedua

xn = nilai data ke-n

n = jumlah sampel atau banyak data

$$\bar{X} = \frac{1.330}{18} = 73.8$$

## 2. Mencari nilai varian

$$\bar{X} = \frac{1.330}{18} = 73.8$$

No	Nama	Hasil Skor Pretest	(Xi - $\bar{X}$ )	(Xi - $\bar{X}$ ) <sup>2</sup>
1	Adhiyasta Zhafran Alvaro	85	11.11	123.46
2	Aditya Nauval Haryanto	75	1.11	1.23
3	Alzena Diva Dwi Anugrah	60	-13.89	192.90
4	Azzam Rais Alfareza	70	-3.89	15.12
5	Deva Auliya Pratama Putri	70	-3.89	15.12
6	Dimas Indra Kurniawan	80	6.11	37.35
7	Fernando Firas Athallah	60	-13.89	192.90
8	Khadijah Qatrunnada Hainda	80	6.11	37.35
9	Khoirunnisa Khanza Azzahra	90	16.11	259.57
10	Kurnia Putri	55	-18.89	356.79
11	Muhammad Al Fatih Wicaksono	90	16.11	259.57
12	Muhammad Azhad Zulhilmi	60	-13.89	192.90
13	Mutia Indira Lavani	75	1.11	1.23
14	Nariratana Chanasya Ayundya	90	16.11	259.57
15	Paramayoga Ammar Maulana	75	1.11	1.23
16	Radhika Hanan Hafidz Landza`I	80	6.11	37.35
17	Rizky Wahyudi	50	-23.89	570.68
18	Zafran Alif Naril Simon	85	11.11	123.46
<b>Jumlah</b>				<b>2677.78</b>

$$\sigma = \frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 + \dots + (X_n - \bar{X})^2}{n}$$

Keterangan :

$\Sigma$  = varians

x1 = data pertama

x2 = data kedua

$\bar{X}$  = nilai rata-rata

n = jumlah sampel atau banyak data

$$\sigma = \frac{2577.78}{18-1} = \frac{2577.78}{17} = \mathbf{157.51}$$

### 3. Mencari Standart Deviation

$$\sigma = \sqrt{\frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 + \dots + (X_n - \bar{X})^2}{n - 1}}$$

Keterangan :

$\sigma$	= varians
$x_1$	= data pertama
$x_2$	= data kedua
$\bar{X}$	= nilai rata-rata
$n$	= jumlah sampel atau banyak data
$\sigma$	$= \sqrt{\sigma^2} = \sqrt{157.51} = \mathbf{12.55055138}$

## B. Nilai Post Test

No	Nama	Hasil Skor Pretest
1	Adhiyasta Zhafran Alvaro	100
2	Aditya Nauval Haryanto	95
3	Alzena Diva Dwi Anugrah	80
4	Azzam Rais Alfareza	90
5	Deva Auliya Pratama Putri	95
6	Dimas Indra Kurniawan	90
7	Fernando Firas Athallah	90
8	Khadijah Qatrunnada Hainda	90
9	Khoirunnisa Khanza Azzahra	100
10	Kurnia Putri	85
11	Muhammad Al Fatih Wicaksono	100
12	Muhammad Azhad Zulhilmi	80
13	Mutia Indira Lavani	95
14	Nariratana Chanasya Ayundya	100
15	Paramayoga Ammar Maulana	85
16	Radhika Hanan Hafidz Landza`I	90
17	Rizky Wahyudi	75
18	Zafran Alif Naril Simon	90

Diketahui :

N = 18

Nilai Minimum = 75

Nilai Maximum = 100

### 1. Mencari Nilai Mean

$$\bar{X} = \frac{X_1 + X_2 + X_3 + \dots + X_n}{n}$$

Keterangan :

