A Message from Leiter-3 Author, Dr. Gale Roid: June 2014

The development and standardization of a widely-used cognitive test requires several years and some very complex statistical and psychometric analyses. The complexity is greatest in the derivation of "conversion" tables such as the conversion of subtest sums to composite scores such as the Nonverbal IQ. Equating of tests across editions is another very challenging area of psychometrics.

Our team of researchers used extensive data from the 1,603 examinees in the standardization sample; data from clinical groups; concurrent data comparing Leiter-3 to all the major IQ measures, and multiple mathematical models in establishing the tables for the Appendix. However, some oddities in the data and models apparently resulted in tables that did not adequately estimate the score distribution for the lower IQ range. With extensive new analyses, we have adjusted the Nonverbal IQ table and the equating table for the conversion of Leiter-R to Leiter-3.

Because of the very important change from response cards to blocks and addition of a full-range Classification/Analogies subtest, the distribution of Nonverbal IQ scores on Leiter-3 is somewhat different from the Leiter-R. With extensive research, and recommendations from clinical and education assessment professionals, we saw the need for the "hands on" nature of the "block and frame" mode of response in Leiter-3, especially for children with special needs. We will continue to study the differences between the two editions.

My apologies for any inconvenience the inconsistencies in tables may have caused. Although these inconsistencies have not affected a large portion of the Leiter-3 population, it is possible a few individuals may have achieved higher than anticipated scores at the lower IQ ranges. As a parent of a child (now adult) with special-needs, I know personally that test results must be accurate for the proper placement and treatment of these precious children and adults.

Please replace Appendix D.1 and Appendix L tables with the tables provided with this letter.

If you have further questions, please feel free to contact Dr. Katherine Genseke at (630) 860-9700 or katy@stoeltingco.com.

Sincerely,

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D.1 Appendix Nonverbal IQ Equivalents

Sum of Scaled Scores	Core IQ Score
0	30
1	31
2	32
3	33
4	34
5	35
6	36
7	37
8	39
9	41
10	43
11	45
12	47
13	49
14	51
15	53
16	55
17	57
18	59
19	61
20	63
21	65
22	67
23	69
24	70
25	71
26	72
27	73
28	74
29	75
30	77
31	78
32	81
33	84
34	87
35	90
36	93
37	95
38	96
39	97
40	98

Sum of Scaled Scores	Core IQ Score
41	99
42	100
43	101
44	103
45	105
46	107
47	108
48	110
49	111
50	113
51	114
52	115
53	116
54	117
55	119
56	120
57	121
58	123
59	125
60	126
61	128
62	129
63	131
64	132
65	133
66	135
67	137
68	139
69	141
70	143
71	145
72	147
73	149
74	152
75	155
76	158
77	161
78	164
79	167
80	170

process. Psychologists should take the additional time to prepare, train, and debrief the interpreter as part of this assessment process. Assessments of deaf or hard of hearing individuals, when done appropriately, will require significant amounts of additional time and resources. Psychologists must remain cognizant that the presence and use of an interpreter may add complexity and a potential source of errors into all aspects of the assessment. Psychologists should not presume that the examinee is familiar and knowledgeable about the role and effective use of a professional interpreter. Training and review of roles in the beginning of the assessment process may greatly enhance a fluid administration. Examiners should note and document in their report the impact on and use of a professional interpreter for the assessment process. Examiners who are able to communicate directly with a deaf or hard of hearing examinee should note and document the effectiveness of the communication between the examiner and examinee as well as any impact on the obtained results. The Leiter-3 gestural laminate card and pantomimed movements provided in the general administration guidelines were used to collect information during the standardization process. Any alteration of or deviation from these gestures should be noted in the assessment report.

When assessing individuals who use assistive listening devices (e.g. hearing aids, cochlear implants), it is strongly recommended that the assessment is conducted in a location without any ambient noise or visual distractions. Assistive listening devices often only amplify all sounds and may thus become a source of distracting information and increased difficulty without inferring the examiner. The interaction between some lighting sources, radio transmitters, or other electronic devices may also result in perceived interference with assistive listening devices. It is strongly recommended that the examiner conducts a brief review of the assistive listening device with the examinee to confirm an appropriate level of function.

