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ABSTRACT

Classical measurement theory was used to investigate the measurement (psychometric) characteristics of both parts of the Finding Embedded Figures Test (FEFT) administered in either a "no guessing" supply format or a multiple-choice selection format to undergraduate college students or to middle school students. Three issues were addressed in this study: (1) how the alpha components for data from the FEFT compare across studies; (2) how test and item difficulty and discrimination coefficients compare across test administrations; and (3) how variables such as gender and grade levels of middle school students influence FEFT performance. Analyses were based on data from 69 undergraduates tested in a 1988 supply format study, 155 undergraduates who completed the multiple-choice format in 1989, and 1,528 middle school students who completed the multiple-choice format in this study. Coefficient alpha for the FEFT ranged between 0.81 and 0.90 across samples and administration formats. Items generally had desirable psychometric characteristics across studies. Construct validity analyses suggested that the measure is reasonably valid. Four tables present data from the study and three appendices give the FEFT composite scores. (SLD)

MEASUREMENT CHARACTERISTICS OF THE FINDING EMBEDDED FIGURES TEST WITH MIDDLE SCHOOL STUDENTS

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ABSTRACT

The study applied classical measurement theory to investigate the measurement characteristics of both parts of the Finding Embedded Figures Test, when the test is administered in either a "no guessing" supply format or a multiple-choice selection format, and when the FEFT is administered to either undergraduate college students or to middle school students. Analysis was based on data provided by 69 undergraduate subjects in the supply format study (Melancon & Thompson, 1988); 155 undergraduate students completing the FEFT in a multiple-choice format study (Melancon & Thompson, 1989); and 1,528 middle school students completing the FEFT in a multiple-choice format in the present study. Coefficient alpha for the FEFT ranged between 0.81 and 0.90 across samples and administration formats. Items generally had desirable psychometric characteristics across studies. Construct validity analyses were supportive of a conclusion that the measure is reasonably valid.

In the years immediately following World War II, Herman A. Witkin and his colleagues performed a series of historically important studies (e.g., Witkin, 1949) involving stylistic variations in perceptions of visual stimuli. These initial studies investigated variations in ability to perceive the upright in the absence of normally-available orienting stimuli. Witkin, Moore, Goodenough and Cox (1977, pp. 3-4) present photographs of the apparatuses used in these early "rod-and-frame" and "body-adjustment" tests. Heesacker (1981) presents a summary of the early years of this important research, and of the antecedents of the work dating back to the previous century (Jastrow, 1892).

Witkin's early work led to the development of the theory of psychological differentiation and the delineation of a cognitive style that has come to be called field independence/dependence (Goodenough & Witkin, 1977, pp. 2-3). Persons who tend to operate on the field independence (FI) end of this cognitive style continuum tend to perceive themselves as more segregated from their environments; these persons tend to be more analytical in their abilities and interests. Persons who tend to operate on the field dependence (FD) end of the continuum, on the other hand, tend to be less able either to distinguish among or to reorganize stimuli; these persons tend to be more social in their abilities and interests.

Field independence is the most researched of the 19 cognitive styles that have been identified (Goldstein & Blackman, 1978; Messick, 1976). For example, a comprehensive bibliography of studies involving the field-independence construct cites

several thousand studies (Cox & Gall, 1981). Various researchers (cf. Doebler & Eicke, 1979, p. 226; Donlon, 1977, p. 1; Laosa, 1978, p. 3; Rasinski, 1983, p.1; Witkin, Moore, Goodenough & Cox, 1977, p. 1) concur that the construct of field-independence has stimulated great interest.

