

Methodology for ACT WorkKeys® as a Predictor of Worker Productivity

The analysis examined the predictive potential of ACT WorkKeys® with regard to two elements. The first is “time to employment.” People taking WorkKeys were either completing schooling or actively in the job market and looking for employment. The time to employment was measured as the number of weeks from the date of the test until the individual appeared on a wage record. The observation count for this was 200,044. Not everyone taking the exam had a wage record, as some individuals may have never found work, retired or moved out of state.

Wages were also of interest. Ideally, if this were a longitudinal dataset, an assessment could have been made examining the score on the test versus wage growth over a five- or 10-year horizon. Assuming wages as a proxy for performance, a relationship between WorkKeys’ scores and on the job performance would be properly ascertained. Unfortunately, such a longitudinal series was not available so two different wage measures were used.

The first, “wage after test,” reflects the average wage collected in the second and third quarters from the date of initial employment (this compensates for mid-quarter hiring or the potential influence of signing bonuses). The observation count for this was 265,229. However, this variable may be detrimentally influenced by selection bias. Highly productive employees likely score well on the assessment and find a more highly paid position in reemployment. The high wage on reemployment might be a function of the exam, but it might also be an indication of prior wage. To accommodate this potential, an additional “wage difference” variable was created. It is based on the difference between wages after reemployment with those before the test (using a similar collection method). The observation count for this was 64,642.

The analysis additionally looked at individuals age 19 and older and those between ages 16 and 18. Most individuals took WorkKeys during a phase of unemployment and as a result of applying for jobs with specific employers. This self-selection has the potential to bias results. However, some school districts provided these assessments to students prior to graduation from high school and the student pool would be less likely to suffer from self-selection. The results were run against both groups to determine if any detectable difference could be ascertained.

A standard ordinary least squares (OLS) model was utilized to assess the data. As the tests were taken in such short time proximity, the potential influence of time was discounted in this preliminary study.

$$\text{Time to Employment}_i = \beta_0 + \beta_1(\text{Gender}_i) + \beta_2(\text{Age}_i) + \sum_{k=3}^8 \beta_{k,i}(X_{k,i}) + \sum_{n=9}^{17} \beta_{n,i}(Y_{n,i}) + \varepsilon$$

$$\text{Wage Difference}_i = \beta_0 + \beta_1(\text{Gender}_i) + \beta_2(\text{Age}_i) + \sum_{k=3}^8 \beta_{k,i}(X_{k,i}) + \sum_{n=9}^{17} \beta_{n,i}(Y_{n,i}) + \varepsilon$$

Where

i = individual

X_k = Tests: Reading for Information, Locating Information, Observation, Teamwork, Applied Mathematics, Applied Technology

Y_n = Highest Educational Attainment: 8th Grade or Less, Grades 9-11, H.S. Graduate or Equivalent, 1 Yr College, 2 Yr College or Associates, 3 Yr College, Bachelor's, Master's, Doctorate

The results provided below indicate no statistical influence on the choice of test taken with time to employment or wage.

The next set of tests examined the influence of score on the tests with regard to time to employment and wages, while controlling for the additional variables. These tests were run independently on the young cohort and older cohort.

$$\text{Time to Employment}_i = \beta_0 + \beta_1(\text{Gender}_i) + \beta_2(\text{Age}_i) + \beta_3(\text{Level}_i) + \sum_{n=4}^{12} \beta_{n,i}(Y_{n,i}) + \varepsilon$$

$$\text{Wage After Test}_i = \beta_0 + \beta_1(\text{Gender}_i) + \beta_2(\text{Age}_i) + \beta_3(\text{Level}_i) + \sum_{n=4}^{12} \beta_{n,i}(Y_{n,i}) + \varepsilon$$

$$\text{Wage Difference}_i = \beta_0 + \beta_1(\text{Gender}_i) + \beta_2(\text{Age}_i) + \beta_3(\text{Level}_i) + \sum_{n=4}^{12} \beta_{n,i}(Y_{n,i}) + \varepsilon$$

Where

Level: Level score individual achieved on the WorkKeys Assessment Test

The results of the analysis indicate little difference between younger and older groups. Either the influence of selection bias as a result of mandated employer participation by applicants is not large enough to be detected or the method of splitting age groups to isolate the bias was insufficient.

