

Appendix A2

Table A2.1 Average correlations between true and estimated scores across all scoring models and design factors at N = 1000.

6 Items	Proportion Score		Unconditional Score		Impact-Only Score		Impact-and-DIF Score	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>Small Mean/Large Variance</i>								
33% Small DIF	0.757	0.015	0.759	0.014	0.826	0.013	0.826	0.013
66% Small DIF	0.755	0.014	0.757	0.014	0.813	0.013	0.822	0.013
33% Large DIF	0.757	0.014	0.759	0.013	0.823	0.013	0.829	0.012
66% Large DIF	0.751	0.014	0.747	0.015	0.773	0.019	0.826	0.013
<i>Medium Mean/Medium Variance</i>								
33% Small DIF	0.785	0.012	0.792	0.012	0.828	0.011	0.829	0.011
66% Small DIF	0.786	0.011	0.793	0.011	0.815	0.012	0.824	0.011
33% Large DIF	0.785	0.012	0.792	0.012	0.825	0.011	0.830	0.011
66% Large DIF	0.782	0.011	0.784	0.011	0.773	0.017	0.824	0.011
<i>Large Mean/Small Variance</i>								
33% Small DIF	0.789	0.011	0.800	0.010	0.845	0.009	0.846	0.009
66% Small DIF	0.792	0.011	0.803	0.010	0.833	0.010	0.841	0.010
33% Large DIF	0.790	0.010	0.801	0.010	0.839	0.009	0.845	0.009
66% Large DIF	0.791	0.010	0.798	0.011	0.794	0.015	0.839	0.010
<hr/>								
12 Items	Proportion Score		Unconditional Score		Impact-Only Score		Impact-and-DIF Score	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>Small Mean/Large Variance</i>								
33% Small DIF	0.825	0.012	0.834	0.011	0.880	0.009	0.882	0.009
66% Small DIF	0.821	0.011	0.830	0.011	0.871	0.010	0.881	0.009
33% Large DIF	0.825	0.013	0.831	0.012	0.873	0.010	0.885	0.009
66% Large DIF	0.811	0.011	0.815	0.011	0.838	0.012	0.884	0.009
<i>Medium Mean/Medium Variance</i>								
33% Small DIF	0.851	0.008	0.864	0.008	0.883	0.007	0.886	0.007
66% Small DIF	0.848	0.009	0.861	0.008	0.874	0.008	0.884	0.008
33% Large DIF	0.851	0.008	0.863	0.008	0.876	0.008	0.886	0.007
66% Large DIF	0.841	0.009	0.850	0.009	0.842	0.011	0.884	0.007
<i>Large Mean/Small Variance</i>								
33% Small DIF	0.856	0.007	0.874	0.007	0.893	0.006	0.895	0.006
66% Small DIF	0.853	0.007	0.871	0.007	0.884	0.007	0.892	0.007
33% Large DIF	0.858	0.007	0.875	0.007	0.885	0.007	0.895	0.006
66% Large DIF	0.849	0.008	0.863	0.008	0.853	0.009	0.891	0.007
<hr/>								
24 Items	Proportion Score		Unconditional Score		Impact-Only Score		Impact-and-DIF Score	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>Small Mean/Large Variance</i>								
33% Small DIF	0.866	0.010	0.892	0.008	0.921	0.006	0.924	0.006
66% Small DIF	0.860	0.011	0.885	0.009	0.913	0.007	0.923	0.006
33% Large DIF	0.865	0.010	0.887	0.009	0.915	0.007	0.925	0.006
66% Large DIF	0.848	0.011	0.865	0.009	0.883	0.009	0.924	0.006
<i>Medium Mean/Medium Variance</i>								
33% Small DIF	0.890	0.006	0.914	0.005	0.925	0.005	0.927	0.005
66% Small DIF	0.886	0.007	0.910	0.006	0.916	0.006	0.926	0.005
33% Large DIF	0.890	0.007	0.912	0.006	0.918	0.006	0.928	0.005
66% Large DIF	0.876	0.007	0.894	0.007	0.888	0.007	0.926	0.005
<i>Large Mean/Small Variance</i>								
33% Small DIF	0.894	0.005	0.922	0.004	0.930	0.004	0.932	0.004
66% Small DIF	0.891	0.006	0.918	0.005	0.921	0.005	0.930	0.004
33% Large DIF	0.895	0.006	0.921	0.005	0.923	0.005	0.932	0.004
66% Large DIF	0.884	0.006	0.905	0.005	0.894	0.006	0.930	0.004

Table A2.2 Average correlations between true and estimated scores across all scoring models and design factors at N = 2000.