$\bar{X}$  = mean

x1 = nilai data pertama

x2 = nilai data kedua

xn = nilai data ke-n

n = jumlah sampel atau banyak data

$$\bar{X} = \frac{1.630}{18} = \mathbf{90.56}$$

## 2. Mencari nilai varian

$$\bar{X} = \frac{1.630}{18} = \mathbf{90.56}$$

No	Nama	Hasil Skor Pretest	(Xi - $\bar{X}$ )	(Xi - $\bar{X}$ ) <sup>2</sup>
1	Adhiyasta Zhafran Alvaro	100	9.44	89.20
2	Aditya Nauval Haryanto	95	4.44	19.75
3	Alzena Diva Dwi Anugrah	80	-10.56	111.42
4	Azzam Rais Alfareza	90	-0.56	0.31
5	Deva Auliya Pratama Putri	95	4.44	19.75
6	Dimas Indra Kurniawan	90	-0.56	0.31
7	Fernando Firas Athallah	90	-0.56	0.31
8	Khadijah Qatrunnada Hainda	90	-0.56	0.31
9	Khoirunnisa Khanza Azzahra	100	9.44	89.20
10	Kurnia Putri	85	-5.56	30.86
11	Muhammad Al Fatih Wicaksono	100	9.44	89.20
12	Muhammad Azhad Zulhilmi	80	-10.56	111.42
13	Mutia Indira Lavani	95	4.44	19.75
14	Nariratana Chanasya Ayundya	100	9.44	89.20
15	Paramayoga Ammar Maulana	85	-5.56	30.86
16	Radhika Hanan Hafidz Landza`I	90	-0.56	0.31
17	Rizky Wahyudi	75	-15.56	241.98
18	Zafran Alif Naril Simon	90	-0.56	0.31
<b>Jumlah</b>				<b>944.44</b>

$$\sigma = \frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 + \dots + (X_n - \bar{X})^2}{n}$$

Keterangan :

$\sigma$  = varians  
 $x_1$  = data pertama  
 $x_2$  = data kedua  
 $\bar{X}$  = nilai rata-rata  
 $n$  = jumlah sampel atau banyak data

$$\sigma = \frac{944.44}{18-1} = \frac{944.44}{17} = 55.55$$

### 3. Mencari Standart Deviation

$$\sigma = \sqrt{\frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 + \dots (X_n - \bar{X})^2}{n - 1}}$$

Keterangan :

$\sigma$	= varians
$x_1$	= data pertama
$x_2$	= data kedua
$\bar{X}$	= nilai rata-rata
$n$	= jumlah sampel atau banyak data
$\sigma$	$= \sqrt{\sigma^2} = \sqrt{55.55} = 7.45$

### C. Nilai Keterampilan Berpikir Kritis

No	Nama	Keterampilan Berpikir Kritis
1	Adhiyasta Zhafran Alvaro	85.42
2	Aditya Nauval Haryanto	68.75
3	Alzena Diva Dwi Anugrah	77.08
4	Azzam Rais Alfareza	81.25
5	Deva Auliya Pratama Putri	72.92
6	Dimas Indra Kurniawan	83.33
7	Fernando Firas Athallah	75
8	Khadijah Qatrunnada Hainda	85.42
9	Khoirunnisa Khanza Azzahra	85.42
10	Kurnia Putri	87.5
11	Muhammad Al Fatih Wicaksono	91.67
12	Muhammad Azhad Zulhilmi	79.17
13	Mutia Indira Lavani	93.75
14	Nariratana Chanasya Ayundya	93.75
15	Paramayoga Ammar Maulana	87.5
16	Radhika Hanan Hafidz Landza`I	83.33
17	Rizky Wahyudi	79.17
18	Zafran Alif Naril Simon	85.42

Diketahui :

N = 18

Nilai Minimum = 68.75

Nilai Maxiumum = 93.75

#### 1. Mencari Nilai Mean

$$\bar{X} = \frac{X_1 + X_2 + X_3 + \dots + X_n}{n}$$

Keterangan :

$\bar{X}$  = mean

x1 = nilai data pertama

x2 = nilai data kedua

xn = nilai data ke-n

n = jumlah sampel atau banyak data



$$\bar{X} = \frac{1.495}{18} = 83.10$$

## 2. Mencari nilai varian

$$\bar{X} = \frac{1.495}{18} = 83.10$$

No	NAMA	KETERAMPILAN BERPIKIR KRITIS	(Xi - $\bar{X}$ )	(Xi - $\bar{X}$ ) <sup>2</sup>
1	Adhiyasta Zhafran Alvaro	85.42	2.32	5.37
2	Aditya Nauval Haryanto	68.75	-14.35	206.00
3	Alzena Diva Dwi Anugrah	77.08	-6.02	36.27
4	Azzam Rais Alfareza	81.25	-1.85	3.43
5	Deva Auliya Pratama Putri	72.92	-10.18	103.69
6	Dimas Indra Kurniawan	83.33	0.23	0.05
7	Fernando Firas Athallah	75	-8.10	65.66
8	Khadijah Qatrunnada Hainda	85.42	2.32	5.37
9	Khoirunnisa Khanza Azzahra	85.42	2.32	5.37
10	Kurnia Putri	87.5	4.40	19.34
11	Muhammad Al Fatih Wicaksono	91.67	8.57	73.40
12	Muhammad Azhad Zuhilmi	79.17	-3.93	15.47
13	Mutia Indira Lavani	93.75	10.65	113.36
14	Nariratana Chanasya Ayundya	93.75	10.65	113.36
15	Paramayoga Ammar Maulana	87.5	4.40	19.34
16	Radhika Hanan Hafidz Landza`I	83.33	0.23	0.05
17	Rizky Wahyudi	79.17	-3.93	15.47
18	Zafran Alif Naril Simon	85.42	2.32	5.37
<b>Jumlah</b>				<b>806.36</b>

$$\sigma = \frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 + \dots + (X_n - \bar{X})^2}{n}$$

