# Mindprint - Math

## Felicia Zhang 2018-07-25

### Contents

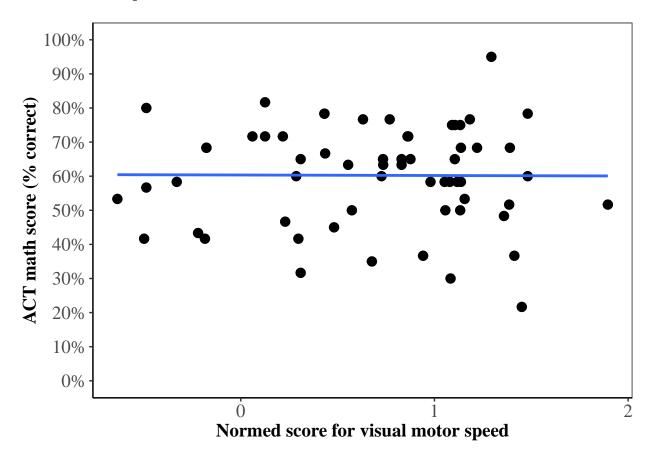
ACT Math (	n = 61)	3
Overall scor	re	3
Visual	motor speed	3
Verba	l memory accuracy	4
Verba	l memory speed	5
	le thinking accuracy	6
Flexib	le thinking speed	7
	l reasoning accuracy	8
	l reasoning speed	9
	act reasoning accuracy	10
	act reasoning speed	11
	ng memory accuracy (p = $0.07$ )	12
	ng memory speed	13
	ng memory efficiency (p $< 0.05$ )	14
	tion accuracy	15
	tion speed	16
	memory accuracy	17
	memory speed	18
	al perception accuracy (p $< 0.01$ )	19
	l perception speed	20
	lgebra/Elementary Algebra Subsection	21
,	motor speed	21
	l memory accuracy	$\frac{-}{22}$
	l memory speed	23
	le thinking accuracy	$\frac{24}{24}$
	le thinking speed	25
	l reasoning accuracy	$\frac{26}{26}$
	l reasoning speed	27
	act reasoning accuracy $(p = 0.08)$	28
	act reasoning speed	29
	ng memory accuracy	30
	ng memory speed	31
	ng memory efficiency	32
	tion accuracy	33
	tion speed	34

	Visual memory accuracy							35
	Visual memory speed							36
	Spatial perception accuracy (p $< 0.001$ )							37
	Spatial perception speed							38
GT/	Plane Geometry/Trigonometry Subsection							
,	Visual motor speed							
	Verbal memory accuracy							
	Verbal memory speed							
	Flexible thinking accuracy							
	Flexible thinking speed							
	Verbal reasoning accuracy							
	Verbal reasoning speed							
	Abstract reasoning accuracy							
	Abstract reasoning speed							
	Working memory accuracy							
	Working memory speed							
	Working memory efficiency (p = $0.07$ )							
	Attention accuracy							
	Attention speed							
	Visual memory accuracy							
	Visual memory speed							
	Spatial perception accuracy (p $< 0.05$ )							
	Spatial perception speed							56
AG/	Intermediate Algebra/Coordinate Geometry Subsection							
110/	Visual motor speed							
	Verbal memory accuracy							
	Verbal memory speed							
	Flexible thinking accuracy							
	Flexible thinking speed							
	Verbal reasoning accuracy							
	Verbal reasoning speed							
	Abstract reasoning accuracy							64
	Abstract reasoning speed							65
	Working memory accuracy $(p < 0.05) \dots \dots \dots$							66
	Working memory speed							67
	Working memory efficiency (p $< 0.05$ )							68
	Attention accuracy							69
	Attention speed							70
	Visual memory accuracy							71
	Visual memory speed							72
	Spatial perception accuracy							73
	Spatial perception speed							74
Sum	mary							75
$\sim um$		•	 •		•	•		

### ACT Math (n = 61)

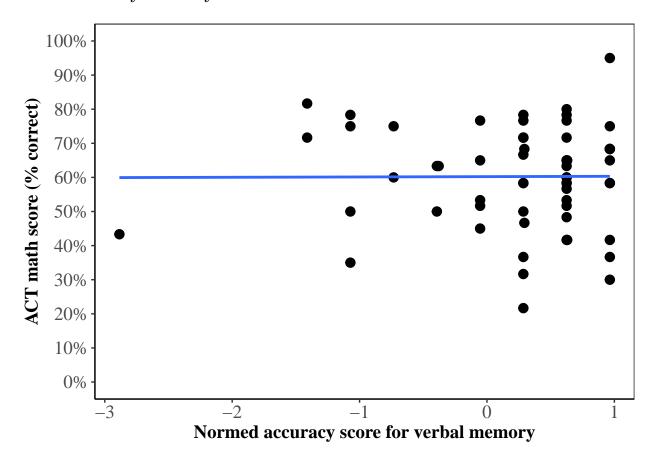
#### Overall score

#### Visual motor speed



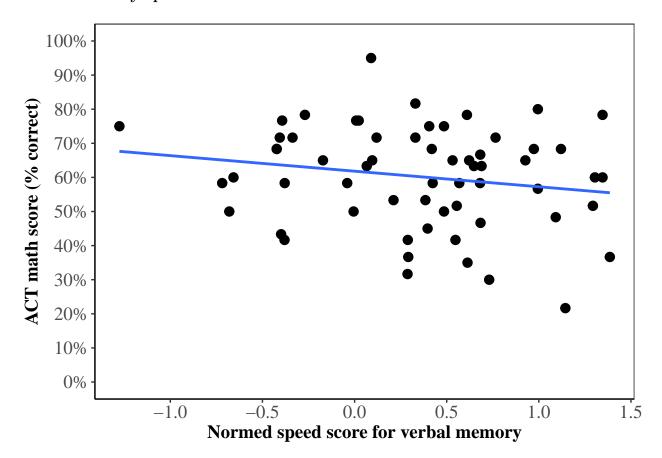
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$SM_Sz and finalDF2$ACTmathscore
## t = -0.044669, df = 59, p-value = 0.9645
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2572594 0.2463662
## sample estimates:
## cor
## -0.005815357
```

#### Verbal memory accuracy



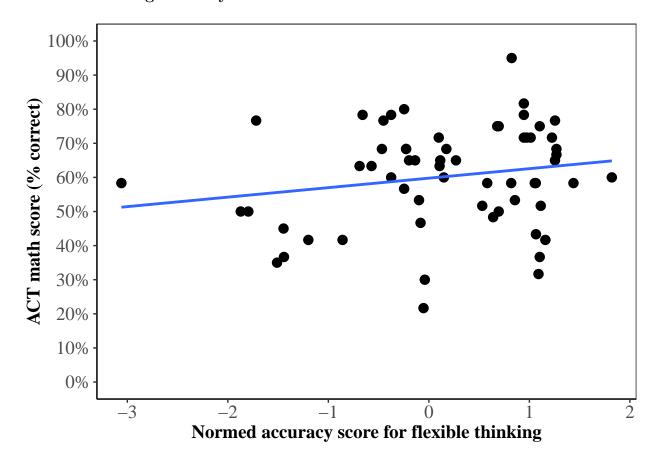
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$VMEM_Az and finalDF2$ACTmathscore
## t = 0.037578, df = 59, p-value = 0.9702
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2472331 0.2563971
## sample estimates:
## cor
## 0.004892229
```

#### Verbal memory speed



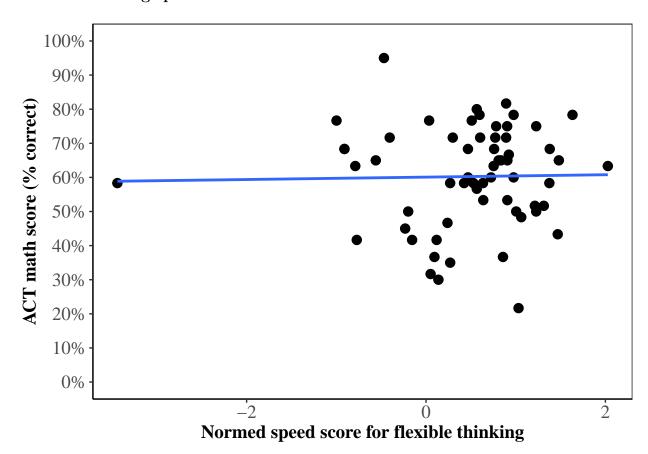
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$VMEM_Sz and finalDF2$ACTmathscore
## t = -1.4342, df = 59, p-value = 0.1568
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.41612819  0.07158892
## sample estimates:
## cor
## -0.1835406
```

#### Flexible thinking accuracy



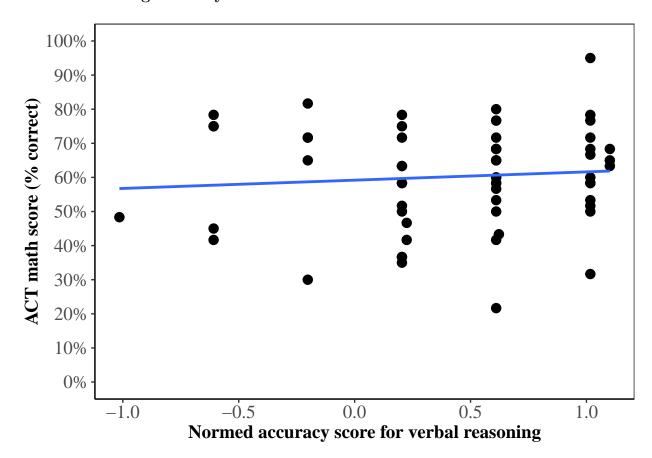
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$ABF_Az and finalDF2$ACTmathscore
## t = 1.477, df = 59, p-value = 0.145
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.06613983  0.42064484
## sample estimates:
## cor
## 0.1888259
```

#### Flexible thinking speed



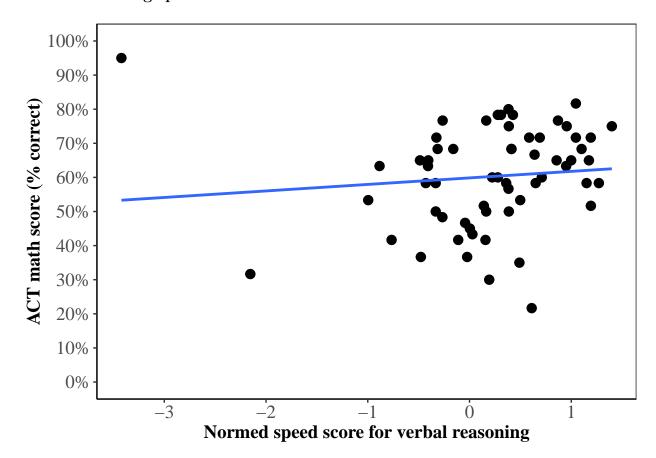
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$ABF_Sz and finalDF2$ACTmathscore
## t = 0.15384, df = 59, p-value = 0.8783
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2329716 0.2704807
## sample estimates:
## cor
## 0.02002384
```

#### Verbal reasoning accuracy



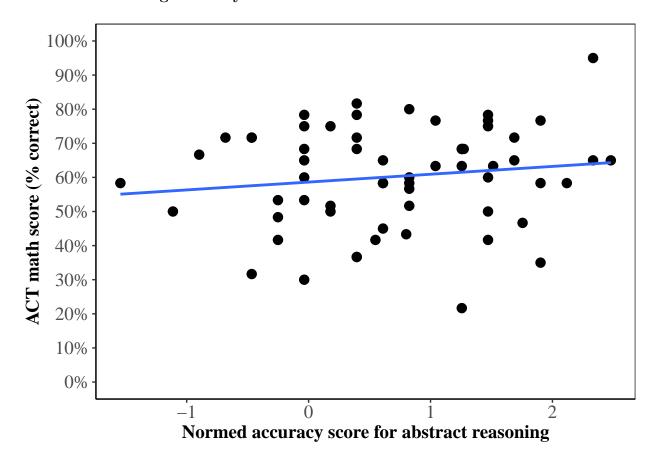
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$LAN_Az and finalDF2$ACTmathscore
## t = 0.66719, df = 59, p-value = 0.5073
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1689678  0.3311398
## sample estimates:
## cor
## 0.08653498
```

