PIRLS Literacy 2016 Item Parameters

Item	Slope (a_j)	Location (b_j)	Guessing (c_j)	Step 1 (d_{j1})	Step 2 (d_{j2})	Step 3 (d_{j3})
Items Shared with PIRLS 2016 (Fixed Item Parameters):						
L21B01C *	0.677 (0.036)	-2.530 (0.108)				
L21B02M *	0.958 (0.067)	-2.353 (0.150)	0.101 (0.072)			
L21B03M *	0.721 (0.048)	-2.406 (0.130)	0.250 (0.000)			
L21B04C *	0.706 (0.032)	-1.260 (0.057)				
L21B05M *	0.883 (0.061)	-1.315 (0.127)	0.223 (0.054)			
L21B06M *	0.440 (0.033)	-1.847 (0.144)	0.250 (0.000)			
L21B07C *	0.745 (0.033)	-1.160 (0.052)				
L21B08C *	0.840 (0.036)	-1.359 (0.053)				
L21B09C *	0.855 (0.036)	-1.140 (0.047)				
L21B10M *	0.660 (0.057)	-0.338 (0.133)	0.192 (0.046)			
L21B11M *	0.979 (0.062)	-1.224 (0.103)	0.186 (0.048)			
L21B12M *	0.738 (0.055)	-2.202 (0.212)	0.127 (0.091)			
L21B13C *	0.542 (0.022)	-0.967 (0.040)		0.693 (0.067)	-0.693 (0.044)	
L21B14M *	1.075 (0.063)	-0.597 (0.066)	0.149 (0.032)			
L21B15C *	0.419 (0.026)	0.318 (0.053)				
L21B16C *	0.435 (0.019)	-0.185 (0.035)		0.092 (0.065)	-0.092 (0.059)	
L21B17C *	0.705 (0.027)	-0.414 (0.027)		0.684 (0.048)	-0.684 (0.035)	
R11F01M *	1.334 (0.049)	-0.627 (0.034)	0.148 (0.018)			
R11F02M *	0.666 (0.038)	-0.848 (0.111)	0.243 (0.037)			
R11F03M *	0.920 (0.039)	-0.666 (0.054)	0.157 (0.024)			
R11F04M *	1.307 (0.053)	-0.831 (0.044)	0.228 (0.023)			
R11F05M *	0.940 (0.045)	-0.255 (0.052)	0.217 (0.022)			
R11F06C *	0.776 (0.023)	-0.152 (0.021)				
R11F07C *	0.503 (0.010)	0.375 (0.018)		-0.896 (0.041)	0.896 (0.043)	
R11F08C *	1.149 (0.029)	-0.328 (0.017)				
R11F09C *	1.011 (0.022)	-0.627 (0.015)		0.074 (0.027)	-0.074 (0.020)	
R11F10C *	0.846 (0.026)	-1.419 (0.039)				
R11F11M *	0.739 (0.045)	0.208 (0.061)	0.192 (0.023)			
R11F12C *	0.618 (0.014)	0.642 (0.017)		-0.471 (0.032)	0.471 (0.036)	
R11F13M *	1.124 (0.054)	-0.199 (0.046)	0.270 (0.021)			
L21E01C *	0.796 (0.047)	-3.130 (0.125)				
L21E02C *	0.771 (0.038)	-2.116 (0.083)				
L21E03M *	1.343 (0.084)	-0.521 (0.059)	0.270 (0.029)			
L21E04M *	1.106 (0.074)	-0.378 (0.070)	0.262 (0.031)			
L21E05M *	1.118 (0.076)	-1.568 (0.110)	0.242 (0.052)			
L21E06M *	0.936 (0.081)	-2.465 (0.221)	0.304 (0.097)			
L21E07C *	0.463 (0.018)	-0.810 (0.042)		-0.018 (0.071)	0.018 (0.055)	
L21E08M *	1.023 (0.064)	-0.749 (0.081)	0.201 (0.036)			
L21E09M *	0.620 (0.085)	0.464 (0.145)	0.340 (0.041)			
L21E10C *	0.859 (0.047)	-2.716 (0.101)				
L21E11M *	1.205 (0.074)	-0.817 (0.071)	0.226 (0.035)			
L21E12C *	1.116 (0.057)	-2.136 (0.066)				
L21E13C *	0.528 (0.027)	-0.275 (0.046)				
L21E14C *	0.493 (0.020)	0.186 (0.032)		0.852 (0.053)	-0.852 (0.053)	
L21E15C *	0.795 (0.040)	-2.219 (0.087)				
L21E16C *	0.706 (0.032)	-0.959 (0.051)				
L21E17M *	1.047 (0.065)	-0.467 (0.069)	0.171 (0.032)			
R21K01C *	0.422 (0.013)	-0.891 (0.033)		0.186 (0.052)	-0.186 (0.039)	
R21K02C *	0.807 (0.023)	-0.559 (0.025)				
R21K03M *	1.004 (0.047)	0.081 (0.039)	0.184 (0.018)			
R21K04M *	1.062 (0.096)	0.979 (0.045)	0.391 (0.014)			
R21K05C *	0.969 (0.026)	0.137 (0.017)				
R21K06M *	1.489 (0.067)	0.052 (0.029)	0.281 (0.015)			
R21K07C *	0.682 (0.016)	0.143 (0.015)		0.119 (0.027)	-0.119 (0.027)	
R21K08M *	0.994 (0.052)	0.354 (0.037)	0.197 (0.017)			
R21K09M *	1.203 (0.056)	-0.010 (0.037)	0.246 (0.018)			
R21K10C *	0.785 (0.017)	0.778 (0.015)		-0.397 (0.027)	0.397 (0.031)	
R21K11M *	1.070 (0.056)	0.260 (0.039)	0.240 (0.017)			
R21K12C *	0.576 (0.013)	-0.110 (0.014)		0.446 (0.040)	-0.084 (0.037)	-0.362 (0.034)

