



Developing Social & Emotional Intelligence

A Cross-Curricular SEL Program for Schools

WORRYWOO RESEARCH INTERVENTION DATA

PROJECT SCOPE: Integration of Social Emotional Learning (SEL) into the Kindergarten Curricula through literacy, art, performing arts and music programs.

SUMMARY:

Between January and March of 2017 a Social Emotional Learning Program (SEL), was conducted at 6 Jersey City Public Schools. **The objective was to integrate SEL into the Kindergarten Curricula and the Arts Curricula, with the goal of improving the emotional intelligence (EI) of the students.**

CONCLUSION:

After the 10 week teaching program (referred to as the research intervention results in the following report) the teachers found that students were better able to manage their emotions.

Specifically, the results indicated that teachers observed a significant positive impact on the students regarding:

- showing empathy toward their peers
- being able to manage their emotions
- being able to identify basic emotions
- being able to identify complex emotions



WorryWoo Research Intervention Results

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Method

Participants

Full data on 286 Kindergarten students from schools around Jersey City, NJ were collected before and after they participated in the WorryWoo Research Intervention. Participants were either age five (N=169; 60.1%) or age six (N=101; 35.9%). The participants were relatively evenly divided via gender, with 128 males (44.9%) and 149 females (52.3%) participating in the curricular intervention. With respect to ethnicity, 118 students were Latino (41.1%), 58 were African American (20.2%), 42 were Asian American (14.6%) and 34 were White (11.8%).

Procedure

The Kindergarten instructors administered pretests to their students before and after introducing them to the WorryWoo Research Intervention. The pre and post-test assessments highlighted students' demographic information and their social-emotional intelligence and facial recognition skills both before and following the intervention.

Results

Descriptive Statistics

In terms of character appeal, 71 (27.2%) students selected Nola, the character portraying Loneliness, as their favorite character. The next most popular monsters included, Wince (59; 22.6%) - the monster portraying Worry and Squeak (54; 20.7%) - the monster portraying Fear. Twitch (32; 12.3%), the frustrated monster, was the next popular, followed by Zelly (23; 8.8%), the envious monster, Fuddle (13; 5.0%), the monster exhibiting Confusion and Rue (3; 1.1%), the monster exhibiting Insecurity.

Beyond character appeal, the kindergarten students were asked to match the monster with his/her emotion and text. The students were most able to accurately label Wince as the Monster of Worry (76.3%), Nola as the Monster of Loneliness (76.0%), Twitch as the Monster of Frustration (69.3%), Fuddle as the Monster of Confusion (57.8%), Zelly as the Monster of Envy (56.1%), Squeak as the Monster of Fear (41.8%) and Rue as the Monster of Insecurity (41.5%).



Finally, when asked to draw an emotion, the majority of participants drew Worry (69; 24.0%), followed by Loneliness (53; 18.5%), Frustration (50; 17.4%), Fear (21; 7.3%), Envy (15; 5.2%), Anger (12; 4.2%), Happiness (11; 3.8%), Innocence (8; 2.8%), Sadness (7; 2.4%), Indecision (6; 2.1%), and Insecurity (5; 1.7%). Additionally, 30 students (10.5%) selected another emotion to draw.

Inferential Statistics

With respect to principal study results of the pre and post-test measures, Paired Sample T-tests revealed that after the research intervention, teachers found that students were better able to manage their emotions, $t(285) = -2.522$, $p < .01$, showed more empathy toward their peers, $t(286) = -5.578$, $p < .001$, and were better able to identify basic emotions, $t(284) = -5.618$, $p < .001$ and complex emotions, $t(285) = -7.612$, $p < .001$. Moreover, students were better able to identify a worry facial expression, $t(286) = -2.000$, $p < .05$ and an Innocence facial expression, $t(285) = -2.218$, $p < .05$ following the research intervention.

Conclusion

The WorryWoo study results suggest that the Worry Woo educational intervention had a significant impact on students' emotion management, empathy, and emotion recognition.