#### Verbal reasoning speed



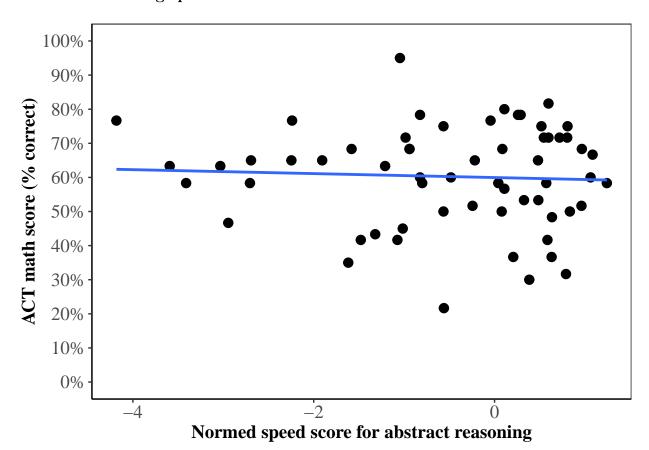
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$LAN_Sz and finalDF2$ACTmathscore
## t = 0.80781, df = 59, p-value = 0.4224
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1512122  0.3472656
## sample estimates:
## cor
## 0.1045912
```

#### Abstract reasoning accuracy



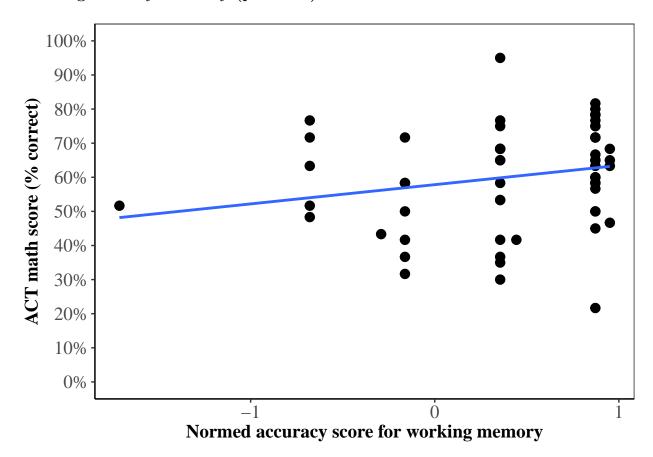
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$NVR_Az and finalDF2$ACTmathscore
## t = 1.0884, df = 59, p-value = 0.2809
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1156146  0.3787314
## sample estimates:
## cor
## 0.1402905
```

#### Abstract reasoning speed



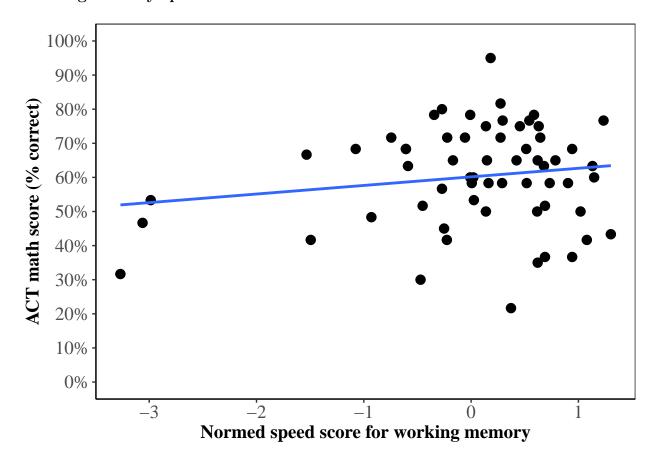
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$NVR_Sz and finalDF2$ACTmathscore
## t = -0.39865, df = 59, p-value = 0.6916
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2997387 0.2026354
## sample estimates:
## cor
## -0.05183011
```

#### Working memory accuracy (p = 0.07)



```
##
## Pearson's product-moment correlation
##
## data: finalDF2$WM_Az and finalDF2$ACTmathscore
## t = 1.7332, df = 59, p-value = 0.08828
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.03356674  0.44715006
## sample estimates:
## cor
## 0.2201146
```

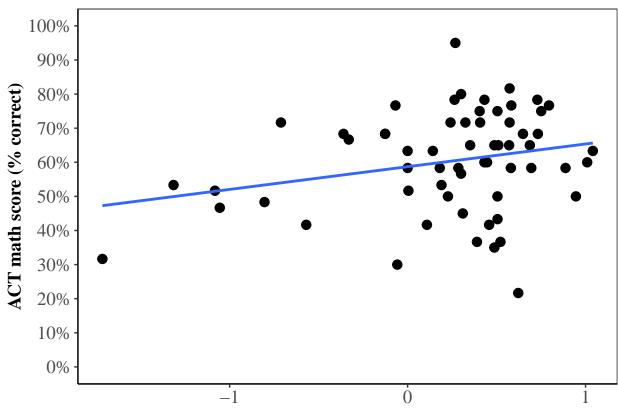
#### Working memory speed



```
##
## Pearson's product-moment correlation
##
## data: finalDF2$WM_Sz and finalDF2$ACTmathscore
## t = 1.2733, df = 59, p-value = 0.2079
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.09207013  0.39893368
## sample estimates:
## cor
## 0.1635424
```

Working memory efficiency (p < 0.05)

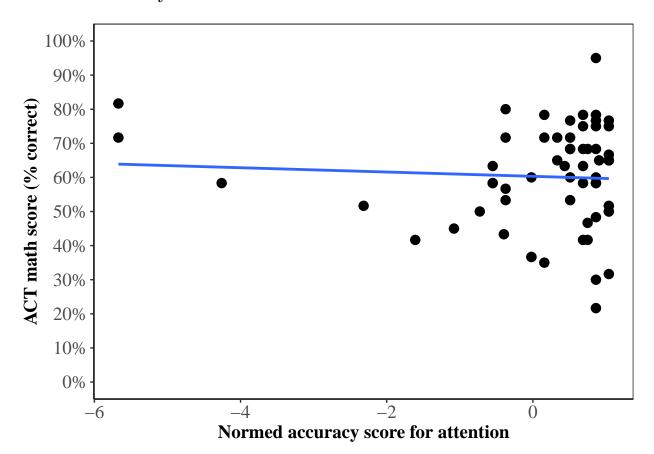
Average of normed accuracy and speed scores for working memory.



Average of normed accuracy and speed scores for working memory

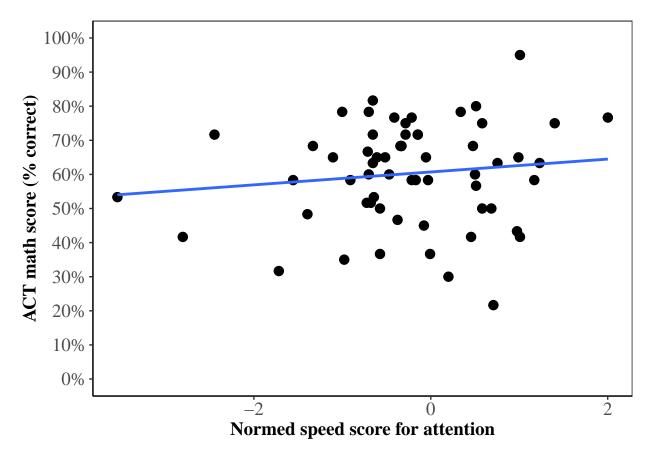
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$WM_EFFICIENCY and finalDF2$ACTmathscore
## t = 2.0083, df = 59, p-value = 0.04919
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## 0.001216049 0.474550976
## sample estimates:
## cor
## 0.2529593
```

#### Attention accuracy



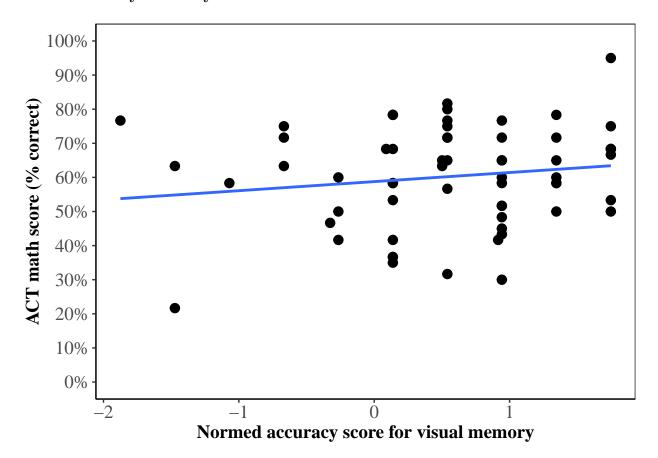
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$ATT_Az and finalDF2$ACTmathscore
## t = -0.46276, df = 59, p-value = 0.6452
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.3073040 0.1946312
## sample estimates:
## cor
## -0.06013698
```

#### Attention speed



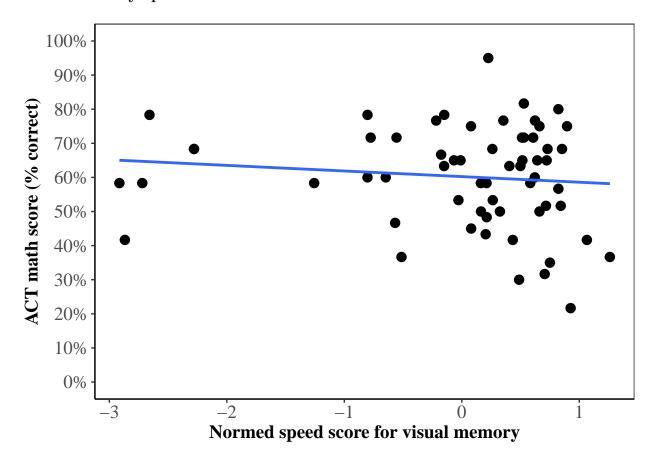
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$ATT_Sz and finalDF2$ACTmathscore
## t = 0.98092, df = 59, p-value = 0.3306
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1292684  0.3667960
## sample estimates:
## cor
## 0.126676
```

