Robust Tests of Equality of Means - use case templates, GenderMag motivation facet, creation task

| | | Statistic ^a | df1 | df2 | Sig. |
|------------------|-------|------------------------|-----|--------|------|
| Precision | Welch | .707 | 1 | 71.371 | .403 |
| Recall | Welch | .029 | 1 | 72.284 | .866 |
| FMeasure | Welch | .252 | 1 | 72.106 | .617 |
| Duration | Welch | 3.359 | 1 | 76.019 | .071 |
| FirstActDet | Welch | .751 | 1 | 77.199 | .389 |
| LastActDet | Welch | 3.427 | 1 | 76.501 | .068 |
| ProcDur | Welch | .191 | 1 | 75.229 | .664 |
| FixRel | Welch | 2.554 | 1 | 76.171 | .114 |
| FixIrrel | Welch | 1.007 | 1 | 76.235 | .319 |
| AvDurRelFix | Welch | .137 | 1 | 75.413 | .712 |
| AvDurIrrelFix | Welch | .015 | 1 | 76.526 | .902 |
| TotSac | Welch | .029 | 1 | 76.690 | .865 |
| Sac2Key | Welch | .122 | 1 | 70.327 | .728 |
| AvAttention | Welch | 1.483 | 1 | 75.464 | .227 |
| AvMentWL | Welch | .657 | 1 | 74.571 | .420 |
| AvFam | Welch | .316 | 1 | 77.400 | .575 |
| AvSCL | Welch | 2.785 | 1 | 77.491 | .099 |
| HRVar_RMSSD | Welch | .912 | 1 | 77.960 | .342 |
| HRVar_NN50 | Welch | 2.063 | 1 | 77.544 | .155 |
| NASA_MD | Welch | .096 | 1 | 65.119 | .758 |
| NASA_PD | Welch | .837 | 1 | 75.602 | .363 |
| NASA_TD | Welch | .004 | 1 | 54.676 | .948 |
| NASA_Performance | Welch | 3.699 | 1 | 73.947 | .058 |
| NASA_Effort | Welch | .238 | 1 | 64.397 | .627 |
| NASA_Frustration | Welch | 1.436 | 1 | 69.733 | .235 |
| NASA_Score | Welch | .554 | 1 | 64.827 | .459 |

a. Asymptotically F distributed.

ANOVA - use case templates, GenderMag motivation facet, creation task

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---------------|------------------------------|-------------------|--------|-------------|-------|-------|
| Precision | Between Groups | .040 | 1 | .040 | .722 | .398 |
| | Within Groups | 4.291 | 78 | .055 | | |
| | Total | 4.330 | 79 | | | |
| Recall | Between Groups | .001 | 1 | .001 | .029 | .865 |
| | Within Groups | 3.945 | 78 | .051 | | |
| | Total | 3.947 | 79 | | | |
| FMeasure | Between Groups | .013 | 1 | .013 | .256 | .614 |
| | Within Groups | 3.962 | 78 | .051 | | |
| | Total | 3.975 | 79 | | | |
| Duration | Between Groups | 72382.228 | 1 | 72382.228 | 3.330 | .072 |
| | Within Groups | 1695276.159 | 78 | 21734.310 | | |
| | Total | 1767658.388 | 79 | | | |
| FirstActDet | Between Groups | 2892.146 | 1 | 2892.146 | .736 | .394 |
| | Within Groups | 306627.404 | 78 | 3931.121 | | |
| | Total | 309519.550 | 79 | | | |
| LastActDet | Between Groups | 76421.516 | 1 | 76421.516 | 3.383 | .070 |
| | Within Groups | 1761942.434 | 78 | 22589.006 | | |
| | Total | 1838363.950 | 79 | | | |
| ProcDur | Between Groups | 54.833 | 1 | 54.833 | .190 | .664 |
| | Within Groups | 22472.154 | 78 | 288.105 | | |
| | Total | 22526.988 | 79 | 200.100 | | |
| FixRel | Between Groups | 26.823 | 1 | 26.823 | 2.529 | .116 |
| 1 IXI (OI | Within Groups | 827.391 | 78 | 10.608 | 2.020 | |
| | Total | 854.214 | 79 | 10.000 | | |
| FixIrrel | Between Groups | 26923.433 | 1 | 26923.433 | .996 | .321 |
| | Within Groups | 2108038.966 | 78 | 27026.141 | .550 | .02 1 |
| | Total | 2134962.399 | 79 | 27020.141 | | |
| AvDurRelFix | Between Groups | 382.624 | 1 | 382.624 | .137 | .712 |
| AVDUINEIFIX | | 218100.286 | 78 | 2796.158 | .137 | .7 12 |
| | Within Groups Total | 218482.911 | 78 | 2790.136 | | |
| AvDurlmolFiv | | 426.852 | 1 | 426.852 | .015 | .902 |
| AvDurIrrelFix | Between Groups Within Groups | | 78 | | .015 | .902 |
| | | 2201836.821 | 78 | 28228.677 | | |
| TotSac | Total | 2202263.673 | | 2.450 | 000 | 000 |
| 1015ac | Between Groups | 3.152 | 1 | 3.152 | .029 | .866 |
| | Within Groups | 8522.798 | 78 | 109.267 | | |
| 0 01/ | Total | 8525.950 | 79 | 0.040 | 405 | 705 |
| Sac2Key | Between Groups | 9.618 | 1 | 9.618 | .125 | .725 |
| | Within Groups | 6001.182 | 78 | 76.938 | | |
| | Total | 6010.800 | 79 | 105 | 4 477 | |
| AvAttention | Between Groups | .105 | 1 | .105 | 1.477 | .228 |
| | Within Groups | 5.569 | 78 | .071 | | |
| | Total | 5.675 | 79 | | | |
| AvMentWL | Between Groups | .040 | 1 | .040 | .658 | .420 |
| | Within Groups | 4.739 | 78 | .061 | | |
| | Total | 4.780 | 79 | | | |
| AvFam | Between Groups | .021 | 1 | .021 | .309 | .580 |
| | Within Groups | 5.221 | 78 | .067 | | |
| | Total | 5.242 | 79 | | | |
| AvSCL | Between Groups | 56496.138 | 1 | 56496.138 | 2.717 | .103 |
| | Within Groups | 1621909.750 | 78 | 20793.715 | | |

| | Total | 1678405.888 | 79 | | | |
|------------------|----------------|-------------|----|----------|-------|------|
| HRVar_RMSSD | Between Groups | 363.312 | 1 | 363.312 | .880 | .351 |
| | Within Groups | 32207.587 | 78 | 412.918 | | |
| | Total | 32570.899 | 79 | | | |
| HRVar_NN50 | Between Groups | 735.270 | 1 | 735.270 | 2.011 | .160 |
| | Within Groups | 28520.661 | 78 | 365.649 | | |
| | Total | 29255.931 | 79 | | | |
| NASA_MD | Between Groups | 9.549 | 1 | 9.549 | .101 | .752 |
| | Within Groups | 7407.639 | 78 | 94.970 | | |
| | Total | 7417.188 | 79 | | | |
| NASA_PD | Between Groups | 247.475 | 1 | 247.475 | .833 | .364 |
| | Within Groups | 23177.525 | 78 | 297.148 | | |
| | Total | 23425.000 | 79 | | | |
| NASA_TD | Between Groups | 1.528 | 1 | 1.528 | .005 | .945 |
| | Within Groups | 24747.222 | 78 | 317.272 | | |
| | Total | 24748.750 | 79 | | | |
| NASA_Performance | Between Groups | 2280.619 | 1 | 2280.619 | 3.722 | .057 |
| | Within Groups | 47788.131 | 78 | 612.668 | | |
| | Total | 50068.750 | 79 | | | |
| NASA_Effort | Between Groups | 40.306 | 1 | 40.306 | .251 | .618 |
| | Within Groups | 12506.881 | 78 | 160.345 | | |
| | Total | 12547.188 | 79 | | | |
| NASA_Frustration | Between Groups | 600.051 | 1 | 600.051 | 1.478 | .228 |
| | Within Groups | 31669.949 | 78 | 406.025 | | |
| | Total | 32270.000 | 79 | | | |
| NASA_Score | Between Groups | 92.078 | 1 | 92.078 | .584 | .447 |
| | Within Groups | 12302.638 | 78 | 157.726 | | |
| | Total | 12394.716 | 79 | | | |

Task * Motivation - use case templates, GenderMag motivation facet, creation task

| | | | | | 95% Co | |
|--------------------|----------------|------------|----------------------|---------------|----------------|----------------|
| | | | | C+4 | Inte | |
| Dependent Variable | Task | Motivation | Mean | Std. Error | Lower Bound | Upper Bound |
| Precision | ARNE | Abby | .777 ^a | .061 | .655 | .900 |
| | Create | Tim | .560 ^a | .049 | .461 | .659 |
| | ALCO | Abby | .878 ^a | .063 | .751 | 1.00 |
| | Create | Tim | .853 ^a | .055 | .743 | .964 |
| Recall | ARNE | Abby | .714 ^a | .064 | .586 | .843 |
| | Create | Tim | .603 ^a | .052 | .500 | .70 |
| | ALCO | Abby | .799 ^a | .066 | .666 | .93 |
| | Create | Tim | .882 ^a | .058 | .767 | .99 |
| FMeasure | ARNE | Abby | .740 ^a | .062 | .616 | .86 |
| | Create | Tim | .574 ^a | .050 | .474 | .67 |
| | ALCO | Abby | .833 ^a | .064 | .705 | .96 |
| | Create | Tim | .866 ^a | .056 | .754 | .978 |
| Duration | ARNE | Abby | 811.467 ^a | 30.485 | 750.348 | 872.58 |
| | Create | Tim | 894.000 ^a | 24.584 | 844.711 | 943.28 |
| | ALCO | Abby | 612.450 ^a | 31.555 | 549.186 | 675.71 |
| | Create | Tim | 656.437 ^a | 27.460 | 601.383 | 711.49 |
| FirstActDet | ARNE | Abby | 155.967 ^a | 9.009 | 137.906 | 174.02 |
| | Create | Tim | 136.241 ^a | 7.265 | 121.675 | 150.80 |
| | ALCO | Abby | 174.758 ^a | 9.325 | 156.063 | 193.45 |
| | Create | Tim | 198.290 ^a | 8.115 | 182.021 | 214.55 |
| LastActDet | ARNE Create | Abby | 775.333 ^a | 30.579 | 714.027 | 836.640 |
| | | Tim | 879.306 ^a | 24.660 | 829.865 | 928.740 |
| | ALCO Create | Abby | 585.442 ^a | 31.652 | 521.983 | 648.900 |
| | | Tim | 639.909 ^a | 27.544 | 584.686 | 695.13° |
| ProcDur | ARNE | Abby | 36.133 ^a | 1.924 | 32.276 | 39.99 |
| | Create | Tim | 14.694 ^a | 1.552 | 11.584 | 17.80 |
| | ALCO | Abby | 27.008 ^a | 1.992 | 23.016 | 31.00° |
| | Create | Tim | 16.528 ^a | 1.733 | 13.053 | 20.00 |
| FixRel | ARNE | Abby | 10.001 ^a | .209 | 9.583 | 10.420 |
| | Create | Tim | 10.429 ^a | .168 | 10.091 | 10.76 |
| | ALCO | Abby | 3.829 ^a | .216 | 3.395 | 4.26 |
| | Create | Tim | 4.032 ^a | .188 | 3.655 | 4.409 |
| FixIrrel | ARNE | Abby | 301.997 ^a | 21.669 | 258.553 | 345.44 |
| | Create | Tim | 254.894 ^a | 17.475 | 219.859 | 289.929 |
| | ALCO | Abby | 5.022 ^a | 22.430 | -39.947 | 49.99 |
| | Create | Tim | 3.716 ^a | 19.519 | -35.417 | 42.849 |
| AvDurRelFix | ARNE | Abby | 105.697 ^a | 10.785 | 84.075 | 127.318 |
| | Create | Tim | 91.544 ^a | 8.697 | 74.107 | 108.98 |
| | ALCO | Abby | 131.983 ^a | 11.163 | 109.603 | 154.36 |
| | Create | Tim | 157.062 ^a | 9.714 | 137.586 | 176.53 |
| AvDurIrrelFix | ARNE | Abby | 253.213 ^a | 31.243 | 190.574 | 315.85 |
| | Create | Tim | | 25.196 | 155.677 | 256.70 |

