

Supplemental Material S2. Quantitative production analysis (QPA) measures by participant.

Some general notes for interpreting these data: Baselines 1, 2, and 3 are not referring to the first three baselines during probing, but rather the order of the last three baselines prior to beginning Combined Aphasia and Apraxia of Speech Treatment (CAAST; Wambaugh, Wright, Mauszycki, Nessler, & Bailey, 2017; Wambaugh, Wright, Nessler, & Mauszycki, 2014). Treatments 1, 2, and 3 refer to the final treatment probe during Phases 1, 2, or 3 of treatment. 2-Wk FU and 6-Wk FU refer to the 2-week and 6-week follow-up probes. Untreated sets are indicated in bold script. The QPA includes a count of matrix verbs (i.e., number of verbs in the main clause), but that count is not included here due to space limitations. However, it can be derived by Total Auxiliary Score/(1 + Auxiliary Complexity Index) for each set. For QPA coding and scoring procedures/guidelines, please refer to Saffran, Berndt, and Schwartz (1998), but some additional procedures were necessary for this analysis and are included here.

Nouns Requiring Determiners (NRD): If a noun occurred in isolation, it was not considered to require a determiner (regardless of what the noun was) due to insufficient context to make such a decision. The Determiner Index refers to the proportion of NRDs occurring with a determiner, regardless of appropriateness of the determiner in the syntactic/semantic context.

Inflected Verbs: Verbs were given credit for any inflectional markings, regardless if tense/agreement was accurate for the syntactic context. Inflection Index refers to the proportion of verbs requiring inflection that were inflected. Total auxiliary score is summed for all matrix verbs in the discourse sample (i.e., all responses per stimuli set). Auxiliary Complexity Index (ACI) is the average verb score above base/uninflected form; so, an ACI score of 1.0 indicates that each verb produced had an average of one additional element (such as tense, auxiliary *IS*, modal verb, etc.).

Well-Formed Sentences: QPA instructions are not very detailed regarding what elements are required for well-formedness except "no syntactic errors or missing verb arguments," thus more specific instructions were given for primary and reliability scoring. A sentence was marked well-formed if (a) verb inflection and agreement were appropriate for the syntactic context (regardless of semantic accuracy related to the picture stimuli), (b) any nouns requiring determiners occurred with a determiner, and (c) no other *necessary/appropriate* grammatical elements/functor words were omitted (i.e., obligatory contexts were filled).

References

- Saffran, E. M., Berndt, R. S., & Schwartz, M. F. (1989). The quantitative analysis of agrammatic production: Procedure and data. *Brain and Language*, 37(3), 440–479.
- Wambaugh, J. L., Wright, S., Mauszycki, S. C., Nessler, C., & Bailey, D. J. (2017). Combined Aphasia and Apraxia of Speech Treatment (CAAST): Systematic replications in the development of a novel treatment. *International Journal of Speech-Language Pathology*. Advance online publication. <https://doi.org/10.1080/17549507.2016.1267262>
- Wambaugh, J. L., Wright, S., Nessler, C., & Mauszycki, S. C. (2014). Combined Aphasia and Apraxia of Speech Treatment (CAAST): Effects of a novel therapy. *Journal of Speech, Language, and Hearing Research*, 57(6), 2191–2207. https://doi.org/10.1044/2014_JSLHR-L-14-0004