T-TEST PAIRS=PreHealthySense PrePositiveAttitude PreFeelingFailure PreEmotionalManage PrePeerEmpathy PreInabilitytoUnderstand PreIdentifyBasicEmotions PreIdentifyComplexEmotions WITH PostHealthySense PostPositiveAttitude PostFeelingFailure PostEmotionalManage PostPeerEmpathy PostInabilitytoUnderstand PostBasicEmotions PostComplexEmotions (PAIRED)
 /CRITERIA=CI(.9500)
 /MISSING=ANALYSIS.

T-Test

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Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreHealthySense	2.94	287	.721	.043
	PcstHealthySense	2.96	287	.644	.038
Pair 2	PrePositiveAttitude	2.90	287	.718	.042
	PostPositiveAttitude	2.98	287	.605	.036
Pair 3	PreFeelingFailure	1.46	287	.618	.036
	PostFeelingFailure	1.47	287	.646	.038
Pair 4	PreEmotionalManage	2.70	286	.717	.042
	PostEmotionalManage	2.81	286	.628	.037
Pair 5	PrePeerEmpathy	2.64	287	.770	.045
	PostPeerEmpathy	2.89	287	.654	.039
Pair 6	PreInabilitytoUnderstand	1.72	286	.794	.047
	PostInabilitytoUnderstand	1.75	286	.798	.047
Pair 7	PreIdentifyBasicEmotions	2.81	285	.655	.039
	PostBasicEmotions	3.05	285	.656	.039
Pair 8	PreIdentifyComplex Emotions	2.41	286	.757	.045
	PostComplexEmotions	2.80	286	.685	.040

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	PreHealthySense & PcstHealthySense	287	.371	.000
Pair 2	PrePositiveAttitude & PcstPositiveAttitude	287	.485	.000
Pair 3	PreFeelingFailure & PcstFeelingFailure	287	.380	.000
Pair 4	PreEmotionalManage & PcstEmotionalManage	286	.384	.000



Paired Samples Correlations

		N	Correlation	Sig.
Pair 5	PrePeerEmpathy & PostPeerEmpathy	287	.469	.000
Pair 6	PreInabilitytoUnderstand & PostInabilitytoUnderstand	286	.272	.000
Pair 7	PreIdentifyBasicEmotions & PostBasicEmotions	285	.384	.000
Pair 8	PreIdentifyComplex Emotions & PostComplexEmotions	286	.288	.000

Paired Samples Test

		Paired Differences				
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
					Lower	Upper
Pair 1	PreHealthySense - PostHealthySense	-.024	.768	.045	-.114	.065
Pair 2	PrePositiveAttitude - PostPositiveAttitude	-.073	.678	.040	-.152	.006
Pair 3	PreFeelingFailure - PostFeelingFailure	-.007	.705	.042	-.089	.075
Pair 4	PreEmotionalManage - PostEmotionalManage	-.112	.750	.044	-.199	-.025
Pair 5	PrePeerEmpathy - PostPeerEmpathy	-.244	.741	.044	-.330	-.158
Pair 6	PreInabilitytoUnderstand - PostInabilitytoUnderstand	-.031	.960	.057	-.143	.080
Pair 7	PreIdentifyBasicEmotions - PostBasicEmotions	-.242	.727	.043	-.327	-.157
Pair 8	PreIdentifyComplex Emotions - PostComplexEmotions	-.388	.862	.051	-.488	-.288



Paired Samples Test

		Paired Differences		
		t	df	Sig. (2-tailed)
Pair 1	PreHealthySense - PostHealthySense	-.538	286	.591
Pair 2	PrePositiveAttitude - PostPositiveAttitude	-1.828	286	.069
Pair 3	PreFeelingFailure - PostFeelingFailure	-.168	286	.867
Pair 4	PreEmotionalManage - PostEmotionalManage	-2.522	285	.012
Pair 5	PrePeerEmpathy - PostPeerEmpathy	-5.578	286	.000
Pair 6	PreInabilitytoUnderstand - PostInabilitytoUnderstand	-.554	285	.580
Pair 7	PreIdentifyBasicEmotions - PostBasicEmotions	-5.618	284	.000
Pair 8	PreIdentifyComplexEmotions - PostComplexEmotions	-7.612	285	.000