#### Visual memory accuracy



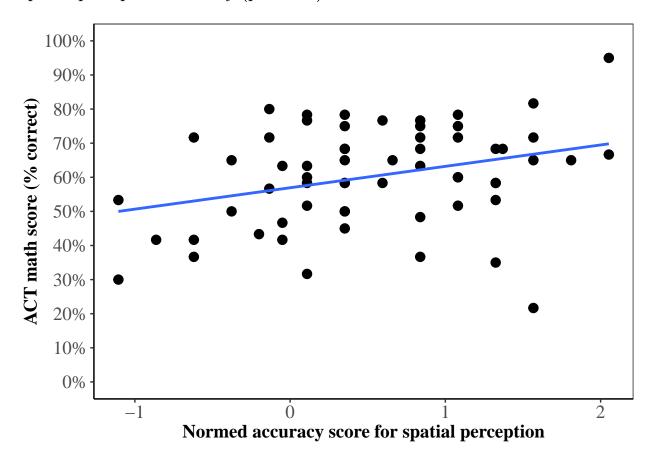
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$SMEM_Az and finalDF2$ACTmathscore
## t = 1.1957, df = 59, p-value = 0.2366
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1019598  0.3905055
## sample estimates:
## cor
## 0.1538101
```

#### Visual memory speed



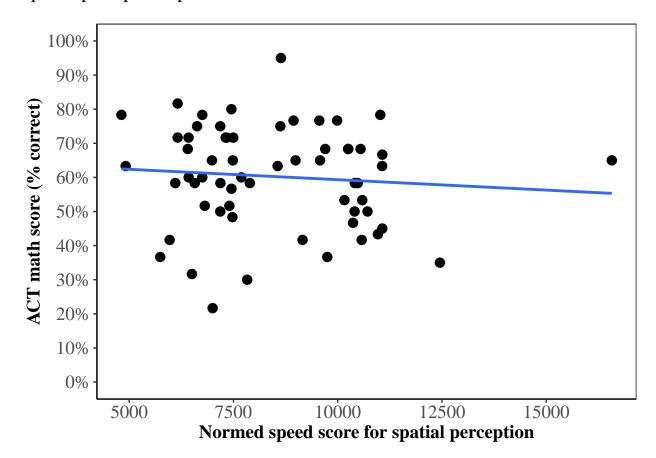
```
##
## Pearson's product-moment correlation
##
## data: finalDF2$SMEM_Sz and finalDF2$ACTmathscore
## t = -0.87163, df = 59, p-value = 0.3869
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.3545080 0.1431318
## sample estimates:
## cor
## -0.112753
```

#### Spatial perception accuracy (p < 0.01)



```
##
## Pearson's product-moment correlation
##
## data: finalDF2$SPA_Az and finalDF2$ACTmathscore
## t = 2.6027, df = 59, p-value = 0.01168
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## 0.07516989 0.52991266
## sample estimates:
## cor
## 0.3209159
```

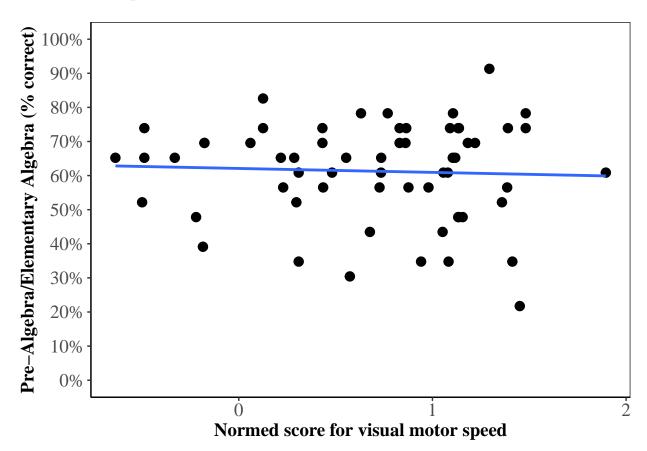
#### Spatial perception speed



```
##
## Pearson's product-moment correlation
##
## data: finalDF2$SPA_Sz and finalDF2$ACTmathscore
## t = -0.67924, df = 59, p-value = 0.4996
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.3325309 0.1674488
## sample estimates:
## cor
## -0.08808631
```

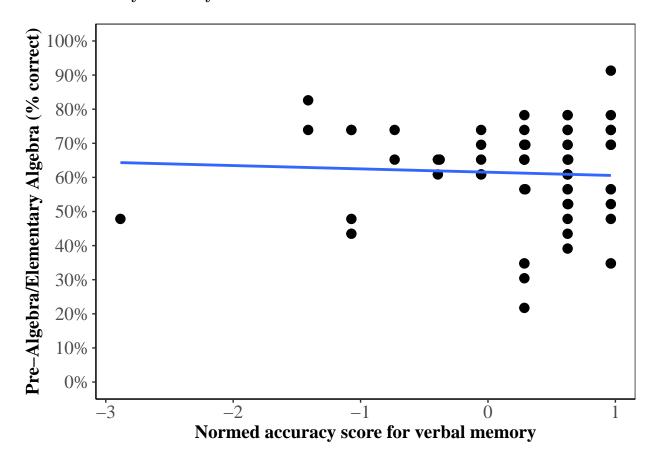
### EA/ Pre-Algebra/Elementary Algebra Subsection

#### Visual motor speed



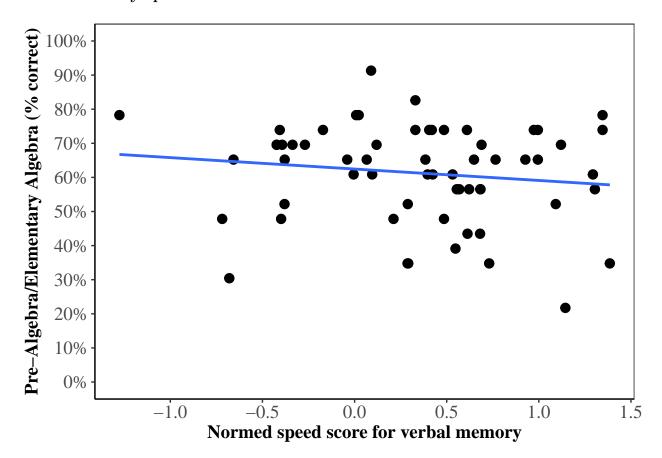
```
##
## Pearson's product-moment correlation
##
## data: EA_DF$SM_Sz and EA_DF$EAscore
## t = -0.36649, df = 59, p-value = 0.7153
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2959277 0.2066422
## sample estimates:
## cor
## -0.04765849
```

#### Verbal memory accuracy



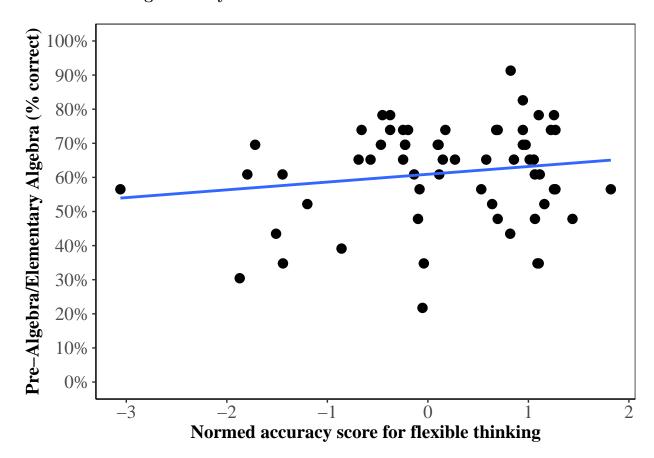
```
##
## Pearson's product-moment correlation
##
## data: EA_DF$VMEM_Az and EA_DF$EAscore
## t = -0.39783, df = 59, p-value = 0.6922
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2996417 0.2027376
## sample estimates:
## cor
## -0.05172385
```

#### Verbal memory speed



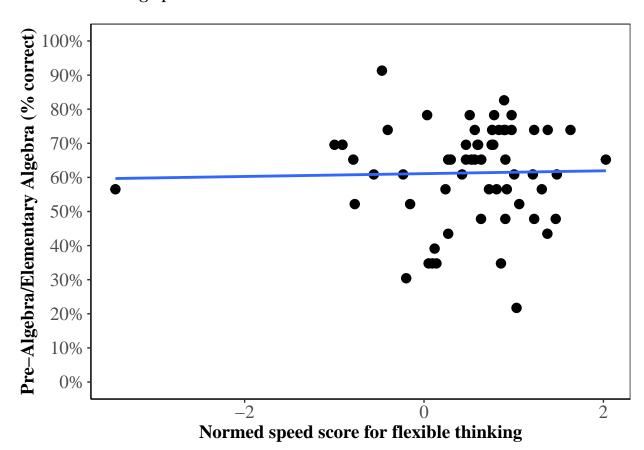
```
##
## Pearson's product-moment correlation
##
## data: EA_DF$VMEM_Sz and EA_DF$EAscore
## t = -1.0764, df = 59, p-value = 0.2861
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.3774110 0.1171345
## sample estimates:
## cor
## -0.1387798
```

#### Flexible thinking accuracy



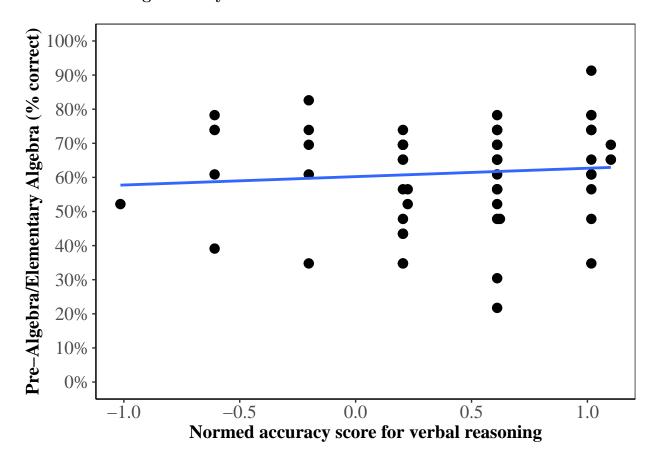
```
##
## Pearson's product-moment correlation
##
## data: EA_DF$ABF_Az and EA_DF$EAscore
## t = 1.24, df = 59, p-value = 0.2199
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.09630984 0.39533066
## sample estimates:
## cor
## 0.1593762
```

#### Flexible thinking speed



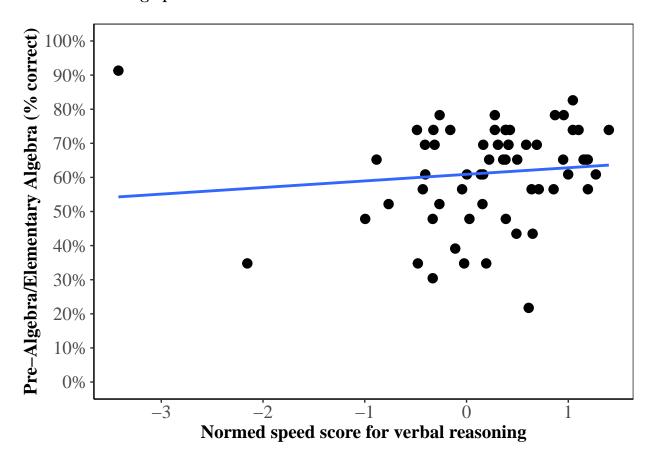
```
##
## Pearson's product-moment correlation
##
## data: EA_DF$ABF_Sz and EA_DF$EAscore
## t = 0.18723, df = 59, p-value = 0.8521
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2288567 0.2745046
## sample estimates:
## cor
## 0.02436838
```

#### Verbal reasoning accuracy

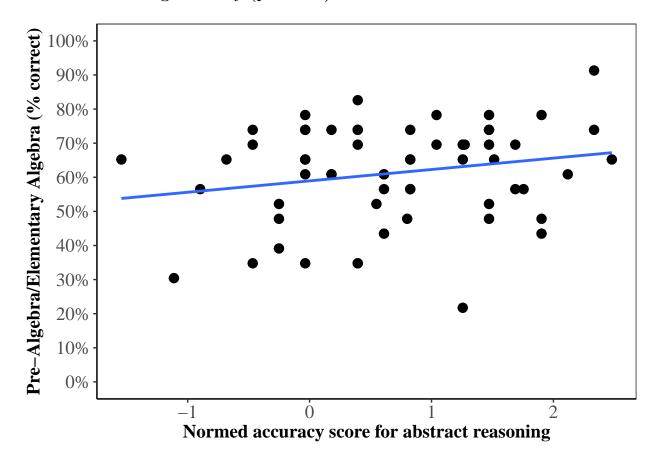


