Identifying Inter-subject Difficulties in Norwegian GPA Data Using Item Response Theory

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Table 1

Generalised Partial Credit Model (GPCM) Parameter Estimates

Subject Code	Subject Name	a	b_1	b_2	b_3	b_4	b_5
NORW	Written Norwegian	3.021 (0.025)	−2.882 (0.026)	−1.535 (0.010)	−0.403 (0.006)	0.627 (0.007)	1.789 (0.011)
NORO	Oral Norwegiani	3.346 (0.028)	−3.024 (0.031)	−1.845 (0.011)	−0.817 (0.007)	0.154 (0.006)	1.300 (0.008)
ENGW	Written English	1.790 (0.015)	−2.875 (0.029)	−1.638 (0.013)	−0.559 (0.009)	0.534 (0.008)	1.741 (0.013)
ENGO	Oral English	1.689 (0.014)	−3.185 (0.041)	−2.024 (0.016)	−1.001 (0.010)	0.175 (0.008)	1.473 (0.011)
MATH	Mathematics	1.715 (0.014)	−2.773 (0.024)	−1.027 (0.010)	−0.113 (0.009)	0619 (0.009)	1.694 (0.013)
NATS	Natural Sciences	2.656 (0.022)	−2.877 (0.026)	−1.602 (0.010)	−0.640 (0.007)	0.206 (0.007)	1.266 (0.009)
SOCS	Social Sciences	3.397 (0.028)	−2.920 (0.027)	−1.766 (0.010)	−0.826 (0.007)	0.074 (0.006)	1.170 (0.008)
RELI	Religion and Ethics	3.154 (0.026)	−2.850 (0.025)	−1.715 (0.011)	−0.800 (0.007)	0.108 (0.006)	1.181 (0.008)
MUSI	Music	1.331 (0.011)	−3.832 (0.077)	−2.558 (0.026)	−1.493 (0.014)	−0.140 (0.009)	1.559 (0.013)
HAND	Arts and Handcraft	1.138 (0.010)	−4.129 (0.101)	−2.924 (0.032)	−1.616 (0.016)	−0.124 (0.010)	1.751 (0.016)
FOOD	Food and Health	1.429 (0.012)	−4.565 (0.173)	−3.263 (0.037)	−1.644 (0.014)	−0.208 (0.009)	1.479 (0.012)
PHED	Physical Education	0.804 (0.008)	−4.483 (0.138)	−3.264 (0.050)	−2.295 (0.026)	−0.658 (0.015)	1.750 (0.019)

Note. A generalised partial credit model (GPCM) computes the discrimination (a) and difficulty (b) parameters for each subject. Standard errors are enclosed in parenthesis below point estimates. All estimates are significant at .001 level.