

Lampiran 41 : Uji T untuk menguji hipotesis 1

$$\begin{aligned}
 t &= \frac{X_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r \left[\frac{s_1}{\sqrt{n_1}} \right] \left[\frac{s_2}{\sqrt{n_2}} \right]}} \\
 &= \frac{72,46 - 64,91}{\sqrt{\frac{29,06}{38} + \frac{30,26}{38} - 2 \times 0,279 \left[\frac{5,39}{\sqrt{38}} \right] \left[\frac{5,50}{\sqrt{38}} \right]}} \\
 &= \frac{7,55}{\sqrt{\frac{59,32}{38} - 2 \times 0,279 \left[\frac{5,39}{6,16} \right] \left[\frac{5,50}{6,16} \right]}} \\
 &= \frac{7,55}{\sqrt{1,56 - 2 \times 0,279 \times 0,88 \times 0,89}} = 1,56 \\
 &= \frac{7,55}{\sqrt{1,56 - 0,44}} \\
 &= \frac{7,55}{\sqrt{1,12}} \\
 &= \frac{7,55}{1,06} \\
 &= 7,12
 \end{aligned}$$

$$t \text{ Tabel, } dk = n_1 + n_2 - 2$$

$$= 38 + 38 - 2$$

= 74, karena tidak ada dalam tabel, maka dilakukan interpolasi

$$t_{05}(60) = 2,000$$

$$t_{05}(120) = \underline{1,980} - 0,020$$

$$\begin{aligned}
 t_{05}(74) &= 2 - \frac{1}{2}(0,020) \\
 &= 2,00 - 0,01 \\
 &= 1,99
 \end{aligned}$$

Kriteria Pengujian

H_a = diterima jika $t \text{ hitung} > t \text{ tabel}$

H_o = diterima jika $t \text{ hitung} < t \text{ tabel}$

Karena $t \text{ hitung} (7,12) > t \text{ tabel} (1,99)$ maka H_o ditolak dan H_a diterima, terdapat perbedaan prestasi belajar antara kelas eksperimen XA dengan Kelas Kontrol X C

Lampiran 42 : Uji T untuk menguji hipotesis 2

$$\begin{aligned}
 t &= \frac{X_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r \left[\frac{s_1}{\sqrt{n_1}} \right] \left[\frac{s_2}{\sqrt{n_2}} \right]}} \\
 &= \frac{72,46 - 64,82}{\sqrt{\frac{29,06}{38} + \frac{42,51}{38} - 2 \times 0,08 \left[\frac{5,39}{\sqrt{38}} \right] \left[\frac{6,52}{\sqrt{38}} \right]}} \\
 &= \frac{7,64}{\sqrt{\frac{71,57}{38} - 2 \times 0,08 \left[\frac{5,39}{6,16} \right] \left[\frac{6,52}{6,16} \right]}} \\
 &= \frac{7,64}{\sqrt{1,88 - 2 \times 0,08 \times 0,88 \times 0,06}} \\
 &= \frac{7,64}{\sqrt{1,88 - 0,15}} \\
 &= \frac{7,64}{\sqrt{1,73}} \\
 &= \frac{7,64}{1,32} \\
 &= 5,79
 \end{aligned}$$

$$t \text{ Tabel, } dk = n_1 + n_2 - 2$$

$$= 38 + 38 - 2$$

= 74, karena tidak ada dalam tabel, maka dilakukan interpolasi

$$t_{05}(60) = 2,000$$

$$t_{05}(120) = \underline{1,980} - 0,020$$

$$\begin{aligned}
 t_{05}(74) &= 2 - \frac{1}{2}(0,020) \\
 &= 2,00 - 0,01 \\
 &= 1,99
 \end{aligned}$$

Kriteria Pengujian

H_a = diterima jika $t \text{ hitung} > t \text{ tabel}$

H_o = diterima jika $t \text{ hitung} < t \text{ tabel}$

Karena $t \text{ hitung} (5,79) > t \text{ tabel} (1,99)$ maka H_o ditolak dan H_a diterima, terdapat perbedaan prestasi belajar antara kelas eksperimen XA dengan Kelas Kontrol X E