```
##
## Pearson's product-moment correlation
##
## data: EA_DF$LAN_Az and EA_DF$EAscore
## t = 0.69612, df = 59, p-value = 0.4891
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1653216  0.3344753
## sample estimates:
## cor
## 0.09025665
```

#### Verbal reasoning speed

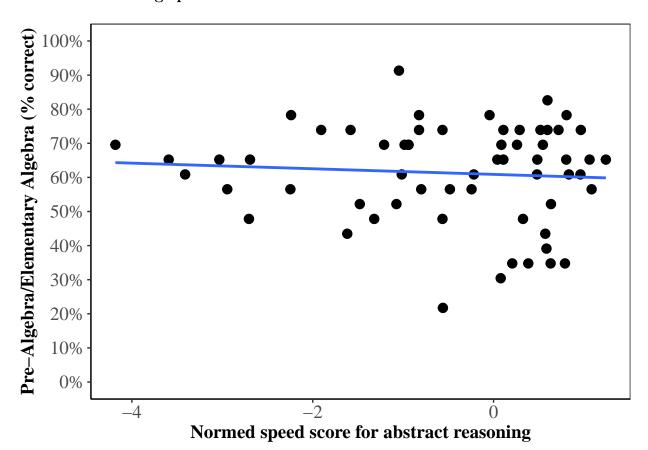


```
##
## Pearson's product-moment correlation
##
## data: EA_DF$LAN_Sz and EA_DF$EAscore
## t = 0.84208, df = 59, p-value = 0.4031
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1468751  0.3511603
## sample estimates:
## cor
## 0.1089762
```



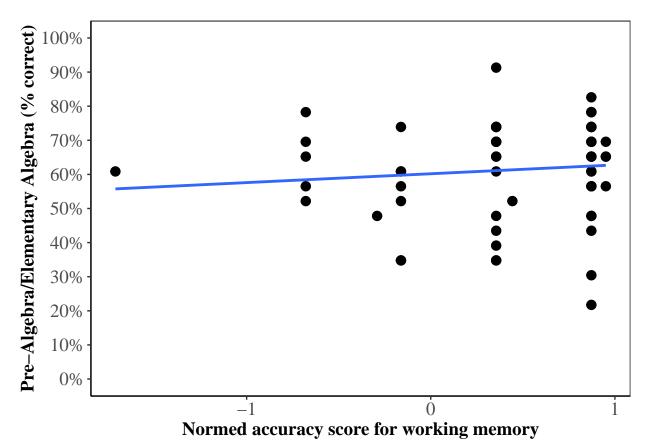
```
##
## Pearson's product-moment correlation
##
## data: EA_DF$NVR_Az and EA_DF$EAscore
## t = 1.6481, df = 59, p-value = 0.1047
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.04437907 0.43844452
## sample estimates:
## cor
## 0.2097861
```

#### Abstract reasoning speed



```
##
## Pearson's product-moment correlation
##
## data: EA_DF$NVR_Sz and EA_DF$EAscore
## t = -0.5862, df = 59, p-value = 0.56
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.3217508  0.1791583
## sample estimates:
## cor
## -0.07609558
```

#### Working memory accuracy



```
##
## Pearson's product-moment correlation
##
## data: EA_DF$WM_Az and EA_DF$EAscore
## t = 0.805, df = 59, p-value = 0.4241
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1515679 0.3469454
## sample estimates:
## cor
## 0.1042311
```

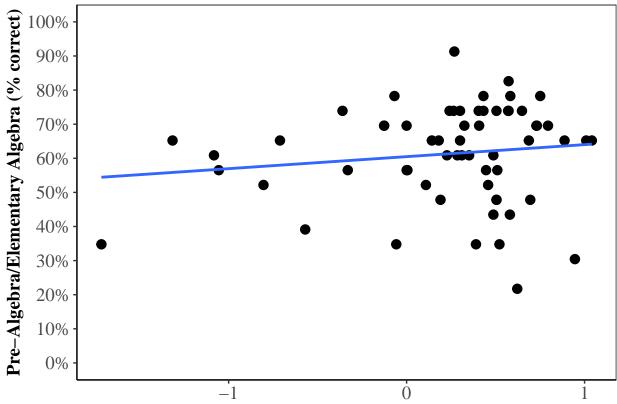
#### Working memory speed



```
##
## Pearson's product-moment correlation
##
## data: EA_DF$WM_Sz and EA_DF$EAscore
## t = 0.76043, df = 59, p-value = 0.45
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1572025  0.3418579
## sample estimates:
## cor
## 0.09851829
```

#### Working memory efficiency

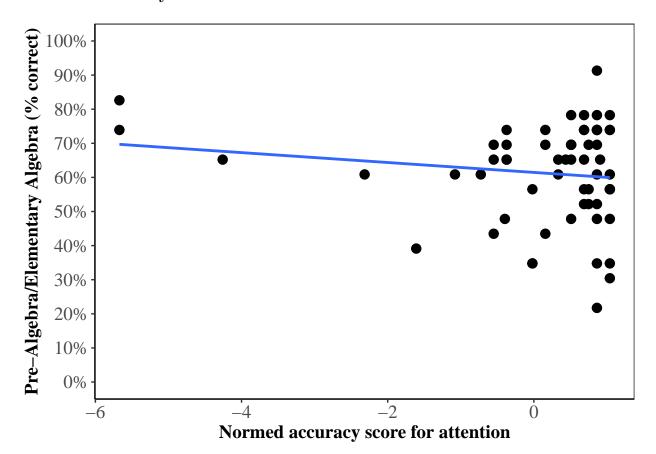
Average of normed accuracy and speed scores for working memory.



Average of normed accuracy and speed scores for working memory

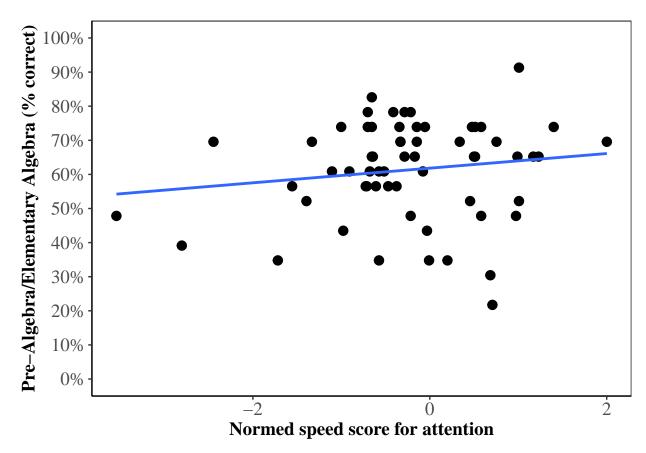
```
##
## Pearson's product-moment correlation
##
## data: EA_DF$WM_EFFICIENCY and EA_DF$EAscore
## t = 1.0687, df = 59, p-value = 0.2896
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1181179  0.3765555
## sample estimates:
## cor
## 0.1378017
```

#### Attention accuracy



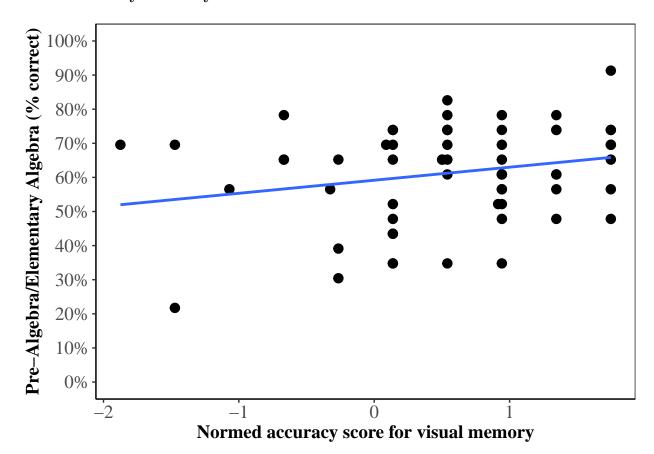
```
##
## Pearson's product-moment correlation
##
## data: EA_DF$ATT_Az and EA_DF$EAscore
## t = -1.1074, df = 59, p-value = 0.2726
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.380833 0.113191
## sample estimates:
## cor
## -0.1426971
```

#### Attention speed



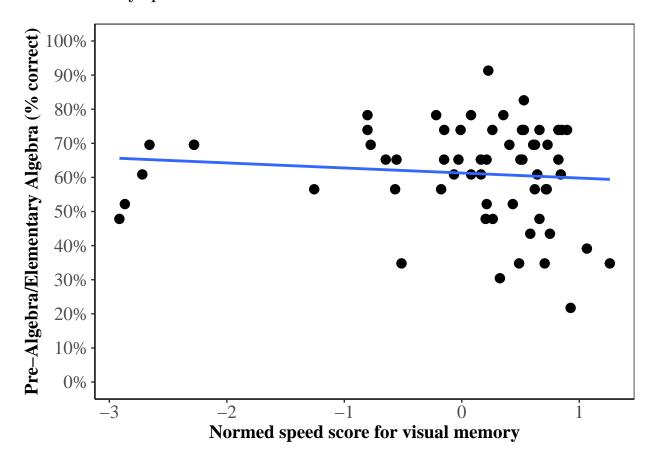
```
##
## Pearson's product-moment correlation
##
## data: EA_DF$ATT_Sz and EA_DF$EAscore
## t = 1.1513, df = 59, p-value = 0.2542
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1076046  0.3856577
## sample estimates:
## cor
## 0.1482328
```

#### Visual memory accuracy



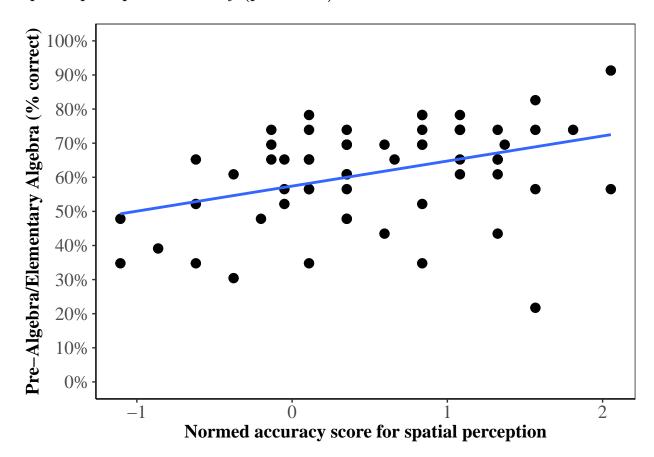
```
##
## Pearson's product-moment correlation
##
## data: EA_DF$SMEM_Az and EA_DF$EAscore
## t = 1.7966, df = 59, p-value = 0.07752
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.02553571 0.45355782
## sample estimates:
## cor
## 0.2277496
```

#### Visual memory speed



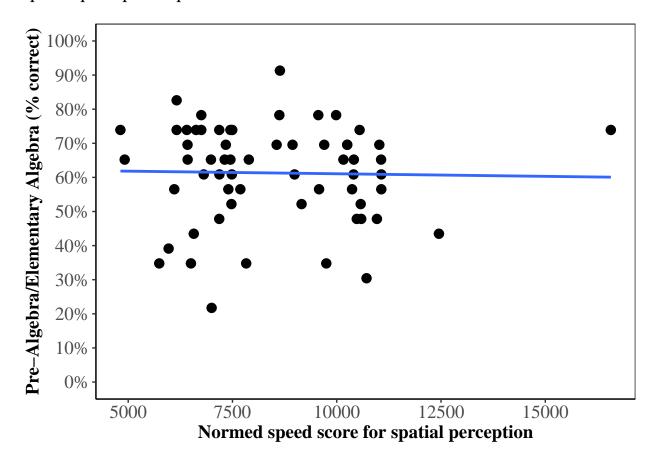
```
##
## Pearson's product-moment correlation
##
## data: EA_DF$SMEM_Sz and EA_DF$EAscore
## t = -0.80719, df = 59, p-value = 0.4228
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.3471943 0.1512914
## sample estimates:
## cor
## -0.1045111
```

### Spatial perception accuracy (p < 0.001)