Participant 1

Probe	Total Narrative Words			Open-Class Word Count			Closed-Class (CC) Word Count			Proportion CC Words			Noun Count		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	54	60	65	30	33	35	24	27	30	.44	.45	.46	20	18	20
Baseline 2	48	46	63	28	28	36	20	18	27	.42	.39	.43	16	16	19
Baseline 3	55	55	68	28	30	37	27	25	31	.49	.45	.46	17	15	20
Treatment 1	204	114	128	110	54	65	94	60	63	.46	.53	.49	48	18	35
2-Wk FU	140	133	167	66	64	77	74	69	90	.53	.52	.54	33	27	38
6-Wk FU	136	91	147	74	46	69	62	45	78	.46	.49	.53	33	23	38
	Nouns Requiring Determiner (NRD)			NRD with Determiner			Determiner Index			Pronoun Count			Noun:Pronoun Ratio		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	14	15	19	13	14	15	.93	.93	.79	1	4	3	20	4.50	6.67
Baseline 2	10	14	17	10	13	16	1.0	.93	.94	5	3	7	3.20	5.33	2.71
Baseline 3	10	14	16	9	14	14	.90	1.0	.88	6	2	4	2.83	7.50	5.0
Treatment 1	29	12	24	22	12	22	.76	1.0	.92	25	24	9	1.92	0.75	3.89
2-Wk FU	25	23	27	25	22	24	1.0	.96	.89	19	17	28	1.74	1.59	1.36
6-Wk FU	23	20	28	22	18	26	.96	.90	.93	13	10	20	2.54	2.30	1.90
	Verb Count			Noun:Verb Ratio			Verbs Requiring Inflection (VRI)			VRI with Inflection			Inflection Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	8	11	14	2.50	1.64	1.43	8	10	13	8	10	10	1.0	1.0	.77
Baseline 2	12	10	12	1.33	1.60	1.58	11	10	10	11	10	9	1.0	1.0	.90
Baseline 3	10	11	13	1.70	1.36	1.54	10	10	11	9	10	10	.90	1.0	.91
Treatment 1	47	30	27	1.02	0.60	1.30	46	29	27	46	28	27	1.0	.97	1.0
2-Wk FU	28	32	33	1.18	0.84	1.15	26	27	30	25	25	28	.96	.93	.93
6-Wk FU	31	20	26	1.06	1.15	1.46	28	18	25	28	17	25	1.0	.94	1.0
	Total Auxiliary Score			Auxiliary Complexity Index			Sentence Count			Number of Words in Sentences			Proportion of Words in Sentences		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	21	22	26	1.63	1.44	1.17	8	8	9	46	46	51	.85	.77	.78
Baseline 2	19	19	22	1.11	0.90	1.20	5	7	9	31	27	46	.65	.59	.73
Baseline 3	22	27	27	1.20	1.70	1.45	10	8	11	55	54	68	1.0	.98	1.0
Treatment 1	101	62	58	2.16	1.70	1.90	32	23	20	204	114	119	1.0	1.0	.93
2-Wk FU	60	57	73	1.86	1.71	1.81	22	21	25	138	133	167	.99	1.0	1.0
6-Wk FU	61	39	59	2.05	1.44	1.81	20	16	21	136	91	147	1.0	1.0	1.0
	Mean Sentence Length			Number of Well-Formed Sentences			Prop. of Well-Formed Sentences			Embedded Clause Count			Embedding Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	5.75	5.75	5.67	6	5	4	.75	.63	.44	0	1	0	0	.13	0
Baseline 2	6.20	3.86	5.11	5	5	6	1.0	.71	.67	2	0	1	.40	0	.11
Baseline 3	5.50	6.75	6.18	7	6	7	.70	.75	.64	0	1	1	0	.13	.09
Treatment 1	6.38	4.96	5.95	23	15	15	.72	.65	.75	0	1	1	0	.04	.05
2-Wk FU	6.27	6.33	6.68	18	16	20	.82	.76	.80	3	5	1	.14	.24	.04
6-Wk FU	6.80	5.69	7.0	16	11	14	.80	.69	.67	6	3	1	.30	.19	.05

