T-Test (Level of education)

Group Statistics

	Education Level	N	Mean	Std. Deviation	Std. Error Mean
Grdaes Without Type Hints	Graduate	30	5.90	3.916	.715
	Undergraduate	82	4.41	3.496	.386
Grdaes With Type Hints	Graduate	30	7.73	5.527	1.009
	Undergraduate	82	5.44	4.699	.519

Independent Samples Test

	masponasint samples root				
		Levene's Test Varia	t-test for Equality of .		
		F	Sig.	t	
Grdaes Without Type Hints	Equal variances assumed	.333	.565	1.928	
	Equal variances not assumed			1.828	
Grdaes With Type Hints	Equal variances assumed	2.600	.110	2.181	
	Equal variances not assumed			2.022	

Independent Samples Test

t-test for Equality of Means

		df	Significance One-Sided p Two-Sided p	
		ui	One-olded p	1 WO-Olded p
Grdaes Without Type Hints	Equal variances assumed	110	.028	.056
	Equal variances not assumed	46.948	.037	.074
Grdaes With Type Hints	Equal variances assumed	110	.016	.031
	Equal variances not assumed	45.231	.025	.049

Independent Samples Test

t-test for Equality of Means

		Mean Difference	Std. Error Difference	95% Confidence Interval of the Lower
Grdaes Without Type Hints	Equal variances assumed	1.485	.771	042
	Equal variances not assumed	1.485	.813	149
Grdaes With Type Hints	Equal variances assumed	2.294	1.052	.209
	Equal variances not assumed	2.294	1.135	.009

Independent Samples Test

t-test for Equality of Means 95% Confidence Interval of the ...

		Upper
Grdaes Without Type Hints	Equal variances assumed	3.012
	Equal variances not assumed	3.120
Grdaes With Type Hints	Equal variances assumed	4.379
	Equal variances not assumed	4.579

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer ^a	Point Estimate	Lower	Upper
Grdaes Without Type Hints	Cohen's d	3.611	.411	011	.832
	Hedges' correction	3.636	.408	011	.826
	Glass's delta	3.496	.425	.000	.847
Grdaes With Type Hints	Cohen's d	4.930	.465	.042	.887
	Hedges' correction	4.964	.462	.041	.881
	Glass's delta	4.699	.488	.062	.912

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.

T-Test (Paird t test)

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Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Grdaes With Type Hints	6.05	112	5.013	.474
	Grdaes Without Type Hints	4.81	112	3.655	.345

Paired Samples Correlations

				Significance	
		N	Correlation	One-Sided p	Two-Sided p
Pair 1	Grdaes With Type Hints & Grdaes Without Type Hints	112	.796	<.001	<.001

Paired Samples Test

Paired Differences

		Paired Differences			
				95% Confidence Interval of the	
	Mean	Std. Deviation	Std. Error Mean	Lower	
Pair 1 Grdaes With Type I Grdaes Without Type		3.056	.289	.669	

Paired Samples Test

		Paired			Signifi	cance
	95% Confidence Interval of the					
		Upper	t	df	One-Sided p	Two-Sided p
Pair 1	Grdaes With Type Hints - Grdaes Without Type Hints	1.813	4.298	111	<.001	<.001

Paired Samples Effect Sizes

					95%
			Standardizer ^a	Point Estimate	Lower
Pair 1	Grdaes With Type Hints -	Cohen's d	3.056	.406	.213
Grdaes Without Type Hints	Hedges' correction	3.077	.403	.211	

Paired Samples Effect Sizes

95% ...

			Upper
Pair 1	Grdaes With Type Hints -	Cohen's d	.598
Grdaes Without Type Hints		Hedges' correction	.594

a. The denominator used in estimating the effect sizes.
 Cohen's d uses the sample standard deviation of the mean difference.
 Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.

T-Test

Group Statistics

	Education Level	N	Mean	Std. Deviation	Std. Error Mean
Grdaes Without Type Hints	Graduate	30	5.90	3.916	.715
	Undergraduate	82	4.41	3.496	.386
Grdaes With Type Hints	Graduate	30	7.73	5.527	1.009
	Undergraduate	82	5.44	4.699	.519

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of .
		F	Sig.	t
Grdaes Without Type Hints	Equal variances assumed	.333	.565	1.928
	Equal variances not assumed			1.828
Grdaes With Type Hints	Equal variances assumed	2.600	.110	2.181
	Equal variances not assumed			2.022

Independent Samples Test

t-test for Equality of Means

		df	Significance One-Sided p Two-Sided p	
Grdaes Without Type Hints	Equal variances assumed	110	.028	.056
71	Equal variances not assumed	46.948	.037	.074
Grdaes With Type Hints	Equal variances assumed	110	.016	.031
	Equal variances not assumed	45.231	.025	.049

Independent Samples Test

t-test for Equality of Means

		Mean Difference	Std. Error Difference	95% Confidence Interval of the Lower
Grdaes Without Type Hints	Equal variances assumed	1.485	.771	042
	Equal variances not assumed	1.485	.813	149
Grdaes With Type Hints	Equal variances assumed	2.294	1.052	.209
	Equal variances not assumed	2.294	1.135	.009

Independent Samples Test

t-test for Equality of Means 95% Confidence Interval of the ...

	Upper
Grdaes Without Type Hints	3.012
Equal variances not assumed	3.120
Grdaes With Type Hints	4.379
Equal variances not assumed	4.579

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer ^a	Point Estimate	Lower	Upper
Grdaes Without Type Hints	Cohen's d	3.611	.411	011	.832
	Hedges' correction	3.636	.408	011	.826
	Glass's delta	3.496	.425	.000	.847
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	Hedges' correction	4.964	.462	.041	.881
	Glass's delta	4.699	.488	.062	.912

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.