```
##
## Pearson's product-moment correlation
##
## data: EA_DF$SPA_Az and EA_DF$EAscore
## t = 3.2251, df = 59, p-value = 0.002055
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## 0.1499307 0.5821980
## sample estimates:
## cor
## 0.3871349
```

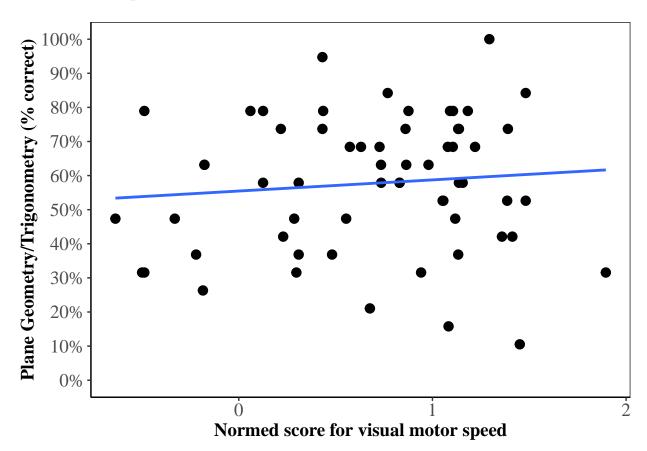
#### Spatial perception speed



```
##
## Pearson's product-moment correlation
##
## data: EA_DF$SPA_Sz and EA_DF$EAscore
## t = -0.17362, df = 59, p-value = 0.8628
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2728660 0.2305346
## sample estimates:
## cor
## -0.02259802
```

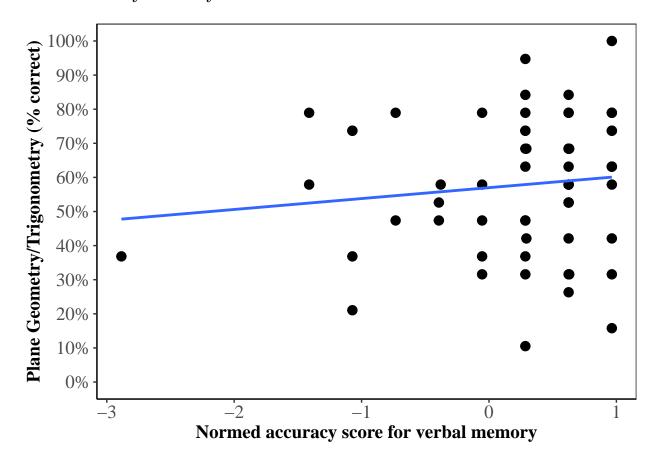
# GT/ Plane Geometry/Trigonometry Subsection

#### Visual motor speed



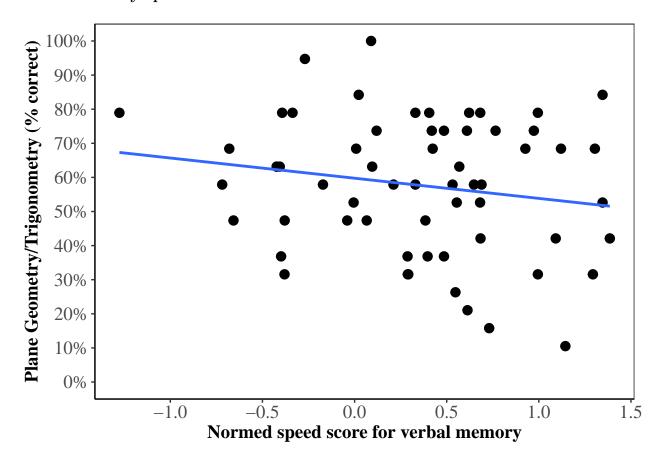
```
##
## Pearson's product-moment correlation
##
## data: GT_DF$SM_Sz and GT_DF$GTscore
## t = 0.75753, df = 59, p-value = 0.4517
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1575686 0.3415263
## sample estimates:
## cor
## 0.09814646
```

#### Verbal memory accuracy



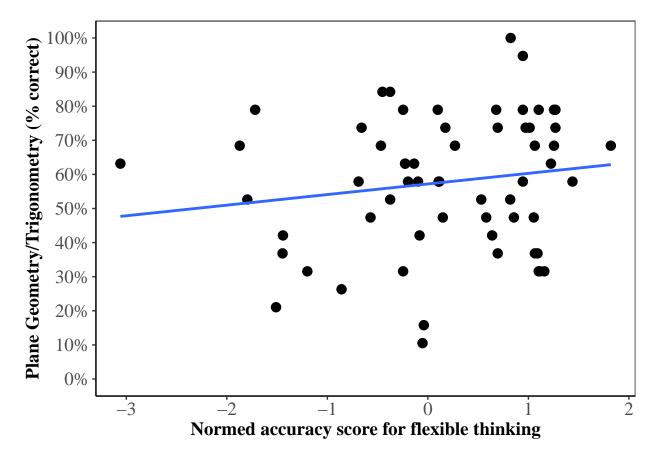
```
##
## Pearson's product-moment correlation
##
## data: GT_DF$VMEM_Az and GT_DF$GTscore
## t = 0.95245, df = 59, p-value = 0.3448
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1328824  0.3636093
## sample estimates:
## cor
## 0.1230561
```

#### Verbal memory speed



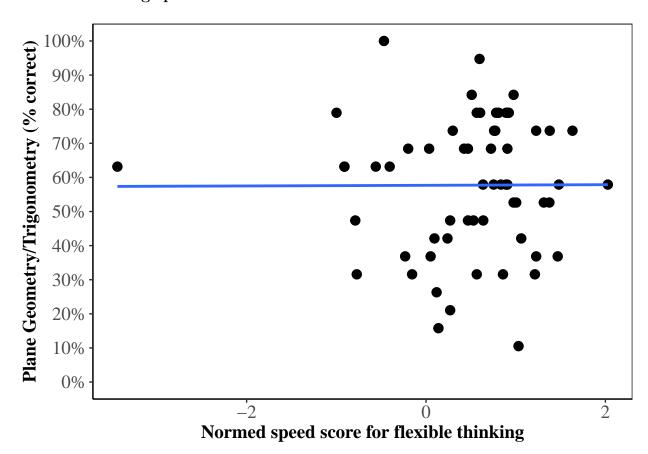
```
##
## Pearson's product-moment correlation
##
## data: GT_DF$VMEM_Sz and GT_DF$GTscore
## t = -1.3915, df = 59, p-value = 0.1693
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.4116015 0.0770211
## sample estimates:
## cor
## -0.178257
```

#### Flexible thinking accuracy



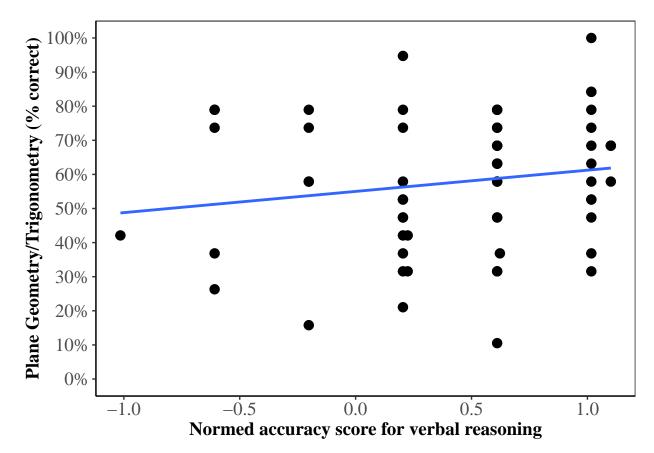
```
##
## Pearson's product-moment correlation
##
## data: GT_DF$ABF_Az and GT_DF$GTscore
## t = 1.2289, df = 59, p-value = 0.224
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.09772863 0.39412155
## sample estimates:
## cor
## 0.15798
```

#### Flexible thinking speed

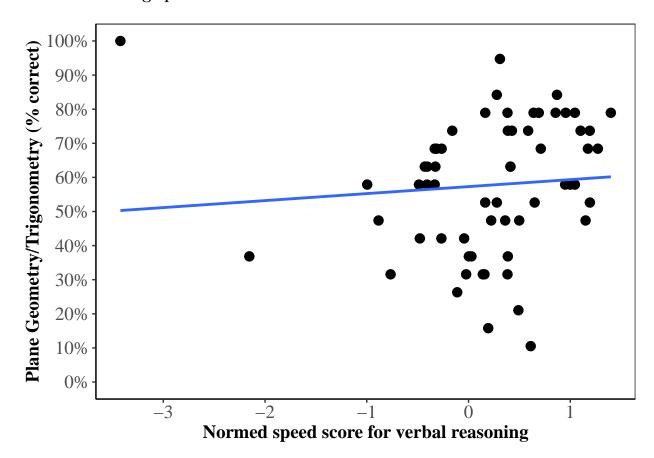