Tables

Observation Count Test	Wage After Test		
	Total	above 18	16 to 18
Reading for Information	51445	46283	5162
Locating Information	76294	70482	5812
Observation	55464	54315	1149
Teamwork	18451	18027	424
Applied Mathematics	55372	49914	5458
Applied Technology	7497	7274	223

Observation Count Test	Time (Weeks) to Employment		
	Total	above 18	16 to 18
Reading for Information	38434	34669	3765
Locating Information	57771	53480	4291
Observation	42468	41567	901
Teamwork	13811	13486	325
Applied Mathematics	41533	37543	3990
Applied Technology	6027	5851	176

Observation Count Test	Wage Difference		
	Total	above 18	16 to 18
Reading for Information	13011	11614	1397
Locating Information	18523	17002	1521
Observation	12996	12748	248
Teamwork	4640	4541	99
Applied Mathematics	13839	12371	1468
Applied Technology	1470	1423	47

# of Obs.	265229
F(20,265208)	568.46
Prob>F	0.0000
R-Sqr Adj.	0.0411

Variable	Coef	Std Err	t	p
Reading for Information	-86.02	3198.5	0.03	0.979
Locating Information	-93.01	3198.5	0.03	0.977
Observation	-7.89	3198.5	0.00	0.998
Teamwork	-110.91	3198.8	0.03	0.972
Applied Mathematics	-112.00	3198.5	0.04	0.972
Applied Technology	-72.05	3199.3	0.02	0.982
Listening and Writing	-182.11	3207.6	0.06	0.955
Locating Information	461.06	4523.5	0.10	0.919
Business Writing	(omitted)			
Workplace Observation	-2678.58	5539.9	0.48	0.629
Gender (M)	-344.38	26.91	12.80	0.000**
Age at Test	-96.17	0.98	98.16	0.000**
8th Grade or less	-688.28	80.21	8.58	0.000**
Grades 9-11	-1377.09	73.12	18.83	0.000**
H.S. Grad. or Equiv.	-1204.99	48.94	24.62	0.000**
1 yr. College/Tech./Voc.	-1233.43	62.22	19.82	0.000**
2 yrs. College or Assoc.	-1232.24	58.22	21.17	0.000**
3 yrs. College/Tech./Voc.	-1382.26	100.00	13.82	0.000**
Bachelor's Degree	-1364.78	70.12	19.46	0.000**
Master's Degree	-2811.28	173.18	16.23	0.000**
Doctorate	-1712.16	232.31	7.37	0.000**
Intercept	4842.51			

Statistical Significance: 1% **, 5% *

# of Obs.	200587
F(19,200567)	78.56
Prob>F	0.0000
R-Sqr Adj.	0.0073

Variable	Coef	Std Err	t	p
Reading for Information	1.29	51503.1	0.00	1.000
Locating Information	0.60	51503.1	0.00	1.000
Observation	-2.08	51503.1	0.00	1.000
Teamwork	-3.38	51503.1	0.00	1.000
Applied Mathematics	1.34	51503.1	0.00	1.000
Applied Technology	-1.68	51503.1	0.00	1.000
Listening and Writing	-1.31	51503.1	0.00	1.000
Locating Information	(omitted)			
Business Writing	-1.28	51503.1	0.00	1.000
Workplace Observation	(omitted)			
Gender (M)	-0.02	0.12	0.21	0.835
Age at Test	0.08	0.00	18.88	0.000**
8th Grade or less	-2.11	0.45	4.73	0.000**
Grades 9-11	-0.88	0.42	2.08	0.037
H.S. Grad. or Equiv.	-3.49	0.35	10.00	0.000**
1 yr. College/Tech./Voc.	-3.64	0.38	9.48	0.000**
2 yrs. College or Assoc.	-4.10	0.37	10.94	0.000**
3 yrs. College/Tech./Voc.	4.42	0.51	8.66	0.000**
Bachelor's Degree	-4.35	0.41	10.58	0.000**
Master's Degree	-6.02	0.79	7.60	0.000**
Doctorate	-5.79	1.04	5.59	0.000**
Intercept	16.71			