Participant 2

Probe	Total Narrative Words			Open-Class Word Count			Closed-Class (CC) Word Count			Proportion CC Words			Noun Count		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	70	69	43	62	62	41	8	7	2	.11	.10	.05	49	42	28
Baseline 2	36	39	34	32	37	31	4	2	3	.11	.05	.09	26	25	26
Baseline 3	49	45	53	41	41	48	8	4	5	.16	.09	.09	33	35	41
Treatment 1	77	33	72	72	31	68	5	2	4	.06	.06	.06	52	25	55
Treatment 2	83	72	72	78	67	65	5	5	7	.06	.07	.10	75	61	64
2-Wk FU	91	72	81	83	60	74	8	12	7	.09	.17	.09	70	54	66
6-Wk FU	74	82	78	70	77	77	4	5	1	.05	.06	.01	58	64	66
	Nouns Requiring Determiner (NRD)			NRD with Determiner			Determiner Index			Pronoun Count			Noun:Pronoun Ratio		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	0	0	3	0	0	0	0	0	0	1	0	0	49.0	0	0
Baseline 2	0	0	1	0	0	0	0	0	0	2	1	1	13.0	25.0	26.0
Baseline 3	0	0	0	0	0	0	0	0	0	7	1	1	4.71	35.0	41.0
Treatment 1	1	1	2	0	1	0	0	1.0	0	4	0	1	13.0	0	55.0
Treatment 2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2-Wk FU	10	3	8	2	0	2	.20	0	.25	3	9	1	23.30	6.0	66.0
6-Wk FU	7	13	10	0	0	0	0	0	0	0	1	0	0	64.0	0
	Verb Count			Noun:Verb Ratio			Verbs Requiring Inflection (VRI)			VRI with Inflection			Inflection Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	8	15	9	6.13	2.80	3.11	8	15	9	5	7	3	.63	.47	.33
Baseline 2	5	6	2	5.20	4.17	13.0	5	5	2	2	4	2	.40	.80	1.0
Baseline 3	5	2	3	6.60	17.50	13.67	4	2	3	0	1	0	0	.50	0
Treatment 1	19	5	13	2.74	5.0	4.23	16	5	12	10	5	9	.63	1.0	.75
Treatment 2	3	5	1	25.0	12.20	64.0	3	5	1	2	3	1	.67	.60	1.0
2-Wk FU	13	5	8	5.38	10.80	8.25	13	5	8	8	2	6	.62	.40	.75
6-Wk FU	11	14	11	5.27	4.57	6.0	11	14	11	9	13	10	.82	.93	.91
	Total Auxiliary Score			Auxiliary Complexity Index			Sentence Count			Number of Words in Sentences			Proportion of Words in Sentences		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	9	19	11	0.13	0.27	0.22	0	0	3	0	0	6	0	0	.14
Baseline 2	5	10	4	0	0.67	1.0	2	1	0	4	2	0	.11	.05	0
Baseline 3	5	3	3	0	0.50	0	1	0	0	2	0	0	.04	0	0
Treatment 1	29	10	22	0.53	1.0	0.69	3	1	2	7	3	4	.09	.09	.06
Treatment 2	5	8	2	0.67	0.60	1.0	0	0	0	0	0	0	0	0	0
2-Wk FU	16	6	11	0.23	0.20	0.38	6	1	3	12	2	6	.13	.03	.07
6-Wk FU	18	14	11	0.64	0	0	7	14	11	16	28	22	.22	.34	.28
	Mean Sentence Length			Number of Well-Formed Sentences			Prop. of Well-Formed Sentences			Embedded Clause Count			Embedding Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	0	0	2.0	0	0	0	0	0	0	0	0	0	0	0	0
Baseline 2	2.0	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baseline 3	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Treatment 1	2.33	3.0	2.0	1	0	0	.33	0	0	0	0	0	0	0	0
Treatment 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-Wk FU	2.0	2.0	2.0	0	0	0	0	0	0	0	0	0	0	0	0
6-Wk FU	2.29	2.0	2.0	0	0	1	0	0	.09	0	0	0	0	0	0

