

## **Appendix 3**

### **Definition of study variables**

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Teaching method

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- B Blended Learning
  - E E-learning
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Citations

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- CC1 Article is part of the main connected component of the studied articles graph
  - CC0 Article is not part of the main connected component of the studied articles graph
  - Ci0 No citations were found for this article at the time of this study
  - Ci1 Up to 10 citation were found for this article at the time of this study
  - Ci2 More than 10 citations were found for this article at the time of this study
  - Rf0 Article has less than 2 references in common with other articles in this study
  - Rf1 Article has 2 to 10 references in common with other articles in this study
  - Rf2 Article has more than 10 references in common with other articles in this study
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Platform support

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- A Audio Response System
  - B Blog
  - C CD/DVD ROM
  - E Ebook
  - We Website
  - M Email
  - Po Podcast
  - Pt Portfolio
  - T Video Conference
  - Wi Wiki
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Media features

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- An Animation
- Au Audio
- D Diagram
- I Image

## Description of platform features

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
[1]	2011	evidence based medicine	B	B A	n/a	n/a	n/a	n/a	Rf0 Ci1 CC1
[2]	2012	reproductive medicine	E	We E	T I D An	Q I F P	I F	Pr Se Me	Rf2 Ci1 CC1
[3]	2013	general	B	We	T I D	S V Q I F	n/a	Cn Se Mo Me	Rf1 Ci1 CC0
[4]	2012	general	B	We	T	Cb S	F	n/a	Rf1 Ci1 CC1
[5]	2009	anatomy	B	A	T I	I F	n/a	n/a	Rf0 Ci1 CC1
[6]	2011	oncology	E	We	T I D	C Q I F P	n/a	n/a	Rf2 Ci1 CC1
[7]	2010	dermatology	E	Po	V Au	n/a	n/a	n/a	Rf1 Ci1 CC0
[8]	2012	geriatrics	E	We	n/a	I	n/a	n/a	Rf1 Ci1 CC0
[9]	2012	cardiology	E	We	n/a	n/a	n/a	n/a	Rf2 Ci1 CC1
[10]	2012	professionalism	E	n/a	V	Q F P	n/a	Se	Rf0 Ci0 CC0
[11]	2010	anatomy genetics histology	B	T	V	n/a	n/a	n/a	Rf2 Ci2 CC1
[12]	2012	emergency	E	We M	T I	I	F	n/a	Rf1 Ci1 CC0
[13]	2008	pulmonology	E	We Wi	T V Au I D	Q I F	F	Me	Rf0 Ci1 CC1
[14]	2008	dermatology	E	We	T I D	S I F	H	n/a	Rf2 Ci1 CC1
[15]	2010	ophthalmology	E	We	T I D	Q I	n/a	n/a	Rf2 Ci1 CC1
[16]	2009	general surgery	E	We Po	T I	n/a	n/a	n/a	Rf1 Ci2 CC1
[17]	2013	general	B	E	n/a	n/a	n/a	n/a	Rf0 Ci0 CC0
[18]	2010	cardiology haematology	E	We	T I D	S V C I F P	n/a	n/a	Rf0 Ci2 CC1

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
[18]	2010	cardiology haematology	B	We	T I D	S V C I F P	n/a	n/a	Rf0 Ci1 CC1
[19]	2007	general	E	We	n/a	Cb S G I F	I F	n/a	Rf1 Ci2 CC1
[20]	2012	immunology	B	We	An	n/a	n/a	n/a	Rf2 Ci1 CC1
[21]	2011	general	E	We	T D	n/a	n/a	n/a	Rf0 Ci0 CC0
[22]	2009	general	B	n/a	V	n/a	n/a	n/a	Rf0 Ci1 CC1
[22]	2009	general	B	T	n/a	n/a	n/a	n/a	Rf0 Ci1 CC1
[23]	2013	cardiology	E	We	V	Q I F	n/a	n/a	Rf0 Ci0 CC0
[24]	2004	pathology	E	We	T	C Q I	F Ca	n/a	Rf0 Ci1 CC1
[25]	2013	emergency	E	We	n/a	S G I F	n/a	n/a	Rf0 Ci1 CC1
[26]	2008	professionalism	B	We	T V Au I D	Cb I F	I F D	Me	Rf2 Ci2 CC1
[27]	2004	general	E	Pt	n/a	n/a	n/a	n/a	Rf1 Ci2 CC0
[28]	2012	general	E	T	n/a	n/a	n/a	n/a	Rf1 Ci1 CC0
[29]	2011	radiology	E	T	V Au	n/a	n/a	n/a	Rf1 Ci1 CC0
[30]	2003	primary	E	We	T I D	C I F P	n/a	Se	Rf0 Ci1 CC1
[31]	2012	psychiatry	E	T	V	n/a	n/a	n/a	Rf2 Ci1 CC1
[32]	2009	general	B	We	T I D	C I P	n/a	n/a	Rf1 Ci1 CC1
[33]	2009	general	E	We	T Au I D	S V C I F P	n/a	n/a	Rf1 Ci1 CC1
[34]	2012	radiology	n/a	We	n/a	I F	n/a	n/a	Rf0 Ci0 CC1
[35]	2008	professionalism	B	B	T	n/a	n/a	n/a	Rf2 Ci2 CC1