Numerous studies indicate that field-independence has noteworthy associations with myriad outcomes; several reviews of these studies are available elsewhere (cf. Goodenough, 1976; Goodenough & Witkin, 1977; Melancon & Thompson, 1987; Witkin, Moore, Goodenough & Cox, 1977). However, the general tenor of these diverse findings can be gleaned by considering a few of the many available citations. Field-independence has been found to be related to diverse outcomes, including vocational choice (Witkin, Moore, Oltman, Goodenough, Friedman, Owen & Raskin, 1977); concept-learning abilities (Stasz, Shavelson, Cox & Moore, 1976); and to performance in specific subject areas such as reading (Pitts & Thompson, 1984; Spiro & Tirre, 1979). Field-independence also affects reaction to different instructional interventions and conditions (cf. Paradise & Block, 1984).

Cox and Gall (1981, p. 5) cite 16 measures that have been employed with varying frequency to measure aspects of perceptual disembedding ability. However, the most frequently used measure has been the Group Embedded Figures Test (Witkin, Oltman, Raskin & Karp, 1971). The Group Embedded Figures Test (GEFT) has been frequently used, in part because the measure has exceptional psychometric integrity even when evaluated by sophisticated measurement theory such as generalizability theory (Thompson &

Melancon, 1987b), or when used with children (Thompson, Pitts & Gipe, 1983).

Although the GEFT has proven to be a very useful measure of aspects of field independence, the measure does have some limitations. The primary limitation is that the GEFT employs a "supply" format in which subjects literally draw on the target figure embedded within a stimulus. As Donlon (1977, pp. 1-2) notes, "From the standpoint of a large-scale administration, however, the GEFT has the drawback of requiring trained personnel to score each item."

Melancon and Thompson (1987) present in detail the first phase of development of a multiple-choice perceptual disembedding measure, the Finding Embedded Figures Test (FEFT). The FEFT (Thompson & Melancon, 1987a) was developed to provide a multiple-choice, machine-scoreable measure of perceptual disembedding or restructuring as an alternative to supply-format tests such as the GEFT. The characteristics of this measure have been investigated in a series of studies involving various samples and analytic methods (Melancon & Thompson, 1987, 1988, 1989a, 1989b, 1989c; Thompson & Melancon, 1988). Previous studies have employed samples of undergraduate college math students.

The present study was conducted to determine the psychometric properties of the FEFT when the test is administered to middle school aged students. Three questions were posed in the present study. First, how do the alpha coefficients for data from the FEFT compare across studies? Second, how do test and item difficulty and discrimination coefficients compare across administrations? Third, how do variables such as gender and the

grade levels of middle school students influence FEFT performance? Table 1 presents information about the demographic characteristics of the subjects in the present study with middle school students and in comparison studies involving undergraduate college students (Melancon & Thompson, 1988, 1989).

INSERT TABLE 1 ABOUT HERE.

Results

The study's first research question involved a comparison of alpha coefficients for FEFT data across studies. These data are presented in Table 2 for various item combinations, including (a) the 20 unique items from FEFT Part A and the 20 unique items from Part B; (b) the 20 unique and the 15 linking items from Part A and the 20 unique items from Part B; (c) the 20 unique items from Part A and the 20 unique and the 15 linking items from Part B; and (d) all 70 (35 + 35) FEFT items.

INSERT TABLE 2 ABOUT HERE.

The study's second question involved comparison of item difficulty and discrimination coefficients across studies. Tables 3 and 4 present these results. Proportion correct statistics are tabled a P values. Item-score-to-total-score correlation coefficients, corrected by omitting scores on a given item from the total score with which the item score is correlated so that each total Part score involved 34 items (35-1), are presented for each FEFT Part as "Corr IxAr" or "Corr IxBr". Corrected item-score-to-toal-score correlation coefficients for composite FEFT

scores, each total score involving 69 items (70-1), are presented as "Corr IxTr". Item score correlations with scores on the GEFT are presented as "Val r". The last two columns of Tables 3 and 4 present mean item statistics across the three studies.

INSERT TABLES 2 AND 3 ABOUT HERE.

The study's third research question involved the influence of demographic variables, such as gender and middle school student grade level, on FEFT scores. The mean number of right answers on FEFT Part A for males (23.52, SD=5.22) and females (23.45, SD=4.97) did not differ to a statistically significant degree (F=0.04, p=0.85). Of course, since the sample size in the present study was so large, even trivial effect sizes may be statistically significant, so it is important to directly consult effect sizes in such cases (Thompson, 1989). Eta-squared or the correlation ratio for this comparison was 0.005%.