```
##
## Pearson's product-moment correlation
##
## data: GT_DF$ABF_Sz and GT_DF$GTscore
## t = 0.030503, df = 59, p-value = 0.9758
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2480977 0.2555363
## sample estimates:
## cor
## 0.003971088
```

#### Verbal reasoning accuracy

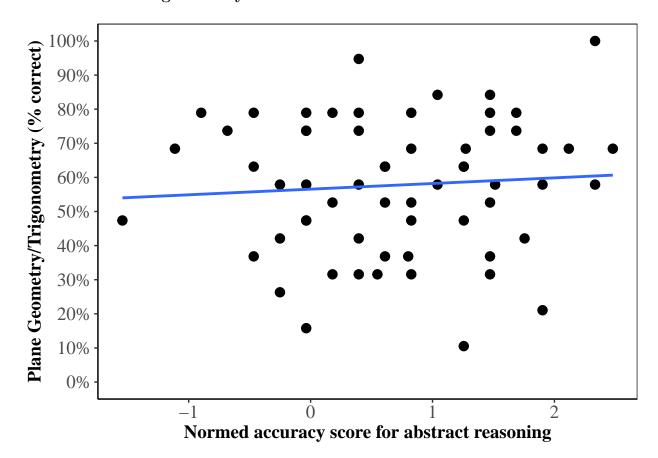


#### Verbal reasoning speed



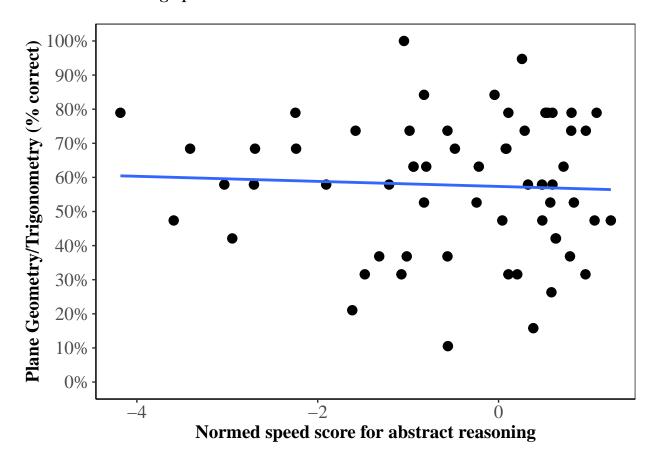
```
##
## Pearson's product-moment correlation
##
## data: GT_DF$LAN_Sz and GT_DF$GTscore
## t = 0.64725, df = 59, p-value = 0.52
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1714792  0.3288350
## sample estimates:
## cor
## 0.08396738
```

#### Abstract reasoning accuracy



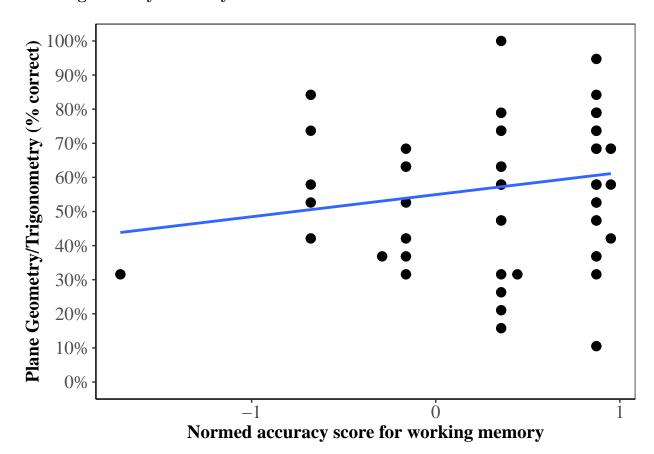
```
##
## Pearson's product-moment correlation
##
## data: GT_DF$NVR_Az and GT_DF$GTscore
## t = 0.58306, df = 59, p-value = 0.5621
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1795533  0.3213849
## sample estimates:
## cor
## 0.07568981
```

#### Abstract reasoning speed



```
##
## Pearson's product-moment correlation
##
## data: GT_DF$NVR_Sz and GT_DF$GTscore
## t = -0.38334, df = 59, p-value = 0.7028
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2979256 0.2045438
## sample estimates:
## cor
## -0.04984439
```

#### Working memory accuracy



```
##
## Pearson's product-moment correlation
##
## data: GT_DF$WM_Az and GT_DF$GTscore
## t = 1.4824, df = 59, p-value = 0.1436
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.0654518  0.4212134
## sample estimates:
## cor
## 0.1894922
```

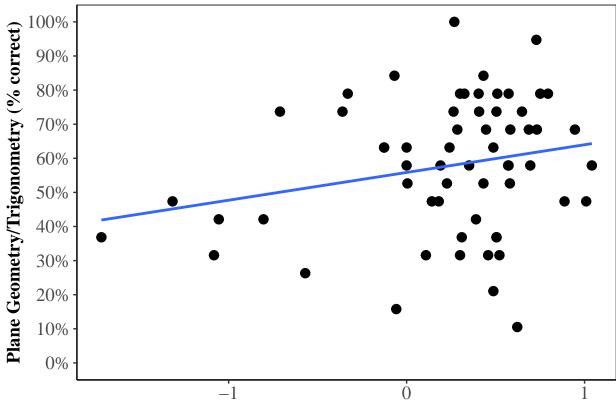
#### Working memory speed



```
##
## Pearson's product-moment correlation
##
## data: GT_DF$WM_Sz and GT_DF$GTscore
## t = 1.2177, df = 59, p-value = 0.2282
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.09915101 0.39290767
## sample estimates:
## cor
## 0.1565792
```

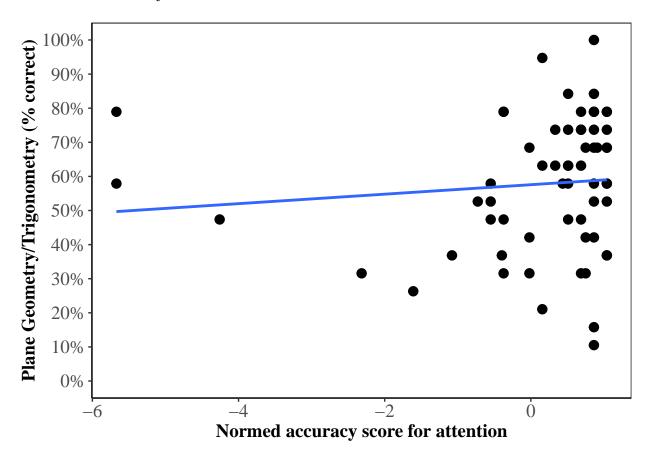
Working memory efficiency (p = 0.07)

Average of normed accuracy and speed scores for working memory.



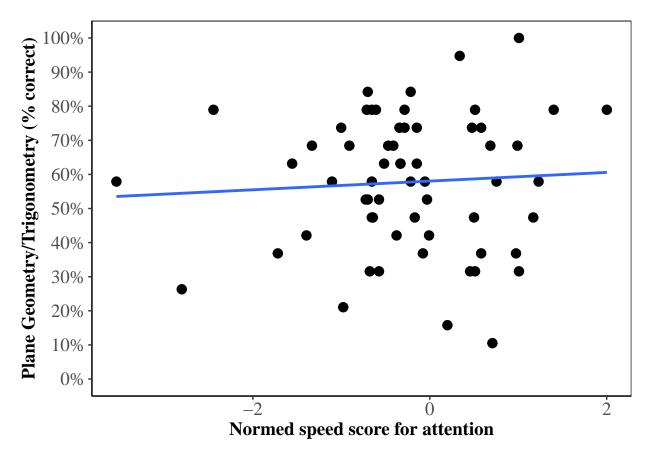
Average of normed accuracy and speed scores for working memory

#### Attention accuracy



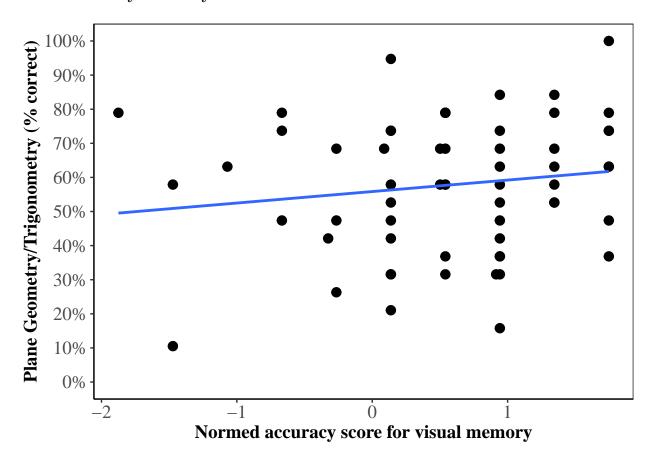
```
##
## Pearson's product-moment correlation
##
## data: GT_DF$ATT_Az and GT_DF$GTscore
## t = 0.76631, df = 59, p-value = 0.4465
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1564595  0.3425304
## sample estimates:
## cor
## 0.09927255
```

#### Attention speed



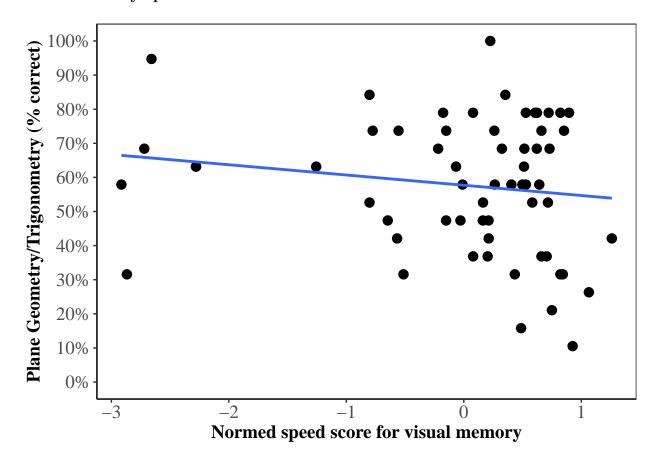
```
##
## Pearson's product-moment correlation
##
## data: GT_DF$ATT_Sz and GT_DF$GTscore
## t = 0.49213, df = 59, p-value = 0.6245
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1909563 0.3107562
## sample estimates:
## cor
## 0.06393905
```

#### Visual memory accuracy



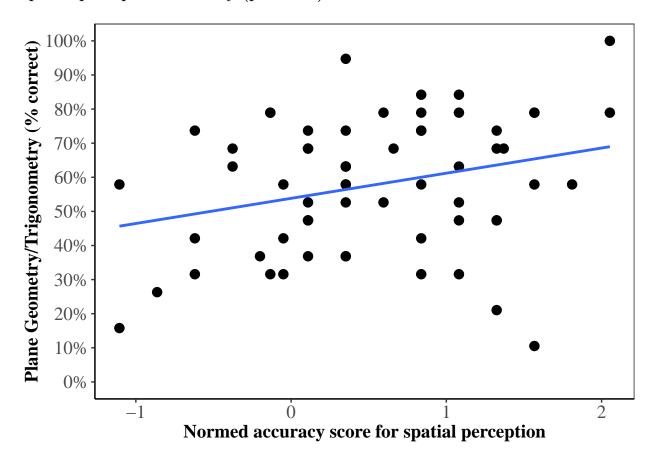
```
##
## Pearson's product-moment correlation
##
## data: GT_DF$SMEM_Az and GT_DF$GTscore
## t = 1.13, df = 59, p-value = 0.2631
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1103215  0.3833146
## sample estimates:
## cor
## 0.1455426
```

#### Visual memory speed



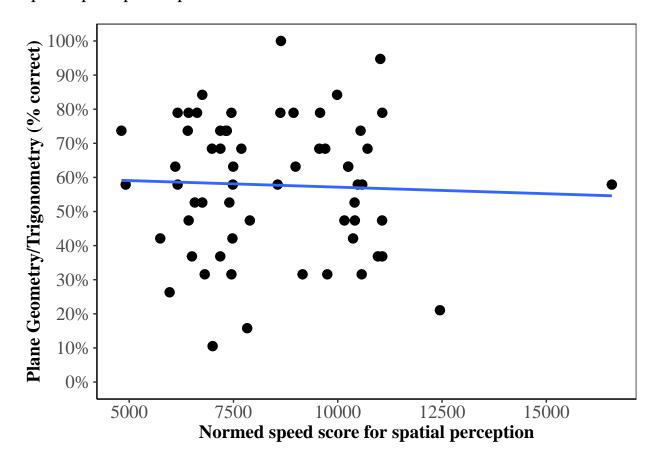
```
##
## Pearson's product-moment correlation
##
## data: GT_DF$SMEM_Sz and GT_DF$GTscore
## t = -1.1993, df = 59, p-value = 0.2352
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.3909003 0.1014987
## sample estimates:
## cor
## -0.154265
```

#### Spatial perception accuracy (p < 0.05)