| | | | 206.192 ^a | | | |
|-------------|----------------|------|----------------------|--------|---------|---------|
| | ALCO | Abby | 373.950 ^a | 32.340 | 309.112 | 438.788 |
| | Create | Tim | 449.185 ^a | 28.143 | 392.762 | 505.607 |
| TotSac | ARNE | Abby | 84.867 ^a | 2.946 | 78.960 | 90.773 |
| | Create | Tim | 89.213 ^a | 2.376 | 84.450 | 93.976 |
| | ALCO | Abby | 85.008 ^a | 3.049 | 78.895 | 91.122 |
| | Create | Tim | 87.401 ^a | 2.654 | 82.081 | 92.721 |
| Sac2Key | ARNE | Abby | 11.833 ^a | 2.353 | 7.117 | 16.550 |
| | Create | Tim | 15.926 ^a | 1.897 | 12.122 | 19.730 |
| | ALCO | Abby | 15.158 ^a | 2.435 | 10.276 | 20.041 |
| | Create | Tim | 17.034 ^a | 2.119 | 12.785 | 21.282 |
| AvAttention | ARNE | Abby | .743 ^a | .037 | .669 | .818 |
| | Create | Tim | .682 ^a | .030 | .622 | .742 |
| | ALCO | Abby | .383 ^a | .038 | .306 | .460 |
| | Create | Tim | .389 ^a | .033 | .322 | .456 |
| AvMentWL | ARNE | Abby | .753 ^a | .046 | .661 | .846 |
| | Create | Tim | .770 ^a | .037 | .696 | .845 |
| | ALCO Create | Abby | .362 ^a | .048 | .267 | .458 |
| | Create | Tim | .407 ^a | .042 | .324 | .490 |
| AvFam | ARNE Create | Abby | .740 ^a | .043 | .653 | .827 |
| | | Tim | .765 ^a | .035 | .695 | .835 |
| | ALCO Create | Abby | .329 ^a | .045 | .239 | .419 |
| | Create | Tim | .312 ^a | .039 | .234 | .390 |
| AvSCL | ARNE Create | Abby | 477.967 ^a | 41.415 | 394.936 | 560.998 |
| | | Tim | 523.463 ^a | 33.399 | 456.503 | 590.423 |
| | ALCO Create | Abby | 532.517 ^a | 42.868 | 446.571 | 618.462 |
| | Orcato | Tim | 640.964 ^a | 37.305 | 566.173 | 715.755 |
| HRVar_RMSSD | ARNE Create | Abby | 19.237 ^a | 4.495 | 10.226 | 28.248 |
| | | Tim | 46.286 ^a | 3.625 | 39.019 | 53.553 |
| | ALCO Create | Abby | 29.512 ^a | 4.652 | 20.184 | 38.839 |
| | | Tim | 36.144 ^a | 4.049 | 28.027 | 44.260 |
| HRVar_NN50 | ARNE Create | Abby | 10.114 ^a | 5.238 | 386 | 20.615 |
| | | Tim | 34.061 ^a | 4.224 | 25.593 | 42.529 |
| | ALCO Create | Abby | 22.468 ^a | 5.421 | 11.599 | 33.337 |
| | | Tim | 25.175 ^a | 4.718 | 15.717 | 34.634 |
| NASA_MD | ARNE Create | Abby | 53.000 ^a | 2.411 | 48.166 | 57.834 |
| | | Tim | 51.389 ^a | 1.944 | 47.491 | 55.287 |
| | ALCO Create | Abby | 46.208 ^a | 2.496 | 41.205 | 51.212 |
| | | Tim | 51.548 ^a | 2.172 | 47.193 | 55.902 |
| NASA_PD | ARNE Create | Abby | 23.667 ^a | 4.334 | 14.978 | 32.355 |
| | | Tim | 20.185 ^a | 3.495 | 13.178 | 27.192 |
| | ALCO Create | Abby | 18.542 ^a | 4.486 | 9.548 | 27.535 |
| | | Tim | 17.560 ^a | 3.904 | 9.733 | 25.386 |
| NASA_TD | ARNE Create | Abby | 47.500 ^a | 3.641 | 40.201 | 54.799 |
| | | Tim | 29.722 ^a | 2.936 | 23.836 | 35.608 |
| | ALCO | Abby | 25.250 ^a | 3.768 | 17.695 | 32.805 |
| | | | | | | |

| | Create | Tim | 21.677 ^a | 3.279 | 15.102 | 28.251 |
|------------------|----------------|------|---------------------|-------|--------|--------|
| NASA_Performance | ARNE | Abby | 61.500 ^a | 7.476 | 46.511 | 76.489 |
| | Create | Tim | 36.111 ^a | 6.029 | 24.023 | 48.199 |
| | ALCO | Abby | 65.625 ^a | 7.739 | 50.110 | 81.140 |
| | Create | Tim | 47.798 ^a | 6.734 | 34.296 | 61.299 |
| NASA_Effort | ARNE | Abby | 49.500 ^a | 3.390 | 42.704 | 56.296 |
| | Create | Tim | 47.222 ^a | 2.734 | 41.742 | 52.703 |
| | ALCO Create | Abby | 42.083 ^a | 3.509 | 35.049 | 49.118 |
| | | Tim | 48.571 ^a | 3.053 | 42.450 | 54.693 |
| NASA_Frustration | ARNE | Abby | 38.833 ^a | 5.899 | 27.008 | 50.659 |
| | Create | Tim | 17.361 ^a | 4.757 | 7.824 | 26.898 |
| | ALCO | Abby | 35.083 ^a | 6.106 | 22.842 | 47.324 |
| | Create | Tim | 30.893 ^a | 5.313 | 20.241 | 41.545 |
| NASA_Score | ARNE | Abby | 45.667 ^a | 3.678 | 38.292 | 53.042 |
| | Create | Tim | 33.665 ^a | 2.967 | 27.718 | 39.613 |
| | ALCO | Abby | 42.408 ^a | 3.808 | 34.774 | 50.042 |
| | Create | Tim | 38.763 ^a | 3.313 | 32.120 | 45.406 |

a. Based on modified population marginal mean.

Robust Tests of Equality of Means - use case templates, GenderMag information processing facet, creation task

| | | Statistic ^a | df1 | df2 | Sig. |
|------------------|-------|------------------------|-----|--------|------|
| Precision | Welch | 1.330 | 1 | 56.261 | .254 |
| Recall | Welch | .338 | 1 | 48.852 | .564 |
| FMeasure | Welch | .828 | 1 | 52.816 | .367 |
| Duration | Welch | 2.060 | 1 | 58.441 | .157 |
| FirstActDet | Welch | 3.835 | 1 | 61.902 | .055 |
| LastActDet | Welch | 1.231 | 1 | 57.854 | .272 |
| ProcDur | Welch | 6.373 | 1 | 50.164 | .015 |
| FixRel | Welch | 2.016 | 1 | 50.625 | .162 |
| FixIrrel | Welch | .201 | 1 | 57.291 | .656 |
| AvDurRelFix | Welch | 11.016 | 1 | 41.070 | .002 |
| AvDurIrrelFix | Welch | 10.223 | 1 | 44.076 | .003 |
| TotSac | Welch | 1.086 | 1 | 48.009 | .303 |
| Sac2Key | Welch | 5.069 | 1 | 61.371 | .028 |
| AvAttention | Welch | 41.415 | 1 | 67.219 | .000 |
| AvMentWL | Welch | 7.429 | 1 | 59.209 | .008 |
| AvFam | Welch | 5.319 | 1 | 50.219 | .025 |
| AvSCL | Welch | 2.601 | 1 | 59.357 | .112 |
| HRVar_RMSSD | Welch | 10.550 | 1 | 41.997 | .002 |
| HRVar_NN50 | Welch | 3.747 | 1 | 50.260 | .059 |
| NASA_MD | Welch | 5.771 | 1 | 36.521 | .021 |
| NASA_PD | Welch | 23.509 | 1 | 77.996 | .000 |
| NASA_TD | Welch | 1.187 | 1 | 33.586 | .284 |
| NASA_Performance | Welch | .814 | 1 | 59.604 | .371 |
| NASA_Effort | Welch | 2.788 | 1 | 39.797 | .103 |
| NASA_Frustration | Welch | .399 | 1 | 48.785 | .530 |
| NASA_Score | Welch | .665 | 1 | 49.288 | .419 |

a. Asymptotically F distributed.

ANOVA - use case templates, GenderMag information processing facet, creation task

| | | Sum of Squares | df | Mean Square | F | Sig. |
|--------------------|----------------|-------------------|--------|-------------|--------|------|
| Precision | Between Groups | .066 | 1 | .066 | 1.205 | .276 |
| | Within Groups | 4.264 | 78 | .055 | | |
| | Total | 4.330 | 79 | | | |
| Recall | Between Groups | .017 | 1 | .017 | .341 | .561 |
| | Within Groups | 3.929 | 78 | .050 | | |
| | Total | 3.947 | 79 | | | |
| FMeasure | Between Groups | .040 | 1 | .040 | .787 | .378 |
| | Within Groups | 3.935 | 78 | .050 | | |
| | Total | 3.975 | 79 | | | |
| Duration | Between Groups | 40135.756 | 1 | 40135.756 | 1.812 | .182 |
| | Within Groups | 1727522.631 | 78 | 22147.726 | | |
| | Total | 1767658.388 | 79 | | | |
| FirstActDet | Between Groups | 12296.678 | 1 | 12296.678 | 3.227 | .076 |
| | Within Groups | 297222.872 | 78 | 3810.550 | | |
| | Total | 309519.550 | 79 | | | |
| LastActDet | Between Groups | 25376.412 | 1 | 25376.412 | 1.092 | .299 |
| | Within Groups | 1812987.538 | 78 | 23243.430 | | |
| | Total | 1838363.950 | 79 | | | |
| ProcDur | Between Groups | 1684.228 | 1 | 1684.228 | 6.303 | .014 |
| | Within Groups | 20842.759 | 78 | 267.215 | | |
| | Total | 22526.988 | 79 | | | |
| FixRel | Between Groups | 21.144 | 1 | 21.144 | 1.980 | .163 |
| | Within Groups | 833.070 | 78 | 10.680 | | |
| | Total | 854.214 | 79 | 10.000 | | |
| FixIrrel | Between Groups | 4906.250 | 1 | 4906.250 | .180 | .673 |
| | Within Groups | 2130056.149 | 78 | 27308.412 | | |
| | Total | 2134962.399 | 79 | 2.0002 | | |
| AvDurRelFix | Between Groups | 30888.100 | 1 | 30888.100 | 12.843 | .001 |
| , we arrive in the | Within Groups | 187594.811 | 78 | 2405.062 | 12.010 | |
| | Total | 218482.911 | 79 | 2.00.002 | | |
| AvDurlrrelFix | Between Groups | 276925.522 | 1 | 276925.522 | 11.219 | .001 |
| /WBarireir ix | Within Groups | 1925338.151 | 78 | 24683.822 | 11.213 | .001 |
| | Total | 2202263.673 | 79 | 2 1000.022 | | |
| TotSac | Between Groups | 119.785 | 1 | 119.785 | 1.111 | .295 |
| 101040 | Within Groups | 8406.165 | 78 | 107.771 | 1.111 | .200 |
| | Total | 8525.950 | 79 | 107.771 | | |
| Sac2Key | Between Groups | 313.712 | 1 | 313.712 | 4.295 | .042 |
| Oaczney | Within Groups | 5697.088 | 78 | 73.040 | 4.293 | .042 |
| | Total | 6010.800 | 79 | 73.040 | | |
| AvAttention | Between Groups | 1.672 | 1 | 1.672 | 32.590 | .000 |
| AVAILEMILION | Within Groups | 4.003 | 78 | .051 | 32.390 | .000 |
| | Total | 5.675 | | .031 | | |
| Av/Mont\// | | | 79 | 266 | 6.470 | 013 |
| AvMentWL | Between Groups | .366 | 70 | .366 | 6.472 | .013 |
| | Within Groups | 4.413 | 78 | .057 | | |
| A | Total | 4.780 | 79 | 224 | F 050 | |
| AvFam | Between Groups | .331 | 1 | .331 | 5.256 | .025 |
| | Within Groups | 4.911 | 78 | .063 | | |
| | Total | 5.242 | 79 | | | |
| AvSCL | Between Groups | 47286.350 | 1 | 47286.350 | 2.261 | .137 |
| | Within Groups | 1631119.537 | 78 | 20911.789 | | |

