



MANDEL & ASSOCIATES LTD.

Psychological and Rehabilitation Assessment Specialists

29 March 2021

College of Alberta Psychologists 1850 Sun Life Place 10123 – 99 Street NW Edmonton, Alberta T5J 3H1

Attention: Dr. Troy Janzen

Re: Complaint by Ms.

Dear Dr. Janzen:

I have received your letter dated 18 February 2021 together with Ms. Complaint Reporting Form (CRF) and the volume of documents attached to the form. My response follows.

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54. The manual for the General Aptitude Test Battery (1979) provides a table (9.3) titled "GATB Data on Aptitudes for Specific Occupations". The table is 70 pages long and provides objective data on 446 occupations, including teacher (#404, page 170). Three sets of data for both elementary and high school teachers are provided: an initial validation sample (N=234); a cross validation sample (N=263), and a combined sample (N=497). Table 9.3 in the GATB manual shows that the mean scores on G (general learning ability – equivalent to

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FSIQ) were 118 (SD = 13) in the initial validation sample; 111 (SD = 13) in the cross validation sample, and 114 (SD = 13) for the combined sample. The same raises objections to the statement included in our description of the GATB introduction "The GATB does what few other tests do; it permits comparison of client characteristics with those of actual workers in specific occupations". Yet Table 9.3 in the GATB manual proves that the statement is correct. Extracts from the GATB manual, or the full manual, can be provided to the College upon request.

55. The table in the GATB manual specifically indicates that the data (discussed above in 54) is based upon **both** elementary and secondary school teachers. These are differentiated from nursery school teachers, for whom a G of 104 is reported. Further, I would note that there is no distinction between elementary and high school teachers in the other sources I reviewed. Thirdly, there is no distinction between elementary and secondary teachers in university entry requirements. The choice to aim for elementary versus secondary teaching is made following admission to, or graduation from, the program.

- 57. The field testing with the GATB, included in Table 9.3 of the GATB manual, provided aptitude scores for teachers based upon a sample of 497 university seniors in Education programs. This found that the average score on G for the combined sample was 114 (SD=13). Ms. Score on this measure was 83, more than 2 SDs below the mean.
- 58. Empirical data on the typical level of intelligence or general mental ability seen within a population of teachers is in fact available in the scientific literature, and this disproves statement that teachers have only average intelligence and are less intelligent than other university oraduates.
- 59. The table below, which is extracted from a book chapter by Gottfredson³, shows that on average teachers' general cognitive ability is above average, equivalent to an IQ score of 111 (77th percentile). The cognitive abilities required of teachers are similar to those of accountants, managers, and computer programmers.
- 60. The data presented in the below table shows not only the median score for teachers, but also provides a range from the 25th to 75th percentiles, which I interpret as 102 to 120. From this it can be determined that the standard deviation for Gottfredson's data is 13.3 (90.675 SD). Extrapolating from this, an IQ score of 86 (Ms. **Context and State S**

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Percent of modi (among (among (among	ile ** Position WAIS IQ: 80 *** WPT: 10 fair	90 100 110 120 128 15 20 25 30 35 4	138 Training Potential
91	Attorney Research Analyst		WPT 28 and Over
88	Manager, Advertising Chemist		Able to gather and synthesize information easily, can infer information and conclusions
86	Engineer Executive Manager, Trainee		(IQ 116 and above)
83	Auditor Copywriter		
81	Manager/Supervisor Manager, Sales Programmer, Analyst		WPT 26 TO 30 Above everage intrividuals; can
77	Teacher Adjuster Manager, General		be traned with typical college formut, able to learn much on their over; e.g. independent
	Purchasing Agent Nurse, Registered Sales, Account Exec.		(ID 113-120)
70	Administrative Asst. Manager, Store Bookkeeper		
68	Clerk, Credit Drafter, Designer Lab Tester & Tech. Nenager, Assistant		
	Sales, General Sales, Telephone Secretary		WPT 20 TO 26 Able to learn routines quickly;
60	Clerk, Accounting Collector, Bad Debt Operator, Computer		writen materials with actual on the job experience. (IQ 100-113)
	Rep., Cust Sive. Sales Rep., Insurance Technician	#	
55	Clerk, Typist Dispatcher Office, General		
	Police, Patrol Off. Receptionist Cashier		WPT 18 to 22 Successful in elementary
50	Clencal, General Inside Sales Clerk Meter Reader Brinter		from programmed or mastery learning approaches; impor- tant to allow enough time and
	Teller Data Entry Electrical Helper		experience previous to work. (10 93-104)
45	Machinist Manager, Food Dept. Quality Control Chkr.		
	Claims Clerk Driver, Deliveryman Guard, Security	#	WPT 10 to 17
42	Maintenance Operator, Machine Arc Welder, Die Sett.	井	most of what they must learn; successful approach is to use apprendiceship program; may
37	Mechanic Medical-Dental Asst. Messenger	#+	not benefit from "book lealining training, (IQ 89-95)
	Production, Factory Assembler Food Service Worker		
31	Nurse's Alde Warehouseman Custodian & Janitor Material Mandler		WPT 12 OR LESS Unlikely to benefit from
25	Packer		successful using simple tools under consistent supervision.
			IQ 83 and belowit