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
[36]	2009	orthopaedics	B	We	T V I D	n/a	n/a	Me	Rf0 Ci1 CC0
[37]	2009	public health	B	B Wi	T	Cb	F	n/a	Rf1 Ci1 CC0
[38]	2012	ophthalmology	B	We	n/a	n/a	n/a	n/a	Rf0 Ci0 CC0
[39]	2011	anatomy	E	We	T	I	n/a	n/a	Rf1 Ci2 CC1
[40]	2012	immunology	E	We B	T	n/a	n/a	n/a	Rf0 Ci0 CC0
[41]	2012	general surgery	E	We	T	Cb I	n/a	n/a	Rf2 Ci1 CC1
[42]	2008	general surgery	B	We	T I	C I F	n/a	Me	Rf1 Ci2 CC1
[43]	2008	general surgery	B	We	n/a	S	n/a	n/a	Rf1 Ci1 CC1
[44]	2012	emergency	E	We	n/a	Cb G I F	n/a	n/a	Rf1 Ci1 CC0
[45]	2009	anaesthesia	B	We	T V Au I D	S C Q I F P	n/a	Me	Rf1 Ci1 CC0
[46]	2012	cardiovascular surgery	E	We	T V Au I	Q I F P	n/a	n/a	Rf1 Ci0 CC0
[47]	2013	geriatrics	B	We	T V Au I D	Q I F	n/a	Me	Rf0 Ci1 CC1
[48]	2011	physiology	B	We	T V Au I D An	S C Q I F P	n/a	Ch Pr Se Mo Me Pe	Rf0 Ci1 CC1
[49]	2011	anatomy	B	We	T V I D	Cb Q I F P	D	Me	Rf1 Ci1 CC0
[50]	2012	general	B	We	n/a	n/a	F D	n/a	Rf1 Ci1 CC0
[51]	2007	evidence based medicine	E	We C	T V Au	n/a	n/a	Me	Rf2 Ci2 CC1
[52]	2012	emergency	B	We	V Au	n/a	n/a	n/a	Rf2 Ci1 CC1
[53]	2012	biochemistry	B	We	T V Au I	Cb	F	n/a	Rf1 Ci0 CC0

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
[54]	2006	general	B	We	T V Au I	n/a	F	n/a	Rf2 Ci0 CC1
[55]	2007	general	E	We	V	n/a	n/a	n/a	Rf1 Ci1 CC1
[56]	2012	anatomy	E	We	n/a	S I	n/a	Ch	Rf1 Ci1 CC0
[57]	2011	nephrology	E	We	T V Au I D	Q I	F	n/a	Rf2 Ci0 CC1
[58]	2009	radiology	E	We	T I D	n/a	n/a	Ch Si Cn Pr Se Mo Me	Rf1 Ci0 CC0
[59]	2010	nuclear medicine	E B	We	T V I D	C Q I F	n/a	Me	Rf1 Ci1 CC1
[60]	2005	radiology	E	We	T I D An	S I F	n/a	Cn Me	Rf1 Ci1 CC1
[61]	2012	geriatrics	B	We T Pt	T V Au	G	n/a	n/a	Rf1 Ci2 CC1
[62]	2008	anatomy	B	We	T I D	Cb	F	n/a	Rf1 Ci1 CC1
[63]	2008	palliative	E	We	T	Q	n/a	n/a	Rf1 Ci1 CC1
[64]	2003	n/a	B	We Pt	T I D	Cb Q I F P	F Ca	Se Me	Rf2 Ci1 CC1
[65]	2005	dermatology	E	We	T I D	C Q I F P	n/a	Si Cn Pr Se Me	Rf2 Ci1 CC0
[66]	2013	paediatrics	B	We	T I D	C Q I F	n/a	Si Pr Se	Rf1 Ci1 CC0
[67]	2012	infectious diseases	B	We T Po	n/a	n/a	D	n/a	Rf0 Ci0 CC0
[68]	2009	psychiatry	E	We	T V Au I	S I F	n/a	n/a	Rf1 Ci1 CC0
[69]	2013	radiology	E	We	n/a	n/a	n/a	n/a	Rf1 Ci1 CC1
[70]	2005	cardiovascular surgery	E	We	T V Au I D An	S I	n/a	Cn V	Rf0 Ci0 CC1
[71]	2006	cardiovascular surgery	E	We	T V Au I D An	S I	n/a	Cn	Rf2 Ci1 CC1