Lampiran 43 : Uji T untuk menguji hipotesis 3

$$\begin{aligned}
 t &= \frac{X_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r \left[\frac{s_1}{\sqrt{n_1}} \right] \left[\frac{s_2}{\sqrt{n_2}} \right]}} \\
 &= \frac{72,46 - 64,95}{\sqrt{\frac{29,06}{38} + \frac{32,81}{37} - 2 \times 0,08 \left[\frac{5,39}{\sqrt{38}} \right] \left[\frac{5,73}{\sqrt{37}} \right]}} \\
 &= \frac{7,51}{\sqrt{0,76 + 0,89 - 2 \times 0,08 \left[\frac{5,39}{6,16} \right] \left[\frac{5,73}{6,08} \right]}} \\
 &= \frac{7,51}{\sqrt{1,88 - 2 \times 0,08 \left(\frac{5,39}{6,16} \right) \left(\frac{5,73}{6,08} \right)}} \\
 &= \frac{7,51}{\sqrt{1,88 - 0,13}} \\
 &= \frac{7,51}{\sqrt{1,75}} \\
 &= \frac{7,51}{1,32} \\
 &= 5,69
 \end{aligned}$$

$$t \text{ Tabel, } dk = n_1 + n_2 - 2$$

$$= 38 + 37 - 2$$

= 73, karena tidak ada dalam tabel, maka dilakukan interpolasi

$$t_{05}(60) = 2,000$$

$$t_{05}(120) = \underline{1,980} - 0,020$$

$$\begin{aligned}
 t_{05}(74) &= 2 - \frac{1}{2}(0,020) \\
 &= 2,00 - 0,01 \\
 &= 1,99
 \end{aligned}$$

Kriteria Pengujian

H_a = diterima jika $t \text{ hitung} > t \text{ tabel}$

H_o = diterima jika $t \text{ hitung} < t \text{ tabel}$

Karena $t \text{ hitung} (5,69) > t \text{ tabel} (1,99)$ maka H_o ditolak dan H_a diterima, terdapat perbedaan prestasi belajar antara kelas eksperimen XA dengan Kelas Kontrol X F

Lampiran Uji T untuk menguji hipotesis 4

$$\begin{aligned}
 t &= \frac{X_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r \left[\frac{s_1}{\sqrt{n_1}} \right] \left[\frac{s_2}{\sqrt{n_2}} \right]}} \\
 &= \frac{71,58 - 64,91}{\sqrt{\frac{60,66}{38} + \frac{30,26}{38} - 2 \times 0,011 \left[\frac{7,79}{\sqrt{38}} \right] \left[\frac{5,50}{\sqrt{38}} \right]}} \\
 &= \frac{6,67}{\sqrt{\frac{90,92}{38} - 2 \times 0,011 \left[\frac{7,79}{6,16} \right] \left[\frac{5,50}{6,16} \right]}} \\
 &= \frac{6,67}{\sqrt{2,39 - 2 \times 0,011 (1,26) (0,89)}} \\
 &= \frac{6,67}{\sqrt{2,39 - 0,25}} \\
 &= \frac{6,67}{\sqrt{2,14}} \\
 &= \frac{6,67}{1,46} \\
 &= 4,57
 \end{aligned}$$

$$t \text{ Tabel, } dk = n_1 + n_2 - 2$$

$$= 38 + 38 - 2$$

= 74, karena tidak ada dalam tabel, maka dilakukan interpolasi

$$t_{05}(60) = 2,000$$

$$t_{05}(120) = \underline{1,980} - 0,020$$

$$\begin{aligned}
 t_{05}(74) &= 2 - \frac{1}{2}(0,020) \\
 &= 2,00 - 0,01 \\
 &= 1,99
 \end{aligned}$$

Kriteria Pengujian

H_0 = ditolak jika $t \text{ hitung} > t \text{ tabel}$

H_0 = diterima jika $t \text{ hitung} < t \text{ tabel}$

Karena $t \text{ hitung} (4,57) > t \text{ tabel} (1,99)$ maka H_0 ditolak dan H_a diterima, terdapat perbedaan prestasi belajar antara kelas eksperimen XB dengan Kelas Kontrol XC

Lampiran 44 : Uji T untuk menguji hipotesis 4

$$\begin{aligned}
 t &= \frac{X_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r \left[\frac{s_1}{\sqrt{n_1}} \right] \left[\frac{s_2}{\sqrt{n_2}} \right]}} \\
 &= \frac{71,58 - 64,82}{\sqrt{\frac{60,66}{38} + \frac{42,51}{38} - 2 \times 0,186 \left[\frac{7,79}{\sqrt{38}} \right] \left[\frac{6,52}{\sqrt{38}} \right]}} \\
 &= \frac{6,76}{\sqrt{\frac{103,17}{38} - 2 \times 0,186 \left[\frac{7,79}{6,16} \right] \left[\frac{6,52}{6,16} \right]}} \\
 &= \frac{6,76}{\sqrt{2,72 - 2 \times 0,186 (2,26)(1,06)}} \\
 &= \frac{6,76}{\sqrt{2,72 - 0,50}} \\
 &= \frac{6,76}{\sqrt{2,22}} \\
 &= \frac{6,76}{1,49} \\
 &= 4,54
 \end{aligned}$$

$$t \text{ Tabel, } dk = n_1 + n_2 - 2$$

$$= 38 + 38 - 2$$

= 74, karena tidak ada dalam tabel, maka dilakukan interpolasi

$$t_{05}(60) = 2,000$$

$$t_{05}(120) = \underline{1,980} - 0,020$$

$$\begin{aligned}
 t_{05}(74) &= 2 - \frac{1}{2}(0,020) \\
 &= 2,00 - 0,01 \\
 &= 1,99
 \end{aligned}$$