Statistical Significance: 1% **, 5% *

Variable	Test: Reading for Information Time to Employment Age: 19 and older				Test: Reading for Information Time to Employment Age: 16 to 18				Test: Locating Information Time to Employment Age: 19 and older				Test: Locating Information Time to Employment Age: 16 to 18				Test: Observation Time to Employment Age: 19 and older				Test: Observation Time to Employment Age: 16 to 18			
	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p
Level Score	-0.63	0.12	5.25	0.000**	-0.57	0.36	1.59	0.112	-0.48	0.11	4.40	0.000**	-0.28	0.43	0.64	0.521	-0.56	0.10	5.81	0.000**	0.28	0.54	0.53	0.600
Gender (M)	-0.62	0.29	2.19	0.029	2.17	0.98	2.22	0.027	-0.24	0.23	1.02	0.308	1.95	0.91	2.15	0.031	1.55	0.23	6.49	0.000**	3.78	1.26	2.99	0.003
Age at Test	0.12	0.01	10.69	0.000**	-4.93	1.12	4.40	0.000	0.10	0.01	10.84	0.000**	-4.74	1.08	4.37	0.000**	0.08	0.01	8.52	0.000**	1.79	2.72	0.66	0.510
8th Grade of less	-0.27	1.36	0.20	0.841	-3.51	1.69	2.07	0.038	0.05	1.05	0.05	0.962	-2.94	1.63	1.81	0.071	0.32	1.09	0.29	0.769	-12.66	4.75	2.66	0.008
Grades 9-11	3.55	1.24	2.85	0.004	-6.26	2.05	3.05	0.002	2.02	0.98	2.06	0.039	-5.79	1.89	3.07	0.000**	-0.79	1.07	0.74	0.460	-10.33	3.87	2.67	0.008
H.S. Grad. or Equiv.	-0.66	1.11	0.06	0.55	-4.14	1.32	3.15	0.002	-0.98	0.85	1.15	0.249	-4.37	1.25	3.49	0.000**	-0.10	0.90	0.11	0.914	-13.48	3.48	3.87	0.000**
1 yr. College/Tech./Voc.	-0.73	1.18	0.62	0.536	-6.22	2.52	2.47	0.014	-0.91	0.91	1.00	0.318	-4.91	2.30	2.13	0.033	0.26	0.95	0.27	0.784	-10.41	4.17	2.50	0.013
2 yrs. College or Assoc.	1.33	1.16	1.14	0.252	1.70	3.16	0.54	0.59	-1.31	0.89	1.47	0.142	0.97	2.92	0.33	0.739	0.00	0.94	0.00	0.997	-14.05	5.17	2.72	0.007
3 yrs. College/Tech./Voc.	-1.16	1.45	0.80	0.422	-4.95	8.30	0.60	0.551	-1.71	1.11	1.54	0.123	-4.64	7.60	0.61	0.542	-0.75	1.14	0.66	0.508	-4.09	16.8	0.24	0.807
Bachelor's Degree	-1.55	1.23	1.26	0.208	9.33	8.30	1.12	0.261	-1.52	0.94	1.61	0.108	6.66	7.60	0.88	0.381	0.38	0.99	0.38	0.702	-18.94	10.1	1.88	0.061
Master's Degree	-3.50	1.97	1.78	0.075	(omitted)	(omitted)	(omitted)	(omitted)	-3.17	1.59	1.99	0.046	(omitted)	(omitted)	(omitted)	(omitted)	-1.02	1.67	0.72	0.473	(omitted)			
Doctorate	-3.13	2.57	1.22	0.224	(omitted)	(omitted)	(omitted)	(omitted)	-3.01	2.04	1.47	0.141	(omitted)	(omitted)	(omitted)	(omitted)	-2.16	2.00	1.08	0.280	(omitted)			
Intercept	17.07				112.39				15.94				107.07					12.61				-12.04		

