

Multimedia Appendix 2. Summary of Findings Table for the Effects of Digital Health Education on communication skills

Digital education (online learning, virtual patient) compared with traditional				
Patient or population: first, second, third and/or fourth year undergraduate medical students				
Settings: Universities				
Intervention: Digital education (online digital education, VP simulation)				
Comparison: Traditional learning				
Outcomes	Illustrative comparative risks (95% CI)	Number of participants (number of studies)	Quality of the evidence (GRADE)	Comments
Skills (measured with surveys, checklist, Likert scales, OSCE)	The mean skills score in digital education groups was -0.19 standard deviations lower (-0.9 lower to 0.52 higher).	472 students (4 studies)	⊕⊕⊖⊖ low ^{a,b}	The standard deviations was derived from a SMD of -0.19 (95% CI: -0.9 to 0.52) which indicates a small effect size. The result of one study (168 participants) was not added to the meta-analysis due to incomplete outcome data. However, the study authors reported improved effectiveness in postintervention skills with online digital education compared to traditional learning [30].
Knowledge	No studies reported knowledge outcome.			

Attitude	No studies reported attitude outcome.
Satisfaction	No studies reported satisfaction outcome.
Patient-related outcome	No studies reported patient-related outcome.
Adverse outcome	No studies reported adverse events.
Economic evaluation	No studies reported economic evaluation.
<p>OSCE-objective structured clinical examination; VP- virtual patient.</p> <p>GRADE Working Group grades of evidence</p> <p>High quality: further research is very unlikely to change our confidence in the estimate of effect.</p> <p>Moderate quality: further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.</p> <p>Low quality: further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.</p> <p>Very low quality: we are very uncertain about the estimate.</p>	

Table 2 Legend:

^a Downgraded by one level for study limitations: the risk of bias was unclear or high in most included studies.

^b Downgraded by one level for inconsistency: the heterogeneity between studies was high with a lack of overlap among confidence intervals.