| | Total | 1678405.888 | 79 | | | |
|------------------|----------------|-------------|----|----------|--------|------|
| HRVar_RMSSD | Between Groups | 4362.321 | 1 | 4362.321 | 12.062 | .001 |
| | Within Groups | 28208.578 | 78 | 361.648 | | |
| | Total | 32570.899 | 79 | | | |
| HRVar_NN50 | Between Groups | 1325.177 | 1 | 1325.177 | 3.701 | .058 |
| | Within Groups | 27930.754 | 78 | 358.087 | | |
| | Total | 29255.931 | 79 | | | |
| NASA_MD | Between Groups | 650.841 | 1 | 650.841 | 7.503 | .008 |
| | Within Groups | 6766.346 | 78 | 86.748 | | |
| | Total | 7417.187 | 79 | | | |
| NASA_PD | Between Groups | 3778.134 | 1 | 3778.134 | 15.000 | .000 |
| | Within Groups | 19646.866 | 78 | 251.883 | | |
| | Total | 23425.000 | 79 | | | |
| NASA_TD | Between Groups | 522.397 | 1 | 522.397 | 1.682 | .198 |
| | Within Groups | 24226.353 | 78 | 310.594 | | |
| | Total | 24748.750 | 79 | | | |
| NASA_Performance | Between Groups | 448.807 | 1 | 448.807 | .706 | .404 |
| | Within Groups | 49619.943 | 78 | 636.153 | | |
| | Total | 50068.750 | 79 | | | |
| NASA_Effort | Between Groups | 515.599 | 1 | 515.599 | 3.343 | .071 |
| | Within Groups | 12031.588 | 78 | 154.251 | | |
| | Total | 12547.188 | 79 | | | |
| NASA_Frustration | Between Groups | 166.154 | 1 | 166.154 | .404 | .527 |
| | Within Groups | 32103.846 | 78 | 411.588 | | |
| | Total | 32270.000 | 79 | | | |
| NASA_Score | Between Groups | 105.115 | 1 | 105.115 | .667 | .417 |
| | Within Groups | 12289.600 | 78 | 157.559 | | |
| | Total | 12394.716 | 79 | | | |

Task * InformationProcessing - use case templates, GenderMag information processing facet, creation task

| | | CI | reation tas | K | | |
|--------------------|----------------|-----------------------|----------------------|---------------|----------------|------------------|
| | | | | | | nfidence rval |
| Dependent Variable | Task | InformationProcessing | Mean | Std. Error | Lower Bound | Upper Bound |
| Precision | ARNE | Abby | .652 ^a | .061 | .530 | .774 |
| | Create | Tim | .627 ^a | .050 | .527 | .726 |
| | ALCO | Abby | .967 ^a | .069 | .829 | 1.105 |
| | Create | Tim | .765 ^a | .048 | .668 | .861 |
| Recall | ARNE | Abby | .610 ^a | .064 | .482 | .738 |
| | Create | Tim | .667 ^a | .052 | .564 | .771 |
| | ALCO | Abby | .950 ^a | .072 | .806 | 1.094 |
| | Create | Tim | .731 ^a | .050 | .631 | .832 |
| FMeasure | ARNE | Abby | .628 ^a | .062 | .504 | .751 |
| | Create | Tim | .638 ^a | .050 | .537 | .738 |
| | ALCO | Abby | .954 ^a | .070 | .814 | 1.094 |
| | Create | Tim | .745 ^a | .049 | .647 | .843 |
| Duration | ARNE | Abby | 790.194 ^a | 30.364 | 729.319 | 851.070 |
| | Create | Tim | 920.271 ^a | 24.685 | 870.780 | 969.761 |
| | ALCO | Abby | 600.667 ^a | 34.285 | 531.928 | 669.405 |
| | Create | Tim | 668.220 ^a | 23.963 | 620.176 | 716.264 |
| FirstActDet | ARNE | Abby | 146.653 ^a | 8.973 | 128.664 | 164.642 |
| | Create | Tim | 140.760 ^a | 7.295 | 126.136 | 155.385 |
| | ALCO | Abby | 148.375 ^a | 10.132 | 128.062 | 168.688 |
| | Create | Tim | 224.673 ^a | 7.081 | 210.476 | 238.870 |
| LastActDet | ARNE | Abby | 771.389 ^a | 30.457 | 710.326 | 832.452 |
| | Create | Tim | 895.260 ^a | 24.761 | 845.617 | 944.903 |
| | ALCO Create | Abby | 582.875 ^a | 34.391 | 513.925 | 651.825 |
| | | Tim | 642.475 ^a | 24.037 | 594.284 | 690.667 |
| ProcDur | ARNE | Abby | 18.806 ^a | 1.916 | 14.963 | 22.648 |
| | Create | Tim | 25.010 ^a | 1.558 | 21.887 | 28.134 |
| | ALCO | Abby | 17.792 ^a | 2.164 | 13.453 | 22.130 |
| | Create | Tim | 25.744 ^a | 1.512 | 22.712 | 28.777 |
| FixRel | ARNE | Abby | 10.379 ^a | .208 | 9.962 | 10.796 |
| | Create | Tim | 10.199 ^a | .169 | 9.860 | 10.538 |
| | ALCO | Abby | 4.223 ^a | .235 | 3.752 | 4.694 |
| | Create | Tim | 3.637 ^a | .164 | 3.308 | 3.966 |
| FixIrrel | ARNE | Abby | 242.748 ^a | 21.583 | 199.477 | 286.019 |
| | Create | Tim | 293.442 ^a | 17.547 | 258.264 | 328.621 |
| | ALCO | Abby | 6.904 ^a | 24.371 | -41.956 | 55.764 |
| | Create | Tim | 1.834 ^a | 17.034 | -32.316 | 35.984 |
| AvDurRelFix | ARNE | Abby | 85.662 ^a | 10.742 | 64.126 | 107.198 |
| | Create | Tim | 104.801 ^a | 8.733 | 87.293 | 122.309 |
| | ALCO | Abby | 122.479 ^a | 12.129 | 98.162 | 146.796 |
| | Create | Tim | 166.566 ^a | 8.477 | 149.569 | 183.562 |
| AvDurlrrelFix | ARNE | Abby | 194.443 ^a | 31.119 | 132.053 | 256.833 |
| | | | ., | | | |

| | Create | Tim | 244.3 | 892 ^a | 25.299 | 193.670 | 295.115 |
|-------------|----------------|-------------|-------|--------------------------------------|----------------|------------------|------------------|
| | ALCO | Abby | 345.4 | 138 ^a | 35.139 | 274.989 | 415.886 |
| | Create | Tim | 477.6 | 697 ^a | 24.560 | 428.458 | 526.936 |
| TotSac | ARNE | Abby | 85.2 | 292 ^a | 2.934 | 79.409 | 91.175 |
| | Create | Tim | 89.4 | 138 ^a | 2.386 | 84.655 | 94.220 |
| | ALCO | Abby | 85.6 | 625 ^a | 3.313 | 78.982 | 92.268 |
| | Create | Tim | 86.7 | ′84 ^a | 2.316 | 82.141 | 91.427 |
| Sac2Key | ARNE | Abby | 11.5 | 500 ^a | 2.343 | 6.802 | 16.198 |
| | Create | Tim | 16.6 | 888 ^a | 1.905 | 12.868 | 20.507 |
| | ALCO | Abby | 13.8 | 875 ^a | 2.646 | 8.570 | 19.180 |
| | Create | Tim | 18.3 | 817 ^a | 1.849 | 14.609 | 22.025 |
| AvAttention | ARNE Create | Abby | 8. | 35 ^a | .037 | .761 | .909 |
| | | Tim | .6 | 606 ^a | .030 | .546 | .666 |
| | ALCO Create | Abby | .5 | 54 ^a | .042 | .471 | .638 |
| | Create | Tim | .2 | 218 ^a | .029 | .160 | .277 |
| AvMentWL | ARNE Create | Abby | 8. | 322 ^a | .046 | .730 | .914 |
| | | Tim | .7 | '21 ^a | .037 | .646 | .796 |
| | ALCO Create | Abby | .4 | 179 ^a | .052 | .375 | .583 |
| | Orcate | Tim | .2 | 290 ^a | .036 | .218 | .363 |
| AvFam | ARNE Create | Abby | 8. | 322 ^a | .043 | .736 | .909 |
| | | Tim | .7 | 706 ^a | .035 | .636 | .776 |
| | ALCO Create | Abby | .3 | 379 ^a | .049 | .282 | .477 |
| | | Tim | .2 | 262 ^a | .034 | .194 | .330 |
| AvSCL | ARNE Create | Abby | 552.5 | 500 ^a | 41.250 | 469.799 | 635.201 |
| | | Tim | 473.2 | 250 ^a | 33.535 | 406.016 | 540.484 |
| | ALCO Create | Abby | 587.0 | 000 ^a | 46.578 | 493.617 | 680.383 |
| | | Tim | 586.4 | 181 ^a | 32.555 | 521.212 | 651.750 |
| HRVar_RMSSD | ARNE Create | Abby | 41.7 | | 4.477 | 32.809 | 50.760 |
| | | Tim | 32.7 | | 3.639 | 25.459 | 40.053 |
| | ALCO Create | Abby | 40.5 | | 5.055 | 30.418 | 50.687 |
| LIDY ANALO | ADME | Tim | 25.1 | | 3.533 | 18.020 | 32.186 |
| HRVar_NN50 | ARNE Create | Abby | 27.2 | | 5.217 | 16.821 | 37.739 |
| | ALCO | Tim | 24.1 | | 4.241 | 15.677 | 32.682 |
| | Create | Abby Tim | 27.3 | | 5.890 4.117 | 15.490 12.089 | 39.110 28.598 |
| NASA_MD | ARNE | Abby | 20.3 | | 2.402 | 52.546 | 62.176 |
| NASA_IVID | Create | Tim | 57.3 | | 1.952 | 44.002 | 51.831 |
| | ALCO | Abby | 47.9 | | 2.712 | 46.438 | 57.312 |
| | Create | Tim | 51.8 | | 1.895 | 42.081 | 49.681 |
| NASA PD | ARNE | Abby | 45.8 | 381 ^u 708 ^a | 4.316 | 42.001 | 21.362 |
| NAOA_I D | Create | Tim | | | 3.509 | 20.933 | 35.004 |
| | ALCO | Abby | |)69 ^a)42 ^a | 4.874 | -3.730 | 15.813 |
| | Create | Tim | 30.0 | | 3.407 | 23.230 | 36.889 |
| NASA TD | ARNE | Abby | | 333 ^a | 3.626 | 33.563 | 48.103 |
| | Create | Tim | 32.5 | | 2.948 | 26.590 | 38.410 |
| | ALCO | Abby | | 875 ^a | 4.094 | 16.166 | 32.584 |
| | | | 24.3 | ,, , | | | -2.00 |
| | | | | | | | |

| | Create | Tim | 22.552 ^a | 2.862 | 16.814 | 28.289 |
|------------------|----------------|------|---------------------|-------|--------|--------|
| NASA_Performance | ARNE | Abby | 46.528 ^a | 7.447 | 31.598 | 61.457 |
| | Create | Tim | 44.167 ^a | 6.054 | 32.029 | 56.304 |
| | ALCO | Abby | 51.875 ^a | 8.408 | 35.017 | 68.733 |
| | Create | Tim | 61.548 ^a | 5.877 | 49.765 | 73.330 |
| NASA_Effort | ARNE | Abby | 52.917 ^a | 3.376 | 46.148 | 59.686 |
| | Create | Tim | 44.375 ^a | 2.745 | 38.872 | 49.878 |
| | ALCO Create | Abby | 47.708 ^a | 3.812 | 40.065 | 55.352 |
| | | Tim | 42.946 ^a | 2.665 | 37.604 | 48.289 |
| NASA_Frustration | ARNE | Abby | 31.181 ^a | 5.875 | 19.402 | 42.959 |
| | Create | Tim | 20.417 ^a | 4.776 | 10.841 | 29.993 |
| | ALCO | Abby | 33.333 ^a | 6.634 | 20.033 | 46.633 |
| | Create | Tim | 32.643 ^a | 4.637 | 23.347 | 41.939 |
| NASA_Score | ARNE | Abby | 40.255 ^a | 3.664 | 32.909 | 47.600 |
| | Create | Tim | 36.224 ^a | 2.979 | 30.252 | 42.196 |
| | ALCO Create | Abby | 41.224 ^a | 4.137 | 32.929 | 49.518 |
| | | Tim | 39.948 ^a | 2.892 | 34.150 | 45.745 |

a. Based on modified population marginal mean.

