

Investigating the effects of a T-Shaped Literacy intervention on Years 7 and 8 students' reading and writing in subject English

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Appendices

Appendix

TABLE 1. Pre-post analysis of researcher-designed measures for 2022 and 2023

Category	N	Pre score	Post score	Gain	SD	t-statistics	p-value	sig	Effect size
2022 Language Features	211	6.8	9.1	2.3	4.0	8.55	p < 0.01	***	0.59
2023 Language Features	87	7.6	9.7	2.1	3.4	5.73	p < 0.01	***	0.61
2022 Close Reading	201	3.8	5.2	1.3	3.4	5.70	p < 0.01	***	0.40
2023 Close Reading	87	3.1	4.7	1.6	2.9	4.98	p < 0.01	***	0.53
2022 Creative Writing	186	15.1	14.8	-0.3	5.0	-0.72	0.473		-0.05
2023 Creative Writing	76	20.4	22.0	1.6	5.5	2.50	0.015	**	0.29

TABLE 2. Researcher-designed measures for 2023 treatment vs comparison group summary

Category	N		(Gain) post-pre		Variance of gain		Gain_diff	t_	df	p-value	sig	Effect size
	Comparison treatment		Comparison treatment		Comparison treatment							
2023 Language Features	87	57	2.1	0.2	11.9	8.7	1.9	3.61	137	p < 0.01	***	0.61
2023 Close Reading	87	57	1.6	0.3	8.5	4.9	1.2	2.89	157	p < 0.01	***	0.48
2023 Creative Writing	76	58	1.6	-0.3	30.4	17.8	1.8	2.19	102	0.031	**	0.37

TABLE 3. Knowledge of literary metalanguage. Treatment versus comparison

Group	N		Mean postscore		Variance of postscore		Mean_diff	t_statistics	df	p_value	sig	Effect size
	Comparison treatment	Treatment	Comparison treatment	Treatment	Comparison treatment	Treatment						
Overall	108	126	11.28	9.05	15.100	13.102	2.23	4.517	221	0.000	***	0.594
Female	52	76	10.94	9.45	16.055	13.264	1.49	2.150	103	0.034	**	0.390
Male	53	48	11.77	8.46	13.832	12.339	3.32	4.606	99	0.000	***	0.916
Māori	30	30	11.10	9.07	15.886	11.720	2.03	2.120	57	0.038	**	0.547
Pacific	17	5	12.18	9.20	8.029	9.200	2.98	1.957	6	0.096		1.014
Asian	23	16	11.78	9.19	16.723	12.163	2.60	2.128	35	0.040	**	0.683
NZ European	33	68	10.79	8.93	17.110	13.532	1.86	2.198	57	0.032	**	0.476
Other	2	5	13.00	10.40	18.000	31.800	2.60	0.663	3	0.561		0.521

TABLE 4. PAT Reading for 2022 and 2023

Academic year	Category	Group	N	Normdiff1	Normdiff4	Normdiff Gain	Normdiff Gain_SD	t_statistics	p-value	sig	Effect size
2022	Overall	All	226	-6.8	-7.5	-0.7	8.6	-1.27	0.205		-0.08
	Gender	Female	106	-6.0	-6.5	-0.4	10.1	-0.45	0.652		-0.04
		Male	120	-7.5	-8.4	-1.0	7.1	-1.51	0.133		-0.14
		Māori	61	-8.0	-8.9	-0.9	10.6	-0.70	0.488		-0.09
		Pacific	82	-9.8	-9.0	0.7	8.2	0.81	0.421		0.09
	Ethnicity	Asian	21	-3.8	-3.9	-0.1	5.8	-0.08	0.938		-0.02
		NZ European	59	-2.3	-5.0	-2.7	7.3	-2.84	p < 0.01	***	-0.37
		Other	3	-10.0	-11.5	-1.5					
2023	Overall	All	130	-4.7	-11.8	-7.1	8.4	-9.70	p < 0.01	***	-0.85
	Gender	Female	62	-4.1	-13.6	-9.5	7.7	-9.64	p < 0.01	***	-1.22
		Male	68	-5.2	-10.2	-5.0	8.5	-4.89	p < 0.01	***	-0.59
		Māori	41	-4.7	-13.0	-8.3	9.0	-5.90	p < 0.01	***	-0.92
		Pacific	20	-7.2	-13.9	-6.7	7.6	-3.91	p < 0.01	***	-0.87
	Ethnicity	Asian	22	-0.4	-4.4	-4.0	6.8	-2.77	0.011	**	-0.59
		NZ European	45	-5.8	-13.3	-7.5	8.6	-5.85	p < 0.01	***	-0.87
		Other	2	-0.8	-14.6	-13.8					

