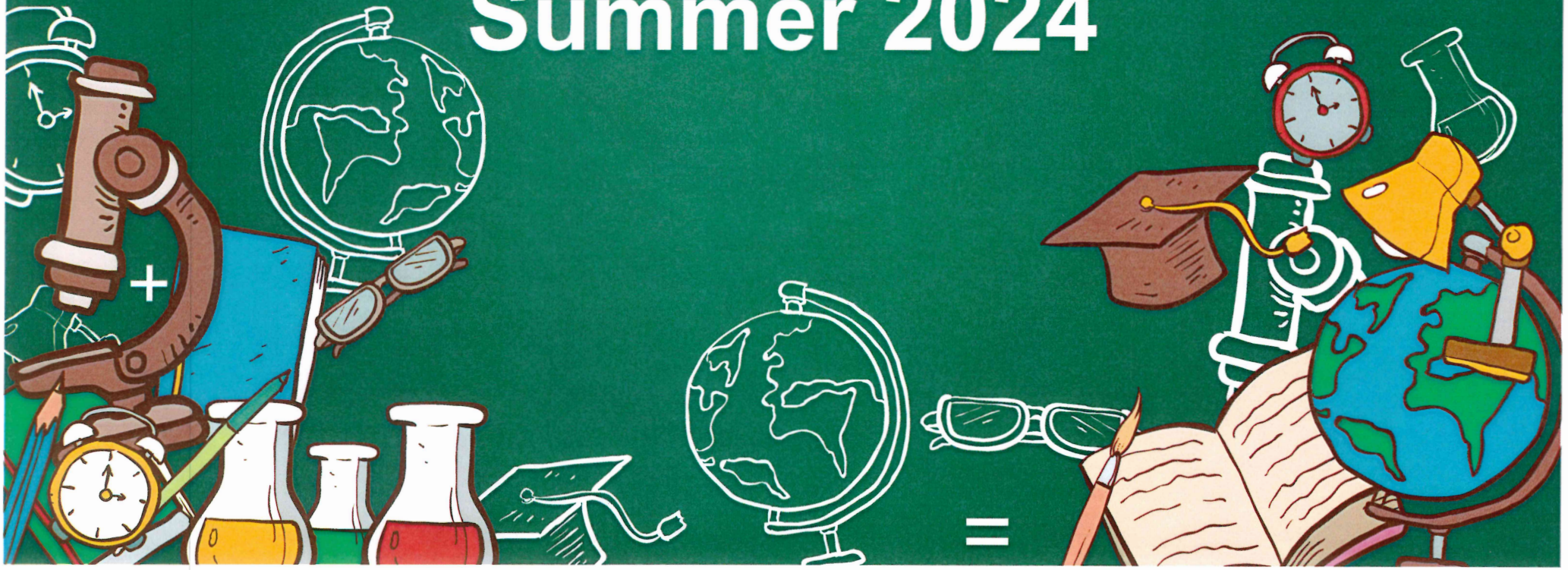
Technical Analysis

Summer 2024



Summer School 2024 - All Programs

TRIAL #1 **Gender**

Observed

Program	Female	Male	Non-Binary	Total
Summer School	1056	1155	11	2222
Non-Summer School	5939	6181	66	12186
Totals	6995	7336	77	14408

Expected

Program	Female	Male	Non-Binary	Total
Summer School	1078.7680	1131.3570	11.8749	
Non-Summer School	5916.2320	6204.6430	65.1251	
Totals				

	0.4805	0.4941	0.0645
	0.0876	0.0901	0.0118

1.2286

Chi Table	(alpha = 0.05, df = 2)	**5.9915**
Chi Dist		0.5410
Chi-Test		0.5410

Note: **Since 1.2286 < 5.9915, we accept the null hypothesis - classifications are independent.**
(p = 0.5410, $d.f.$ = 2, $\chi 2$ = 1.2286)

TRIAL #2 **Socio-Economically Disadvantaged (SED)**

Observed

	No	Yes	Total
Summer School	1283	939	2222
Non-Summer School	5563	6623	12186
Totals	6846	7562	14408