Robust Tests of Equality of Means - use case templates, GenderMag self-efficacy facet, creation task

| | | Statistic ^a | df1 | df2 | Sig. |
|------------------|-------|------------------------|-----|--------|------|
| Precision | Welch | .099 | 1 | 61.258 | .754 |
| Recall | Welch | .051 | 1 | 64.135 | .823 |
| FMeasure | Welch | .076 | 1 | 61.669 | .784 |
| Duration | Welch | 3.437 | 1 | 65.723 | .068 |
| FirstActDet | Welch | 3.812 | 1 | 63.218 | .055 |
| LastActDet | Welch | 3.874 | 1 | 65.027 | .053 |
| ProcDur | Welch | 1.836 | 1 | 66.895 | .180 |
| FixRel | Welch | .074 | 1 | 66.452 | .787 |
| FixIrrel | Welch | .242 | 1 | 64.072 | .625 |
| AvDurRelFix | Welch | 1.697 | 1 | 65.594 | .197 |
| AvDurIrrelFix | Welch | 1.721 | 1 | 67.617 | .194 |
| TotSac | Welch | .015 | 1 | 56.410 | .904 |
| Sac2Key | Welch | .187 | 1 | 53.411 | .667 |
| AvAttention | Welch | 2.031 | 1 | 67.003 | .159 |
| AvMentWL | Welch | 2.198 | 1 | 61.540 | .143 |
| AvFam | Welch | 1.108 | 1 | 60.179 | .297 |
| AvSCL | Welch | .405 | 1 | 61.828 | .527 |
| HRVar_RMSSD | Welch | .113 | 1 | 62.128 | .738 |
| HRVar_NN50 | Welch | 1.302 | 1 | 65.413 | .258 |
| NASA_MD | Welch | .354 | 1 | 69.786 | .554 |
| NASA_PD | Welch | .982 | 1 | 65.889 | .325 |
| NASA_TD | Welch | 2.002 | 1 | 66.679 | .162 |
| NASA_Performance | Welch | .074 | 1 | 68.569 | .786 |
| NASA_Effort | Welch | .278 | 1 | 68.563 | .600 |
| NASA_Frustration | Welch | .177 | 1 | 62.997 | .676 |
| NASA_Score | Welch | 3.160 | 1 | 68.887 | .080 |

a. Asymptotically F distributed.

ANOVA - use case templates, GenderMag self-efficacy facet, creation task

| | | Squares | df | Mean Square | F | Sig. |
|-----------------|-----------------------|-------------------|----|-------------|-------|-------|
| Precision | Between Groups | .006 | 1 | .006 | .104 | .748 |
| | Within Groups | 4.324 | 78 | .055 | | |
| | Total | 4.330 | 79 | | | |
| Recall | Between Groups | .003 | 1 | .003 | .052 | .821 |
| | Within Groups | 3.944 | 78 | .051 | | |
| | Total | 3.947 | 79 | | | |
| FMeasure | Between Groups | .004 | 1 | .004 | .079 | .779 |
| | Within Groups | 3.971 | 78 | .051 | | |
| | Total | 3.975 | 79 | | | |
| Duration | Between Groups | 75150.075 | 1 | 75150.075 | 3.463 | .067 |
| | Within Groups | 1692508.313 | 78 | 21698.825 | | |
| | Total | 1767658.388 | 79 | | | |
| FirstActDet | Between Groups | 14829.633 | 1 | 14829.633 | 3.925 | .051 |
| | Within Groups | 294689.917 | 78 | 3778.076 | | |
| | Total | 309519.550 | 79 | | | |
| LastActDet | Between Groups | 88129.200 | 1 | 88129.200 | 3.928 | .051 |
| | Within Groups | 1750234.750 | 78 | 22438.907 | | |
| | Total | 1838363.950 | 79 | | | |
| ProcDur | Between Groups | 516.675 | 1 | 516.675 | 1.831 | .180 |
| | Within Groups | 22010.313 | 78 | 282.183 | | |
| | Total | 22526.988 | 79 | | | |
| FixRel | Between Groups | .806 | 1 | .806 | .074 | .787 |
| | Within Groups | 853.408 | 78 | 10.941 | | |
| | Total | 854.214 | 79 | | | |
| FixIrrel | Between Groups | 6742.427 | 1 | 6742.427 | .247 | .621 |
| | Within Groups | 2128219.972 | 78 | 27284.871 | | |
| | Total | 2134962.399 | 79 | | | |
| AvDurRelFix | Between Groups | 4691.251 | 1 | 4691.251 | 1.712 | .195 |
| | Within Groups | 213791.660 | 78 | 2740.919 | | |
| | Total | 218482.911 | 79 | | | |
| AvDurIrrelFix | Between Groups | 47128.591 | 1 | 47128.591 | 1.706 | .195 |
| | Within Groups | 2155135.082 | 78 | 27629.937 | | |
| | Total | 2202263.673 | 79 | | | |
| TotSac | Between Groups | 1.752 | 1 | 1.752 | .016 | .900 |
| 101040 | Within Groups | 8524.198 | 78 | 109.285 | .010 | |
| | Total | 8525.950 | 79 | .00.200 | | |
| Sac2Key | Between Groups | 16.133 | 1 | 16.133 | .210 | .648 |
| oueznicy | Within Groups | 5994.667 | 78 | 76.855 | .210 | .010 |
| | Total | 6010.800 | 79 | 70.000 | | |
| AvAttention | Between Groups | .144 | 1 | .144 | 2.024 | .159 |
| 7.17.11.011 | Within Groups | 5.531 | 78 | .071 | 2.021 | . 100 |
| | Total | 5.675 | 79 | .071 | | |
| AvMentWL | Between Groups | .137 | 1 | .137 | 2.296 | .134 |
| / WIVIOIITY V L | Within Groups | 4.643 | 78 | .060 | 2.230 | . 134 |
| | Total | 4.043 | | .000 | | |
| AvFam | | | | .078 | 1 171 | 200 |
| AVFAIII | Between Groups | .078 | 70 | | 1.171 | .283 |
| | Within Groups | 5.164 | 78 | .066 | | |
| | Total Between Groups | 5.242 9022.002 | 79 | 9022.002 | .422 | F40 |
| AvSCL | | un / / HH7 | 1 | 9077 007 | 4/7 | .518 |

| | Total | 1678405.888 | 79 | | | |
|------------------|----------------|-------------|----|---------|-------|------|
| HRVar_RMSSD | Between Groups | 48.992 | 1 | 48.992 | .118 | .733 |
| | Within Groups | 32521.907 | 78 | 416.948 | | |
| | Total | 32570.899 | 79 | | | |
| HRVar_NN50 | Between Groups | 485.274 | 1 | 485.274 | 1.316 | .255 |
| | Within Groups | 28770.657 | 78 | 368.855 | | |
| | Total | 29255.931 | 79 | | | |
| NASA_MD | Between Groups | 32.552 | 1 | 32.552 | .344 | .559 |
| | Within Groups | 7384.635 | 78 | 94.675 | | |
| | Total | 7417.187 | 79 | | | |
| NASA_PD | Between Groups | 292.969 | 1 | 292.969 | .988 | .323 |
| | Within Groups | 23132.031 | 78 | 296.565 | | |
| | Total | 23425.000 | 79 | | | |
| NASA_TD | Between Groups | 618.802 | 1 | 618.802 | 2.000 | .161 |
| | Within Groups | 24129.948 | 78 | 309.358 | | |
| | Total | 24748.750 | 79 | | | |
| NASA_Performance | Between Groups | 46.875 | 1 | 46.875 | .073 | .788 |
| | Within Groups | 50021.875 | 78 | 641.306 | | |
| | Total | 50068.750 | 79 | | | |
| NASA_Effort | Between Groups | 43.802 | 1 | 43.802 | .273 | .603 |
| | Within Groups | 12503.385 | 78 | 160.300 | | |
| | Total | 12547.188 | 79 | | | |
| NASA_Frustration | Between Groups | 75.208 | 1 | 75.208 | .182 | .671 |
| | Within Groups | 32194.792 | 78 | 412.754 | | |
| | Total | 32270.000 | 79 | | | |
| NASA_Score | Between Groups | 473.092 | 1 | 473.092 | 3.095 | .082 |
| | Within Groups | 11921.624 | 78 | 152.841 | | |
| | Total | 12394.716 | 79 | | | |

Task * SelfEfficacy - use case templates, GenderMag self-efficacy facet, creation task

| | | | | Std. | Inte Lower | rval Upper |
|--------------------|----------------|--------------|----------------------|--------|---------------|---------------|
| Dependent Variable | Task | SelfEfficacy | Mean | Error | Bound | Bound |
| Precision | ARNE Create | Abby | .614 ^a | .056 | .502 | .726 |
| | Create | Tim | .661 ^a | .053 | .555 | .767 |
| | ALCO | Abby | .862 ^a | .061 | .740 | .984 |
| | Create | Tim | .869 ^a | .058 | .754 | .985 |
| Recall | ARNE | Abby | .625 ^a | .059 | .508 | .743 |
| | Create | Tim | .660 ^a | .055 | .549 | .771 |
| | ALCO | Abby | .839 ^a | .064 | .711 | .966 |
| | Create | Tim | .843 ^a | .060 | .722 | .964 |
| FMeasure - | ARNE | Abby | .612 ^a | .057 | .498 | .726 |
| | Create | Tim | .654 ^a | .054 | .547 | .762 |
| | ALCO | Abby | .848 ^a | .062 | .725 | .972 |
| | Create | Tim | .851 ^a | .059 | .733 | .968 |
| Duration | ARNE | Abby | 886.429 ^a | 27.910 | 830.473 | 942.384 |
| | Create | Tim | 842.619 ^a | 26.349 | 789.792 | 895.446 |
| | ALCO | Abby | 665.556 ^a | 30.364 | 604.680 | 726.431 |
| | Create | Tim | 603.331 ^a | 28.771 | 545.648 | 661.014 |
| FirstActDet | ARNE | Abby | 122.667 ^a | 8.248 | 106.131 | 139.202 |
| | Create | Tim | 163.905 ^a | 7.786 | 148.294 | 179.516 |
| | ALCO | Abby | 185.569 ^a | 8.973 | 167.580 | 203.559 |
| | Create | Tim | 187.479 ^a | 8.502 | 170.433 | 204.524 |
| LastActDet | ARNE Create | Abby | 864.036 ^a | 27.996 | 807.908 | 920.164 |
| | | Tim | 820.310 ^a | 26.430 | 767.320 | 873.299 |
| | ALCO | Abby | 645.569 ^a | 30.457 | 584.506 | 706.632 |
| | Create | Tim | 579.781 ^a | 28.860 | 521.920 | 637.641 |
| ProcDur | ARNE | Abby | 22.393 ^a | 1.761 | 18.861 | 25.924 |
| | Create | Tim | 22.310 ^a | 1.663 | 18.975 | 25.644 |
| | ALCO | Abby | 19.986 ^a | 1.916 | 16.144 | 23.828 |
| | Create | Tim | 23.550 ^a | 1.816 | 19.909 | 27.191 |
| FixRel | ARNE | Abby | 10.242 ^a | .191 | 9.859 | 10.625 |
| | Create | Tim | 10.310 ^a | .180 | 9.949 | 10.672 |
| | ALCO | Abby | 3.842 ^a | .208 | 3.425 | 4.259 |
| | Create | Tim | 4.018 ^a | .197 | 3.623 | 4.413 |
| FixIrrel | ARNE | Abby | 281.773 ^a | 19.839 | 241.999 | 321.547 |
| | Create | Tim | 261.660 ^a | 18.730 | 224.109 | 299.210 |
| | ALCO | Abby | 2.707 ^a | 21.583 | -40.564 | 45.979 |
| | Create | Tim | 6.031 ^a | 20.451 | -34.971 | 47.033 |
| AvDurRelFix | ARNE | Abby | 100.387 ^a | 9.874 | 80.592 | 120.182 |
| | Create | Tim | 92.810 ^a | 9.322 | 74.121 | 111.498 |
| | ALCO | Abby | 126.639 ^a | 10.742 | 105.103 | 148.175 |
| | Create | Tim | | 10.178 | 142.000 | 182.812 |
| AvDurIrrelFix | ARNE | Abby | 162.406 ^a | 28.604 | 175.823 | 290.519 |
| Woullielly | Create | ADDY | 233.171 ^a | 20.004 | 170.020 | 230.019 |