Statistical Significance: 1% **, 5% *

Variable	Test: Teamwork Time to Employment Age: 19 and older				Test: Teamwork Time to Employment Age: 16 to 18				Test: Applied Mathematics Time to Employment Age: 19 and older				Test: Applied Mathematics Time to Employment Age: 16 to 18				Test: Applied Technology Time to Employment Age: 19 and older				Test: Applied Technology Time to Employment Age: 16 to 18			
	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p
Level Score	-0.30	0.16	1.90	0.058	1.53	0.87	1.75	0.081	-0.66	0.11	6.28	0.000**	-0.67	0.36	1.85	0.065	-0.27	0.17	1.59	0.112	-3.12	1.33	2.35	0.200
Gender (M)	0.91	0.38	2.36	0.018	5.91	2.49	2.37	0.018	-0.77	0.28	2.71	0.007	2.18	0.95	2.29	0.022	1.55	0.89	1.74	0.082	12.63	10.03	1.26	0.210
Age at Test	0.12	0.01	8.15	0.000**	0.85	5.35	0.16	0.874	0.10	0.01	9.18	0.000**	-4.62	1.11	4.18	0.000**	0.10	0.02	4.03	0.000**	1.93	7.56	0.25	0.799
8th Grade of less	-1.55	1.79	0.87	0.387	-21.92	8.0	2.74	0.007	-0.45	1.29	0.35	0.726	-3.25	1.66	1.96	0.050	-3.48	2.46	1.41	0.157	16.77	9.75	1.72	0.087
Grades 9-11	-0.93	1.68	0.55	0.581	-12.09	6.35	1.90	0.058	2.17	1.19	1.83	0.067	-6.72	1.99	3.38	0.001	-4.61	2.81	1.64	0.101	-5.51	10.28	0.54	0.593
H.S. Grad. or Equiv.	-0.71	1.48	0.48	0.631	-19.98	5.85	3.42	0.001	-1.74	1.05	1.66	0.097	-4.25	1.29	3.29	0.001	-3.12	1.87	1.67	0.096	0.78	6.65	0.12	0.907
1 yr. College/Tech./Voc.	-0.63	1.56	0.40	0.688	-13.08	7.10	1.84	0.067	-1.88	1.12	1.68	0.092	-5.44	2.46	2.22	0.027	-0.68	2.03	0.34	0.736	10.56	10.07	1.05	0.296
2 yrs. College or Assoc.	-1.48	1.54	0.96	0.336	-25.28	11.0	2.29	0.023	-2.44	1.10	2.22	0.026	0.96	3.05	0.31	0.753	-1.99	1.96	1.01	0.310	-2.54	12.5	0.20	0.839
3 yrs. College/Tech./Voc.	-1.31	1.86	0.70	0.481	(omitted)	(omitted)	(omitted)	(omitted)	-2.19	1.38	1.59	0.111	-5.78	7.50	0.77	0.441	-3.34	2.63	1.27	0.204	10.48	29.3	0.36	0.721
Bachelor's Degree	-0.88	1.64	0.54	0.591	-27.12	12.9	2.11	0.036	-2.82	1.17	2.41	0.016	11.79	8.64	1.36	0.172	-2.23	2.19	1.02	0.307	(omitted)			
Master's Degree	-5.69	2.71	2.10	0.036	(omitted)	(omitted)	(omitted)	(omitted)	-3.67	1.95	1.88	0.060	(omitted)	(omitted)	(omitted)	(omitted)	-3.49	4.5	0.77	0.439	(omitted)			
Doctorate	-4.20	3.77	1.11	0.265	(omitted)	(omitted)	(omitted)	(omitted)	-3.51	2.53	1.39	0.166	(omitted)	(omitted)	(omitted)	(omitted)	-5.27	5.2	1.01	0.31	(omitted)			
Intercept	9.95				3.88				18.94				107.57					12.85				-24.35		