Keterangan :

$\sigma$  = varians

x1 = data pertama

x2 = data kedua

$\bar{X}$  = nilai rata-rata

n = jumlah sampel atau banyak data

$$\sigma = \frac{806.36}{18-1} = \frac{806.36}{17} = 47.43$$

### 3. Mencari Standart Deviation

$$\sigma = \sqrt{\frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 + \dots (X_n - \bar{X})^2}{n - 1}}$$

Keterangan :

$\sigma$  = varians

$x_1$  = data pertama

$x_2$  = data kedua

$\bar{X}$  = nilai rata-rata

$n$  = jumlah sampel atau banyak data

$$\sigma = \sqrt{\sigma^2} = \sqrt{47.43} = 6.89$$

### UJI HIPOTESIS (PAIRED T-TEST)

No	Hasil Skor Pretest	Hasil Skor Posttest	D (X1. - X2 )	D <sup>2</sup>
1	85	100	-15	225
2	75	95	-20	400
3	60	80	-20	400
4	70	90	-20	400
5	70	95	-25	625
6	80	90	-10	100
7	60	90	-30	900
8	80	90	-10	100
9	90	100	-10	100
10	55	85	-30	900
11	90	100	-10	100
12	60	80	-20	400
13	75	95	-20	400
14	90	100	-10	100
15	75	85	-10	100
16	80	90	-10	100
17	50	75	-25	625
18	85	90	-5	25
<b>Jumlah</b>			<b>-300</b>	<b>6000</b>

#### Keterangan

X1. = nilai pretest  
 X2 = nilai posttest  
 D = selisih hitung  
 D<sup>2</sup> = hasil kuadrat selisih hitung

Langkah-langkah uji hipotesis :

#### Hipotesis

H0 :  $(\mu_1 - \mu_2) = 0$  atau  $\mu_1 = \mu_2$  artinya tidak terdapat perbedaan yang signifikan antara hasil pretest dan posttest

H1 :  $(\mu_1 - \mu_2) \neq 0$  atau  $\mu_1 \neq \mu_2$  artinya terdapat perbedaan yang signifikan antara hasil pretest dan posttest

#### Menentukan nilai alpha

Karena tingkat kepercayaan 95%, maka  $\alpha$  yang digunakan 5% = 0,05

Statistik uji

Uji yang digunakan adalah uji t dengan t-hitung sebagai berikut:

$$t = \frac{\frac{\sum D}{n}}{\frac{s}{\sqrt{n}}} \text{ dan } s = \sqrt{\frac{1}{n-1} \left\{ \sum D^2 - \frac{(\sum D)^2}{n} \right\}}$$

Keterangan:  $X1$  = nilai pretest

$X2$  = nilai posttest

$D$  = selisih hitung

$D2$  = hasil kuadrat selisih hitung  $s$  = simpangan baku

$n$  = jumlah sampel atau banyak data

$$s = \sqrt{\frac{1}{n-1} \left\{ \sum D^2 - \frac{(\sum D)^2}{n} \right\}}$$

$$s = \sqrt{\frac{1}{18-1} \left\{ 6000 - \frac{(-300)^2}{18} \right\}}$$

$$s = \sqrt{\frac{1}{17} \left\{ 6000 - \frac{90000}{18} \right\}}$$

$$s = \sqrt{\frac{1}{17} \left\{ 6000 - \frac{90000}{18} \right\}}$$

$$s = \sqrt{\frac{1}{17} \left\{ 6000 - 5000 \right\}}$$

$$s = \sqrt{\frac{1}{17} \left\{ 6000 - 5000 \right\}}$$

$$s = \sqrt{\frac{1}{17} \left\{ 1000 \right\}}$$

$$s = \sqrt{58.8235} = 7.6696$$

$$t = \frac{\frac{\sum D}{n}}{\frac{s}{\sqrt{n}}} = \frac{\frac{-300}{18}}{\frac{7.6696}{\sqrt{18}}} = \frac{-16.666}{1.80774206} = -9.21923562$$

$$t_{tabel} = t(0,05; 18) = 2.10982$$

Menentukan aturan penolakan  $H_0$

$H_0$  ditolak jika  $t\text{-hitung} > t\text{-tabel}$  atau  $p\text{-value} < \alpha$

Menentukan keputusan

$|t\text{-hitung}| = |-9.21923562| = 9.21923562$  sedangkan nilai  $t\text{-tabel} = 2.10982$

$|t\text{-hitung}| > t\text{-tabel}$  maka, tolak  $H_0$

Kesimpulan :

Karena  $H_0$  ditolak, maka  $H_1$  artinya terdapat perbedaan yang signifikan pada siswa kelas IV antara sebelum dan sesudah belajar diberikan treatment menggunakan pembelajaran kolaboratif.