Participant 3

Probe	Total Narrative Words			Open-Class Word Count			Closed-Class (CC) Word Count			Proportion CC Words			Noun Count		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	46	56	41	33	39	24	13	17	17	.28	.30	.41	13	12	7
Baseline 2	42	32	34	30	22	21	12	10	13	.29	.31	.38	14	13	7
Baseline 3	54	55	37	33	33	23	21	22	14	.39	.40	.38	15	11	6
Treatment 1	120	110	124	87	86	97	33	24	27	.28	.22	.22	67	59	70
Treatment 2	224	223	225	145	156	160	79	67	65	.35	.30	.29	85	99	105
2-Wk FU	194	314	299	127	184	171	67	130	128	.35	.41	.43	82	92	91
6-Wk FU	230	261	245	137	155	152	93	106	93	.40	.41	.38	74	85	96
	Nouns Requiring Determiner (NRD)			NRD with Determiner			Determiner Index			Pronoun Count			Noun:Pronoun Ratio		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	4	1	3	3	1	2	.75	1.0	.67	8	9	6	1.63	1.33	1.17
Baseline 2	0	2	1	0	2	0	0	1.0	0	7	4	6	2.0	3.25	1.17
Baseline 3	3	2	3	2	1	1	.67	.50	.33	10	11	4	1.50	1.0	1.50
Treatment 1	6	5	9	4	2	2	.67	.40	.22	15	13	14	4.47	4.54	5.0
Treatment 2	8	8	14	3	6	8	.38	.75	.57	42	30	27	2.02	3.30	3.89
2-Wk FU	5	16	23	1	10	11	.20	.63	.48	36	51	55	2.28	1.80	1.65
6-Wk FU	6	14	12	4	8	8	.67	.57	.67	41	46	40	1.80	1.85	2.40
	Verb Count			Noun:Verb Ratio			Verbs Requiring Inflection (VRI)			VRI with Inflection			Inflection Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	13	17	12	1.0	0.71	0.58	10	16	11	10	13	10	1.0	.81	.91
Baseline 2	11	7	10	1.27	1.86	0.70	10	6	10	7	5	7	.70	.83	.70
Baseline 3	14	17	13	1.07	0.65	0.46	14	12	11	12	11	10	.86	.92	.91
Treatment 1	15	18	22	4.47	3.28	3.18	15	18	22	12	18	16	.80	1.0	.73
Treatment 2	38	34	37	2.24	2.91	2.84	35	33	36	30	23	31	.86	.70	.86
2-Wk FU	34	59	64	2.41	1.56	1.42	33	55	57	28	45	49	.85	.82	.86
6-Wk FU	39	49	40	1.90	1.73	2.40	34	41	33	32	35	28	.94	.85	.85
	Total Auxiliary Score			Auxiliary Complexity Index			Sentence Count			Number of Words in Sentences			Proportion of Words in Sentences		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	19	21	22	0.58	0.24	1.0	6	10	6	21	34	20	.46	.61	.49
Baseline 2	17	12	17	0.55	0.71	0.70	7	5	6	21	14	18	.50	.44	.53
Baseline 3	27	21	18	0.93	0.24	0.50	10	12	5	38	38	18	.70	.69	.49
Treatment 1	34	34	36	1.27	0.89	0.71	11	13	16	45	43	51	.38	.39	.41
Treatment 2	67	55	61	0.97	0.67	0.79	30	29	26	118	122	118	.53	.55	.52
2-Wk FU	73	119	108	1.35	1.13	1.04	30	46	45	118	204	207	.61	.65	.69
6-Wk FU	73	92	77	1.21	1.30	1.14	31	40	31	132	173	124	.57	.66	.51
	Mean Sentence Length			Number of Well-Formed Sentences			Prop. of Well-Formed Sentences			Embedded Clause Count			Embedding Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	3.50	3.40	3.33	4	10	5	.67	1.0	.83	1	0	1	.17	0	.17
Baseline 2	3.0	2.80	3.0	6	3	2	.86	.60	.33	0	0	0	0	0	0
Baseline 3	3.80	3.17	3.60	5	7	3	.50	.58	.60	0	1	1	0	.08	.20
Treatment 1	4.09	3.31	3.19	6	10	4	.55	.77	.25	0	0	0	0	0	0
Treatment 2	3.93	4.21	4.54	19	16	16	.63	.55	.62	1	1	2	.03	.03	.08
2-Wk FU	3.93	4.43	4.60	20	29	21	.67	.63	.47	2	2	6	.07	.04	.13
6-Wk FU	4.26	4.33	4.0	17	27	20	.55	.68	.65	4	4	0	.13	.10	0

