Structural Equation Modelling

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Models Info

Estimation Method	ML
Number of observations	233
Free parameters	18
Converged	TRUE
Loglikelihood user model	-1866.361
Loglikelihood unrestricted model	-1860.201
Model	Learning=~PostScore Inhibition=~SS_ACC+SS_Eff2 Switching=~FM_ACC_mean SALES=~SelfEfficacy_S+TaskValue+MasteryGoals_S

Note. lavaan WARNING: some estimated ov variances are negative

Overall Tests

Model tests

Label	X^2	df	p
User Model	12.3	10	0.264
Baseline Model	705.9	21	<.001

Fit indices

		RMSEA 95% CI		
SRMR	RMSEA	Lower	Upper	RMSEA p
0.031	0.032	0.000	0.081	0.670

Estimates

Parameter estimates

				95% Confidence Intervals				
Dep	Pred	Estimate	SE	Lower	Upper	β	z	p

Measurement model

				95% Confidence Intervals				
Latent	Observed	Estimate	SE	Lower	Upper	β	z	p
Learning	PostScore	1.00	0.0000	1.00	1.00	1.0000		
Inhibition	SS_ACC	1.00	0.0000	1.00	1.00	0.6690		
	SS_Eff2	33.40	42.5348	-49.97	116.76	0.0726	0.785	0.432
Switching	FM_ACC_mean	1.00	0.0000	1.00	1.00	1.0000		
SALES	SelfEfficacy_S	1.00	0.0000	1.00	1.00	0.7835		
	TaskValue	1.27	0.0737	1.12	1.41	0.8627	17.197	<.001
	MasteryGoals_S	1.52	0.0833	1.35	1.68	1.0324	18.209	<.001

Additional outputs

User model versus baseline model

	Model
Comparative Fit Index (CFI)	0.997
Tucker-Lewis Index (TLI)	0.993
Bentler-Bonett Non-normed Fit Index (NNFI)	0.993
Bentler-Bonett Normed Fit Index (NFI)	0.983
Parsimony Normed Fit Index (PNFI)	0.468
Bollen's Relative Fit Index (RFI)	0.963
Bollen's Incremental Fit Index (IFI)	0.997
Relative Noncentrality Index (RNI)	0.997

Other fit indices

	Model
Hoelter Critical N (CN), α=0.05	347.204
Hoelter Critical N (CN), α=0.01	439.909
Goodness of Fit Index (GFI)	0.986
Parsimony Goodness of Fit Index (GFI)	0.352
McDonald Fit Index (MFI)	0.995