| | | | 212.800 ^a | | | |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| | ALCO | Abby | 357.917 ^a | 31.119 | 295.526 | 420.307 |
| | Create | Tim | 465.218 ^a | 29.487 | 406.100 | 524.336 |
| TotSac | ARNE | Abby | 88.655 ^a | 2.697 | 83.247 | 94.062 |
| | Create | Tim | 86.667 ^a | 2.546 | 81.561 | 91.772 |
| | ALCO | Abby | 84.514 ^a | 2.934 | 78.631 | 90.397 |
| | Create | Tim | 87.895 ^a | 2.780 | 82.321 | 93.470 |
| Sac2Key | ARNE | Abby | 15.345 ^a | 2.154 | 11.027 | 19.663 |
| | Create | Tim | 13.583 ^a | 2.033 | 9.507 | 17.660 |
| | ALCO | Abby | 16.944 ^a | 2.343 | 12.247 | 21.642 |
| | Create | Tim | 15.248 ^a | 2.220 | 10.796 | 19.699 |
| AvAttention | ARNE | Abby | .700 ^a | .034 | .632 | .768 |
| | Create | Tim | .708 ^a | .032 | .644 | .773 |
| | ALCO | Abby | .413 ^a | .037 | .339 | .486 |
| | Create | Tim | .360 ^a | .035 | .290 | .430 |
| AvMentWL | MentWL ARNE | Abby | .799 ^a | .042 | .714 | .883 |
| | Create | Tim | .730 ^a | .040 | .650 | .810 |
| | ALCO | Abby | .387 ^a | .046 | .295 | .480 |
| | Create | Tim | .382 ^a | .044 | .295 | .469 |
| AvFam | ARNE | Abby | .787 ^a | .040 | .708 | .866 |
| | Create | Tim | .725 ^a | .037 | .650 | .800 |
| | ALCO | Abby | .321 ^a | .043 | .234 | .407 |
| | Create | Tim | .320 ^a | .041 | .238 | .402 |
| AvSCL | ARNE | Abby | 513.524 ^a | 37.916 | 437.506 | 589.541 |
| | Create | Tim | 500.905 ^a | 35.796 | 429.138 | 572.672 |
| | ALCO | Abby | 590.750 ^a | 41.250 | 508.049 | 673.451 |
| | Create | Tim | 582.731 ^a | 39.086 | 504.367 | 661.095 |
| HRVar_RMSSD | ARNE | Abby | 37.312 ^a | 4.115 | 29.062 | 45.562 |
| | Create | Tim | 35.938 ^a | 3.885 | 28.150 | 43.727 |
| | | | | | | |
| | ALCO | Abby | 27.285 ^a | 4.477 | 18.310 | 36.260 |
| | ALCO Create | Abby Tim | 27.285 ^a 38.370 ^a | 4.477 4.242 | 18.310 29.866 | 36.260 46.875 |
| HRVar_NN50 | Create | | | | | |
| HRVar_NN50 | Create | Tim | 38.370 ^a | 4.242 | 29.866 | 46.875 |
| HRVar_NN50 | ARNE Create ALCO | Tim Abby | 38.370 ^a 23.118 ^a | 4.242 4.795 | 29.866 13.505 | 46.875 32.732 |
| HRVar_NN50 | ARNE Create | Tim Abby Tim | 38.370 ^a 23.118 ^a 27.899 ^a | 4.242 4.795 4.527 | 29.866 13.505 18.823 | 46.875 32.732 36.975 |
| HRVar_NN50 NASA_MD | ARNE Create ALCO Create ARNE | Tim Abby Tim Abby | 38.370 ^a 23.118 ^a 27.899 ^a 17.115 ^a | 4.242 4.795 4.527 5.217 | 29.866 13.505 18.823 6.656 | 46.875 32.732 36.975 27.574 |
| | ARNE Create ALCO Create | Tim Abby Tim Abby Tim | 38.370 ^a 23.118 ^a 27.899 ^a 17.115 ^a 30.528 ^a | 4.242 4.795 4.527 5.217 4.943 | 29.866 13.505 18.823 6.656 20.618 | 46.875 32.732 36.975 27.574 40.439 |
| | ARNE Create ALCO Create ARNE Create ARNE Create | Tim Abby Tim Abby Tim Abby Abby | 38.370 ^a 23.118 ^a 27.899 ^a 17.115 ^a 30.528 ^a 51.012 ^a | 4.242 4.795 4.527 5.217 4.943 2.207 | 29.866 13.505 18.823 6.656 20.618 46.586 | 46.875 32.732 36.975 27.574 40.439 55.438 |
| | ARNE Create ALCO Create ARNE Create | Tim Abby Tim Abby Tim Abby Tim Abby Tim | 38.370 ^a 23.118 ^a 27.899 ^a 17.115 ^a 30.528 ^a 51.012 ^a 52.917 ^a | 4.242 4.795 4.527 5.217 4.943 2.207 2.084 | 29.866 13.505 18.823 6.656 20.618 46.586 48.738 | 46.875 32.732 36.975 27.574 40.439 55.438 57.095 |
| | ARNE Create ALCO Create ARNE Create ARNE Create ALCO Create | Tim Abby Tim Abby Tim Abby Tim Abby Tim Abby | 38.370 ^a 23.118 ^a 27.899 ^a 17.115 ^a 30.528 ^a 51.012 ^a 52.917 ^a | 4.242 4.795 4.527 5.217 4.943 2.207 2.084 2.402 | 29.866 13.505 18.823 6.656 20.618 46.586 48.738 47.477 | 46.875 32.732 36.975 27.574 40.439 55.438 57.095 57.106 |
| NASA_MD | ARNE Create ALCO Create ARNE Create ALCO Create | Tim Abby Tim Abby Tim Abby Tim Abby Tim Abby Tim Abby Tim | 38.370 ^a 23.118 ^a 27.899 ^a 17.115 ^a 30.528 ^a 51.012 ^a 52.917 ^a 52.292 ^a 45.464 ^a | 4.242 4.795 4.527 5.217 4.943 2.207 2.084 2.402 2.276 | 29.866 13.505 18.823 6.656 20.618 46.586 48.738 47.477 40.902 | 46.875 32.732 36.975 27.574 40.439 55.438 57.095 57.106 50.027 |
| NASA_MD | ARNE Create ARNE Create ARNE Create ARNE Create ALCO Create ALCO Create | Tim Abby Tim Abby Tim Abby Tim Abby Tim Abby Tim Abby Abby | 38.370 ^a 23.118 ^a 27.899 ^a 17.115 ^a 30.528 ^a 51.012 ^a 52.917 ^a 52.292 ^a 45.464 ^a 23.929 ^a | 4.242 4.795 4.527 5.217 4.943 2.207 2.084 2.402 2.276 3.968 | 29.866 13.505 18.823 6.656 20.618 46.586 48.738 47.477 40.902 15.974 | 46.875 32.732 36.975 27.574 40.439 55.438 57.095 57.106 50.027 31.883 |
| NASA_MD | ARNE Create ARNE Create ARNE Create ARNE Create ALCO Create ARNE Create | Tim Abby Tim | 38.370 ^a 23.118 ^a 27.899 ^a 17.115 ^a 30.528 ^a 51.012 ^a 52.917 ^a 52.292 ^a 45.464 ^a 23.929 ^a 18.929 ^a | 4.242 4.795 4.527 5.217 4.943 2.207 2.084 2.402 2.276 3.968 3.746 | 29.866 13.505 18.823 6.656 20.618 46.586 48.738 47.477 40.902 15.974 11.419 | 46.875 32.732 36.975 27.574 40.439 55.438 57.095 57.106 50.027 31.883 26.438 |
| NASA_MD | ARNE Create ARNE Create ARNE Create ARNE Create ALCO Create ALCO Create | Tim Abby | 38.370 ^a 23.118 ^a 27.899 ^a 17.115 ^a 30.528 ^a 51.012 ^a 52.917 ^a 52.292 ^a 45.464 ^a 23.929 ^a 18.929 ^a 21.458 ^a | 4.242 4.795 4.527 5.217 4.943 2.207 2.084 2.402 2.276 3.968 3.746 4.316 | 29.866 13.505 18.823 6.656 20.618 46.586 48.738 47.477 40.902 15.974 11.419 12.804 | 46.875 32.732 36.975 27.574 40.439 55.438 57.095 57.106 50.027 31.883 26.438 30.112 |
| NASA_MD NASA_PD | ARNE Create ALCO Create ARNE Create ALCO Create ALCO Create ALCO Create | Tim Abby Tim | 38.370 ^a 23.118 ^a 27.899 ^a 17.115 ^a 30.528 ^a 51.012 ^a 52.917 ^a 52.292 ^a 45.464 ^a 23.929 ^a 18.929 ^a 21.458 ^a 14.643 ^a 41.131 ^a | 4.242 4.795 4.527 5.217 4.943 2.207 2.084 2.402 2.276 3.968 3.746 4.316 4.090 | 29.866 13.505 18.823 6.656 20.618 46.586 48.738 47.477 40.902 15.974 11.419 12.804 6.443 | 46.875 32.732 36.975 27.574 40.439 55.438 57.095 57.106 50.027 31.883 26.438 30.112 22.843 |
| NASA_MD NASA_PD | ARNE Create ALCO Create ARNE Create ALCO Create ALCO Create ARNE Create ARNE Create ARNE ARNE ARNE ARNE ARNE ARNE ARNE ARN | Tim Abby | 38.370 ^a 23.118 ^a 27.899 ^a 17.115 ^a 30.528 ^a 51.012 ^a 52.917 ^a 52.292 ^a 45.464 ^a 23.929 ^a 18.929 ^a 21.458 ^a 14.643 ^a 41.131 ^a 31.012 ^a | 4.242 4.795 4.527 5.217 4.943 2.207 2.084 2.402 2.276 3.968 3.746 4.316 4.090 3.333 | 29.866 13.505 18.823 6.656 20.618 46.586 48.738 47.477 40.902 15.974 11.419 12.804 6.443 34.449 | 46.875 32.732 36.975 27.574 40.439 55.438 57.095 57.106 50.027 31.883 26.438 30.112 22.843 47.813 |
| NASA_MD NASA_PD | ARNE Create ALCO Create ARNE Create ALCO Create ALCO Create ARNE Create ARNE Create ALCO Create | Tim Abby Tim | 38.370 ^a 23.118 ^a 27.899 ^a 17.115 ^a 30.528 ^a 51.012 ^a 52.917 ^a 52.292 ^a 45.464 ^a 23.929 ^a 18.929 ^a 21.458 ^a 14.643 ^a 41.131 ^a | 4.242 4.795 4.527 5.217 4.943 2.207 2.084 2.402 2.276 3.968 3.746 4.316 4.090 3.333 3.147 | 29.866 13.505 18.823 6.656 20.618 46.586 48.738 47.477 40.902 15.974 11.419 12.804 6.443 34.449 24.703 | 46.875 32.732 36.975 27.574 40.439 55.438 57.095 57.106 50.027 31.883 26.438 30.112 22.843 47.813 37.321 |

| | Create | Tim | 17.899 ^a | 3.436 | 11.010 | 24.787 |
|------------------|----------------|------|---------------------|-------|--------|--------|
| NASA_Performance | ARNE | Abby | 43.750 ^a | 6.845 | 30.027 | 57.473 |
| | Create | Tim | 46.607 ^a | 6.462 | 33.651 | 59.563 |
| | ALCO | Abby | 68.542 ^a | 7.447 | 53.612 | 83.471 |
| | Create | Tim | 44.881 ^a | 7.056 | 30.734 | 59.028 |
| NASA_Effort | ARNE | Abby | 47.440 ^a | 3.103 | 41.218 | 53.663 |
| | Create | Tim | 48.631 ^a | 2.930 | 42.757 | 54.505 |
| | ALCO Create | Abby | 49.792 ^a | 3.376 | 43.023 | 56.561 |
| | | Tim | 40.863 ^a | 3.199 | 34.449 | 47.277 |
| NASA_Frustration | ARNE | Abby | 24.762 ^a | 5.400 | 13.935 | 35.589 |
| | Create | Tim | 25.298 ^a | 5.098 | 15.076 | 35.519 |
| | ALCO | Abby | 39.583 ^a | 5.875 | 27.805 | 51.362 |
| | Create | Tim | 26.393 ^a | 5.567 | 15.232 | 37.554 |
| NASA_Score | ARNE | Abby | 38.671 ^a | 3.368 | 31.919 | 45.423 |
| | Create | Tim | 37.232 ^a | 3.179 | 30.858 | 43.607 |
| | ALCO | Abby | 47.641 ^a | 3.664 | 40.296 | 54.987 |
| | Create | Tim | 33.530 ^a | 3.472 | 26.570 | 40.490 |

a. Based on modified population marginal mean.