```
##
## Pearson's product-moment correlation
##
## data: GT_DF$SPA_Az and GT_DF$GTscore
## t = 2.2615, df = 59, p-value = 0.02743
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## 0.03296079 0.49878278
## sample estimates:
## cor
## 0.2824372
```

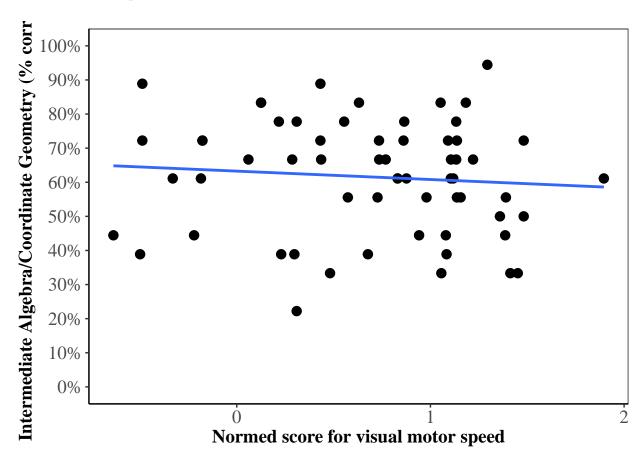
#### Spatial perception speed



```
##
## Pearson's product-moment correlation
##
## data: GT_DF$SPA_Sz and GT_DF$GTscore
## t = -0.32039, df = 59, p-value = 0.7498
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2904475 0.2123746
## sample estimates:
## cor
## -0.0416749
```

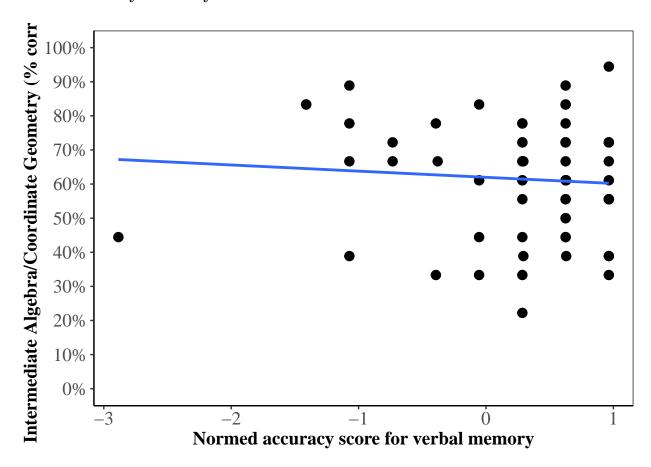
# AG/ Intermediate Algebra/Coordinate Geometry Subsection

#### Visual motor speed



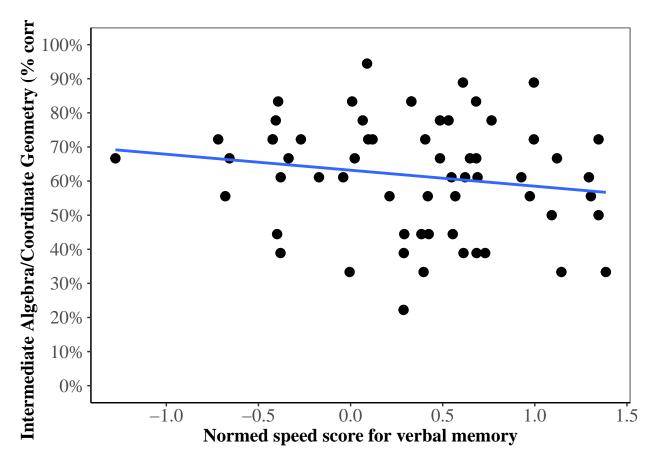
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$SM_Sz and AG_DF$AGscore
## t = -0.67276, df = 59, p-value = 0.5037
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.3317824 0.1682664
## sample estimates:
## cor
## -0.08725146
```

#### Verbal memory accuracy



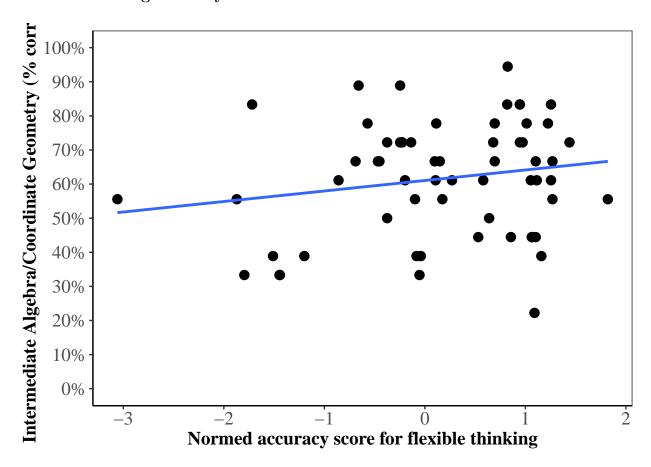
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$VMEM_Az and AG_DF$AGscore
## t = -0.63418, df = 59, p-value = 0.5284
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.3273215 0.1731250
## sample estimates:
## cor
## -0.08228301
```

#### Verbal memory speed



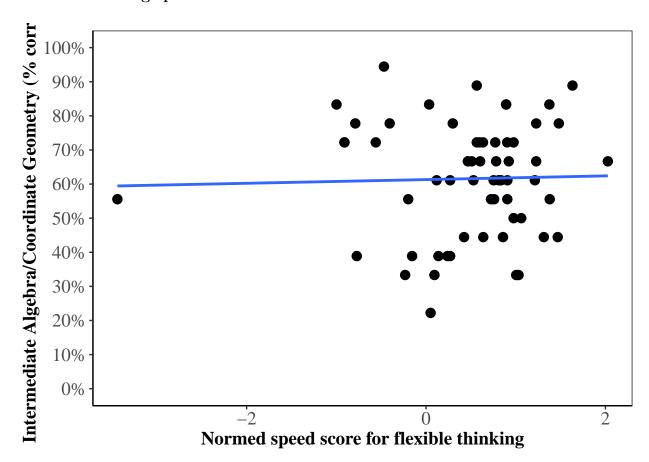
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$VMEM_Sz and AG_DF$AGscore
## t = -1.2978, df = 59, p-value = 0.1994
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.40156962 0.08895706
## sample estimates:
## cor
## -0.1665956
```

#### Flexible thinking accuracy



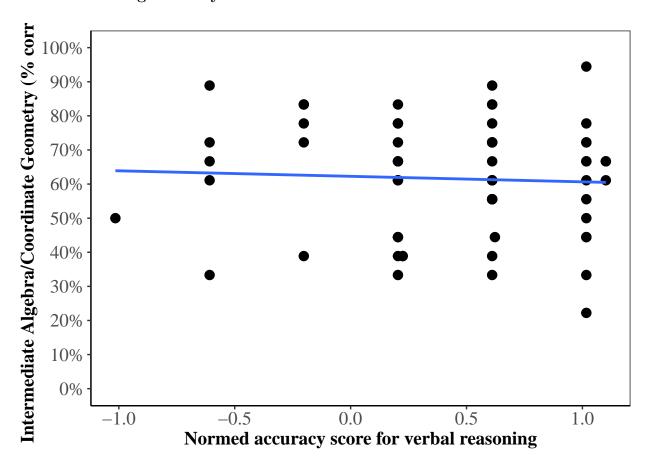
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$ABF_Az and AG_DF$AGscore
## t = 1.4449, df = 59, p-value = 0.1538
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.07022327 0.41726241
## sample estimates:
## cor
## 0.1848666
```

#### Flexible thinking speed



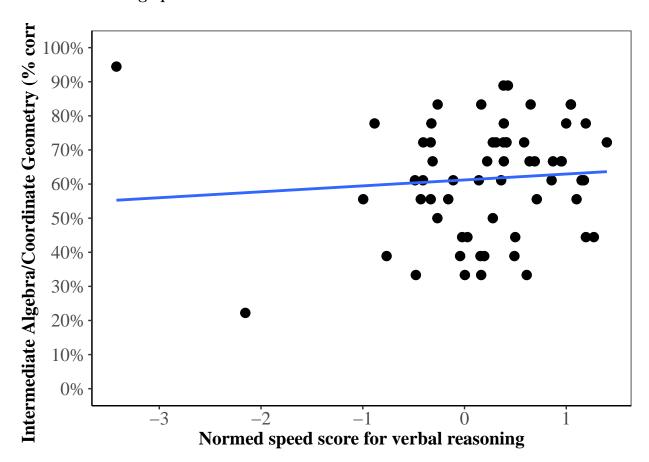
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$ABF_Sz and AG_DF$AGscore
## t = 0.21016, df = 59, p-value = 0.8343
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2260274 0.2772612
## sample estimates:
## cor
## 0.02735003
```

#### Verbal reasoning accuracy



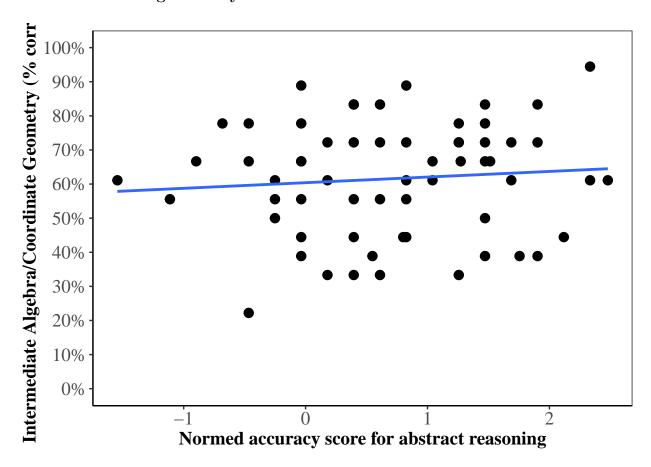
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$LAN_Az and AG_DF$AGscore
## t = -0.39198, df = 59, p-value = 0.6965
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2989488  0.2034673
## sample estimates:
## cor
## -0.05096476
```

#### Verbal reasoning speed



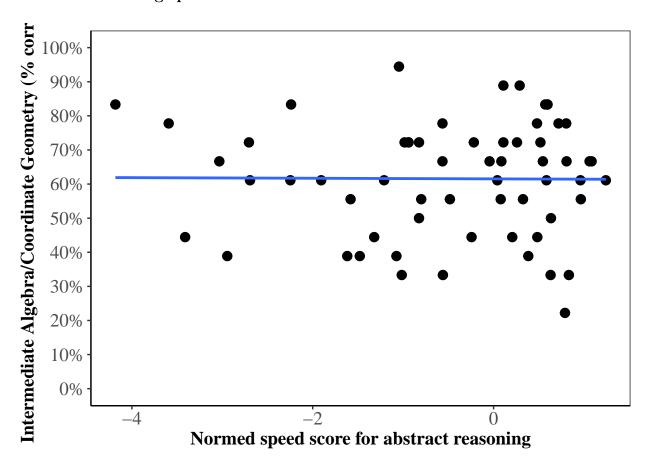
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$LAN_Sz and AG_DF$AGscore
## t = 0.64827, df = 59, p-value = 0.5193
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1713515 0.3289523
## sample estimates:
## cor
## 0.08409801
```