Expected

	No	Yes	Total
Summer School	1055.7893	1166.2107	
Non-Summer School	5790.2107	6395.7893	
Totals			

48.8968	44.2671	
8.9159	8.0717	**110.1514**

Chi Table	(alpha = 0.05, df = 1)	**3.8415**
Chi Dist		0.0000
Chi-Test		0.0000

Note: **Since 110.1514 > 3.8415, we reject the null hypothesis - classifications are dependent.**
(p = 0.0000, $d.f.$ = 1, $\chi 2$ = 110.1514)

TRIAL #3 **Language Proficiency**

Observed

Program	English Learner	English Only	Initially Fluent Prof	Reclassified	Total
Summer School	570	1021	84	518	2193
Non-Summer School	2354	6087	359	3386	12186
Totals	2924	7108	443	3904	14379

Expected

Program	English Learner	English Only	Initially Fluent Prof	Reclassified	Total
Summer School	445.9512	1084.0701	67.5637	595.4150	
Non-Summer School	2478.0488	6023.9299	375.4363	3308.5850	
Totals					

	34.5063	3.6694	3.9985	10.0654
	6.2098	0.6603	0.7196	1.8114

61.6405

Chi Table	(alpha = 0.05, df = 3)	**7.8147**
Chi Dist		0.0000
Chi-Test		0.0000

Note: **Since 61.6405 > 7.8147, we reject the null hypothesis - classifications are dependent.**
(p = 0.0000, $d.f.$ = 3, $\chi 2$ = 61.6405)

Summer School 2024 - HSCR (1&2)

TRIAL #1 **Gender**

Observed

Program	Female	Male	Non-Binary	Total
Summer School	366	369	9	744
Non-Summer School	3038	3119	46	6203
Totals	3404	3488	55	6947

Expected

Program	Female	Male	Non-Binary	Total
Summer School	364.5568	373.5529	5.8903	
Non-Summer School	3039.4432	3114.4471	49.1097	
Totals				

	0.0057	0.0555	1.6417
	0.0007	0.0067	0.1969

1.9072

Chi Table	(alpha = 0.05, df = 2)	**5.9915**
Chi Dist		0.3854
Chi-Test		0.3854

Note: **Since 1.9072 < 5.9915, we accept the null hypothesis - classifications are independent.**
(p = 0.3854, $d.f.$ = 2, $\chi 2$ = 1.9072)

TRIAL #2 **Socio-Economically Disadvantaged (SED)**

Observed

	No	Yes	Total
Summer School	487	257	744
Non-Summer School	3051	3152	6203
Totals	3538	3409	6947

Expected

	No	Yes	Total
Summer School	378.9077	365.0923	
Non-Summer School	3159.0923	3043.9077	
Totals			

	30.8358	32.0027
	3.6985	3.8385

70.3755

Chi Table	(alpha = 0.05, df = 1)	**3.8415**
Chi Dist		0.0000
Chi-Test		0.0000

Note: **Since 70.3755 > 3.8415, we reject the null hypothesis - classifications are dependent.**
(p = 0.0000, $d.f.$ = 1, $\chi 2$ = 70.3755)

TRIAL #3 **Language Proficiency**

Observed

Program	English Learner	English Only	Initially Fluent Prof	Reclassified	Total
Summer School	138	255	16	334	743
Non-Summer School	702	3173	173	2155	6203
Totals	840	3428	189	2489	6946

Expected

Program	English Learner	English Only	Initially Fluent Prof	Reclassified	Total
Summer School	89.8532	366.6864	20.2170	266.2434	
Non-Summer School	750.1468	3061.3136	168.7830	2222.7566	
Totals					

	25.7990	34.0178	0.8796	17.2434
	3.0902	4.0747	0.1054	2.0654

87.2755

Chi Table	(alpha = 0.05, df = 3)	**7.8147**
Chi Dist		0.0000
Chi-Test		0.0000

Note: **Since 87.2755 > 7.8147, we reject the null hypothesis - <u>classifications are dependent</u>.**
(p = 0.0000, $d.f.$ = 3, $\chi 2$ = 87.2755)