Statistical Significance: 1% **, 5% *

Variable	Test: Reading for Information Wage After Test Age: 19 and older				Test: Reading for Information Wage After Test Age: 16 to 18				Test: Locating Information Wage After Test Age: 19 and older				Test: Locating Information Wage After Test Age: 16 to 18				Test: Observation Wage After Test Age: 19 and older				Test: Observation Wage After Test Age: 16 to 18			
	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p
Level Score	204.12	16.99	12.01	0.000**	27.81	16.33	1.70	0.089	354.47	20.34	17.42	0.000**	74.11	21.86	3.39	0.001	349.63	24.21	14.44	0.000**	245.29	71.13	3.45	0.001
Gender (M)	713.45	41.17	17.33	0.000**	351.43	47.69	7.37	0.000**	868.50	45.38	19.14	0.000**	447.32	48.52	9.22	0.000**	959.44	61.12	15.70	0.000**	695.01	165.05	4.21	0.000**
Age at Test	10.94	1.57	6.94	0.000**	200.03	53.52	3.74	0.000**	16.72	1.74	9.67	0.000**	231.93	56.54	4.10	0.000**	21.19	2.32	9.12	0.000**	-52.62	349.85	0.15	0.880
8th Grade of less	2236.66	140.15	15.96	0.000**	741.29	78.42	9.45	0.000**	2366.15	146.33	16.17	0.000**	755.49	82.21	9.19	0.000**	2462.02	202.06	12.18	0.000**	1567.82	525.06	2.99	0.003
Grades 9-11	1593.97	116.81	13.65	0.000**	505.44	94.17	5.37	0.000**	1496.84	129.50	11.56	0.000**	529.92	94.82	5.59	0.000**	1077.10	191.69	5.62	0.000**	1311.56	364.94	3.59	0.000**
H.S. Grad. or Equiv.	2314.11	83.42	27.74	0.000**	1287.33	56.05	22.97	0.000**	2314.82	89.54	25.85	0.000**	1318.96	57.49	22.94	0.000**	2171.31	129.81	16.73	0.000**	2039.74	282.80	7.21	0.000**
1 yr. College/Tech./Voc.	2397.85	104.00	23.06	0.000**	1391.46	132.72	10.48	0.000**	2393.87	110.20	21.72	0.000**	1509.21	131.37	11.49	0.000**	2204.14	153.14	14.39	0.000**	2727.08	437.34	6.24	0.000**
2 yrs. College or Assoc.	2759.00	97.27	28.36	0.000**	1622.79	173.99	9.33	0.000**	2774.74	103.44	26.82	0.000**	1613.43	175.04	9.22	0.000**	2766.18	145.39	19.03	0.000**	2492.18	638.81	3.90	0.000**
3 yrs. College/Tech./Voc.	2451.10	160.06	15.31	0.000**	1640.03	472.40	3.47	0.001	2632.09	167.39	15.72	0.000**	1808.99	472.82	3.83	0.000**	2424.04	222.71	10.88	0.000**	6238.35	2468.1	2.53	0.012
Bachelor's Degree	3104.36	113.54	27.34	0.000**	11189.08	426.23	2.79	0.005	3180.63	120.80	26.33	0.000**	1363.70	432.06	3.16	0.002	2928.97	167.48	17.49	0.000**	1891.81	1257.5	1.50	0.133
Master's Degree	3069.72	250.95	12.23	0.000**	(omitted)				3133.22	280.23	11.18	0.000**	(omitted)				2655.74	398.79	6.66	0.000**	(omitted)			
Doctorate	2367.08	351.46	6.74	0.000**	(omitted)				2383.39	376.22	6.34	0.000**	(omitted)				2558.47	492.29	5.20	0.035*	(omitted)			
Intercept	-977.22				-3088.44				-1429.83				-3857.52				-1539.07							