The mean number of right answers on FEFT Part B for males (19.12, SD=5.76) and females (18.22, SD=5.20) did differ to a statistically significant degree (F=5.44, p=0.02). However, the eta-squared effect size (0.681%) was still less than one percent.

The mean number of right answers on FEFT Part A (22.06, SD=5.57; 23.36, SD=4.78; 24.52, SD=4.89) differed significantly (F=13.96, p<0.05) across grades six through eight, respectively. The associated eta-squared effect size was 3.4 percent. The mean number of right answers on FEFT Part B (17.45, SD=5.20; 18.86, SD=5.74; 19.91, SD=5.07) differed significantly (F=11.82, p<0.05) across grades six through eight, respectively. The associated

eta-squared effect size was 2.9 percent.

An ancillary analysis was conducted to investigate the test-retest reliability of the 15 linking items ("L01", "L02", etc.) used twice, once on each FEFT Part. The correlation of scores on the 15 Part A linking items with the scores on the same 15 items used again in Part B was 0.59 for the 60 middle school students who completed both FEFT Parts. However, these results were attenuated by the limited reliability of scores (alphas respectively equalled 0.60 and 0.65) derived from using only 15 linking items in each test Part. After correction for this attenuation (Guilford, 1954, p. 400), the test-retest reliability was calculated to be 0.95.

Discussion

The study's first research question involved comparison of alpha coefficients for Finding Embedded Figures Test data across studies. As reported in Table 2, coefficient alpha for the FEFT ranged between 0.81 and 0.90 across samples and administration formats. As Crocker and Algina (1986, p. 142) note, alpha "is not a direct estimate of the reliability coefficient but rather an estimate of the lower bound of that coefficient." Thus, these results seem favorable with respect to a conclusion that the FEFT yields reasonably reliable scores.

The study's second research question involved comparison of item difficulty and discrimination coefficients across administrations. These statistics are emphasized in classical test theory, as Thompson and Levitov (1985) explain. For a five-choice item, most theorists would consider a proportion-correct P

value of about 0.6 ([(1 - 1/5)/2] + 1/5) to be roughly ideal (Thompson & Levitov, 1985), if item difficulty was the only consideration. Thus, the results presented in Tables 3 and 4 suggest that regardless of administration format or sample type the FEFT items generally are somewhat too easy. However, Part B items perform closer to expection, especially when these items are administered to middle school students. Furthermore, the comparability of the P values for the 15 linking items common to both test Parts suggests that item context does not itself appreciably affect item difficulty, since the P values for given linking items used on both FEFT Parts tended to be comparable within studies. For example, the P value for linking item one ("L01") was 1.000 when the item was used in Part A (#3) versus 1.000 for the same item (#1) on Part B (Melancon & Thompson, 1988); 0.911 versus 0.909 for linking item one's P values in the Melancon and Thompson (1989) study; and 0.885 versus 0.818 for linking item one's P values in the present study with middle school students.

It is generally hoped that test takers who do better on a given item will also do better on all the other items in the pool. Positive and larger discrimination r values are desirable (Thompson & Levitov, 1985). As reported in Tables 3 and 4, in selection format administrations corrected discrimination coefficients tended to average slightly less that 0.3. Few Part A items, and even fewer Part B items, had negative discrimination coefficients. Thus, the tabled results are also favorable with respect to desired item discrimination characteristics.

The study's third research question involved the

associations of gender and grade level with FEFT scores. The eta-squared effect sizes for gender (0.005% and 0.681%) were negligible. These results are somewhat at variance with previous studies involving the GEFT in which sex differences have been isolated (cf. Melancon & Thompson, 1987, p. 32; Witkin, 1979). This result may mean that (a) sex typing has not yet affected students in middle school grades, (b) society has changed enough that previously detected sex effects no longer exist, or that (c) the FEFT is more sex-fair that the GEFT. Some research suggests that GEFT sex effects are learned (Berry, 1966). Nevertheless, the tenability of these rival hypotheses remains to be explored in future research.