Over the course of the development of the Leiter-3, a clinical validity study of deaf and hard of hearing individuals was conducted. The results from this study, n=46 and reported in Chapter 7, did not suggest that the scores from the administration of the Leiter-3 varied significantly from those individuals in the normative sample. Due to the limited size of this study and the age ranges included, this information should not be misconstrued as representing the typical performance of all deaf or hard of hearing individuals. It should not be cited as providing "deaf/hard of hearing norms" the purpose of this limited sample was to gather data regarding the fairness of the instrument as compared to typically developing peers. While further research is beneficial to evaluate the use of the Leiter-3 amongst various subgroups within the deaf and hard of hearing communities, developmental research appears to support its appropriateness for use with these populations in a fair and comparable manner.

L Appendix Equating Table for the Conversion of Leiter-R to Leiter-3 with Confidence Intervals

Leiter-R Brief IQ	Leiter-3 NV IQ	Confidence Interval for Leiter-3 Low	High
30	36	30	42
31	37	31	43
32	38	32	44
33	39	33	45
34	40	34	46
35	41	35	47
36	41	35	47

Leiter-R Brief IQ	Leiter-3 NV IQ	Confidence Interval for Leiter-3 Low	High
37	42	36	48
38	43	37	49
39	44	38	50
40	45	39	51
41	46	40	52
42	47	41	53
43	48	42	54

Leiter-R Brief IQ	Leiter-3 NV IQ	Confidence Interval for Leiter-3	
		Low	High
44	49	43	55
45	50	44	56
46	51	45	57
47	52	46	58
48	53	47	59
49	54	48	60
50	55	49	61
51	56	50	62
52	57	51	63
53	58	52	64
54	59	53	65
55	59	53	65
56	60	54	66
57	61	55	67
58	62	56	68
59	63	57	69
60	64	58	70
61	65	59	71
62	66	60	72
63	67	61	73
64	68	62	74
65	69	63	75
66	70	64	76
67	71	65	77
68	72	66	78
69	73	67	79
70	74	68	80
71	75	69	81
72	76	70	82
73	77	71	83
74	78	72	84
75	79	73	85
76	80	74	86
77	81	75	87
78	82	76	88
79	83	77	89
80	84	78	90
81	85	79	91
82	86	80	92
83	87	81	93
84	87	81	93
85	88	82	94
86	89	83	95
87	90	84	96
88	91	85	97
89	92	86	98
90	93	87	99
91	94	88	100
92	95	89	101
93	96	90	102
94	97	91	103
95	98	92	104
96	99	93	105
97	100	94	106
98	101	95	107
99	102	96	108
100	103	97	109
101	104	98	110
102	105	99	111
103	106	100	112
104	107	101	113
105	108	102	114
106	109	103	115
107	110	104	116

Leiter-R Brief IQ	Leiter-3 NV IQ	Confidence Interval for Leiter-3	
		Low	High
108	111	105	117
109	112	106	118
110	113	107	119
111	113	107	119
112	114	108	120
113	115	109	121
114	116	110	122
115	117	111	123
116	118	112	124
117	119	113	125
118	120	114	126
119	121	115	127
120	122	116	128
121	123	117	129
122	124	118	130
123	124	118	130
124	125	119	131
125	126	120	132
126	127	121	133
127	128	122	134
128	129	123	135
129	130	124	136
130	131	125	137
131	131	125	137
132	132	126	138
133	133	127	139
134	134	128	140
135	135	129	141
136	135	129	141
137	136	130	142
138	137	131	143
139	138	132	144
140	139	133	145
141	140	134	146
142	141	135	147
143	142	136	148
144	143	137	149
145	143	137	149
146	144	138	150
147	145	139	151
148	146	140	152
149	147	141	153
150	148	142	154
151	149	143	155
152	150	144	156
153	150	144	156
154	151	145	157
155	152	146	158
156	153	147	159
157	154	148	160
158	154	148	160
159	155	149	161
160	156	150	162
161	157	151	163
162	157	151	163
163	158	152	164
164	159	153	165
165	160	154	166
166	160	154	166
167	161	155	167
168	162	156	168
169	163	157	169
170	164	158	170

NOTE. The values for Leiter-3 Nonverbal IQ were calculated from the sample of N = 60 described in Chapter 7. Equating studies included linear and equipercentile methods (see Chapter 7). Confidence interval values were calculated by adding or subtracting twice the value of the standard error of measurement for Nonverbal IQ, averaging 3.0