Statistical Significance: 1% **, 5% *

Variable	Test: Teamwork Wage After Test Age: 19 and older				Test: Teamwork Wage After Test Age: 16 to 18				Test: Applied Mathematics Wage After Test Age: 19 and older				Test: Applied Mathematics Wage After Test Age: 16 to 18				Test: Applied Technology Wage After Test Age: 19 and older				Test: Applied Technology Wage After Test Age: 16 to 18			
	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p	Coef	Std Err	t	p
Level Score	322.72	24.41	13.22	0.000**	-75.10	126.65	0.59	0.554	275.20	20.52	13.41	0.000**	65.65	17.28	3.80	0.000**	399.03	57.32	6.96	0.000**	63.49	124.63	0.51	0.611
Gender (M)	683.94	61.03	11.21	0.000**	1217.45	346.00	3.52	0.000**	680.41	56.95	11.95	0.000**	389.66	48.58	8.02	0.000**	575.73	295.54	1.95	0.051	2238.48	1002.95	2.23	0.027
Age at Test	16.24	2.28	7.12	0.000**	418.67	798.67	0.52	0.600	11.48	2.14	5.37	0.000**	221.80	55.28	4.01	0.000**	13.58	8.12	1.67	0.094	1443.39	637.66	2.26	0.025
8th Grade of less	1939.57	201.08	9.65	0.000**	466.39	1021.6	0.46	0.648	2478.59	186.99	13.26	0.000**	760.47	80.14	9.49	0.000**	2649.29	641.68	4.13	0.000**	386.66	788.49	0.49	0.624
Grades 9-11	1390.04	175.94	7.90	0.000**	416.08	638.94	0.65	0.515	1694.55	157.73	10.74	0.000**	513.01	95.42	5.38	0.000**	1544.26	774.79	1.99	0.046	509.61	967.54	0.53	0.599
H.S. Grad. or Equiv.	2179.77	123.31	17.68	0.000**	1320.67	518.21	2.55	0.011	2370.65	111.08	21.34	0.000**	1325.67	57.21	23.17	0.000**	3032.22	374.30	8.10	0.000**	2172.21	546.62	3.97	0.000**
1 yr. College/Tech./Voc.	2302.29	146.96	15.67	0.000**	2032.87	801.05	2.54	0.012	2406.81	138.09	17.43	0.000**	1426.88	134.85	10.58	0.000**	2852.65	460.49	6.19	0.000**	2065.02	922.51	2.24	0.026
2 yrs. College or Assoc.	2514.79	140.76	17.87	0.000**	3860.27	1620.4	2.38	0.018	2744.41	129.82	21.14	0.000**	1696.99	175.68	9.66	0.000**	4009.60	421.75	9.51	0.000**	2317.01	1251.5	1.85	0.066
3 yrs. College/Tech./Voc.	2417.12	222.72	10.85	0.000**	(omitted)				2553.64	216.05	11.82	0.000**	1827.69	446.34	4.09	0.000**	3712.44	733.44	5.06	0.000**	4861.16	3073.1	1.58	0.115
Bachelor's Degree	2693.14	167.77	16.05	0.000**	3198.30	1954.8	1.64	0.103	3040.89	153.28	19.84	0.000**	1197.94	460.86	2.60	0.009	3837.29	535.13	7.17	0.000**	(omitted)			
Master's Degree	2854.57	406.49	7.02	0.000**	(omitted)				2943.95	349.27	8.43	0.000**	(omitted)				2726.52	1494.2	1.82	0.068	(omitted)			
Doctorate	1432.99	532.89	2.69	0.007	(omitted)				2036.82	482.67	4.22	0.000**	(omitted)				3557.40	1756.1	2.03	0.043	(omitted)			
Intercept	-1226.32				-7238.43				-1206.58				-3668.73				-611.26							