The cross-sectional finding that students do somewhat better as they age is consistent with previous findings that people tend to become more field independent as they age (Melancon & Thompson, 1987, pp. 36-37). However, people tend to remain intraindividually stable in style across time, i.e., placement relative to others in a cohort tends to remain fairly constant even though the cohort tends to become more field independent with aging.

Overall, the results reported here are supportive of a conclusion that the Finding Embedded Figures Test has reasonable psychometric integrity. This result is encouraging, but FEFT must still be considered a research edition until more evidence is garnered in construct validity studies involving the kinds of diverse outcomes already examined in relation to the GEFT (e.g., Pitts & Thompson, 1984; Witkin, Moore, Oltman et al., 1977).

The promise of a sound multiple-choice alternative to the GEFT may warrant these inquiries.

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Table 1
Sample Demographics Across Studies

	n	Males	Yrs of Age Mean	SD
Present Study				
Both FEFT Parts	60	28 (46.7%)	12.92	0.83
Only Part A	737	341 (46.3%)	12.72	1.17
Only Part B	731	362 (49.5%)	12.83	1.21
Total	1528	731 (47.8%)	12.78	1.18
Melancon & Thompson (1989)				
Both FEFT Parts	155	88 (56.8%)	19.82	2.91
Part A and GEFT	70	32 (45.7%)	19.72	4.07
Part B and GEFT	77	39 (50.6%)	18.74	2.05
Total	302	159 (52.6%)	19.52	3.06
Melancon & Thompson (1988)				
	69	27 (39.1%)	20.04	3.12

Note. The number of subjects in grades six through eight in the present study was 465 (30.4%), 622 (40.7%), and 441 (28.9%), respectively.

Table 2
Alpha Coefficients for Combined FEFT Forms

Item Set	Items	Alpha[a]	Alpha[b]	Alpha[c]
Non-linking items from both Parts A and B	40	.83	.84	.81
35 Part A and 20 non-linking Part B items	55	.84	.88	.83
35 Part B and 20 non-linking Part A items	55	.85	.88	.84
All 70 items from both Parts A and B	70	.86	.90	.86

a
n = 69 undergraduate math students completing both FEFT Parts in a "no guessing" supply format (Melancon & Thompson, 1988).

b
n = 155 undergraduate math students completing both FEFT Parts in a multiple-choice selection format (Melancon & Thompson, 1989).

c
n = 60 middle school students completing both FEFT Parts in a multiple-choice selection format.