PIRLS Literacy 2016 Item Parameters

Item	Slope (a_j)	Location (b_j)	Guessing (c_j)	Step 1 (d_{j1})	Step 2 (d_{j2})	Step 3 (d_{j3})
Items not Shared with PIRLS 2016 (Estimated Item Parameters):						
L21L01M	0.838 (0.126)	-1.433 (0.168)	0.195 (0.054)			
L21L02M	0.647 (0.138)	-0.588 (0.206)	0.217 (0.056)			
L21L03C	0.516 (0.058)	-1.925 (0.132)				
L21L04C	0.656 (0.066)	-1.881 (0.108)				
L21L05C	0.534 (0.043)	-1.394 (0.075)		0.019 (0.143)	-0.019 (0.132)	
L21L06C	0.806 (0.078)	-2.118 (0.101)				
L21L07M	1.031 (0.146)	-1.384 (0.132)	0.182 (0.047)			
L21L08M	0.880 (0.165)	-0.776 (0.160)	0.248 (0.050)			
L21L09C	0.400 (0.054)	-1.017 (0.144)				
L21L10M	1.221 (0.186)	-1.194 (0.119)	0.221 (0.045)			
L21L11C	0.489 (0.064)	-0.125 (0.157)				
L21L12M	1.101 (0.169)	-1.518 (0.149)	0.245 (0.055)			
L21L13C	0.586 (0.038)	-1.530 (0.070)		-1.098 (0.178)	1.098 (0.167)	
L21L14M	1.666 (0.249)	-1.382 (0.096)	0.212 (0.042)			
L21L15C	0.440 (0.044)	-0.886 (0.091)		0.371 (0.159)	-0.371 (0.165)	
L21M01M	0.566 (0.089)	-3.339 (0.368)	0.241 (0.093)			
L21M02M	1.340 (0.228)	-0.245 (0.089)	0.155 (0.027)			
L21M03C	0.403 (0.054)	-3.054 (0.241)				
L21M04C	0.733 (0.070)	-1.325 (0.087)				
L21M05M	1.097 (0.164)	-2.371 (0.169)	0.234 (0.065)			
L21M06C	0.853 (0.079)	-1.889 (0.087)				
L21M07M	1.039 (0.185)	-0.605 (0.126)	0.226 (0.040)			
L21M08C	0.991 (0.094)	-2.201 (0.087)				
L21M09M	0.793 (0.118)	-1.455 (0.168)	0.178 (0.053)			
L21M10C	0.423 (0.035)	-2.004 (0.100)		-0.289 (0.193)	0.289 (0.166)	
L21M11M	1.347 (0.270)	-0.177 (0.104)	0.242 (0.032)			
L21M12C	0.677 (0.067)	-1.633 (0.098)				
L21M13M	1.109 (0.158)	-2.173 (0.150)	0.204 (0.058)			
L21M14C	0.586 (0.047)	-0.850 (0.058)		0.667 (0.133)	0.012 (0.140)	-0.679 (0.150)
L21M15M	1.710 (0.335)	-0.455 (0.095)	0.315 (0.034)			
L21M16C	0.833 (0.079)	-1.393 (0.083)				
L21M17C	1.030 (0.104)	-0.372 (0.077)				
L21M18M	1.162 (0.202)	-0.472 (0.108)	0.180 (0.035)			