Statistical Significance: 1% **, 5% *

Variable	Test: Reading for Information Wage Difference Age: 19 and older					Test: Reading for Information Wage Difference Age: 16 to 18					Test: Locating Information Wage Difference Age: 19 and older					Test: Locating Information Wage Difference Age: 16 to 18					Test: Observation Wage Difference Age: 19 and older					Test: Observation Wage Difference Age: 16 to 18				
	Coef	Std Err	t	p		Coef	Std Err	t	p		Coef	Std Err	t	p		Coef	Std Err	t	p		Coef	Std Err	t	p		Coef	Std Err	t	p	
Level Score	-115.27	21.62	5.33	0.000**		-7.76	16.40	0.47	0.636		-47.22	23.79	1.98	0.047*		14.53	21.93	0.66	0.508		-45.36	28.00	1.62	0.105		170.36	70.74	2.41	0.016*	
Gender (M)	-537.38	52.39	10.26	0.000**		379.46	47.91	7.92	0.000**		-310.55	53.06	5.85	0.000**		481.41	48.67	9.89	0.000**		-292.26	70.67	4.14	0.000**		694.99	164.13	4.23	0.000**	
Age at Test	-94.43	2.00	47.12	0.000**		53.61	53.76	1.00	0.319		-93.53	2.03	46.00	0.000**		91.30	56.71	1.61	0.107		-89.32	2.69	33.23	0.000**		255.88	347.90	0.74	0.462	
8th Grade of less Grades 9-11	-1557.63	178.35	8.73	0.000**		426.58	78.78	5.42	0.000**		-939.82	171.13	5.49	0.000**		429.13	82.46	5.20	0.000**		-782.68	233.65	3.35	0.000**		1079.03	522.14	2.07	0.039*	
H.S. Grad. or Equiv.	-1768.25	148.65	11.90	0.000**		213.36	94.59	2.26	0.024*		-1802.81	151.44	11.90	0.000**		230.58	95.11	2.42	0.150*		-1918.30	221.66	8.65	0.000**		925.19	362.91	2.55	0.011*	
1 yr. College/Tech./Voc.	-1847.25	106.16	17.40	0.000**		842.81	56.31	14.97	0.000**		-1556.82	104.71	14.87	0.000**		858.23	57.66	14.88	0.000**		-1460.49	150.11	9.73	0.000**		1320.78	281.23	4.70	0.000**	
2 yrs. College or Assoc.	-1814.07	132.35	13.71	0.000**		823.79	133.32	6.18	0.000**		-1493.36	128.88	11.59	0.000**		981.78	131.77	7.45	0.000**		-1474.51	177.09	8.33	0.000**		1645.40	434.91	3.78	0.000**	
3 yrs. College/Tech./Voc.	-1808.01	123.78	14.61	0.000**		1003.11	174.77	5.74	0.000**		-1473.94	120.97	12.18	0.000**		953.11	175.57	5.43	0.000**		-1350.21	168.12	8.03	0.000**		1282.53	635.26	2.02	0.044	
Master's Degree	-2097.88	203.69	10.30	0.000**		1364.33	474.51	2.88	0.004**		-1582.47	195.75	8.08	0.000**		1598.76	474.26	3.37	0.000**		-1494.00	257.54	5.80	0.000**		6307.79	2454.4	2.57	0.010**	
Doctorate	-2133.53	144.49	14.77	0.000**		399.87	428.14	0.93	0.350		-1595.81	141.27	11.30	0.000**		603.67	433.37	1.39	0.164		-1157.98	193.66	5.98	0.000**		977.67	1250.5	0.78	0.434	
Intercept	-3863.09	319.35	12.10	0.000**	omitted	omitted				-3211.15	327.72	9.80	0.000**	omitted	omitted				-1791.26	461.14	3.88	0.000**	omitted	omitted						
	-2401.29	447.25	5.37	0.000**	omitted	omitted				-2077.01	439.97	4.72	0.000**	omitted	omitted				-1203.28	569.26	2.11	0.035*	omitted	omitted						
	5936.64				939.90				5085.61					138.63				4905.12					-4245.19							