Table 3
FEFT Part A Item Statistics

Item		P	Corr IxAr	Corr IxTr	P	Corr IxAr	Val r	P	Corr IxAr	Corr IxTr	$\bar{P}$	$\overline{IxAr}$
		a	a	a	b	b	c	d	d	e		
1		942	028	057	649	289	147	942	180	147	84	17
2		783	186	095	693	314	137	808	262	345	76	25
3	L01	1000	---	---	911	331	243	885	228	208	93	19
4		855	230	218	773	356	220	736	238	119	79	27
5		420	-203	-075	427	206	216	410	228	180	42	08
6	L02	942	263	271	747	263	360	603	310	316	76	28
7	L03	275	111	024	387	261	268	214	088	195	29	15
8	L04	652	322	355	756	268	118	676	312	263	69	30
9		319	175	231	369	181	183	333	203	138	34	19
10	L05	667	191	270	653	268	115	327	062	-111	55	17
11		768	144	192	720	335	253	482	232	307	66	24
12	L06	841	221	186	684	354	386	738	336	405	75	30
13		768	388	371	671	408	402	551	276	290	66	36
14	L07	928	006	-008	809	133	076	814	204	022	85	11
15	L08	362	072	178	382	250	122	378	312	328	37	21
16	L09	899	234	303	800	328	293	741	290	221	81	28
17		551	166	240	662	250	185	535	252	239	58	22
18		957	056	116	884	463	380	901	307	437	91	28
19	L10	957	-057	-035	836	346	186	847	268	098	88	19
20	L11	710	292	298	636	389	201	459	258	226	60	31
21	L12	928	218	238	858	294	136	871	297	206	89	27
22	L13	928	341	251	929	207	210	858	260	308	91	27
23		1000	---	---	867	376	355	923	314	271	93	23
24	L14	536	145	221	738	249	116	636	220	425	64	20
25		841	310	296	800	382	437	786	311	409	81	33
26		855	028	031	662	455	473	679	263	412	73	25
27		783	205	263	862	285	481	791	306	306	81	27
28		899	451	384	760	298	018	805	366	205	82	37
29	L15	913	-052	042	756	406	420	675	328	282	78	23
30		797	374	247	502	161	-012	583	149	182	63	23
31		725	351	392	773	329	270	608	318	535	70	33
32		768	250	201	791	272	394	694	341	442	75	29
33		522	290	394	733	232	370	699	324	368	65	28
34		638	357	380	836	299	270	659	329	464	71	33
35		884	384	330	862	154	277	831	221	349	86	25
Mean		760	185	199	719	297	249	671	263	272		
SD		196	151	135	147	080	127	185	068	132		

Note. Linking items are designated with an "L" in the Item column. Decimals are omitted; statistics from the three studies are reported to three decimal values while mean statistics across the three studies are reported to two decimal places.

a

n = 69 undergraduate math students completing both FEFT Parts in a "no guessing" supply format (Melancon & Thompson, 1988).

b

n = 225 undergraduate math students completing FEFT Part A in a multiple-choice selection format (Melancon & Thompson, 1989).

c

n = 70 undergraduate math students completing FEFT Part A in a multiple-choice selection format and the Group Embedded Figures Test (Melancon & Thompson, 1989).

d

n = 797 middle school students completing FEFT Part A in a multiple-choice selection format.

e

n = 60 middle school students completing both FEFT Parts in a multiple-choice selection format.

Table 4
FEFT Part B Item Statistics

Item		P	Corr IxBr	Corr IxTr	P	Corr IxBr	Val r	P	Corr IxBr	Corr IxTr	$\bar{P}$	$\overline{IxBr}$
		a	a	a	b	b	c	d	d	e		
1	L01	1000	---	---	909	266	116	818	273	455	91	18
2		406	480	436	370	204	048	254	229	200	34	30
3		174	392	372	200	330	370	147	028	088	17	25
4		551	211	293	600	114	-034	469	330	163	54	22
5	L02	884	169	270	757	297	326	499	384	464	71	28
6	L03	333	136	191	357	274	259	184	075	106	29	16
7		333	456	427	509	379	242	287	292	419	38	38
8		580	491	445	683	282	123	521	270	376	59	35
9	L04	710	327	344	809	243	207	647	315	106	72	30
10		681	264	347	596	409	137	438	272	227	57	32
11	L05	681	354	339	661	361	481	536	304	318	63	34
12		580	318	325	691	246	017	491	144	301	59	24
13		188	524	527	278	252	289	227	088	168	23	29
14	L06	841	101	097	661	326	320	553	288	184	69	24
15	L07	899	042	079	852	152	142	744	166	212	83	12
16		754	394	423	626	290	121	545	280	307	64	32
17	L08	304	315	350	374	270	306	231	249	546	30	28
18	L09	942	302	338	848	371	261	671	303	423	82	33
19		971	184	223	952	285	272	917	295	251	95	25
20		768	423	485	765	409	482	555	422	462	70	42
21	L10	971	248	193	878	172	087	797	224	022	88	21
22	L11	696	433	407	722	444	465	449	353	125	62	41
23		768	258	168	691	157	189	604	250	213	69	22
24		493	344	325	557	370	236	419	288	379	49	33
25		652	411	426	665	485	349	408	295	096	57	40
26	L12	899	219	171	830	372	354	749	361	207	83	32
27		797	441	449	874	239	271	841	287	283	84	32
28	L13	870	205	211	865	287	171	773	287	394	84	26
29	L14	507	159	191	752	230	124	519	294	379	59	23
30		522	336	329	517	292	091	400	120	274	48	25
31		609	537	489	796	346	400	631	285	244	68	39
32	L15	855	193	153	735	329	238	622	352	334	74	29
33		826	289	264	700	393	320	514	305	171	68	33
34		841	347	315	913	226	206	747	255	278	83	28
35		406	416	381	604	280	190	438	209	149	48	30
Mean		665	306	308	674	297	234	533	262	266		
SD		227	133	125	186	084	126	194	085	127		