PIRLS Literacy 2016 Item Parameters

Item	Slope (a_j)	Location (b_j)	Guessing (c_j)	Step 1 (d_{j1})	Step 2 (d_{j2})	Step 3 (d_{j3})
L11O01M	0.905 (0.145)	-2.254 (0.226)	0.299 (0.075)			
L11O02C	0.509 (0.058)	-0.799 (0.119)				
L11O03M	1.155 (0.181)	-2.672 (0.180)	0.230 (0.069)			
L11O04M	1.168 (0.171)	-1.652 (0.139)	0.248 (0.052)			
L11O05C	0.896 (0.081)	-1.836 (0.084)				
L11O06C	0.665 (0.064)	-1.491 (0.097)				
L11O07M	0.628 (0.107)	-1.644 (0.261)	0.228 (0.070)			
L11O08M	0.607 (0.104)	-1.735 (0.277)	0.231 (0.073)			
L11O09C	1.230 (0.110)	-1.684 (0.066)				
L11O10C	1.015 (0.107)	-3.050 (0.117)				
L11O11C	0.720 (0.069)	-1.883 (0.100)				
L11O12M	0.547 (0.087)	-2.109 (0.293)	0.196 (0.073)			
L11O13M	0.991 (0.169)	-0.667 (0.127)	0.200 (0.040)			
L11O14C	0.864 (0.080)	-1.884 (0.089)				
L11O15C	0.678 (0.065)	0.092 (0.086)		0.350 (0.105)	-0.350 (0.148)	
L11O16M	1.216 (0.207)	-0.420 (0.099)	0.176 (0.032)			
L11U01C	0.651 (0.065)	-2.359 (0.125)				
L11U02M	0.978 (0.155)	-2.199 (0.205)	0.291 (0.070)			
L11U03M	1.131 (0.163)	-1.283 (0.121)	0.192 (0.043)			
L11U04C	0.681 (0.066)	-1.759 (0.102)				
L11U05M	1.186 (0.159)	-1.713 (0.121)	0.177 (0.045)			
L11U06M	1.194 (0.167)	-1.405 (0.116)	0.186 (0.043)			
L11U07M	1.092 (0.207)	-0.267 (0.112)	0.198 (0.034)			
L11U08M	1.123 (0.190)	-0.732 (0.118)	0.223 (0.039)			
L11U09M	1.071 (0.176)	-1.305 (0.152)	0.278 (0.051)			
L11U10C	0.534 (0.064)	-0.304 (0.134)				
L11U11C	0.649 (0.052)	-1.701 (0.072)		0.220 (0.130)	-0.220 (0.111)	
L11U12C	0.786 (0.074)	-1.447 (0.087)				
L11U13M	1.386 (0.217)	-1.523 (0.125)	0.268 (0.049)			
L11U14C	0.594 (0.074)	-0.008 (0.141)				