Summer School 2024 - Elementary

TRIAL #1 **Gender**

Observed

Program	Female	Male	Non-Binary	Total
Summer School	583	645	2	1230
Non-Summer School	1613	1643	6	3262
Totals	2196	2288	8	4492

Expected

Program	Female	Male	Non-Binary	Total
Summer School	601.3090	626.5004	2.1906	
Non-Summer School	1594.6910	1661.4996	5.8094	
Totals				

	0.5575	0.5463	0.0166
	0.2102	0.2060	0.0063

1.5428

Chi Table	(alpha = 0.05, df = 2)	**5.9915**
Chi Dist		0.4624
Chi-Test		0.4624

Note: **Since 1.5428 < 5.9915, we accept the null hypothesis - classifications are independent.**
(p = 0.4624, $d.f.$ = 2, $\chi 2$ = 1.5428)

TRIAL #2 **Socio-Economically Disadvantaged (SED)**

Observed

	No	Yes	Total
Summer School	635	595	1230
Non-Summer School	1269	1993	3262
Totals	1904	2588	4492

Expected

	No	Yes	Total
Summer School	521.3535	708.6465	
Non-Summer School	1382.6465	1879.3535	
Totals			

24.7731	18.2256	
9.3412	6.8723	**59.2122**

Chi Table	(alpha = 0.05, df = 1)	**3.8415**
Chi Dist		0.0000
Chi-Test		0.0000

Note: **Since 59.2122 > 3.8415, we reject the null hypothesis - classifications are dependent.**
(p = 0.0000, $d.f.$ = 1, $\chi 2$ = 59.2122)

TRIAL #3 **Language Proficiency**

Observed

Program	English Learner	English Only	Initially Fluent Prof	Reclassified	Total
Summer School	399	667	50	86	1202
Non-Summer School	1154	1584	127	397	3262
Totals	1553	2251	177	483	4464

Expected

Program	English Learner	English Only	Initially Fluent Prof	Reclassified	Total
Summer School	418.1689	606.1160	47.6599	130.0551	
Non-Summer School	1134.8311	1644.8840	129.3401	352.9449	
Totals					

0.8787	6.1158	0.1149	14.9233	
0.3238	2.2536	0.0423	5.4990	**30.1514**

Chi Table	(alpha = 0.05, df = 3)	**7.8147**
Chi Dist		0.0000
Chi-Test		0.0000

Note: **Since 30.1514 > 7.8147, we reject the null hypothesis - <u>classifications are dependent</u>.**
(p = 0.0000, $d.f.$ = 3, $\chi 2$ = 30.1514)

Summer School 2024
Springboard Elementary Paired t-Tests

Trial 1: t-Test: Paired Two Sample for Means - Number of Correct Letter Sounds

	CLS-B	*CLS-E*
Mean	49.94170404	68.08520179
Variance	1879.757848	2726.222438
Observations	223	223
Pearson Correlation	0.923282163	
Hypothesized Mean Difference	0	
df	222	
t Stat	-13.13033038	
P(T<=t) one-tail	7.94292E-30	
t Critical one-tail	1.651746359	
P(T<=t) two-tail	1.58858E-29	
t Critical two-tail	1.970707395	

(p = 0.0000, d.f. = 222, t = 13.1303, alpha = 0.05)
Since 13.1303 > 1.6517, we reject the null hypothesis - the means differ at a statictially significant level (alpha = 0.05).

Trial 2: t-Test: Paired Two Sample for Means - Number of Word Correct Per Minute

	WCPM-B	*WCPM-E*
Mean	67.93333333	75.7
Variance	1454.409195	1800.493103
Observations	30	30
Pearson Correlation	0.926694093	
Hypothesized Mean Difference	0	
df	29	
t Stat	-2.660283847	
P(T<=t) one-tail	0.006293395	
t Critical one-tail	1.699127027	
P(T<=t) two-tail	0.012586789	
t Critical two-tail	2.045229642	

(p = 0.0063, d.f. = 29, t = 2.6603, alpha = 0.05)
Since 2.6603 > 1.6991, we reject the null hypothesis - the means differ at a statictially significant level (alpha = 0.05).