

Supplementary Data. Digital technology practices for vocational teachers in the industrial revolution 4.0: Mediating technology self-efficacy

Instrument Validity and Reliability

Outer Loading					Outer Weight					VIF	
	DTP	IN	SS	TSE		DTP	IN	SS	TSE		VIF
DTP1	0.899				DTP1	0.192				DTP1	4.130
DTP2	0.879				DTP2	0.191				DTP2	3.184
DTP3	0.895				DTP3	0.196				DTP3	4.569
DTP4	0.861				DTP4	0.182				DTP4	2.977
DTP5	0.836				DTP5	0.188				DTP5	2.844
DTP6	0.910				DTP6	0.188				DTP6	4.467
IN1		0.742			IN1		0.265			IN1	1.834
IN2		0.704			IN2		0.228			IN2	1.732
IN3		0.801			IN3		0.313			IN3	1.705
IN4		0.807			IN4		0.221			IN4	4.309
IN5		0.812			IN5		0.261			IN5	4.296
SS1			0.810		SS1			0.260		SS1	2.403
SS2			0.833		SS2			0.170		SS2	2.768
SS3			0.893		SS3			0.236		SS3	3.536
SS4			0.905		SS4			0.241		SS4	4.183
SS5			0.855		SS5			0.257		SS5	2.838
TSE1				0.758	TSE1				0.226	TSE1	1.749
TSE2				0.772	TSE2				0.212	TSE2	2.000
TSE3				0.723	TSE3				0.223	TSE3	1.574
TSE4				0.775	TSE4				0.209	TSE4	1.963
TSE5				0.754	TSE5				0.228	TSE5	1.836
TSE6				0.716	TSE6				0.238	TSE6	1.633

Fornell-Larcker Criterion

	DTP	IN	SS	TSE
DTP	0.880			
IN	0.779	0.775		
SS	0.343	0.195	0.860	
TSE	0.782	0.568	0.293	0.750

Heterotrait-Monotrait Ratio (HTMT)

	DTP	IN	SS	TSE
DTP				
IN	0.866			
SS	0.363	0.214		
TSE	0.876	0.665	0.324	

Cross Loadings

	Digital Technology Practice	Infrastructure	Social Support	Technology Self Efficacy
DTP1	0.899	0.741	0.297	0.654
DTP2	0.879	0.693	0.297	0.692
DTP3	0.895	0.760	0.325	0.654
DTP4	0.861	0.609	0.328	0.706
DTP5	0.836	0.628	0.234	0.753
DTP6	0.910	0.678	0.331	0.675
IN1	0.603	0.742	0.191	0.458
IN2	0.519	0.704	0.147	0.394
IN3	0.720	0.801	0.230	0.529
IN4	0.522	0.807	0.034	0.355
IN5	0.610	0.812	0.120	0.429
SS1	0.327	0.226	0.810	0.273
SS2	0.215	0.080	0.833	0.175
SS3	0.288	0.164	0.893	0.256
SS4	0.291	0.159	0.905	0.265
SS5	0.325	0.178	0.855	0.266
TSE1	0.563	0.489	0.181	0.758
TSE2	0.567	0.384	0.231	0.772
TSE3	0.595	0.418	0.208	0.723
TSE4	0.561	0.412	0.120	0.775
TSE5	0.614	0.401	0.255	0.754
TSE6	0.612	0.444	0.311	0.716

Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Digital Technology Practice	0.942	0.942	0.954	0.775
Infrastructure	0.833	0.841	0.882	0.600
Social Support	0.912	0.920	0.934	0.739
Technology Self Efficacy	0.844	0.844	0.885	0.563

Goodness of fit

Fit Summary

	Saturated Model	Estimated Model
SRMR	0.077	0.077
d_ULS	1.483	1.483
d_G	0.907	0.907
Chi-Square	968.219	968.219
NFI	0.745	0.745

Total Construct Crossvalidated Redundancy

	SSO	SSE	Q ² (1-SSE/SSO)
DTP	1242.000	491.117	0.605
IN	1035.000	1035.000	
SS	1035.000	1035.000	
TSE	1242.000	1008.186	0.188

R Square

	R Square	R Square Adjusted
DTP	0.788	0.785
TSE	0.357	0.351

Data Processing Results between Variables

Notes :

IN = Infrastructure

1 = Path Coefficients

SS = Social Support

2 = Indirect Effects

TSE = Technology Self Efficacy

3 = Total Effects

DTP = Digital Technology Practices

	Original Sample (O)			Sample Mean (M)			Standard Deviation (STDEV)			T Statistics (O/STDEV)			p-Values		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
IN → DTP	0.490	0.250	0.741	0.486	0.256	0.742	0.088	0.067	0.047	5.568	3.712	15.833	.000	.000	.000
IN → TSE	0.531		0.531	0.531		0.531	0.082		0.082	6.508		6.508	.000		.000
SS → DTP	0.109	0.089	0.199	0.109	0.093	0.201	0.043	0.038	0.054	2.534	2.353	3.669	.012	.019	.000
SS → TSE	0.190		0.190	0.194		0.194	0.074		0.074	2.554		2.554	.011		.011
TSE → DTP	0.472		0.472	0.477		0.477	0.079		0.079	5.997		5.997	.000		.000