Participant 4

Probe	Total Narrative Words			Open-Class Word Count			Closed-Class (CC) Word Count			Proportion CC Words			Noun Count		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	33	19	21	23	14	17	10	5	4	.30	.26	.19	15	9	8
Baseline 2	18	23	9	17	15	8	1	8	1	.06	.35	.11	10	7	2
Baseline 3	7	20	15	6	14	15	1	6	0	.14	.30	0	5	10	7
Treatment 1	36	45	42	24	23	28	12	22	14	.33	.49	.33	16	18	15
Treatment 2	47	61	51	27	29	31	20	32	20	.43	.52	.39	16	18	22
2-Wk FU	47	51	66	28	28	32	19	23	34	.40	.45	.52	19	17	19
6-Wk FU	69	65	73	34	36	40	35	29	33	.51	.45	.45	23	24	27
	Nouns Requiring Determiner (NRD)			NRD with Determiner			Determiner Index			Pronoun Count			Noun:Pronoun Ratio		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	3	3	0	1	1	0	.33	.33	0	3	1	3	5.0	9.0	2.67
Baseline 2	1	2	0	1	1	0	1.0	.50	0	0	3	0	0	2.33	0
Baseline 3	2	4	2	0	1	0	0	.25	0	0	0	0	0	0	0
Treatment 1	8	17	14	3	11	5	.38	.65	.36	1	0	0	16.0	0	0
Treatment 2	12	16	9	10	16	7	.83	1.0	.78	2	1	3	8.0	18.0	7.33
2-Wk FU	12	14	14	11	11	12	.92	.79	.86	1	1	4	19.0	17.0	4.75
6-Wk FU	18	17	21	13	11	9	.72	.65	.43	3	2	4	7.67	12.0	6.75
	Verb Count			Noun:Verb Ratio			Verbs Requiring Inflection (VRI)			VRI with Inflection			Inflection Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	6	4	7	2.50	2.25	1.14	3	4	6	3	4	6	1.0	1.0	1.0
Baseline 2	6	8	4	1.67	0.88	0.50	6	8	4	4	4	4	.67	.50	1.0
Baseline 3	1	4	7	5.0	2.50	1.0	1	4	7	1	3	6	1.0	.75	.86
Treatment 1	8	5	9	2.0	3.60	1.67	7	5	9	7	5	9	1.0	1.0	1.0
Treatment 2	9	11	6	1.78	1.64	3.67	9	11	6	9	11	6	1.0	1.0	1.0
2-Wk FU	9	11	11	2.11	1.55	1.73	8	11	11	8	11	11	1.0	1.0	1.0
6-Wk FU	9	10	12	2.56	2.40	2.25	9	10	12	9	9	12	1.0	.90	1.0
	Total Auxiliary Score			Auxiliary Complexity Index			Sentence Count			Number of Words in Sentences			Proportion of Words in Sentences		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	8	7	12	1.0	0.75	0.71	3	1	2	10	3	5	.30	.16	.24
Baseline 2	10	11	8	0.67	0.38	1.0	0	2	0	0	6	0	0	.26	0
Baseline 3	2	8	13	1.0	1.0	0.86	0	2	2	0	11	4	0	.55	.27
Treatment 1	15	13	18	1.50	1.60	1.0	6	5	9	23	27	35	.64	.60	.83
Treatment 2	19	24	16	1.11	1.40	1.67	9	10	5	46	61	30	.98	1.0	.59
2-Wk FU	16	21	27	1.29	0.91	1.45	7	11	11	36	51	65	.77	1.0	.98
6-Wk FU	21	18	20	1.63	1.0	1.0	8	9	10	56	52	62	.81	.80	.85
	Mean Sentence Length			Number of Well-Formed Sentences			Prop. of Well-Formed Sentences			Embedded Clause Count			Embedding Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	3.33	3.0	2.50	2	1	1	.67	1.0	.50	0	0	0	0	0	0
Baseline 2	0	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baseline 3	0	5.50	2.0	0	0	0	0	0	0	0	0	0	0	0	0
Treatment 1	3.83	5.40	3.89	3	3	0	.50	.60	0	0	0	0	0	0	0
Treatment 2	5.11	6.10	6.0	3	3	4	.33	.30	.80	0	1	0	0	.10	0
2-Wk FU	5.14	4.64	5.91	4	3	6	.57	.27	.55	1	0	0	.14	0	0
6-Wk FU	7.0	5.78	6.20	5	2	1	.63	.22	.10	1	1	2	.13	.11	.20