Figure 15.1: Wonderlic Personnel Test (WPT) scores by position applied for (1992). The bold horizontal line shows the range between the 25th and 75th percentiles. The bold crossmark shows the 50th percentile (median) of applicants to that job. Source: Wonderlic (1992: 20, 26, 27). Reprinted by permission of the publisher. 62. Beyond the data provided by Gottfredson, there is also empirical data about the intellectual abilities of teachers provided in a paper by Schmidt & Hunter⁴, which is reproduced here.

SCHMIDT AND HUNTER

Table 1

Mean GCT Standard Scores, Standard Deviations, and Range of Scores of 18,782 AAF White Enlisted Men by Civilian Occupation (From Harrell & Harrell, 1945, pp. 231-232)

Occupation	Ν	M	Mdn	SD	Range
	172	128.1	128.1	11.7	94-157
Accountant	04	127.6	126.8	10.9	96157
Lawyer	24	126.6	125.8	11.7	100-151
Engineer	59	126.0	125.5	11.4	100-149
Public-relations man	42	126.0	123.5	11.4	08-151
Auditor	62	125.9	125.5	11.2	102 152
Chemist	21	124.8	124.5	13.8	102-155
Reporter	45	124.5	125.7	11.7	100-157
Chief clerk	165	124.2	124.5	11.7	88-153
Teacher	256	122.8	123.7	12.8	76-155
Deafterman	153	122.0	121.7	12.8	74-155
Charlestian	147	121.0	121.4	12.5	66-151
Stenographer	58	120.5	124.0	15.2	76-149
Pharmacist	140	120.1	119.8	13.3	80-151
Tabulating-machine operator	140	120.0	110.7	13.1	70-157
Bookkeeper	2/2	120.0	120.7	11.5	90-137
Manager, sales	42	119.0	120.7	12.0	82-153
Purchasing agent	98	118.7	119.2	12.9	82-153
Manager, production	34	118.1	117.0	10.0	66 147
Photographer	95	117.6	119.8	13.9	00-14/

63. This data (N=256) shows that mean GMA for teachers (measured with military's General Classification Test; meant to approximate GMA) was 122.8 (SD = 12.8), just below the scores for other professional occupations such as chemist, auditor, and engineer, and clearly above average. There was no distinction provided for elementary versus high school teachers.



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66. In another publication by Gottfredson⁴, the following chart is presented. Note that teachers intellectual abilities are lumped with those of accountants and managers and clearly fall within the above average range (IQ 110 – 120).



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her measured IQ in our assessment was 86, almost

two standard deviations below the typical intellect exhibited by teachers.

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- 71. I would note that within Dr. Westcott's assessment, she in fact administered two measures of G the GATB and the WAIS. Ms. **Here G** scores on these two tests were highly consistent (83 [20th percentile] on the GATB; 86 [18th percentile] on the WAIS). These are age-related normative scores. As noted above, her scores on these measures when compared with other teachers fell at the 3th percentile or lower.
- 72. Claim that the GATB does not measure abilities of actual workers in specific occupations is incorrect. In fact the GATB manual (Table 9.3) lists empirical data for the aptitudes of 446 occupations, including teacher.



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Sincerely,

Allan Mandel, Ph.D., R. Psych.

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References

¹ Schmidt, F The role of general cognitive ability and job performance: Why there cannot be a debate. <u>Human Performance</u>, 2002, <u>15(1/2)</u>, 187,210.

² Gottfredson, L. Why *g* matters: The complexity of everyday life. <u>Intelligence</u>, 1997, <u>24(1)</u>, 79-132.

³ Gottfredson, L. g, jobs, and life. In Nyborg, H. <u>The Scientific Study of General Intelligence</u>. Oxford, United Kingdom, Elsevier Science, 2003

⁴ Schmidt, F. & Hunter, J. General mental ability in the world of work: Occupational attainment and performance. <u>Journal of Personality and Social Psychology</u>, 2004, <u>86(1)</u>, 162-173.

⁵ Gottfredson, L. The general intelligence factor. <u>Scientific American</u>, 1998, 24-29.

⁶ Schmidt, F. & Hunter, J. The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. <u>Psychological Bulletin</u>, 1998, 124(2), 262-74.