Data Processing Results on Each Participant's Background

Teaching experience Under 10 years old

	Original Sample (O)			Sample Mean (M)			Standard Deviation (STDEV)			T Statistics (O/STDEV)			p-Values		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
IN → DTP	0.670	0.145	0.815	0.663	0.151	0.814	0.143	0.091	0.049	4.699	2.599	7.683	.000	.010	.000
IN → TSE	0.426		0.426	0.426		0.426	0.171		0.171	2.498		2.498	.013		.013
SS → DTP	0.098	0.106	0.204	0.098	0.109	0.215	0.077	0.053	0.081	1.617	2.381	2.305	.021	.013	.015
SS → TSE	0.091		0.091	0.091		0.091	0.141		0.141	1.501		1.501	.030		.030
TSE → DTP	0.341		0.341	0.343		0.343	0.137		0.137	2.494		2.494	.013		.013

11 to 20 years

	Original Sample (O)			Sample Mean (M)			Standard Deviation (STDEV)			T Statistics (O/STDEV)			p-Values		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
IN → DTP	0.346	0.260	0.606	0.345	0.263	0.608	0.064	0.063	0.070	5.408	4.158	8.654	.000	.000	.000
IN → TSE	0.539		0.539	0.544		0.544	0.094		0.094	5.728		5.728	.000		.000
SS → DTP	0.234	0.172	0.406	0.232	0.175	0.407	0.071	0.058	0.074	3.308	2.950	5.503	.001	.003	.000
SS → TSE	0.356		0.356	0.359		0.359	0.097		0.097	3.687		3.687	.000		.000
TSE → DTP	0.483		0.483	0.484		0.484	0.081		0.081	5.948		5.948	.000		.000

Over 21 years old

	Original Sample (O)			Sample Mean (M)			Standard Deviation (STDEV)			T Statistics (O/STDEV)			p-Values		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
IN → DTP	0.368	0.328	0.696	0.354	0.351	0.705	0.173	0.140	0.094	2.129	2.346	7.412	.034	.011	.000
IN → TSE	0.591		0.591	0.619		0.619	0.123		0.123	4.793		4.793	.000		.000
SS → DTP	0.334	0.224	0.558	0.339	0.245	0.584	0.095	0.125	0.092	1.947	2.010	2.907	.036	.024	.009
SS → TSE	0.442		0.442	0.445		0.445	0.149		0.149	2.311		2.311	.019		.019
TSE → DTP	0.555		0.555	0.562		0.562	0.159		0.159	3.501		3.501	.001		.001

School Type
Public school

	Original Sample (O)			Sample Mean (M)			Standard Deviation (STDEV)			T Statistics (O/STDEV)			p-Values		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
IN → DTP	0.501	0.185	0.686	0.478	0.206	0.684	0.124	0.132	0.079	4.051	2.289	9.643	.000	.030	.000
IN → TSE	0.478		0.478	0.489		0.489	0.151		0.151	3.166		3.166	.002		.002
SS → DTP	0.394	0.116	0.509	0.194	0.127	0.321	0.057	0.162	0.084	3.390	3.174	4.055	.001	.026	.000
SS → TSE	0.299		0.299	0.314		0.314	0.123		0.123	2.436		2.436	.015		.015
TSE → DTP	0.387		0.387	0.406		0.406	0.123		0.103	3.152		3.152	.002		.002

Private school

	Original Sample (O)			Sample Mean (M)			Standard Deviation (STDEV)			T Statistics (O/STDEV)			p-Values		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
IN → DTP	0.473	0.264	0.738	0.460	0.279	0.739	0.113	0.089	0.055	4.203	1.977	13.334	.000	.002	.000
IN → TSE	0.521		0.521	0.533		0.533	0.101		0.101	5.161		5.161	.000		.000
SS → DTP	0.315	0.274	0.589	0.304	0.232	0.536	0.066	0.065	0.088	1.192	2.134	4.698	.011	.000	.000
SS → TSE	0.246		0.246	0.182		0.182	0.124		0.124	1.178		1.178	.043		.043
TSE → DTP	0.508		0.508	0.516		0.516	0.100		0.100	5.055		5.055	.000		.000