Participant 5

Probe	Total Narrative Words			Open-Class Word Count			Closed-Class (CC) Word Count			Proportion CC Words			Noun Count		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	49	47	48	34	28	28	15	19	20	.31	.40	.42	16	18	19
Baseline 2	38	45	40	31	30	27	7	15	13	.18	.33	.33	20	18	19
Baseline 3	46	43	41	32	26	29	14	17	12	.30	.40	.29	18	17	18
Treatment 1	107	145	97	58	83	51	49	62	46	.46	.43	.47	20	31	23
Treatment 2	124	167	170	69	97	90	55	70	80	.44	.42	.47	26	38	38
2-Wk FU	180	194	185	107	112	109	73	82	76	.41	.42	.41	46	39	44
6-Wk FU	150	195	204	83	112	128	67	83	76	.45	.43	.37	35	50	60
	Nouns Requiring Determiner (NRD)			NRD with Determiner			Determiner Index			Pronoun Count			Noun:Pronoun Ratio		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	13	17	17	4	8	4	.31	.47	.24	1	0	0	16	0	0
Baseline 2	16	13	17	2	7	6	.13	.54	.35	3	5	1	6.67	3.60	19.0
Baseline 3	14	16	11	4	7	3	.29	.44	.27	3	0	5	6.0	0	3.60
Treatment 1	15	18	23	15	17	15	1.0	.94	.65	3	2	5	6.67	15.50	4.60
Treatment 2	20	25	20	19	19	19	.95	.76	.95	7	20	13	3.71	1.90	2.92
2-Wk FU	25	26	25	21	23	23	.84	.88	.92	11	18	12	4.18	2.17	3.67
6-Wk FU	21	31	28	21	29	22	1.0	.94	.79	6	3	9	5.83	16.67	6.67
	Verb Count			Noun:Verb Ratio			Verbs Requiring Inflection (VRI)			VRI with Inflection			Inflection Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	17	8	8	0.94	2.25	2.38	17	8	8	2	1	0	.12	.13	0
Baseline 2	8	12	7	2.50	1.50	2.71	7	5	6	3	1	3	.43	.20	.50
Baseline 3	11	8	11	1.64	2.13	1.64	8	8	11	6	8	10	.75	1.0	.91
Treatment 1	32	31	23	0.63	1.0	1.0	20	15	16	12	14	13	.60	.93	.81
Treatment 2	38	46	34	0.68	0.83	1.12	16	12	18	14	9	16	.88	.75	.89
2-Wk FU	35	47	43	1.31	0.83	1.02	15	11	17	11	11	10	.73	1.0	.59
6-Wk FU	37	32	39	0.95	1.56	1.54	24	18	21	16	17	20	.67	.94	.95
	Total Auxiliary Score			Auxiliary Complexity Index			Sentence Count			Number of Words in Sentences			Proportion of Words in Sentences		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	19	9	8	0.12	0.13	0	8	7	8	40	37	36	.82	.79	.75
Baseline 2	10	13	10	0.25	0.44	0.43	6	9	8	21	40	34	.55	.89	.85
Baseline 3	14	8	16	0.56	0	0.60	9	8	7	39	41	21	.85	.95	.51
Treatment 1	45	40	35	1.14	1.67	1.19	10	12	13	79	105	87	.74	.72	.90
Treatment 2	53	54	36	1.65	1.16	1.0	14	24	18	102	148	149	.82	.89	.88
2-Wk FU	46	57	52	1.30	1.28	1.08	16	24	17	124	161	124	.69	.83	.67
6-Wk FU	51	18	58	1.13	1.0	1.64	11	16	14	92	135	125	.61	.69	.61
	Mean Sentence Length			Number of Well-Formed Sentences			Prop. of Well-Formed Sentences			Embedded Clause Count			Embedding Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	5.0	5.29	4.50	0	0	0	0	0	0	0	0	0	0	0	0
Baseline 2	3.50	4.44	4.25	0	4	0	0	.44	0	0	0	0	0	0	0
Baseline 3	4.33	5.13	3.0	1	0	0	.11	0	0	0	0	0	0	0	0
Treatment 1	7.90	8.75	6.69	8	9	5	.80	.75	.38	0	3	0	0	.25	0
Treatment 2	7.29	6.17	8.28	12	14	10	.86	.58	.56	0	0	2	0	0	.11
2-Wk FU	7.75	6.71	7.29	12	16	11	.75	.67	.65	2	1	2	.13	.04	.12
6-Wk FU	8.37	8.44	8.93	9	11	9	.82	.69	.64	1	2	3	.09	.13	.21