Robust Tests of Equality of Means - use case templates, GenderMag risk facet, creation task

| | | Statistic ^a | df1 | df2 | Sig. |
|------------------|-------|------------------------|-----|--------|------|
| Precision | Welch | 19.798 | 1 | 62.361 | .000 |
| Recall | Welch | 1.619 | 1 | 70.575 | .207 |
| FMeasure | Welch | 8.331 | 1 | 64.730 | .005 |
| Duration | Welch | 2.633 | 1 | 75.374 | .109 |
| FirstActDet | Welch | 43.999 | 1 | 57.535 | .000 |
| LastActDet | Welch | 6.993 | 1 | 75.254 | .010 |
| ProcDur | Welch | 418.959 | 1 | 43.219 | .000 |
| FixRel | Welch | .108 | 1 | 68.606 | .744 |
| FixIrrel | Welch | 3.157 | 1 | 55.114 | .081 |
| AvDurRelFix | Welch | 19.296 | 1 | 70.472 | .000 |
| AvDurlrrelFix | Welch | 17.353 | 1 | 71.549 | .000 |
| TotSac | Welch | 17.726 | 1 | 73.545 | .000 |
| Sac2Key | Welch | 19.438 | 1 | 62.214 | .000 |
| AvAttention | Welch | .331 | 1 | 68.134 | .567 |
| AvMentWL | Welch | 4.913 | 1 | 67.250 | .030 |
| AvFam | Welch | 2.809 | 1 | 67.835 | .098 |
| AvSCL | Welch | 1.290 | 1 | 72.497 | .260 |
| HRVar_RMSSD | Welch | 83.319 | 1 | 52.431 | .000 |
| HRVar_NN50 | Welch | 14.938 | 1 | 74.722 | .000 |
| NASA_MD | Welch | 24.073 | 1 | 59.463 | .000 |
| NASA_PD | Welch | 22.239 | 1 | 49.468 | .000 |
| NASA_TD | Welch | 18.887 | 1 | 48.546 | .000 |
| NASA_Performance | Welch | 9.168 | 1 | 77.513 | .003 |
| NASA_Effort | Welch | 24.155 | 1 | 70.482 | .000 |
| NASA_Frustration | Welch | 10.649 | 1 | 70.481 | .002 |
| NASA_Score | Welch | 4.515 | 1 | 68.506 | .037 |

a. Asymptotically F distributed.

ANOVA - use case templates, GenderMag risk facet, creation task

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---------------|---------------------|-------------------|--------------------|-------------|---------|------|
| Precision | Between Groups | .732 | 1 | .732 | 15.861 | .000 |
| | Within Groups | 3.599 | 78 | .046 | | |
| | Total | 4.330 | 79 | | | |
| Recall | Between Groups | .067 | 1 | .067 | 1.356 | .248 |
| | Within Groups | 3.879 | 78 | .050 | | |
| | Total | 3.947 | 79 | | | |
| FMeasure | Between Groups | .317 | 1 | .317 | 6.754 | .011 |
| | Within Groups | 3.658 | 78 | .047 | | |
| | Total | 3.975 | 79 | | | |
| Duration | Between Groups | 50333.217 | 1 | 50333.217 | 2.286 | .135 |
| | Within Groups | 1717325.170 | 78 | 22016.989 | | |
| | Total | 1767658.388 | 79 | | | |
| FirstActDet | Between Groups | 118342.358 | 1 | 118342.358 | 48.283 | .000 |
| | Within Groups | 191177.192 | 78 | 2450.990 | | |
| | Total | 309519.550 | 79 | | | |
| LastActDet | Between Groups | 132612.942 | 1 | 132612.942 | 6.064 | .016 |
| | Within Groups | 1705751.008 | 78 | 21868.603 | | |
| | Total | 1838363.950 | 79 | | | |
| ProcDur | Between Groups | 19546.820 | 1 | 19546.820 | 511.599 | .000 |
| | Within Groups | 2980.168 | 78 | 38.207 | | |
| | Total | 22526.988 | 79 | 00.201 | | |
| FixRel | Between Groups | 1.201 | 1 | 1.201 | .110 | .741 |
| 1 IXI (OI | Within Groups | 853.013 | 78 | 10.936 | .110 | ., , |
| | Total | 854.214 | 79 | 10.000 | | |
| FixIrrel | Between Groups | 92228.861 | 1 | 92228.861 | 3.522 | .064 |
| | Within Groups | 2042733.537 | 78 | 26188.892 | 0.022 | .00- |
| | Total | 2134962.399 | 79 | 20100.032 | | |
| AvDurRelFix | Between Groups | 43536.810 | 1 | 43536.810 | 19.411 | .000 |
| AVDUINEIFIX | | 174946.101 | 78 | 2242.899 | 19.411 | .000 |
| | Within Groups Total | 218482.910 | 79 | 2242.099 | | |
| AvDurIrrelFix | | 400048.409 | 1 | 400048.409 | 17.314 | .000 |
| AVDUITTEIFIX | Between Groups | | ¹ 78 | | 17.314 | .000 |
| | Within Groups Total | 1802215.264 | 79 | 23105.324 | | |
| TatCaa | | 2202263.673 | | 4200 004 | 45.450 | 000 |
| TotSac | Between Groups | 1386.681 | 1 | 1386.681 | 15.150 | .000 |
| | Within Groups | 7139.269 | 78 | 91.529 | | |
| 001/ | Total | 8525.950 | 79 | 000.005 | 45 504 | 000 |
| Sac2Key | Between Groups | 999.695 | 1 | 999.695 | 15.561 | .000 |
| | Within Groups | 5011.105 | 78 | 64.245 | | |
| | Total | 6010.800 | 79 | | 222 | |
| AvAttention | Between Groups | .025 | 1 | .025 | .339 | .562 |
| | Within Groups | 5.650 | 78 | .072 | | |
| | Total | 5.675 | 79 | | | |
| AvMentWL | Between Groups | .291 | 1 | .291 | 5.056 | .027 |
| | Within Groups | 4.489 | 78 | .058 | | |
| | Total | 4.780 | 79 | | | |
| AvFam | Between Groups | .187 | 1 | .187 | 2.879 | .094 |
| | Within Groups | 5.055 | 78 | .065 | | |
| | Total | 5.242 | 79 | | | |
| AvSCL | Between Groups | 27055.188 | 1 | 27055.188 | 1.278 | .262 |
| | Within Groups | 1651350.699 | 78 | 21171.163 | | |

| | Total | 1678405.887 | 79 | | | |
|------------------|----------------|-------------|----|-----------|--------|------|
| HRVar_RMSSD | Between Groups | 14636.150 | 1 | 14636.150 | 63.654 | .000 |
| | Within Groups | 17934.749 | 78 | 229.933 | | |
| | Total | 32570.899 | 79 | | | |
| HRVar_NN50 | Between Groups | 4586.471 | 1 | 4586.471 | 14.502 | .000 |
| | Within Groups | 24669.460 | 78 | 316.275 | | |
| | Total | 29255.931 | 79 | | | |
| NASA_MD | Between Groups | 1858.716 | 1 | 1858.716 | 26.083 | .000 |
| | Within Groups | 5558.472 | 78 | 71.262 | | |
| | Total | 7417.188 | 79 | | | |
| NASA_PD | Between Groups | 5826.407 | 1 | 5826.407 | 25.824 | .000 |
| | Within Groups | 17598.593 | 78 | 225.623 | | |
| | Total | 23425.000 | 79 | | | |
| NASA_TD | Between Groups | 5461.154 | 1 | 5461.154 | 22.085 | .000 |
| | Within Groups | 19287.596 | 78 | 247.277 | | |
| | Total | 24748.750 | 79 | | | |
| NASA_Performance | Between Groups | 4955.323 | 1 | 4955.323 | 8.568 | .004 |
| | Within Groups | 45113.427 | 78 | 578.377 | | |
| | Total | 50068.750 | 79 | | | |
| NASA_Effort | Between Groups | 2980.148 | 1 | 2980.148 | 24.297 | .000 |
| | Within Groups | 9567.040 | 78 | 122.654 | | |
| | Total | 12547.188 | 79 | | | |
| NASA_Frustration | Between Groups | 3896.471 | 1 | 3896.471 | 10.712 | .002 |
| | Within Groups | 28373.529 | 78 | 363.763 | | |
| | Total | 32270.000 | 79 | | | |
| NASA_Score | Between Groups | 691.227 | 1 | 691.227 | 4.607 | .035 |
| | Within Groups | 11703.489 | 78 | 150.045 | | |
| | Total | 12394.716 | 79 | | | |

Task * Risk - use case templates, GenderMag risk facet, creation task

| Task * R | isk - use | case t | emplates, | Gender | /lag risk f | acet, cre | |
|--------------------|----------------|--------|----------------------|---------------|----------------|--------------------------|--|
| | | | | | | % Confidence Interval | |
| Dependent Variable | Task | Risk | Mean | Std. Error | Lower Bound | Upper Bound | |
| Precision | ARNE | Abby | .804 ^a | .056 | .692 | .917 | |
| | Create | Tim | .513 ^a | .053 | .407 | .618 | |
| | ALCO | Abby | .894 ^a | .064 | .765 | 1.023 | |
| | Create | Tim | .837 ^a | .054 | .729 | .945 | |
| Recall | ARNE | Abby | .702 ^a | .059 | .584 | .820 | |
| | Create | Tim | .598 ^a | .055 | .488 | .708 | |
| | ALCO | Abby | .798 ^a | .067 | .663 | .933 | |
| | Create | Tim | .883 ^a | .056 | .771 | .996 | |
| FMeasure | ARNE | Abby | .749 ^a | .057 | .635 | .863 | |
| | Create | Tim | .546 ^a | .053 | .439 | .653 | |
| | ALCO | Abby | .841 ^a | .065 | .710 | .972 | |
| | Create | Tim | .859 ^a | .055 | .749 | .968 | |
| Duration | ARNE | Abby | 809.444 ^a | 27.994 | 753.320 | 865.569 | |
| | Create | Tim | 905.833 ^a | 26.213 | 853.279 | 958.388 | |
| | ALCO | Abby | 608.937 ^a | 32.103 | 544.574 | 673.300 | |
| | Create | Tim | 659.950 ^a | 26.817 | 606.186 | 713.714 | |
| FirstActDet | ARNE | Abby | 174.500 ^a | 8.272 | 157.915 | 191.085 | |
| | Create | Tim | 119.875 ^a | 7.746 | 104.345 | 135.405 | |
| | ALCO | Abby | 213.040 ^a | 9.487 | 194.020 | 232.059 | |
| | Create | Tim | 160.008 ^a | 7.925 | 144.121 | 175.896 | |
| LastActDet | ARNE | Abby | 767.056 ^a | 28.080 | 710.758 | 823.353 | |
| | Create | Tim | 898.510 ^a | 26.294 | 845.794 | 951.227 | |
| | ALCO Create | Abby | 571.575 ^a | 32.202 | 507.014 | 636.137 | |
| | | Tim | 653.775 ^a | 26.899 | 599.846 | 707.704 | |
| ProcDur | ARNE | Abby | 42.389 ^a | 1.767 | 38.847 | 45.931 | |
| | Create | Tim | 7.323 ^a | 1.654 | 4.006 | 10.640 | |
| | ALCO | Abby | 37.361 ^a | 2.026 | 33.299 | 41.423 | |
| | Create | Tim | 6.175 ^a | 1.692 | 2.782 | 9.568 | |
| FixRel | ARNE | Abby | 10.207 ^a | .192 | 9.823 | 10.592 | |
| | Create | Tim | 10.328 ^a | .180 | 9.968 | 10.688 | |
| | ALCO | Abby | 3.668 ^a | .220 | 3.227 | 4.109 | |
| | Create | Tim | 4.192 ^a | .184 | 3.824 | 4.561 | |
| FixIrrel | ARNE | Abby | 346.852 ^a | 19.899 | 306.958 | 386.746 | |
| | Create | Tim | 215.364 ^a | 18.633 | 178.008 | 252.721 | |
| | ALCO | Abby | 4.698 ^a | 22.819 | -41.052 | 50.448 | |
| | Create | Tim | 4.041 ^a | 19.062 | -34.176 | 42.257 | |
| AvDurRelFix | ARNE | Abby | 120.974 ^a | 9.903 | 101.119 | 140.829 | |
| | Create | Tim | 78.316 ^a | 9.273 | 59.724 | 96.909 | |
| | ALCO | Abby | 155.603 ^a | 11.357 | 132.834 | 178.373 | |
| | Create | Tim | 133.442 ^a | 9.487 | 114.422 | 152.462 | |
| AvDurIrrelFix | ARNE | Abby | 298.024 ^a | 28.690 | 240.503 | 355.545 | |
| | Create | Tim | | 26.866 | 112.844 | 220.569 | |
| | | | | | | | |