Note. Linking items are designated with an "L" in the Item column. Decimals are omitted; statistics from the three studies are reported to three decimal values while mean statistics across the three studies are reported to two decimal places.

a

n = 69 undergraduate math students completing both FEFT Parts in a "no guessing" supply format (Melancon & Thompson, 1988).

b

n = 232 undergraduate math students completing FEFT Part B in a multiple-choice selection format (Melancon & Thompson, 1989).

c

n = 77 undergraduate math students completing FEFT Part B in a multiple-choice selection format and the Group Embedded Figures Test (Melancon & Thompson, 1989).

d

n = 791 middle school students completing FEFT Part B in a multiple-choice selection format.

e

n = 60 middle school students completing both FEFT Parts in a multiple-choice selection format.

APPENDIX A:
Percentiles for FEFT Part A
(n = 797 middle school students)

%tile	Value	%tile	Value	%tile	Value
1.00	9.000	2.00	12.000	3.00	12.760
4.00	14.000	5.00	14.000	6.00	15.000
7.00	16.000	8.00	16.000	9.00	17.000
10.00	17.000	11.00	17.000	12.00	17.000
13.00	18.000	14.00	18.000	15.00	18.000
16.00	18.000	17.00	19.000	18.00	19.000
19.00	19.000	20.00	19.000	21.00	20.000
22.00	20.000	23.00	20.000	24.00	20.000
25.00	20.000	26.00	20.000	27.00	20.000
28.00	21.000	29.00	21.000	30.00	21.000
31.00	21.000	32.00	21.000	33.00	22.000
34.00	22.000	35.00	22.000	36.00	22.000
37.00	22.000	38.00	22.000	39.00	22.000
40.00	23.000	41.00	23.000	42.00	23.000
43.00	23.000	44.00	23.000	45.00	23.000
46.00	23.000	47.00	23.000	48.00	24.000
49.00	24.000	50.00	24.000	51.00	24.000
52.00	24.000	53.00	24.000	54.00	24.000
55.00	24.000	56.00	25.000	57.00	25.000
58.00	25.000	59.00	25.000	60.00	25.000
61.00	25.000	62.00	25.000	63.00	26.000
64.00	26.000	65.00	26.000	66.00	26.000
67.00	26.000	68.00	26.000	69.00	26.000
70.00	26.000	71.00	27.000	72.00	27.000
73.00	27.000	74.00	27.000	75.00	27.000
76.00	27.000	77.00	27.000	78.00	28.000
79.00	28.000	80.00	28.000	81.00	28.000
82.00	28.000	83.00	29.000	84.00	29.000
85.00	29.000	86.00	29.000	87.00	29.000
88.00	29.000	89.00	30.000	90.00	30.000
91.00	30.000	92.00	30.000	93.00	31.000
94.00	31.000	95.00	31.000	96.00	32.000
97.00	32.000	98.00	32.000	99.00	33.080

APPENDIX B:
Percentiles for FEFT Part B
(n = 791 middle school students)