Participant 7

Probe	Total Narrative Words			Open-Class Word Count			Closed-Class (CC) Word Count			Proportion CC Words			Noun Count		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	49	53	62	33	30	38	16	23	24	.33	.43	.39	20	17	20
Baseline 2	50	53	55	32	28	33	18	25	22	.36	.47	.40	17	17	18
Baseline 3	38	50	56	23	26	33	15	24	23	.39	.48	.41	13	15	18
Treatment 1	110	40	55	61	24	34	49	16	21	.45	.40	.38	39	16	21
Treatment 2	105	124	43	47	61	24	58	63	19	.55	.51	.44	30	32	12
2-Wk FU	71	130	40	34	64	23	37	66	17	.52	.51	.43	22	31	12
6-Wk FU	91	122	52	45	61	30	46	61	22	.51	.50	.42	28	31	13
	Nouns Requiring Determiner (NRD)			NRD with Determiner			Determiner Index			Pronoun Count			Noun:Pronoun Ratio		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	13	15	16	12	13	16	.92	.87	1.0	0	2	1	0	8.50	20.0
Baseline 2	15	15	15	11	15	14	.73	1.0	.93	0	5	0	0	3.40	0
Baseline 3	13	14	18	11	13	17	.85	.93	.94	0	0	0	0	0	0
Treatment 1	29	11	16	26	10	15	.90	.91	.94	2	0	1	19.50	0	21.0
Treatment 2	24	28	12	24	28	11	1.0	1.0	.92	7	11	0	4.29	2.91	0
2-Wk FU	19	25	11	19	25	11	1.0	1.0	1.0	2	13	0	11	2.38	0
6-Wk FU	23	26	11	22	26	10	.96	1.0	.91	6	11	5	4.67	2.82	2.60
	Verb Count			Noun:Verb Ratio			Verbs Requiring Inflection (VRI)			VRI with Inflection			Inflection Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	10	10	16	2.0	1.70	1.25	10	10	16	10	10	13	1.0	1.0	.81
Baseline 2	12	10	12	1.42	1.70	1.50	12	10	12	12	10	12	1.0	1.0	1.0
Baseline 3	10	10	13	1.30	1.50	1.38	10	10	13	10	9	13	1.0	.90	1.0
Treatment 1	12	8	10	3.25	2.0	2.10	12	8	10	12	7	10	1.0	.88	1.0
Treatment 2	16	21	10	1.88	1.52	1.20	16	21	10	16	21	10	1.0	1.0	1.0
2-Wk FU	11	24	9	2.0	1.29	1.33	11	23	9	11	23	9	1.0	1.0	1.0
6-Wk FU	14	21	14	2.0	1.48	0.93	14	21	14	14	21	14	1.0	1.0	1.0
	Total Auxiliary Score			Auxiliary Complexity Index			Sentence Count			Number of Words in Sentences			Proportion of Words in Sentences		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	30	32	46	2.0	2.20	1.88	9	8	14	43	33	58	.88	.62	.94
Baseline 2	30	34	36	2.0	2.40	2.0	10	10	12	41	50	46	.82	.94	.84
Baseline 3	28	33	32	1.80	2.30	1.67	10	10	13	36	46	48	.95	.92	.86
Treatment 1	40	23	29	2.33	1.88	1.90	12	8	10	78	34	41	.71	.85	.75
Treatment 2	50	61	30	2.13	2.05	2.0	16	19	10	94	124	39	.90	1.0	.91
2-Wk FU	30	65	23	1.73	1.95	1.56	11	22	9	68	130	39	.96	1.0	.98
6-Wk FU	40	55	31	1.86	1.75	1.21	14	20	14	79	119	52	.87	.98	1.0
	Mean Sentence Length			Number of Well-Formed Sentences			Prop. of Well-Formed Sentences			Embedded Clause Count			Embedding Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	4.78	4.13	4.14	5	6	9	.56	.75	.64	0	0	0	0	0	0
Baseline 2	4.10	5.0	3.83	5	6	5	.50	.60	.42	0	0	0	0	0	0
Baseline 3	3.60	4.60	3.69	5	4	5	.50	.40	.38	0	0	0	0	0	0
Treatment 1	6.50	4.25	4.10	10	3	8	.83	.38	.80	0	0	0	0	0	0
Treatment 2	5.88	6.53	3.90	10	19	6	.63	1.0	.60	0	1	0	0	.05	0
2-Wk FU	6.18	5.91	4.33	7	20	6	.64	.91	.67	0	1	0	0	.05	0
6-Wk FU	5.64	5.95	3.71	13	17	10	.93	.85	.71	0	1	0	0	.05	0