| | | | 166.706 ^a | | | |
|-------------|----------------|------|----------------------|--------|---------|---------|
| | ALCO | Abby | 444.810 ^a | 32.902 | 378.845 | 510.774 |
| | Create | Tim | 378.325 ^a | 27.484 | 323.223 | 433.427 |
| TotSac | ARNE | Abby | 82.667 ^a | 2.705 | 77.243 | 88.090 |
| | Create | Tim | 91.406 ^a | 2.533 | 86.327 | 96.485 |
| | ALCO | Abby | 82.984 ^a | 3.102 | 76.764 | 89.204 |
| | Create | Tim | 89.425 ^a | 2.592 | 84.229 | 94.621 |
| Sac2Key | ARNE | Abby | 9.000 ^a | 2.160 | 4.669 | 13.331 |
| | Create | Tim | 18.563 ^a | 2.023 | 14.507 | 22.618 |
| | ALCO | Abby | 13.992 ^a | 2.477 | 9.025 | 18.959 |
| | Create | Tim | 18.200 ^a | 2.069 | 14.051 | 22.349 |
| AvAttention | ARNE | Abby | .750 ^a | .034 | .682 | .818 |
| | Create | Tim | .670 ^a | .032 | .606 | .734 |
| | ALCO | Abby | .310 ^a | .039 | .232 | .388 |
| | Create | Tim | .463 ^a | .033 | .397 | .528 |
| AvMentWL | ARNE | Abby | .722 ^a | .042 | .637 | .807 |
| | Create | Tim | .796 ^a | .040 | .716 | .875 |
| | ALCO | Abby | .315 ^a | .049 | .218 | .413 |
| | Create | Tim | .454 ^a | .041 | .373 | .535 |
| AvFam | ARNE | Abby | .717 ^a | .040 | .637 | .796 |
| | Create | Tim | .785 ^a | .037 | .711 | .860 |
| | ALCO Create | Abby | .279 ^a | .046 | .187 | .370 |
| | Create | Tim | .363 ^a | .038 | .286 | .439 |
| AvSCL | ARNE | Abby | 505.722 ^a | 38.031 | 429.476 | 581.969 |
| | Create | Tim | 508.333 ^a | 35.612 | 436.936 | 579.730 |
| | ALCO Create | Abby | 585.298 ^a | 43.613 | 497.859 | 672.736 |
| | Create | Tim | 588.183 ^a | 36.431 | 515.144 | 661.223 |
| HRVar_RMSSD | ARNE Create | Abby | 15.997 ^a | 4.127 | 7.722 | 24.271 |
| | | Tim | 52.097 ^a | 3.865 | 44.348 | 59.845 |
| | ALCO Create | Abby | 20.184 ^a | 4.733 | 10.694 | 29.673 |
| | Orodio | Tim | 45.472 ^a | 3.954 | 37.545 | 53.399 |
| HRVar_NN50 | ARNE Create | Abby | 9.487 ^a | 4.810 | 155 | 19.130 |
| | | Tim | 37.524 ^a | 4.504 | 28.495 | 46.554 |
| | ALCO Create | Abby | 16.239 ^a | 5.516 | 5.181 | 27.297 |
| | | Tim | 31.404 ^a | 4.607 | 22.167 | 40.641 |
| NASA_MD | ARNE Create | Abby | 48.333 ^a | 2.214 | 43.894 | 52.772 |
| | | Tim | 54.688 ^a | 2.073 | 50.531 | 58.844 |
| | ALCO Create | Abby | 42.798 ^a | 2.539 | 37.707 | 47.888 |
| | | Tim | 54.958 ^a | 2.121 | 50.706 | 59.211 |
| NASA_PD | ARNE Create | Abby | 30.278 ^a | 3.980 | 22.299 | 38.256 |
| | | Tim | 14.792 ^a | 3.726 | 7.321 | 22.263 |
| | ALCO Create | Abby | 27.143 ^a | 4.564 | 17.993 | 36.292 |
| | | Tim | 8.958 ^a | 3.812 | 1.315 | 16.601 |
| NASA_TD | ARNE Create | Abby | 49.444 ^a | 3.343 | 42.742 | 56.147 |
| | | Tim | 26.042 ^a | 3.130 | 19.765 | 32.318 |
| | ALCO | Abby | 30.843 ^a | 3.834 | 23.157 | 38.530 |
| | | | | | | |

| | Create | Tim | 16.083 ^a | 3.202 | 9.663 | 22.504 |
|------------------|----------------|------|---------------------|-------|--------|--------|
| NASA_Performance | ARNE | Abby | 61.944 ^a | 6.865 | 48.180 | 75.709 |
| | Create | Tim | 32.604 ^a | 6.429 | 19.715 | 45.493 |
| | ALCO | Abby | 69.881 ^a | 7.873 | 54.096 | 85.666 |
| | Create | Tim | 43.542 ^a | 6.577 | 30.356 | 56.727 |
| NASA_Effort | ARNE | Abby | 43.889 ^a | 3.113 | 37.648 | 50.130 |
| | Create | Tim | 51.146 ^a | 2.915 | 45.302 | 56.990 |
| | ALCO Create | Abby | 37.530 ^a | 3.570 | 30.373 | 44.687 |
| | | Tim | 53.125 ^a | 2.982 | 47.147 | 59.103 |
| NASA_Frustration | ARNE | Abby | 36.944 ^a | 5.417 | 26.085 | 47.804 |
| | Create | Tim | 16.094 ^a | 5.072 | 5.925 | 26.263 |
| | ALCO | Abby | 41.310 ^a | 6.212 | 28.856 | 53.763 |
| | Create | Tim | 24.667 ^a | 5.189 | 14.264 | 35.069 |
| NASA_Score | ARNE | Abby | 45.139 ^a | 3.378 | 38.367 | 51.911 |
| | Create | Tim | 32.561 ^a | 3.163 | 26.219 | 38.902 |
| | ALCO | Abby | 44.042 ^a | 3.874 | 36.276 | 51.809 |
| | Create | Tim | 37.129 ^a | 3.236 | 30.642 | 43.617 |

a. Based on modified population marginal mean.

Robust Tests of Equality of Means - use case templates, GenderMag learning style facet, creation task

| | | Statistic ^a | df1 | df2 | Sig. |
|------------------|-------|------------------------|-----|--------|------|
| Precision | Welch | .060 | 1 | 53.725 | .807 |
| Recall | Welch | .008 | 1 | 56.395 | .931 |
| FMeasure | Welch | .030 | 1 | 55.088 | .864 |
| Duration | Welch | .010 | 1 | 46.459 | .922 |
| FirstActDet | Welch | .035 | 1 | 45.659 | .852 |
| LastActDet | Welch | .010 | 1 | 46.492 | .922 |
| ProcDur | Welch | .000 | 1 | 52.047 | .983 |
| FixRel | Welch | .884 | 1 | 50.213 | .352 |
| FixIrrel | Welch | .486 | 1 | 52.903 | .489 |
| AvDurRelFix | Welch | .673 | 1 | 54.827 | .416 |
| AvDurIrrelFix | Welch | .756 | 1 | 53.758 | .388 |
| TotSac | Welch | .124 | 1 | 53.464 | .726 |
| Sac2Key | Welch | .273 | 1 | 54.477 | .603 |
| AvAttention | Welch | .282 | 1 | 51.613 | .597 |
| AvMentWL | Welch | .006 | 1 | 49.263 | .939 |
| AvFam | Welch | .009 | 1 | 49.422 | .926 |
| AvSCL | Welch | 1.395 | 1 | 47.789 | .243 |
| HRVar_RMSSD | Welch | .671 | 1 | 56.474 | .416 |
| HRVar_NN50 | Welch | 1.310 | 1 | 53.096 | .257 |
| NASA_MD | Welch | .025 | 1 | 51.803 | .875 |
| NASA_PD | Welch | 1.477 | 1 | 47.877 | .230 |
| NASA_TD | Welch | .048 | 1 | 63.009 | .828 |
| NASA_Performance | Welch | .074 | 1 | 50.827 | .787 |
| NASA_Effort | Welch | .547 | 1 | 60.320 | .462 |
| NASA_Frustration | Welch | .634 | 1 | 52.863 | .430 |
| NASA_Score | Welch | 1.328 | 1 | 51.806 | .254 |

a. Asymptotically F distributed.

ANOVA - use case templates, GenderMag learning style facet, creation task

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---------------|----------------|-------------------|--------|-------------|-------|------|
| Precision | Between Groups | .003 | 1 | .003 | .059 | .808 |
| | Within Groups | 4.327 | 78 | .055 | | |
| | Total | 4.330 | 79 | | | |
| Recall | Between Groups | .000 | 1 | .000 | .007 | .933 |
| | Within Groups | 3.946 | 78 | .051 | | |
| | Total | 3.947 | 79 | | | |
| FMeasure | Between Groups | .001 | 1 | .001 | .029 | .866 |
| | Within Groups | 3.974 | 78 | .051 | | |
| | Total | 3.975 | 79 | | | |
| Duration | Between Groups | 240.854 | 1 | 240.854 | .011 | .918 |
| | Within Groups | 1767417.533 | 78 | 22659.199 | | |
| | Total | 1767658.388 | 79 | | | |
| FirstActDet | Between Groups | 155.707 | 1 | 155.707 | .039 | .843 |
| | Within Groups | 309363.843 | 78 | 3966.203 | | |
| | Total | 309519.550 | 79 | | | |
| LastActDet | Between Groups | 252.270 | 1 | 252.270 | .011 | .918 |
| | Within Groups | 1838111.680 | 78 | 23565.534 | | |
| | Total | 1838363.950 | 79 | | | |
| ProcDur | Between Groups | .132 | 1 | .132 | .000 | .983 |
| | Within Groups | 22526.855 | 78 | 288.806 | | |
| | Total | 22526.988 | 79 | 200.000 | | |
| FixRel | Between Groups | 9.877 | 1 | 9.877 | .912 | .342 |
| TIATO | Within Groups | 844.338 | 78 | 10.825 | .012 | .012 |
| | Total | 854.214 | 79 | 10.020 | | |
| FixIrrel | Between Groups | 13145.202 | 1 | 13145.202 | .483 | .489 |
| | Within Groups | 2121817.197 | 78 | 27202.785 | .400 | .+08 |
| | Total | 2134962.399 | 79 | 21202.103 | | |
| ADD-15: | Between Groups | 1808.052 | 1 | 1808.052 | .651 | .422 |
| AvDurRelFix | Within Groups | 216674.859 | 78 | 2777.883 | .031 | .422 |
| | Total | 218482.910 | 78 | 2111.003 | | |
| AvDurlmolFiv | | 20761.692 | 1 | 20761.692 | 740 | .392 |
| AvDurIrrelFix | Between Groups | 2181501.982 | 78 | 27967.974 | .742 | .392 |
| | Within Groups | 2202263.673 | 78 | 21901.914 | | |
| TotSac | Total | | | 13.302 | 400 | 700 |
| 1015ac | Between Groups | 13.302 | 1 | | .122 | .728 |
| | Within Groups | 8512.648 | 78 | 109.137 | | |
| 0 01/ | Total | 8525.950 | 79 | 00.005 | 000 | 000 |
| Sac2Key | Between Groups | 20.395 | 1 70 | 20.395 | .266 | .608 |
| | Within Groups | 5990.405 | 78 | 76.800 | | |
| | Total | 6010.800 | 79 | 201 | | |
| AvAttention | Between Groups | .021 | 1 | .021 | .286 | .594 |
| | Within Groups | 5.654 | 78 | .072 | | |
| | Total | 5.675 | 79 | | | |
| AvMentWL | Between Groups | .000 | 1 | .000 | .006 | .937 |
| | Within Groups | 4.779 | 78 | .061 | | |
| | Total | 4.780 | 79 | | | |
| AvFam | Between Groups | .001 | 1 | .001 | .009 | .924 |
| | Within Groups | 5.241 | 78 | .067 | | |
| | Total | 5.242 | 79 | | | |
| AvSCL | Between Groups | 31573.503 | 1 | 31573.503 | 1.495 | .225 |
| | Within Groups | 1646832.384 | 78 | 21113.236 | | |