Kriteria Pengujian

H_0 = ditolak jika $t \text{ hitung} > t \text{ tabel}$

H_0 = diterima jika $t \text{ hitung} < t \text{ tabel}$

Karena $t \text{ hitung} (4,54) > t \text{ tabel} (1,99)$ maka H_0 ditolak dan H_a diterima, terdapat perbedaan prestasi belajar antara kelas eksperimen XB dengan Kelas Kontrol XE

Lampiran Uji T untuk menguji hipotesis 6

$$\begin{aligned}
 t &= \frac{X_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r \left[\frac{s_1}{\sqrt{n_1}} \right] \left[\frac{s_2}{\sqrt{n_2}} \right]}} \\
 &= \frac{71,58 - 64,95}{\sqrt{\frac{60,66}{38} + \frac{32,81}{37} - 2 \times 0,308 \left[\frac{7,79}{\sqrt{38}} \right] \left[\frac{5,73}{\sqrt{37}} \right]}} \\
 &= \frac{6,63}{\sqrt{1,60 + 0,89 - 2 \times 0,308 \left[\frac{7,79}{6,16} \right] \left[\frac{5,73}{6,08} \right]}} \\
 &= \frac{6,63}{\sqrt{2,49 - 2 \times 0,308 (1,26)(0,94)}} \\
 &= \frac{6,63}{\sqrt{2,49 - 0,73}} \\
 &= \frac{6,63}{\sqrt{1,76}} \\
 &= \frac{6,63}{1,33} \\
 &= 6,31
 \end{aligned}$$

$$t \text{ Tabel, } dk = n_1 + n_2 - 2$$

$$= 38 + 37 - 2$$

= 73, karena tidak ada dalam tabel, maka dilakukan interpolasi

$$t_{05}(60) = 2,000$$

$$t_{05}(120) = \underline{1,980} - 0,020$$

$$\begin{aligned}
 t_{05}(73) &= 2 - \frac{1}{2}(0,020) \\
 &= 2,00 - 0,01 \\
 &= 1,99
 \end{aligned}$$

Kriteria Pengujian

H_0 = ditolak jika $t \text{ hitung} > t \text{ tabel}$

H_0 = diterima jika $t \text{ hitung} < t \text{ tabel}$

Karena $t \text{ hitung} (6,31) > t \text{ tabel} (1,99)$ maka H_0 ditolak dan H_a diterima, terdapat perbedaan prestasi belajar antara kelas eksperimen XB dengan Kelas Kontrol XF

Lampiran Uji T untuk menguji hipotesis 7

$$\begin{aligned}
 t &= \frac{X_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r \left[\frac{s_1}{\sqrt{n_1}} \right] \left[\frac{s_2}{\sqrt{n_2}} \right]}} \\
 &= \frac{72,28 - 64,91}{\sqrt{\frac{56,79}{38} + \frac{30,26}{38} - 2 \times 0,059 \left[\frac{7,54}{\sqrt{38}} \right] \left[\frac{5,50}{\sqrt{38}} \right]}} \\
 &= \frac{7,37}{\sqrt{\frac{87,05}{38} - 2 \times 0,059 \left[\frac{7,54}{6,16} \right] \left[\frac{5,50}{6,16} \right]}} \\
 &= \frac{7,37}{\sqrt{2,29 - 2 \times 0,059 (1,22) (0,89)}} \\
 &= \frac{7,37}{\sqrt{2,29 - 0,13}} \\
 &= \frac{7,37}{\sqrt{2,16}} \\
 &= \frac{7,37}{1,47} \\
 &= 5,01
 \end{aligned}$$

$$t \text{ Tabel, } dk = n_1 + n_2 - 2$$

$$= 38 + 38 - 2$$

= 74, karena tidak ada dalam tabel, maka dilakukan interpolasi

$$t_{05}(60) = 2,000$$

$$t_{05}(120) = \underline{1,980} - 0,020$$

$$\begin{aligned}
 t_{05}(74) &= 2 - \frac{1}{2}(0,020) \\
 &= 2,00 - 0,01 \\
 &= 1,99
 \end{aligned}$$