%tile	Value	%tile	Value	%tile	Value
1.00	6.000	2.00	8.000	3.00	8.940
4.00	9.000	5.00	10.000	6.00	10.000
7.00	10.000	8.00	11.000	9.00	11.000
10.00	11.000	11.00	12.000	12.00	12.000
13.00	12.000	14.00	13.000	15.00	13.000
16.00	13.000	17.00	13.000	18.00	13.000
19.00	14.000	20.00	14.000	21.00	14.000
22.00	14.000	23.00	14.000	24.00	15.000
25.00	15.000	26.00	15.000	27.00	15.000
28.00	15.000	29.00	16.000	30.00	16.000
31.00	16.000	32.00	16.000	33.00	16.000
34.00	16.000	35.00	16.000	36.00	16.000
37.00	17.000	38.00	17.000	39.00	17.000
40.00	17.000	41.00	17.000	42.00	17.000
43.00	17.000	44.00	18.000	45.00	18.000
46.00	18.000	47.00	18.000	48.00	18.000
49.00	19.000	50.00	19.000	51.00	19.000
52.00	19.000	53.00	19.000	54.00	19.000
55.00	19.000	56.00	20.000	57.00	20.000
58.00	20.000	59.00	20.000	60.00	20.000
61.00	20.000	62.00	20.000	63.00	20.000
64.00	21.000	65.00	21.000	66.00	21.000
67.00	21.000	68.00	21.000	69.00	22.000
70.00	22.000	71.00	22.000	72.00	22.000
73.00	22.000	74.00	22.000	75.00	22.000
76.00	22.000	77.00	23.000	78.00	23.000
79.00	23.000	80.00	23.000	81.00	24.000
82.00	24.000	83.00	24.000	84.00	25.000
85.00	25.000	86.00	25.000	87.00	25.000
88.00	25.000	89.00	26.000	90.00	26.000
91.00	26.000	92.00	27.000	93.00	27.000
94.00	27.000	95.00	28.000	96.00	28.000
97.00	29.000	98.00	29.040	99.00	31.000

APPENDIX C:
Percentiles for FEFT Composite Scores
(n = 60 middle school students)

%tile	Value	%tile	Value	%tile	Value
1.00	.	2.00	21.220	3.00	21.830
4.00	23.320	5.00	25.050	6.00	25.660
7.00	26.000	8.00	26.000	9.00	26.490
10.00	27.000	11.00	27.000	12.00	27.320
13.00	27.930	14.00	28.000	15.00	28.300
16.00	29.520	17.00	30.370	18.00	30.980
19.00	31.590	20.00	32.200	21.00	32.810
22.00	33.000	23.00	33.000	24.00	33.000
25.00	33.000	26.00	33.000	27.00	33.000
28.00	33.000	29.00	33.000	30.00	33.300
31.00	33.910	32.00	34.000	33.00	34.130
34.00	34.740	35.00	35.350	36.00	35.960
37.00	36.000	38.00	36.000	39.00	36.000
40.00	36.000	41.00	36.000	42.00	36.000
43.00	36.230	44.00	36.840	45.00	37.000
46.00	37.060	47.00	37.670	48.00	38.280
49.00	38.890	50.00	39.500	51.00	40.110
52.00	40.720	53.00	41.330	54.00	41.940
55.00	42.000	56.00	42.000	57.00	42.000
58.00	42.380	59.00	42.990	60.00	43.000
61.00	43.000	62.00	43.000	63.00	43.000
64.00	43.000	65.00	43.000	66.00	43.260
67.00	43.870	68.00	44.480	69.00	45.000
70.00	45.000	71.00	45.310	72.00	45.920
73.00	46.000	74.00	46.000	75.00	46.000
76.00	46.360	77.00	46.970	78.00	47.000
79.00	47.000	80.00	47.000	81.00	47.000
82.00	47.080	83.00	49.520	84.00	51.240
85.00	51.850	86.00	52.460	87.00	53.210
88.00	55.040	89.00	56.000	90.00	56.000
91.00	56.510	92.00	57.000	93.00	57.000
94.00	57.000	95.00	57.000	96.00	57.560
97.00	58.170	98.00	58.780	99.00	.