Statistical Significance: 1% **, 5% *

Variable	Test: Teamwork Wage Difference Age: 19 and older					Test: Teamwork Wage Difference Age: 16 to 18					Test: Applied Mathematics Wage Difference Age: 19 and older					Test: Applied Mathematics Wage Difference Age: 16 to 18					Test: Applied Technology Wage Difference Age: 19 and older					Test: Applied Technology Wage Difference Age: 16 to 18				
	Coef	Std Err	t	p		Coef	Std Err	t	p		Coef	Std Err	t	p		Coef	Std Err	t	p		Coef	Std Err	t	p		Coef	Std Err	t	p	
Level Score	-29.99	36.43	0.82	0.410		-183.18	125.03	1.47	0.144		-101.44	24.27	4.18	0.000**		-1.84	17.43	0.11	0.916		-5.89	61.62	0.10	0.924		-12.34	122.34	0.10	0.920	
Gender (M)	-399.23	91.10	4.38	0.000**		1010.23	341.59	2.96	0.003**		-430.85	67.36	6.40	0.000**		459.67	49.00	9.38	0.000**		-367.73	317.70	1.16	0.247		2721.77	984.55	2.76	0.006**	
Age at Test	-85.22	3.40	25.02	0.000**		1220.11	788.49	0.15	0.879		-98.34	2.53	38.87	0.000**		78.34	55.76	1.40	0.160		-90.57	8.73	10.37	0.000**		1551.35	625.96	2.48	0.014*	
8th Grade of less Grades 9-11	-784.58	300.14	2.61	0.009**		-236.63	1008.6	0.23	0.815		-1079.21	221.18	4.88	0.000**		450.97	80.84	5.58	0.000**		-703.68	689.78	1.02	0.308		63.55	774.03	0.08	0.935	
H.S. Grad. or Equiv.	-1689.52	262.62	6.43	0.000**		282.01	630.80	0.45	0.655		-1951.95	186.57	10.46	0.000**		211.21	96.25	2.19	0.028*		-1682.91	832.87	2.02	0.043*		-52.20	949.79	0.05	0.956	
1 yr. College/Tech./Voc.	-1035.57	184.06	5.63	0.000**		923.73	511.60	1.81	0.072		-1750.49	131.38	13.32	0.000**		879.98	57.71	15.25	0.000**		-994.06	402.36	2.47	0.014*		1498.66	536.59	2.79	0.006**	
2 yrs. College or Assoc.	-1041.72	219.36	4.75	0.000**		1206.18	790.84	1.53	0.128		-1668.80	163.34	10.22	0.000**		961.03	136.03	7.07	0.000**		-1079.37	495.01	2.18	0.029*		1818.62	905.58	2.01	0.046*	
3 yrs. College/Tech./Voc.	-1270.95	210.12	6.05	0.000**		1715.68	1599.7	1.07	0.284		-1721.45	153.55	11.21	0.000**		1083.64	177.20	6.12	0.000**		-533.95	453.37	1.18	0.239		1918.99	1228.6	1.56	0.120	
Master's Degree	-581.77	332.45	1.75	0.080		omitted				-1985.84	255.54	7.77	0.000**		1647.14	450.23	3.66	0.000**		-1261.19	788.42	1.60	0.110		5076.51	3016.7	1.68	0.094		
Doctorate	-1127.46	250.43	4.50	0.000**		2440.24	1929.9	1.26	0.207		-1932.16	181.29	10.66	0.000**		468.00	464.87	1.01	0.314		-1128.21	575.25	1.96	0.050*		omitted				
Intercept	-1495.01	606.76	2.46	0.014*	omitted	omitted				-4144.84	413.12	10.03	0.000**	omitted	omitted				-1623.65	1606.2	1.01	0.312	omitted	omitted						
	-1609.40	795.44	2.02	0.043	omitted	omitted				-2825.82	570.90	4.95	0.000**	omitted	omitted				-188.07	1887.7	0.01	0.921	omitted	omitted						
	4345.92				-535.68				5786.91					370.36				4297.77					-27852.89							

Statistical Significance: 1% **, 5% *