| | Total | 1678405.887 | 79 | | | |
|------------------|----------------|-------------|----|---------|-------|------|
| HRVar_RMSSD | Between Groups | 262.981 | 1 | 262.981 | .635 | .428 |
| | Within Groups | 32307.918 | 78 | 414.204 | | |
| | Total | 32570.899 | 79 | | | |
| HRVar_NN50 | Between Groups | 478.968 | 1 | 478.968 | 1.298 | .258 |
| | Within Groups | 28776.963 | 78 | 368.935 | | |
| | Total | 29255.931 | 79 | | | |
| NASA_MD | Between Groups | 2.408 | 1 | 2.408 | .025 | .874 |
| | Within Groups | 7414.780 | 78 | 95.061 | | |
| | Total | 7417.187 | 79 | | | |
| NASA_PD | Between Groups | 465.496 | 1 | 465.496 | 1.581 | .212 |
| | Within Groups | 22959.504 | 78 | 294.353 | | |
| | Total | 23425.000 | 79 | | | |
| NASA_TD | Between Groups | 13.215 | 1 | 13.215 | .042 | .839 |
| | Within Groups | 24735.535 | 78 | 317.122 | | |
| | Total | 24748.750 | 79 | | | |
| NASA_Performance | Between Groups | 48.240 | 1 | 48.240 | .075 | .785 |
| | Within Groups | 50020.510 | 78 | 641.289 | | |
| | Total | 50068.750 | 79 | | | |
| NASA_Effort | Between Groups | 78.879 | 1 | 78.879 | .493 | .484 |
| | Within Groups | 12468.309 | 78 | 159.850 | | |
| | Total | 12547.187 | 79 | | | |
| NASA_Frustration | Between Groups | 258.505 | 1 | 258.505 | .630 | .430 |
| | Within Groups | 32011.495 | 78 | 410.404 | | |
| | Total | 32270.000 | 79 | | | |
| NASA_Score | Between Groups | 209.317 | 1 | 209.317 | 1.340 | .251 |
| | Within Groups | 12185.398 | 78 | 156.223 | | |
| | Total | 12394.716 | 79 | | | |

Task * LearningStyle - use case templates, GenderMag learning style facet, creation task

| Task * Learning | joty ic - t | ase case terrip | J.a.100, 0 0. | lacimag | | • |
|--------------------|----------------|-----------------|----------------------|---------------|----------------|----------------|
| | | | | | 95% Co Inte | rval |
| Dependent Variable | Task | LearningStyle | Mean | Std. Error | Lower Bound | Upper Bound |
| Precision | ARNE | Abby | .625 ^a | .066 | .491 | .758 |
| | Create | Tim | .645 ^a | .047 | .550 | .740 |
| | ALCO | Abby | .859 ^a | .056 | .746 | .97 |
| | Create | Tim | .873 ^a | .062 | .748 | .99 |
| Recall | ARNE | Abby | .628 ^a | .069 | .488 | .76 |
| | Create | Tim | .651 ^a | .049 | .552 | .75 |
| | ALCO | Abby | .847 ^a | .059 | .729 | .96 |
| | Create | Tim | .834 ^a | .065 | .704 | .96 |
| FMeasure | ARNE | Abby | .622 ^a | .067 | .487 | .75 |
| | Create | Tim | .640 ^a | .048 | .544 | .73 |
| | ALCO | Abby | .850 ^a | .057 | .736 | .964 |
| | Create | Tim | .849 ^a | .063 | .722 | .97 |
| Duration | ARNE | Abby | 864.500 ^a | 33.095 | 798.148 | 930.85 |
| | Create | Tim | 864.537 ^a | 23.520 | 817.383 | 911.69 |
| | ALCO | Abby | 640.889 ^a | 27.994 | 584.764 | 697.01 |
| | Create | Tim | 627.998 ^a | 31.082 | 565.682 | 690.31 |
| FirstActDet | ARNE | Abby | 139.750 ^a | 9.780 | 120.143 | 159.35 |
| | Create | Tim | 145.250 ^a | 6.950 | 131.316 | 159.18 |
| | ALCO Create | Abby | 187.694 ^a | 8.272 | 171.109 | 204.28 |
| | | Tim | 185.354 ^a | 9.185 | 166.939 | 203.76 |
| LastActDet | ARNE Create | Abby | 842.050 ^a | 33.197 | 775.494 | 908.60 |
| | | Tim | 842.241 ^a | 23.592 | 794.942 | 889.54 |
| | ALCO | Abby | 620.778 ^a | 28.080 | 564.480 | 677.07 |
| | Create | Tim | 604.573 ^a | 31.177 | 542.066 | 667.08 |
| ProcDur | ARNE | Abby | 22.450 ^a | 2.089 | 18.262 | 26.63 |
| | Create | Tim | 22.296 ^a | 1.484 | 19.320 | 25.27 |
| | ALCO | Abby | 20.111 ^a | 1.767 | 16.569 | 23.65 |
| | Create | Tim | 23.425 ^a | 1.962 | 19.492 | 27.35 |
| FixRel | ARNE | Abby | 10.585 ^a | .227 | 10.131 | 11.04 |
| | Create | Tim | 10.104 ^a | .161 | 9.781 | 10.42 |
| | ALCO | Abby | 3.988 ^a | .192 | 3.604 | 4.37 |
| | Create | Tim | 3.872 ^a | .213 | 3.445 | 4.29 |
| FixIrrel | ARNE | Abby | 315.505 ^a | 23.525 | 268.341 | 362.66 |
| | Create | Tim | 247.389 ^a | 16.718 | 213.871 | 280.90 |
| | ALCO | Abby | 3.312 ^a | 19.899 | -36.582 | 43.20 |
| | Create | Tim | 5.426 ^a | 22.093 | -38.869 | 49.72 |
| AvDurRelFix | ARNE | Abby | 112.155 ^a | 11.708 | 88.682 | 135.62 |
| | Create | Tim | 87.956 ^a | 8.320 | 71.274 | 104.63 |
| | ALCO | Abby | 130.639 ^a | 9.903 | 110.784 | 150.49 |
| | Create | Tim | 158.406 ^a | 10.996 | 136.361 | 180.45 |
| AvDurIrrelFix | ARNE | Abby | 266.455 ^a | 33.918 | 198.453 | 334.45 |
| | Create | Tim | | 24.105 | 150.508 | 247.16 |

| | | | 198.836 ^a | | | |
|-------------|----------------|------|----------------------|--------|---------|---------|
| | ALCO | Abby | 369.917 ^a | 28.690 | 312.396 | 427.438 |
| | Create | Tim | 453.218 ^a | 31.855 | 389.352 | 517.084 |
| TotSac | ARNE | Abby | 84.800 ^a | 3.198 | 78.388 | 91.212 |
| | Create | Tim | 89.250 ^a | 2.273 | 84.693 | 93.807 |
| | ALCO | Abby | 85.639 ^a | 2.705 | 80.215 | 91.063 |
| | Create | Tim | 86.770 ^a | 3.004 | 80.748 | 92.792 |
| Sac2Key | ARNE | Abby | 12.900 ^a | 2.554 | 7.780 | 18.020 |
| | Create | Tim | 15.333 ^a | 1.815 | 11.694 | 18.972 |
| | ALCO | Abby | 16.819 ^a | 2.160 | 12.488 | 21.151 |
| | Create | Tim | 15.373 ^a | 2.399 | 10.564 | 20.182 |
| AvAttention | ARNE | Abby | .740 ^a | .040 | .659 | .821 |
| | Create | Tim | .684 ^a | .029 | .627 | .742 |
| | ALCO | Abby | .421 ^a | .034 | .353 | .489 |
| | Create | Tim | .352 ^a | .038 | .276 | .428 |
| AvMentWL | ARNE | Abby | .780 ^a | .050 | .680 | .880 |
| | Create | Tim | .756 ^a | .036 | .684 | .827 |
| | ALCO | Abby | .442 ^a | .042 | .357 | .527 |
| | Create | Tim | .328 ^a | .047 | .234 | .422 |
| AvFam | ARNE | Abby | .770 ^a | .047 | .676 | .864 |
| | Create | Tim | .748 ^a | .033 | .681 | .815 |
| | ALCO | Abby | .367 ^a | .040 | .287 | .446 |
| | Create | Tim | .274 ^a | .044 | .186 | .363 |
| AvSCL | ARNE Create | Abby | 542.600 ^a | 44.960 | 452.460 | 632.740 |
| | Create | Tim | 487.556 ^a | 31.952 | 423.496 | 551.615 |
| | ALCO Create | Abby | 599.500 ^a | 38.031 | 523.253 | 675.747 |
| | Create | Tim | 573.981 ^a | 42.225 | 489.324 | 658.638 |
| HRVar_RMSSD | ARNE Create | Abby | 36.126 ^a | 4.879 | 26.343 | 45.909 |
| | | Tim | 36.903 ^a | 3.468 | 29.950 | 43.855 |
| | ALCO Create | Abby | 27.285 ^a | 4.127 | 19.010 | 35.560 |
| | Oreate | Tim | 38.370 ^a | 4.583 | 29.183 | 47.558 |
| HRVar_NN50 | ARNE Create | Abby | 25.758 ^a | 5.686 | 14.358 | 37.158 |
| | | Tim | 25.370 ^a | 4.041 | 17.268 | 33.471 |
| | ALCO Create | Abby | 16.229 ^a | 4.810 | 6.587 | 25.872 |
| | | Tim | 31.414 ^a | 5.340 | 20.708 | 42.120 |
| NASA_MD | ARNE Create | Abby | 51.000 ^a | 2.618 | 45.752 | 56.248 |
| | | Tim | 52.500 ^a | 1.860 | 48.770 | 56.230 |
| | ALCO Create | Abby | 53.750 ^a | 2.214 | 49.311 | 58.189 |
| | | Tim | 44.006 ^a | 2.458 | 39.077 | 48.935 |
| NASA_PD | ARNE Create | Abby | 25.750 ^a | 4.705 | 16.318 | 35.182 |
| | | Tim | 19.028 ^a | 3.343 | 12.325 | 25.731 |
| | ALCO Create | Abby | 18.750 ^a | 3.980 | 10.772 | 26.728 |
| | | Tim | 17.351 ^a | 4.418 | 8.493 | 26.210 |
| NASA_TD | ARNE Create | Abby | 30.000 ^a | 3.952 | 22.076 | 37.924 |
| | | Tim | 39.444 ^a | 2.809 | 33.813 | 45.076 |
| | ALCO | Abby | 26.528 ^a | 3.343 | 19.825 | 33.230 |
| | | | | | | |

| | Create | Tim | 20.399 ^a | 3.712 | 12.957 | 27.841 |
|------------------|----------------------------------|------|---------------------|-------|--------|--------|
| NASA_Performance | ARNE Create | Abby | 42.500 ^a | 8.117 | 26.227 | 58.773 |
| | | Tim | 46.667 ^a | 5.768 | 35.102 | 58.231 |
| | ALCO | Abby | 63.750 ^a | 6.865 | 49.986 | 77.514 |
| | Create | Tim | 49.673 ^a | 7.623 | 34.390 | 64.955 |
| NASA_Effort | ARNE Create | Abby | 45.500 ^a | 3.680 | 38.122 | 52.878 |
| | | Tim | 49.444 ^a | 2.615 | 44.201 | 54.688 |
| | ALCO Create | Abby | 48.958 ^a | 3.113 | 42.718 | 55.199 |
| | | Tim | 41.696 ^a | 3.456 | 34.767 | 48.626 |
| NASA_Frustration | ARNE Create ALCO Create | Abby | 22.000 ^a | 6.404 | 9.162 | 34.838 |
| | | Tim | 26.713 ^a | 4.551 | 17.589 | 35.837 |
| | | Abby | 37.917 ^a | 5.417 | 27.057 | 48.776 |
| | | Tim | 28.060 ^a | 6.014 | 16.002 | 40.117 |
| NASA_Score | ARNE Create | Abby | 36.125 ^a | 3.993 | 28.119 | 44.131 |
| | | Tim | 38.966 ^a | 2.838 | 33.276 | 44.656 |
| | ALCO Create | Abby | 46.224 ^a | 3.378 | 39.451 | 52.996 |
| | | Tim | 34.948 ^a | 3.751 | 27.428 | 42.467 |

a. Based on modified population marginal mean.