

## Appendix 1. MEDLINE (Ovid) search strategy

1. exp education, professional/ not education, veterinary/
2. Education, Pre dental/
3. Education, Pre medical/
4. exp Students, Health Occupations/
5. ((medic\* or premedic\* or dent\* or laborator\* or pre dent\* or midwi?e\* or nurs\* or nutrition\* or orthop\* or podiat\* or pharmac\* or psycholog\* or psychiatr\* or health or healthcare or occupational therap\* or physiotherap\* or physical therap\* or clinical or surg\* or radiolog\* or obstetric\* or gyn?ecolog\* or orthodont\* or An?esthesi\* or Dermatolog\* or Oncolog\* or Rheumatolog\* or Neurolog\* or Patholog\* or P?ediatric\* or Cardiolog\* or Urolog\*) adj3 (student\* or graduate\* or undergraduate\* or staff or personnel or practitioner\* or clerk\* or fellow\* or internship\* or residen\* or educat\* or train\* or novice\* or tutor\*)).tw,kf.
6. or/1-5
7. Computer-Assisted Instruction/
8. exp Internet/
9. Computer Simulation/
10. Patient Simulation/
11. software/
12. Mobile Applications/
13. User-Computer Interface/
14. Video Games/
15. Web Browser/
16. Education, Distance/
17. Computers/
18. exp Microcomputers/
19. exp Cell Phones/
20. Games, Experimental/
21. exp Models, Anatomic/
22. Audiovisual Aids/
23. Educational Technology/
24. Electronic Mail/
25. exp Telemedicine/
26. Telenursing/
27. Telecommunications/
28. Webcasts/
29. exp Videoconferencing/
30. ((computer\* or digital\* or hybrid or blended or mixed mode or distance or remote\* or electronic or mobile or online\* or interactiv\* or multimedia or internet or web\* or virtual\* or game\* or gaming or Videogame\* or Videogaming) adj3 (classroom\* or course\* or educat\* or instruct\* or learn\* or lecture\* or simulat\* or train\* or teach\* or tutor\* or platform\*)).tw,kf.
31. (Simulat\* adj3 (course\* or educat\* or instruct\* or learn\* or train\* or teach\* or platform\* or high-fidelity)).tw,kf.
32. e-learn\*.tw,kf.

33. elearn\*.tw,kf.
34. m-learn\*.tw,kf.
35. mlearn\*.tw,kf.
36. smartphone\*.tw,kf.
37. smart-phone\*.tw,kf.
38. ((mobile or cell) adj2 phone\*).tw,kf.
39. iphone\*.tw,kf.
40. android\*.tw,kf.
41. ipad\*.tw,kf.
42. Personal digital assistant\*.tw,kf.
43. handheld computer\*.tw,kf.
44. Mobile App?.tw,kf.
45. Mobile Application?.tw,kf.
46. webcast\*.tw,kf.
47. webinar\*.tw,kf.
48. flipped classroom\*.tw,kf.
49. Serious game\*.tw,kf.
50. Serious gaming.tw,kf.
51. Patient Simulat\*.tw,kf.
52. Virtual patient\*.tw,kf.
53. ((educat\* or instruct\* or learn\* or simulat\* or train\* or teach\* or interactiv\*) adj2 technolog\*).tw,kf.
54. Massive Open Online Course?.tw,kf.
55. Mooc?.tw,kf.
56. (Canvas network or Coursera or Coursesites or edx or Futurelearn or iversity or miriada x ormoodle or novoed or openlearning or open2study or plato or spoc or udacity or pingpong).tw,kf.
57. or/7-56
58. 6 and 57
59. Education.fs.
60. Education/
61. Teaching/
62. Learning/
63. exp Inservice Training/
64. Curriculum/
65. educat\*.tw,kf.
66. learn\*.tw,kf.
67. train\*.tw,kf.
68. instruct\*.tw,kf.
69. teach\*.tw,kf.
70. or/59-69
71. Health Personnel/
72. exp AlliedHealth Personnel/
73. Anatomists/
74. "Coroners andMedical Examiners"/
75. exp Dental Staff/
76. exp Dentists/
77. Health Educators/

78. Infection Control Practitioners/
79. Medical Laboratory Personnel/
80. expMedical Staff/
81. exp Nurses/
82. exp Nursing Staff/
83. Personnel, Hospital/
84. Pharmacists/
85. exp Physicians/
86. Physician\*.tw,kf.
87. Doctor\*.tw,kf.
88. Nurs\*.tw,kf.
89. Surg\*.tw,kf.
90. Health Personnel.tw,kf.
91. healthcare professional\*.tw,kf.
92. radiolog\*.tw,kf.
93. dentist\*.tw,kf.
94. Pharmacist\*.tw,kf.
95. Hospital Administrator\*.tw,kf.
96. Podiatr\*.tw,kf.
97. Psycholog\*.tw,kf.
98. Psychiatr\*.tw,kf.
99. An?esthesi\*.tw,kf.
100. Clinician\*.tw,kf.
101. Dermatolog\*.tw,kf.
102. General practioner\*.tw,kf.
103. Cardiolog\*.tw,kf.
104. Oncolog\*.tw,kf.
105. Rheumatolog\*.tw,kf.
106. Neurolog\*.tw,kf.
107. Patholog\*.tw,kf.
108. P?ediatric\*.tw,kf.
109. Physiotherap\*.tw,kf.
110. Physical therap\*.tw,kf.
111. Occupational therap\*.tw,kf.
112. dieti?ian\*.tw,kf.
113. Dietetic\*.tw,kf.
114. midwi?e\*.tw,kf.
115. nutrition\*.tw,kf.
116. orthopti\*.tw,kf.
117. obstetric\*.tw,kf.
118. gyn?ecolog\*.tw,kf.
119. orthodont\*.tw,kf.
120. Urolog\*.tw,kf.
121. or/71-120
122. Health Occupations/
123. exp AlliedHealth Occupations/
124. Biomedical Engineering/
125. Chiropractic/

126. exp Dentistry/
127. exp Evidence-Based Practice/
128. exp Medicine/
129. exp Nursing/
130. Dietetics/
131. Optometry/
132. Orthoptics/
133. exp Pharmacology/
134. exp Pharmacy/
135. Podiatry/
136. Psychology, Medical/
137. Serology/
138. Specialization/
139. exp Surgical Procedures, Operative/
140. exp Radiography/
141. or/122-140
142. 121 or 141
143. 57 and 70 and 142
144. Psychomotor Performance/
145. motor skills/
146. ((psychomotor or procedural or technical) adj3 skill\*).tw,kf.
147. (psychomotor adj3 performance).tw,kf.
148. or/144-147
149. 6 and 148
150. 58 or 143 or 149
151. limit 150 to yr="1990 -Current"