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T-TEST PAIRS=Face1WorryG Face2LonelinessB Face3EnvyA Face4InsecurityC Face5IndecisionF Face6FrustrationD Face7InnocenceE WITH PostFace1WorryG PostFace2LonelinessB PostFace3EnvyA PostFace4InsecurityC PostFace5IndecisionF PostFace6FrustrationD PostFace7InnocenceE (PAIRED)
/CRITERIA=CI(.9500)
/MISSING=ANALYSIS.
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T-Test

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Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Face1WorryG	.11	287	.315	.019
	PcstFace1WorryG	.17	287	.429	.025
Pair 2	Face2LonelinessB	.57	287	.496	.029
	PcstFace2LonelinessB	.63	287	.483	.028
Pair 3	Face3EnvyA	.23	287	.419	.025
	PcstFace3EnvyA	.24	287	.428	.025
Pair 4	Face4InsecurityC	.13	287	.332	.020
	PostFace4InsecurityC	.14	287	.351	.021
Pair 5	Face5IndecisionF	.25	287	.434	.026



Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 5	PostFace5IndecisionF	.24	287	.438	.026
Pair 6	Face6FrustrationD	.30	287	.460	.027
	PostFace6FrustrationD	.37	287	.484	.029
Pair 7	Face7InnocenceE	.15	287	.485	.029
	PostFace7InnocenceE	.23	287	.424	.025

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Face1WorryG & PostFace1WorryG	287	.117	.047
Pair 2	Face2LonelinessB & PostFace2LonelinessB	287	.102	.084
Pair 3	Face3EnvyA & PostFace3EnvyA	287	.144	.015
Pair 4	Face4InsecurityC & PostFace4InsecurityC	287	.056	.346
Pair 5	Face5IndecisionF & PostFace5IndecisionF	287	-.065	.269
Pair 6	Face6FrustrationD & PostFace6FrustrationD	287	.025	.679
Pair 7	Face7InnocenceE & PostFace7InnocenceE	287	.097	.099

Paired Samples Test

		Paired Differences				
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
					Lower	Upper
Pair 1	Face1WorryG - PostFace1WorryG	-.059	.502	.030	-.118	.000
Pair 2	Face2LonelinessB - PostFace2LonelinessB	-.063	.655	.039	-.139	.013
Pair 3	Face3EnvyA - PostFace3EnvyA	-.014	.555	.033	-.078	.050
Pair 4	Face4InsecurityC - PostFace4InsecurityC	-.017	.469	.028	-.072	.037
Pair 5	Face5IndecisionF - PostFace5IndecisionF	.007	.637	.038	-.067	.081
Pair 6	Face6FrustrationD - PostFace6FrustrationD	-.070	.660	.039	-.146	.007
Pair 7	Face7InnocenceE - PostFace7InnocenceE	-.080	.612	.036	-.151	-.009



Grade

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	5	1.7	1.7	1.7
	Kindergarten	281	97.9	98.3	100.0
	Total	286	99.7	100.0	
Missing	System	1	.3		
Total		287	100.0		

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other	11	3.8	3.9	3.9
	Five Years Old	169	58.9	60.1	64.1
	Six Years Old	101	35.2	35.9	100.0
	Total	281	97.9	100.0	
Missing	System	6	2.1		
Total		287	100.0		

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other	8	2.8	2.8	2.8
	Male	128	44.6	44.9	47.7
	Female	149	51.9	52.3	100.0
	Total	285	99.3	100.0	
Missing	System	2	.7		
Total		287	100.0		

Ethnicity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	8	2.8	2.8	2.8
	White	34	11.8	11.8	14.6
	Latino	118	41.1	41.1	55.7
	African American	58	20.2	20.2	76.0
	Asian American	42	14.6	14.6	90.6
	Other	27	9.4	9.4	100.0
	Total	287	100.0	100.0	