Participant 8

Probe	Total Narrative Words			Open-Class Word Count			Closed-Class (CC) Word Count			Proportion CC Words			Noun Count		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	40	46	43	39	43	40	1	3	3	.03	.07	.07	24	26	20
Baseline 2	34	34	31	33	33	28	1	1	3	.03	.03	.10	20	20	18
Baseline 3	39	36	37	38	34	36	1	2	1	.03	.06	.03	26	22	21
Treatment 1	68	124	67	49	86	52	19	38	15	.28	.31	.22	21	50	34
Treatment 2	156	131	91	100	88	67	56	43	24	.36	.33	.26	59	52	30
2-Wk FU	103	133	90	73	89	69	30	44	21	.29	.33	.23	44	57	35
6-Wk FU	118	129	111	84	93	82	34	36	29	.29	.28	.26	50	63	44
	Nouns Requiring Determiner (NRD)			NRD with Determiner			Determiner Index			Pronoun Count			Noun:Pronoun Ratio		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	6	6	6	0	1	0	0	.17	0	1	0	1	24.0	0	20.0
Baseline 2	5	11	5	0	1	1	0	.09	.20	0	0	0	0	0	0
Baseline 3	5	9	7	4	1	1	.80	.11	.14	0	0	0	0	0	0
Treatment 1	18	19	9	1	10	3	.06	.53	.33	0	2	0	0	25.0	0
Treatment 2	26	24	18	10	13	4	.38	.54	.22	2	2	1	29.5	26.0	30.0
2-Wk FU	22	19	23	4	8	4	.18	.42	.17	2	1	0	22.0	57.0	0
6-Wk FU	18	29	18	6	5	1	.33	.17	.06	2	4	3	25.0	15.75	14.67
	Verb Count			Noun:Verb Ratio			Verbs Requiring Inflection (VRI)			VRI with Inflection			Inflection Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	8	7	8	3.0	3.71	2.50	8	6	7	7	6	6	.88	1.0	.86
Baseline 2	5	6	5	4.0	3.33	3.60	5	6	4	4	6	4	.80	1.0	1.0
Baseline 3	4	5	5	6.50	4.40	4.20	4	5	5	3	5	5	.75	1.0	1.0
Treatment 1	19	17	9	1.11	2.94	3.78	19	17	9	18	16	8	.95	.94	.89
Treatment 2	22	15	19	2.68	3.47	1.58	22	13	19	21	13	18	.95	1.0	.95
2-Wk FU	17	14	17	2.59	4.07	2.06	15	14	16	14	14	15	.93	1.0	.94
6-Wk FU	18	10	20	2.78	6.30	2.20	16	10	18	16	10	17	1.0	1.0	.94
	Total Auxiliary Score			Auxiliary Complexity Index			Sentence Count			Number of Words in Sentences			Proportion of Words in Sentences		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	15	13	14	0.88	0.86	0.75	2	2	3	5	4	6	.13	.09	.14
Baseline 2	9	12	9	0.80	1.0	0.80	2	3	3	5	7	9	.15	.21	.29
Baseline 3	7	10	10	0.75	1.0	1.0	1	4	2	2	10	6	.05	.28	.16
Treatment 1	29	40	21	0.61	1.35	1.33	13	10	5	39	56	22	.57	.45	.33
Treatment 2	47	35	44	1.14	1.50	1.32	11	11	12	76	77	46	.49	.59	.51
2-Wk FU	35	31	28	1.33	1.38	0.87	10	9	12	58	48	49	.56	.36	.54
6-Wk FU	38	26	39	1.24	1.60	0.95	12	9	14	69	53	47	.58	.41	.42
	Mean Sentence Length			Number of Well-Formed Sentences			Prop. of Well-Formed Sentences			Embedded Clause Count			Embedding Index		
	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3	Set 1	Set 2	Set 3
Baseline 1	2.50	2.0	2.0	0	1	1	0	.50	.33	0	0	0	0	0	0
Baseline 2	2.50	2.33	3.0	0	0	1	0	0	.33	0	0	0	0	0	0
Baseline 3	2.0	2.50	3.0	0	0	0	0	0	0	0	0	0	0	0	0
Treatment 1	3.0	5.60	4.40	0	6	2	0	.60	.40	1	0	0	.08	0	0
Treatment 2	6.91	7.0	3.83	4	4	0	.36	.36	0	0	0	0	0	0	0
2-Wk FU	5.80	5.33	4.08	3	4	3	.30	.44	.25	1	0	2	.10	0	.17
6-Wk FU	5.75	5.89	3.36	6	3	5	.50	.33	.36	0	0	0	0	0	0