#### Abstract reasoning accuracy



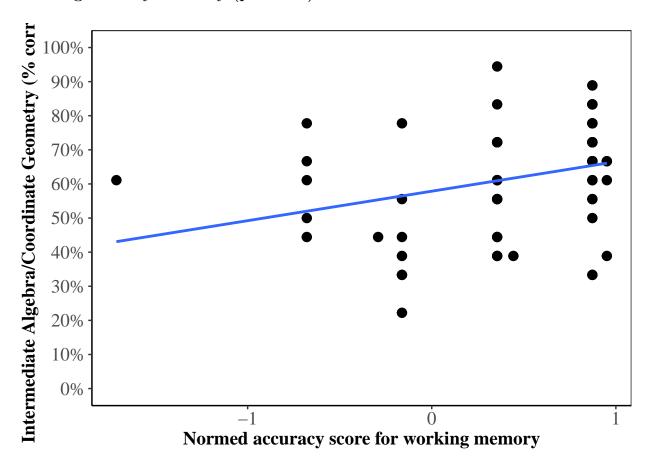
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$NVR_Az and AG_DF$AGscore
## t = 0.68682, df = 59, p-value = 0.4949
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1664941 0.3334041
## sample estimates:
## cor
## 0.08906068
```

#### Abstract reasoning speed



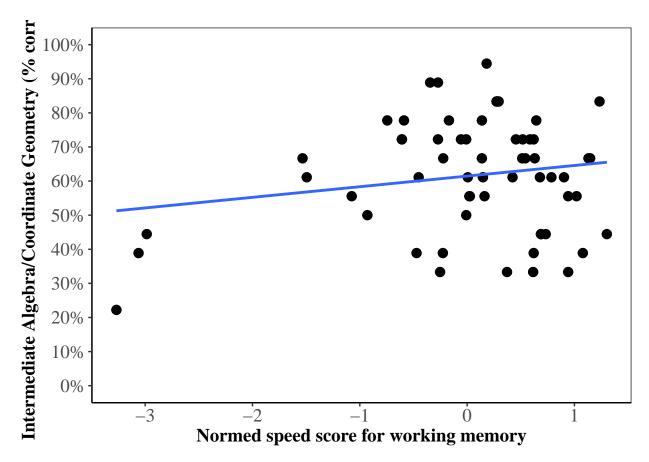
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$NVR_Sz and AG_DF$AGscore
## t = -0.055009, df = 59, p-value = 0.9563
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2585159 0.2451014
## sample estimates:
## cor
## -0.007161383
```

#### Working memory accuracy (p < 0.05)



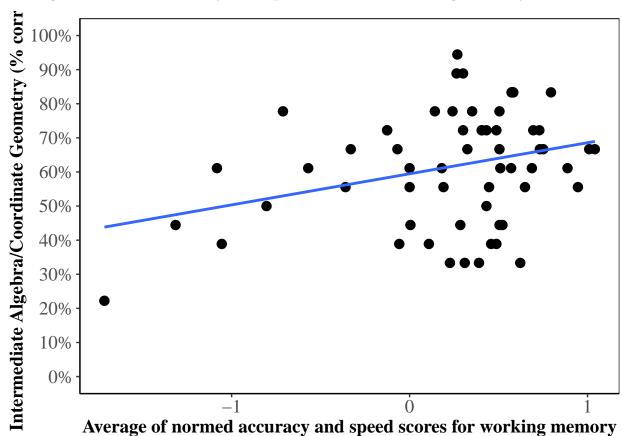
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$WM_Az and AG_DF$AGscore
## t = 2.4009, df = 59, p-value = 0.01952
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## 0.05029999 0.51171783
## sample estimates:
## cor
## 0.2983418
```

#### Working memory speed



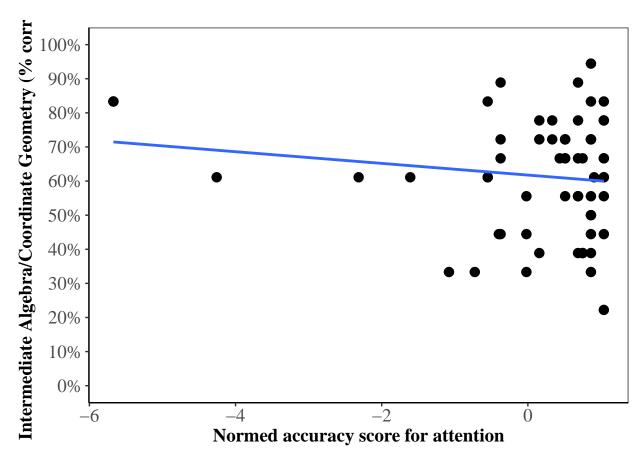
Working memory efficiency (p < 0.05)

Average of normed accuracy and speed scores for working memory.



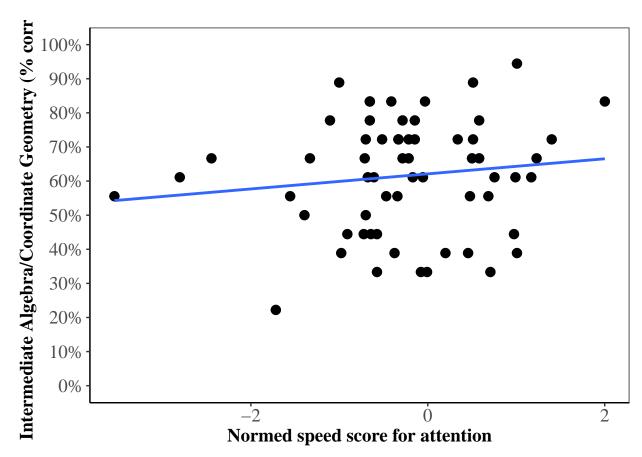
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$WM_EFFICIENCY and AG_DF$AGscore
## t = 2.4711, df = 59, p-value = 0.01638
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## 0.05897705 0.51811333
## sample estimates:
## cor
## 0.3062495
```

#### Attention accuracy



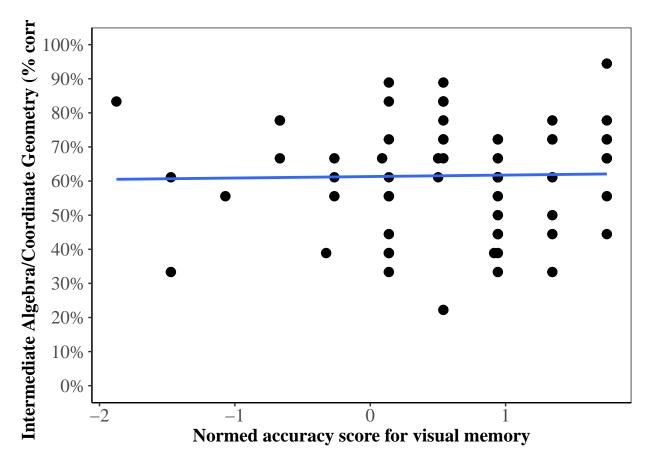
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$ATT_Az and AG_DF$AGscore
## t = -1.122, df = 59, p-value = 0.2664
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.3824402 0.1113335
## sample estimates:
## cor
## -0.1445396
```

#### Attention speed



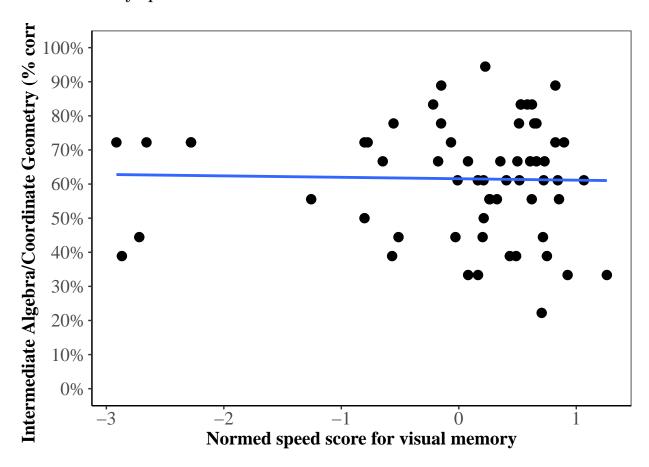
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$ATT_Sz and AG_DF$AGscore
## t = 1.0159, df = 59, p-value = 0.3138
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.1248243  0.3706989
## sample estimates:
## cor
## 0.1311179
```

#### Visual memory accuracy



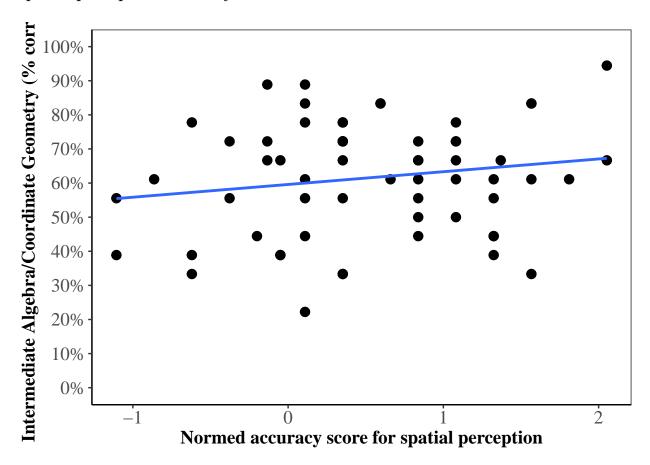
```
##
## Pearson's product-moment correlation
##
## data: AG_DF$SMEM_Az and AG_DF$AGscore
## t = 0.16976, df = 59, p-value = 0.8658
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2310102 0.2724010
## sample estimates:
## cor
## 0.02209594
```

#### Visual memory speed

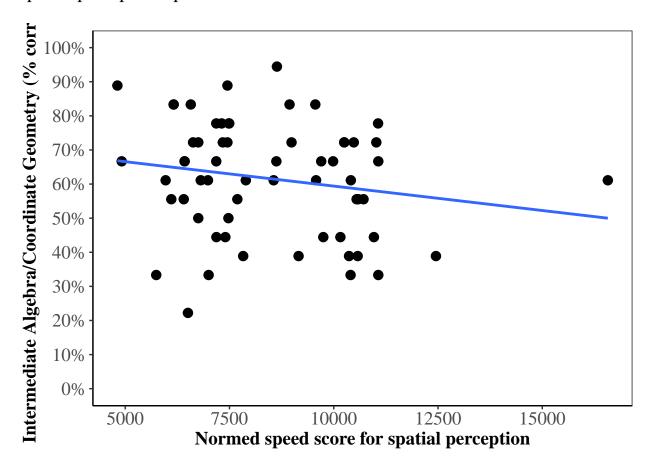


```
##
## Pearson's product-moment correlation
##
## data: AG_DF$SMEM_Sz and AG_DF$AGscore
## t = -0.19511, df = 59, p-value = 0.846
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.2754523 0.2278850
## sample estimates:
## cor
## -0.02539292
```

#### Spatial perception accuracy



#### Spatial perception speed



```
##
## Pearson's product-moment correlation
##
## data: AG_DF$SPA_Sz and AG_DF$AGscore
## t = -1.4295, df = 59, p-value = 0.1581
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
## -0.41563566 0.07218136
## sample estimates:
## cor
## -0.1829651
```

# Summary

- 1. Spatial perception accuracy predicts overall math score, pre-algebra, trig
- 2. WM efficiency predicts overall math score, trig (almost), intermediate algebra/geometry
- 3. WM accuracy predicts intermediate algebra/geometry
- 4. Abstract reasoning accuracy predicts pre-algebra