Paired Samples Test

		Paired Differences		
		t	df	Sig. (2-tailed)
Pair 1	Face1WorryG - PostFace1WorryG	-2.000	286	.046
Pair 2	Face2LonelinessB - PostFace2LonelinessB	-1.621	286	.106
Pair 3	Face3EnvyA - PostFace3EnvyA	-.426	286	.671
Pair 4	Face4InsecurityC - PostFace4InsecurityC	-.629	286	.530
Pair 5	Face5IndecisionF - PostFace5IndecisionF	.185	286	.853
Pair 6	Face6FrustrationD - PostFace6FrustrationD	-1.789	286	.075
Pair 7	Face7InnocenceE - PostFace7InnocenceE	-2.218	286	.027

FREQUENCIES VARIABLES=Grade Age Gender Ethnicity PostWooAppeal PostInsecurityRUE PostFrustrationTWITCH PostEnvyZELLY PostWorryWINCE PostFearSQUEAK PostConfusionFUDDLE PostLonelinessNOLA WhichEmotion /ORDER=ANALYSIS.

Frequencies

[DataSet1] C:\Users\nsilton\Downloads\worrywoodata.sav

Statistics

		Grade	Age	Gender	Ethnicity	PostWoo Appeal	PostInsecurity RUE	Post Frustration TWITCH
N	Valid	286	281	285	287	261	287	287
	Missing	1	6	2	0	26	0	0

Statistics

		PostEnvy ZELLY	PostWorry WINCE	PostFear SQUEAK	Post Confusion FUDDLE	Post Loneliness NOLA	Which Emotion
N	Valid	287	287	287	287	287	287
	Missing	0	0	0	0	0	0

Frequency Table



PostWooAppeal

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	5	1.7	1.9	1.9
	Nola	71	24.7	27.2	29.1
	Wince	59	20.6	22.6	51.7
	Rue	3	1.0	1.1	52.9
	Squeak	54	18.8	20.7	73.6
	Fuddle	13	4.5	5.0	78.5
	Twitch	32	11.1	12.3	90.8
	Zelly	23	8.0	8.8	99.6
	NoneChosen	1	.3	.4	100.0
	Total	261	90.9	100.0	
Missing	System	26	9.1		
Total		287	100.0		

PostInsecurityRUE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	168	58.5	58.5	58.5
	Correct	119	41.5	41.5	100.0
Total		287	100.0	100.0	

PostFrustrationTWITCH

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	87	30.3	30.3	30.3
	Correct	199	69.3	69.3	99.7
	2	1	.3	.3	100.0
Total		287	100.0	100.0	

PostEnvyZELLY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	126	43.9	43.9	43.9
	Correct	161	56.1	56.1	100.0
Total		287	100.0	100.0	

PostWorryWINCE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	68	23.7	23.7	23.7
	Correct	219	76.3	76.3	100.0



PostWorryWINCE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Total	287	100.0	100.0	

PostFearSQUEAK

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	167	58.2	58.2	58.2
	Correct	120	41.8	41.8	100.0
Total		287	100.0	100.0	

PostConfusionFUDDLE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	121	42.2	42.2	42.2
	Correct	166	57.8	57.8	100.0
Total		287	100.0	100.0	

PostLonelinessNOLA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Incorrect	68	23.7	23.7	23.7
	Correct	218	76.0	76.0	99.7
2		1	.3	.3	100.0
Total		287	100.0	100.0	

WhichEmotion

		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Envy	15	5.2	5.2	5.2	
	Loneliness	53	18.5	18.5	23.7	
	Insecurity	5	1.7	1.7	25.4	
	Frustration	50	17.4	17.4	42.9	
	Innocence	8	2.8	2.8	45.6	
	Indecision	6	2.1	2.1	47.7	
	Worry	69	24.0	24.0	71.8	
	Other	30	10.5	10.5	82.2	
	Fear	21	7.3	7.3	89.5	
	Anger	12	4.2	4.2	93.7	
	Happy	11	3.8	3.8	97.6	
	Sad	7	2.4	2.4	100.0	
	Total		287	100.0	100.0	