TABLE 5. e-asTTle Writing for 2022 and 2023

Academic year	Category	Group	N	Normdiff1	Normdiff4	Normdiff Gain	Normdiff Gain_SD	t_statistics	p-value	sig	Effect size
2022	Overall	All	195	-15.5	12.3	27.7	107.0	3.62	$p < 0.01$	***	0.26
	Gender	Female	92	-0.2	33.6	33.8	115.6	2.80	$p < 0.01$	***	0.29
		Male	103	-29.1	-6.8	22.3	99.0	2.29	0.024	**	0.23
	Ethnicity	Māori	51	-33.7	14.9	48.6	61.7	5.63	$p < 0.01$	***	0.79
		Pacific	66	-2.6	14.9	17.5	90.6	1.57	0.122		0.19
		Asian	17	20.4	78.3	57.9	79.3	3.01	$p < 0.01$	***	0.73
		NZ European	58	-17.8	-7.4	10.4	150.8	0.53	0.601		0.07
		Other	3	-147.0	-83.3	63.7					
2023	Overall	All	125	-8.0	16.7	24.7	80.3	3.44	$p < 0.01$	***	0.31
	Gender	Female	60	0.4	15.7	15.3	68.5	1.73	0.089		0.22
		Male	65	-15.6	17.7	33.4	89.4	3.01	$p < 0.01$	***	0.37
	Ethnicity	Māori	41	-4.1	1.3	5.4	71.8	0.48	0.630		0.08
		Pacific	18	17.8	50.6	32.8	75.7	1.84	0.084		0.43
		Asian	22	41.7	56.1	14.4	76.6	0.88	0.387		0.19
		NZ European	42	-48.7	-1.8	46.9	87.5	3.47	$p < 0.01$	***	0.54
		Other	2	-9.5	-14.0	-4.5					

TABLE 6. 2023 Pre-post language features comparison by dosage

Category	N		Mean postscore		Variance of postscore		Mean_diff	t_statistics	df	p-value	sig	Effect size
	2-year	1-year	2-year	1-year	2-year	1-year						
2023 Language Features	34	74	11.3	8.5	12.6	16.4	2.8	3.67	72.58	$p < 0.01$	***	0.74
2023 Close Reading	34	74	6.7	3.4	8.1	7.5	3.2	5.55	61.80	$p < 0.01$	***	1.16
2023 Creative Writing	27	69	25.0	19.9	21.3	33.8	5.1	4.52	59.61	$p < 0.01$	***	0.97

TABLE 7. PAT Reading results by dosage

Category	Group	N		Mean normdiff4		Variance of normdiff4		Mean_diff	t_statistics	df	p_value	sig	Effect size
		2-year	1-year	2-year	1-year	2-year	1-year						
Overall	All	44	86	-13.3	-11.1	62.7	104.4	-2.2	-1.37	107.88	0.174		-0.24
Gender	Female	17	45	-16.4	-12.5	41.9	132.8	-3.9	-1.69	50.76	0.098		-0.42
	Male	27	41	-11.3	-9.5	67.3	70.8	-1.8	-0.89	56.80	0.379		-0.22
Ethnicity	Māori	18	23	-15.4	-11.1	85.2	62.2	-4.3	-1.56	33.52	0.128		-0.50
	Pacific	8	12	-15.8	-12.6	40.1	69.4	-3.1	-0.95	17.58	0.356		-0.42
	Asian	2	20	-5.3	-4.3	237.6	123.5	-1.0	-0.09	1.11	0.942		-0.07
	NZ European	16	29	-10.7	-14.8	24.0	107.0	4.1	1.80	42.34	0.079		0.51
	Other		2		-14.6		30.4						

TABLE 8. e-asTTle Writing results by dosage

Category	Group	N		Mean normdiff4		Variance of normdiff4		Mean_diff	t_statistics	df	p_value	sig	Effect size
		2-year	1-year	2-year	1-year	2-year	1-year						
Overall	All	43	82	46.9	0.9	4795.6	7839.3	46.0	3.20	104.90	0.002	***	0.58
Gender	Female	17	43	32.3	9.1	2921.0	9524.5	23.2	1.17	51.34	0.247		0.29
	Male	26	39	56.5	-8.1	5946.3	6024.0	64.6	3.30	53.97	0.002	***	0.84
Ethnicity	Māori	18	23	6.0	-2.4	3647.2	7207.6	8.4	0.37	38.71	0.714		0.11
	Pacific	8	10	94.8	15.2	7507.1	4251.7	79.6	2.15	12.75	0.051		1.04
	Asian	2	20	122.5	49.5	180.5	6536.9	73.0	3.57	12.64	0.004	***	1.26
	NZ European	15	27	60.5	-36.4	1719.0	7739.7	96.9	4.84	39.28	0.000	***	1.41
	Other		2			-14.0		25088.0					

TABLE 9. 2023 Knowledge of literary metalanguage results by dosage

Category	Group	N		Mean postscore		Variance of postscore		Mean_diff	t_statistics	df	p-value	sig	Effect size
		2-year	1-year	2-year	1-year	2-year	1-year						
Overall	All	34	74	13.8	10.1	6.8	14.7	3.7	5.90	90.83	$p < 0.01$	***	1.14
Gender	Female	13	39	13.2	10.2	8.2	16.6	3.1	2.97	29.42	$p < 0.01$	***	0.87
	Male	21	32	14.2	10.2	5.9	12.9	4.0	4.85	50.93	$p < 0.01$	***	1.31
Ethnicity	Māori	12	18	14.0	9.2	6.5	13.0	4.8	4.30	27.83	$p < 0.01$	***	1.55
	Pacific	8	9	14.3	10.3	1.1	7.0	3.9	4.10	10.63	$p < 0.01$	***	1.95
	Asian	2	21	15.5	11.4	12.5	16.3	4.1					
	NZ European	12	21	13.1	9.5	10.6	16.6	3.6	2.79	27.37	$p < 0.01$	***	0.98
	Other		2			13.0		18.0					