Kriteria Pengujian

H_0 = ditolak jika $t \text{ hitung} > t \text{ tabel}$

H_0 = diterima jika $t \text{ hitung} < t \text{ tabel}$

Karena $t \text{ hitung} (5,01) > t \text{ tabel} (1,99)$ maka H_0 ditolak dan H_a diterima, terdapat perbedaan prestasi belajar antara kelas eksperimen Xi dengan Kelas Kontrol XC

Lampiran Uji T untuk menguji hipotesis 8

$$\begin{aligned}
 t &= \frac{X_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r \left[\frac{s_1}{\sqrt{n_1}} \right] \left[\frac{s_2}{\sqrt{n_2}} \right]}} \\
 &= \frac{72,28 - 64,82}{\sqrt{\frac{56,79}{38} + \frac{42,51}{38} - 2 \times 0,144 \left[\frac{7,54}{\sqrt{38}} \right] \left[\frac{6,52}{\sqrt{38}} \right]}} \\
 &= \frac{7,46}{\sqrt{\frac{99,3}{38} - 2 \times 0,144 \left[\frac{7,54}{6,16} \right] \left[\frac{6,52}{6,16} \right]}} \\
 &= \frac{7,46}{\sqrt{2,61 - 2 \times 0,144 \times 0,22 \times 0,06}} \\
 &= \frac{7,46}{\sqrt{2,61 - 0,37}} \\
 &= \frac{7,46}{\sqrt{2,24}} \\
 &= \frac{7,46}{1,50} \\
 &= 4,97
 \end{aligned}$$

$$t \text{ Tabel, } dk = n_1 + n_2 - 2$$

$$= 38 + 38 - 2$$

= 74, karena tidak ada dalam tabel, maka dilakukan interpolasi

$$t_{05}(60) = 2,000$$

$$t_{05}(120) = \underline{1,980} - 0,020$$

$$\begin{aligned}
 t_{05}(74) &= 2 - \frac{1}{2}(0,020) \\
 &= 2,00 - 0,01 \\
 &= 1,99
 \end{aligned}$$

Kriteria Pengujian

H_0 = ditolak jika $t \text{ hitung} > t \text{ tabel}$

H_0 = diterima jika $t \text{ hitung} < t \text{ tabel}$

Karena $t \text{ hitung} (4,97) > t \text{ tabel} (1,99)$ maka H_0 ditolak dan H_a diterima, terdapat perbedaan prestasi belajar antara kelas eksperimen Xi dengan Kelas Kontrol XE

Lampiran Uji T untuk menguji hipotesis 9

$$\begin{aligned}
 t &= \frac{X_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r \left[\frac{s_1}{\sqrt{n_1}} \right] \left[\frac{s_2}{\sqrt{n_2}} \right]}} \\
 &= \frac{72,28 - 64,95}{\sqrt{\frac{56,79}{38} + \frac{32,81}{37} - 2 \times 0,015 \left[\frac{7,54}{\sqrt{38}} \right] \left[\frac{5,73}{\sqrt{37}} \right]}} \\
 &= \frac{7,33}{\sqrt{1,49 + 0,89 - 2 \times 0,015 \left[\frac{7,54}{6,16} \right] \left[\frac{5,73}{6,08} \right]}} \\
 &= \frac{7,33}{\sqrt{2,38 - 2 \times 0,015 (2,22)(0,94)}} \\
 &= \frac{7,33}{\sqrt{2,38 - 0,03}} \\
 &= \frac{7,33}{\sqrt{2,35}} \\
 &= \frac{7,33}{1,53} \\
 &= 4,79
 \end{aligned}$$

$$t \text{ Tabel, } dk = n_1 + n_2 - 2$$

$$= 38 + 37 - 2$$

= 73, karena tidak ada dalam tabel, maka dilakukan interpolasi

$$t_{05}(60) = 2,000$$

$$t_{05}(120) = \underline{1,980} - 0,020$$

$$\begin{aligned}
 t_{05}(73) &= 2 - \frac{1}{2}(0,020) \\
 &= 2,00 - 0,01 \\
 &= 1,99
 \end{aligned}$$

Kriteria Pengujian

H_0 = ditolak jika $t \text{ hitung} > t \text{ tabel}$

H_0 = diterima jika $t \text{ hitung} < t \text{ tabel}$

Karena $t \text{ hitung} (4,79) > t \text{ tabel} (1,99)$ maka H_0 ditolak dan H_a diterima, terdapat perbedaan prestasi belajar antara kelas eksperimen Xi dengan Kelas Kontrol XF