Areas of expertise

Business and management

	Original Sample (O)			Sample Mean (M)			Standard Deviation (STDEV)			T Statistics (O/STDEV)			p-Values		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
IN → DTP	0.142	0.304	0.446	0.190	0.371	0.561	0.188	0.163	0.197	2.264	2.172	3.617	.037	.010	.011
IN → TSE	0.487		0.487	0.510		0.510	0.194		0.194	3.512		3.512	.012		.012
SS → DTP	0.129	0.301	0.430	0.189	0.348	0.537	0.100	0.142	0.171	4.986	2.420	5.344	.044	.013	.001
SS → TSE	0.276		0.276	0.251		0.251	0.193		0.193	2.431		2.431	.024		.024
TSE → DTP	0.727		0.727	0.689		0.689	0.175		0.175	4.145		4.145	.000		.000

Informatics and Communication Engineering

	Original Sample (O)			Sample Mean (M)			Standard Deviation (STDEV)			T Statistics (O/STDEV)			p-Values		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
IN → DTP	0.516	0.295	0.811	0.522	0.286	0.808	0.134	0.091	0.086	3.838	3.254	9.462	.000	.000	.000
IN → TSE	0.711		0.711	0.716		0.716	0.137		0.137	5.191		5.191	.000		.000
SS → DTP	0.259	0.272	0.531	0.242	0.250	0.492	0.126	0.096	0.134	2.263	3.155	5.645	.029	.035	.000
SS → TSE	0.274		0.274	0.226		0.226	0.110		0.110	1.826		1.826	.035		.035
TSE → DTP	0.415		0.415	0.412		0.412	0.130		0.130	3.183		3.183	.002		.002

Technology and Engineering

	Original Sample (O)			Sample Mean (M)			Standard Deviation (STDEV)			T Statistics (O/STDEV)			p-Values		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
IN → DTP	0.571	0.222	0.793	0.548	0.246	0.793	0.134	0.114	0.054	4.275	1.945	14.786	.000	.011	.000
IN → TSE	0.549		0.549	0.557		0.557	0.125		0.125	4.394		4.394	.000		.000
SS → DTP	0.280	0.199	0.479	0.277	0.202	0.479	0.158	0.149	0.076	2.378	2.009	4.356	.020	.000	.000
SS → TSE	0.246		0.246	0.245		0.245	0.110		0.110	2.228		2.228	.026		.026
TSE → DTP	0.404		0.404	0.425		0.425	0.121		0.121	3.341		3.341	.001		.001

Tourist

	Original Sample (O)			Sample Mean (M)			Standard Deviation (STDEV)			T Statistics (O/STDEV)			p-Values		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
IN → DTP	0.271	0.502	0.773	0.249	0.498	0.747	0.163	0.146	0.129	2.664	3.636	6.004	.019	.000	.000
IN → TSE	0.693		0.693	0.688		0.688	0.129		0.129	5.364		5.364	.000		.000
SS → DTP	0.192	0.169	0.361	0.152	0.277	0.429	0.173	0.106	0.130	1.822	3.596	5.368	.036	.017	.000
SS → TSE	0.333		0.333	0.341		0.341	0.131		0.131	1.779		1.779	.006		.006
TSE → DTP	0.725		0.725	0.725		0.725	0.159		0.159	4.550		4.550	.000		.000

Gender Female

	Original Sample (O)			Sample Mean (M)			Standard Deviation (STDEV)			T Statistics (O/STDEV)			p-Values		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
IN → DTP	0.262	0.253	0.515	0.258	0.384	0.642	0.096	0.086	0.108	2.727	4.324	5.856	.007	.000	.000
IN → TSE	0.586		0.586	0.612		0.612	0.126		0.126	4.665		4.665	.000		.000
SS → DTP	0.252	0.232	0.484	0.243	0.571	0.332	0.066	0.096	0.110	2.603	3.584	4.950	.010	.005	.000
SS → TSE	0.119		0.119	0.173		0.173	0.139		0.139	1.914		1.914	.028		.028
TSE → DTP	0.636		0.636	0.634		0.634	0.094		0.094	6.764		6.764	.000		.000

Male

	Original Sample (O)			Sample Mean (M)			Standard Deviation (STDEV)			T Statistics (O/STDEV)			p-Values		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
IN → DTP	0.550	0.226	0.776	0.544	0.231	0.775	0.094	0.074	0.048	5.848	3.041	16.187	.000	.002	.000
IN → TSE	0.522		0.522	0.522		0.522	0.100		0.100	5.226		5.226	.000		.000
SS → DTP	0.157	0.179	0.336	0.188	0.184	0.372	0.099	0.072	0.062	1.608	1.982	4.532	.039	.019	.002
SS → TSE	0.183		0.183	0.195		0.195	0.093		0.093	2.972		2.972	.019		.019
TSE → DTP	0.432		0.432	0.435		0.435	0.083		0.083	5.221		5.221	.000		.000