6 Items	Proportion Score		Unconditional Score		Impact-Only Score		Impact-and-DIF Score	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>Small Mean/Large Variance</i>								
33% Small DIF	0.757	0.010	0.759	0.010	0.827	0.009	0.829	0.008
66% Small DIF	0.756	0.010	0.758	0.010	0.816	0.010	0.828	0.009
33% Large DIF	0.758	0.010	0.760	0.010	0.826	0.009	0.833	0.009
66% Large DIF	0.750	0.010	0.746	0.010	0.774	0.014	0.830	0.008
<i>Medium Mean/Medium Variance</i>								
33% Small DIF	0.785	0.008	0.793	0.008	0.830	0.008	0.831	0.007
66% Small DIF	0.787	0.008	0.794	0.008	0.818	0.008	0.829	0.008
33% Large DIF	0.787	0.008	0.794	0.008	0.827	0.008	0.834	0.007
66% Large DIF	0.782	0.008	0.785	0.008	0.776	0.012	0.829	0.007
<i>Large Mean/Small Variance</i>								
33% Small DIF	0.789	0.007	0.800	0.007	0.846	0.006	0.848	0.006
66% Small DIF	0.793	0.007	0.805	0.007	0.835	0.007	0.845	0.006
33% Large DIF	0.790	0.008	0.801	0.007	0.842	0.007	0.848	0.006
66% Large DIF	0.792	0.007	0.799	0.008	0.796	0.011	0.843	0.007
<hr/>								
12 Items	Proportion Score		Unconditional Score		Impact-Only Score		Impact-and-DIF Score	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>Small Mean/Large Variance</i>								
33% Small DIF	0.824	0.008	0.834	0.008	0.881	0.006	0.884	0.006
66% Small DIF	0.821	0.009	0.830	0.008	0.872	0.007	0.884	0.006
33% Large DIF	0.825	0.009	0.831	0.008	0.874	0.007	0.886	0.006
66% Large DIF	0.811	0.008	0.815	0.008	0.839	0.009	0.886	0.006
<i>Medium Mean/Medium Variance</i>								
33% Small DIF	0.851	0.006	0.864	0.006	0.884	0.005	0.887	0.005
66% Small DIF	0.848	0.006	0.861	0.005	0.875	0.006	0.886	0.005
33% Large DIF	0.852	0.006	0.863	0.006	0.877	0.006	0.888	0.005
66% Large DIF	0.841	0.006	0.850	0.006	0.843	0.008	0.886	0.005
<i>Large Mean/Small Variance</i>								
33% Small DIF	0.856	0.005	0.874	0.005	0.894	0.005	0.896	0.005
66% Small DIF	0.854	0.005	0.872	0.005	0.884	0.005	0.894	0.004
33% Large DIF	0.858	0.005	0.875	0.005	0.886	0.005	0.896	0.004
66% Large DIF	0.849	0.006	0.864	0.006	0.854	0.007	0.893	0.005
<hr/>								
24 Items	Proportion Score		Unconditional Score		Impact-Only Score		Impact-and-DIF Score	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>Small Mean/Large Variance</i>								
33% Small DIF	0.866	0.007	0.891	0.006	0.922	0.004	0.925	0.004
66% Small DIF	0.860	0.008	0.885	0.007	0.913	0.005	0.924	0.004
33% Large DIF	0.865	0.007	0.887	0.006	0.915	0.005	0.926	0.004
66% Large DIF	0.848	0.007	0.866	0.007	0.884	0.006	0.926	0.004
<i>Medium Mean/Medium Variance</i>								
33% Small DIF	0.889	0.005	0.914	0.004	0.925	0.004	0.928	0.004
66% Small DIF	0.886	0.005	0.910	0.004	0.917	0.004	0.927	0.004
33% Large DIF	0.890	0.005	0.912	0.004	0.918	0.004	0.929	0.003
66% Large DIF	0.876	0.005	0.893	0.005	0.888	0.005	0.927	0.004
<i>Large Mean/Small Variance</i>								
33% Small DIF	0.894	0.004	0.922	0.003	0.930	0.003	0.933	0.003
66% Small DIF	0.890	0.004	0.918	0.003	0.922	0.003	0.931	0.003
33% Large DIF	0.896	0.004	0.922	0.003	0.924	0.003	0.933	0.003
66% Large DIF	0.884	0.004	0.905	0.004	0.895	0.005	0.931	0.003