PIRLS Literacy 2016 Item Parameters

Item	Slope (a_i)	Location (b_i)	Guessing (c_i)	Step 1 (d_{j1})	Step 2 (d_{j2})	Step 3 (d_{j3})
L11A01M	0.958 (0.153)	-2.792 (0.234)	0.259 (0.083)			
L11A02C	0.614 (0.063)	-1.861 (0.110)				
L11A03M	0.759 (0.109)	-1.942 (0.195)	0.182 (0.061)			
L11A04C	0.792 (0.074)	-1.498 (0.084)				
L11A05M	1.228 (0.228)	-0.491 (0.111)	0.252 (0.036)			
L11A06C	0.972 (0.097)	-2.614 (0.103)				
L11A07C	0.811 (0.062)	-2.308 (0.069)		-0.050 (0.130)	0.050 (0.103)	
L11A08M	0.995 (0.140)	-1.418 (0.135)	0.181 (0.047)			
L11A09C	1.208 (0.109)	-1.792 (0.067)				
L11A10C	0.774 (0.074)	-0.964 (0.083)				
L11A11C	0.492 (0.061)	-0.325 (0.144)				
L11A12CZ	0.659 (0.040)	-1.349 (0.049)		-0.418 (0.149)	0.059 (0.172)	0.358 (0.135)
L11A13CZ	0.625 (0.048)	-1.067 (0.065)		0.007 (0.120)	-0.007 (0.121)	
L11A14M	0.791 (0.126)	-1.094 (0.162)	0.163 (0.050)			
L21C01C	0.744 (0.072)	-1.738 (0.095)				
L21C02M	0.935 (0.135)	-0.997 (0.121)	0.140 (0.039)			
L21C03M	0.882 (0.192)	-0.347 (0.153)	0.255 (0.045)			
L21C04C	1.280 (0.119)	-1.917 (0.069)				
L21C05C	1.261 (0.117)	-1.896 (0.069)				
L21C06M	1.452 (0.223)	-1.213 (0.106)	0.240 (0.043)			
L21C07C	0.952 (0.100)	-2.879 (0.121)				
L21C08M	1.164 (0.203)	-0.679 (0.116)	0.236 (0.040)			
L21C09C	0.416 (0.041)	-1.536 (0.100)		0.910 (0.175)	-0.910 (0.154)	
L21C10M	1.339 (0.184)	-1.772 (0.116)	0.197 (0.049)			
L21C11C	1.095 (0.099)	-1.458 (0.069)				
L21C12C	0.675 (0.046)	-1.850 (0.068)		-0.695 (0.154)	0.695 (0.138)	
L21C13M	0.777 (0.131)	-1.145 (0.182)	0.208 (0.056)			
L21C14C	1.043 (0.099)	-2.016 (0.083)				
L21C15M	1.766 (0.284)	-0.792 (0.081)	0.223 (0.034)			
L21C16C	1.128 (0.103)	-1.246 (0.066)				
L21C17C	0.567 (0.072)	-0.105 (0.139)				

PIRLS Literacy 2016 Item Parameters

Item	Slope (a$_j$)	Location (b$_j$)	Guessing (c$_j$)	Step 1 (d$_{j1}$)	Step 2 (d$_{j2}$)	Step 3 (d$_{j3}$)
L21H01C	0.820 (0.083)	-2.706 (0.121)				
L21H02M	1.006 (0.154)	-1.771 (0.169)	0.264 (0.060)			
L21H03M	1.152 (0.200)	-0.378 (0.105)	0.180 (0.033)			
L21H04M	1.162 (0.174)	-1.756 (0.145)	0.259 (0.056)			
L21H05M	1.309 (0.196)	-1.756 (0.130)	0.260 (0.054)			
L21H06C	0.761 (0.075)	-2.195 (0.106)				
L21H07M	1.034 (0.158)	-1.118 (0.131)	0.206 (0.045)			
L21H08M	1.472 (0.253)	-0.565 (0.095)	0.241 (0.034)			
L21H09M	1.111 (0.161)	-1.391 (0.129)	0.210 (0.048)			
L21H10M	0.784 (0.140)	-0.873 (0.174)	0.216 (0.052)			
L21H11C	0.558 (0.060)	-1.605 (0.114)				
L21H12C	0.680 (0.068)	-1.299 (0.094)				
L21H13M	1.366 (0.213)	-1.162 (0.112)	0.248 (0.043)			
L21H14C	0.811 (0.077)	-1.702 (0.088)				
L21H15M	1.443 (0.297)	-0.229 (0.104)	0.279 (0.033)			
L21H16M	1.115 (0.197)	-0.751 (0.130)	0.254 (0.043)			
L11P01M	0.939 (0.163)	-0.866 (0.149)	0.237 (0.046)			
L11P02M	0.938 (0.155)	-1.114 (0.156)	0.244 (0.050)			
L11P03C	0.671 (0.056)	-1.014 (0.066)		0.625 (0.106)	-0.625 (0.110)	
L11P04C	0.845 (0.083)	-2.581 (0.108)				
L11P05M	0.997 (0.146)	-1.540 (0.149)	0.220 (0.052)			
L11P06C	0.803 (0.081)	-2.732 (0.119)				
L11P07C	0.733 (0.071)	-0.856 (0.089)				
L11P08M	1.390 (0.200)	-1.184 (0.099)	0.190 (0.038)			
L11P09M	1.330 (0.205)	-1.436 (0.123)	0.265 (0.047)			
L11P10M	1.325 (0.208)	-1.383 (0.124)	0.273 (0.047)			
L11P11C	0.642 (0.044)	-1.237 (0.064)		-0.431 (0.133)	0.431 (0.131)	
L11P12C	0.565 (0.062)	-0.803 (0.112)				
L11P13C	1.128 (0.102)	-1.167 (0.067)				
L11P14C	0.606 (0.065)	-1.032 (0.105)				

* Items with fixed item parameters estimated in PIRLS 2016 concurrent item calibration.