Modifcation indices

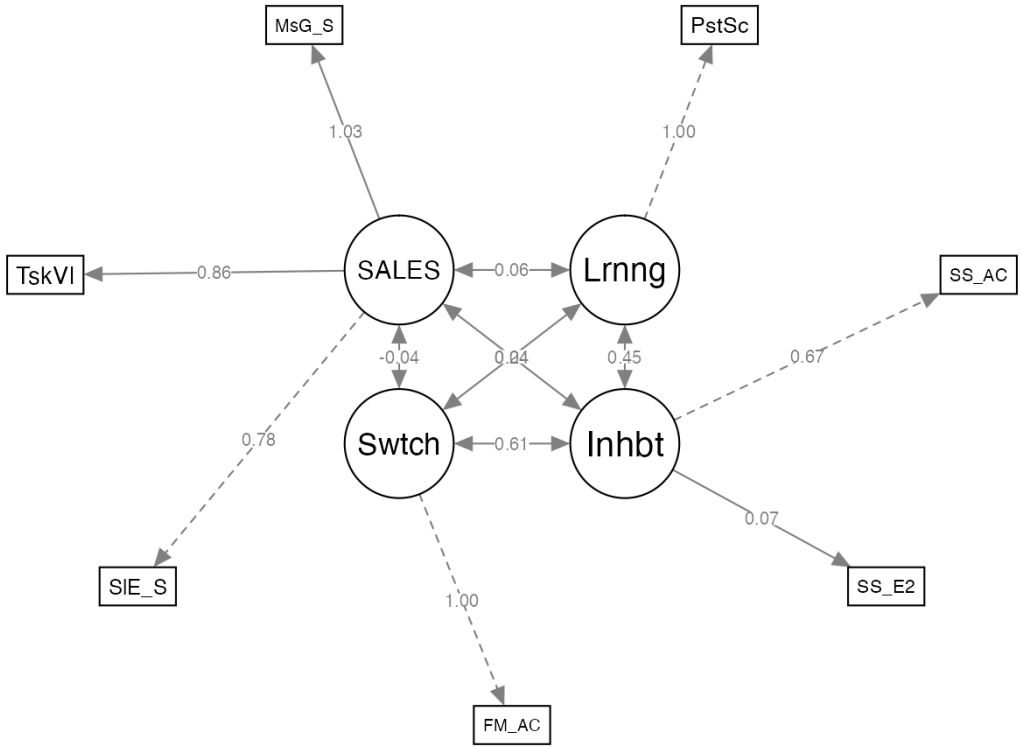
Modification indices

			Modif. index	EPC	sEPC (LV)	sEPC (all)	sEPC (nox)
PostScore	~~	SS_ACC	3.91948	-0.617	-0.617		
PostScore	~~	SS_Eff2	3.91945	20.619	20.619		
Learning	=~	SS_ACC	3.67322	-0.060	-0.210	-1.539	-1.539
Learning	=~	SS_Eff2	3.67318	2.011	7.009	0.167	0.167
SS_ACC	~~	FM_ACC_mean	3.45296	0.019	0.019		
SS_Eff2	~~	FM_ACC_mean	3.45288	-0.638	-0.638		
Switching	=~	SS_ACC	2.77410	3.501	0.297	2.177	2.177
Switching	=~	SS_Eff2	2.77405	-116.920	-9.915	-0.236	-0.236
TaskValue	~~	MasteryGoals_S	2.67304	0.490	0.490	6.519	6.519
FM_ACC_mean	~~	SelfEfficacy_S	2.61424	-0.003	-0.003		
SS_Eff2	~~	MasteryGoals_S	1.59682	-0.944	-0.944	-0.115	-0.115
SS_ACC	~~	SelfEfficacy_S	1.44009	0.004	0.004	0.088	0.088
SS_ACC	~~	TaskValue	1.42427	-0.003	-0.003	-0.083	-0.083
SALES	=~	SS_ACC	1.37314	0.179	0.093	0.679	0.679
SALES	=~	SS_Eff2	1.37313	-5.968	-3.091	-0.074	-0.074
SelfEfficacy_S	~~	MasteryGoals_S	1.33793	-0.193	-0.193	-2.405	-2.405
Switching	=~	SelfEfficacy_S	1.17493	-0.323	-0.027	-0.041	-0.041
SS_Eff2	~~	TaskValue	0.86294	0.871	0.871	0.054	0.054
Inhibition	=~	TaskValue	0.66524	-0.254	-0.023	-0.030	-0.030
Learning	=~	TaskValue	0.65514	-0.005	-0.018	-0.024	-0.024
FM_ACC_mean	~~	TaskValue	0.46035	0.001	0.001		
PostScore	~~	TaskValue	0.33726	-0.043	-0.043		
Inhibition	=~	MasteryGoals_S	0.32438	0.162	0.015	0.019	0.019
Learning	=~	SelfEfficacy_S	0.28388	0.004	0.013	0.020	0.020
PostScore	~~	SelfEfficacy_S	0.26683	0.043	0.043		
Switching	=~	MasteryGoals_S	0.26568	0.125	0.011	0.014	0.014
SS_Eff2	~~	SelfEfficacy_S	0.13082	0.381	0.381	0.022	0.022
FM_ACC_mean	~~	MasteryGoals_S	0.12449	0.001	0.001		
Learning	=~	MasteryGoals_S	0.10986	0.002	0.007	0.009	0.009
SS_ACC	~~	MasteryGoals_S	0.10107	0.001	0.001	0.040	0.040
PostScore	~~	MasteryGoals_S	0.02738	0.011	0.011		
Inhibition	=~	SelfEfficacy_S	0.00983	0.035	0.003	0.005	0.005
Switching	=~	TaskValue	0.00799	0.024	0.002	0.003	0.003
SelfEfficacy_S	~~	TaskValue	6.43e-6	0.000	0.000	0.002	0.002

Note. expected parameter changes and their standardized forms (sEPC); for latent variables (LV), all variables (all), and latent and observed variables except for the exogenous observed variables (nox)

Path Model

Path diagrams



Model diagram notes
Circle layout requires rotation to be `Exogenous Top` or `Exogenous Bottom`. Rotation has been set to `Exogenous Top`