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
[72]	2012	general surgery	B	We	T V I	Cb S C Q I F P	n/a	Me	Rf1 Ci1 CC1
[73]	2006	primary	B	We Pt	T	n/a	n/a	n/a	Rf0 Ci1 CC1
[74]	2013	general	B	We T	n/a	Cb	n/a	n/a	Rf0 Ci1 CC1
[75]	2003	general	E	We	T Au I D	C	D	n/a	Rf1 Ci1 CC1
[76]	2010	paediatrics	E	We Po	T V Au I D	Cb C Q I F	n/a	Me	Rf2 Ci1 CC0
[77]	2012	histology	E	B	n/a	C	n/a	n/a	Rf2 Ci0 CC0
[78]	2013	otolaryngology	B	Pt	T V Au I	Q I F P	D	n/a	Rf0 Ci1 CC0
[79]	2011	paediatrics	E	We	V An	n/a	n/a	n/a	Rf2 Ci1 CC0
[80]	2011	primary	E	We	T V Au I	V C I	n/a	n/a	Rf2 Ci1 CC1
[81]	2006	radiology	E B	We	T V I D	Cb Q I F	F D	Si Cn Pr Se Me	Rf0 Ci1 CC1
[82]	2008	anatomy	E	n/a	n/a	n/a	n/a	n/a	Rf1 Ci1 CC1
[83]	2012	otolaryngology	E	We	T I	C Q	n/a	n/a	Rf1 Ci1 CC0
[84]	2010	general	B	We	n/a	Cb	F	n/a	Rf1 Ci1 CC0
[85]	2010	palliative	B	We	T V I	C I	n/a	Me	Rf0 Ci2 CC0
[86]	2007	genetics	E	We	T An	I	D	Se	Rf0 Ci2 CC0
[87]	2013	epidemiology	B	We	T V Au I	n/a	F	n/a	Rf1 Ci0 CC1
[88]	2009	radiology	E	We	T I D	S Q I F	n/a	Me	Rf0 Ci1 CC1
[89]	2012	emergency	B	We	n/a	V	n/a	n/a	Rf0 Ci1 CC1
[90]	2013	general surgery	E	We M	T	C Q I	n/a	n/a	Rf1 Ci1 CC1

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
[91]	2010	evidence based medicine	E	We	n/a	n/a	D	n/a	Rf2 Ci2 CC1
[92]	2011	physics	E	We	T I D	Cb S V Q I F	n/a	n/a	Rf2 Ci2 CC0
[93]	2011	general	E	We	T V Au I D	Q I	n/a	Cn Se Mo Me	Rf1 Ci1 CC1
[94]	2012	advanced life support	E	We	n/a	n/a	D	n/a	Rf2 Ci0 CC0
[95]	2010	pulmonology	B	We	T	Q F	F	n/a	Rf0 Ci0 CC0
[96]	2008	informatics	E	Wi	n/a	Cb	D	n/a	Rf0 Ci1 CC0
[97]	2013	psychiatry	E	We	T V Au I	V I	n/a	n/a	Rf2 Ci1 CC0
[98]	2013	reproductive medicine	E	We	n/a	Q	n/a	n/a	Rf0 Ci0 CC0
[99]	2008	psychology	B	We C Pt	T V Au I	C Q I F	n/a	Me V	Rf2 Ci1 CC1
[100]	2012	professionalism	B	We	V	Q	n/a	n/a	Rf2 Ci1 CC0
[101]	2009	neurology	B	We	T V Au	Q	n/a	Me	Rf2 Ci1 CC0
[102]	2012	professionalism	E	We	T V Au I	Q F	n/a	n/a	Rf0 Ci0 CC0
[103]	2010	neuroscience	B	We	T I D	Q I F	n/a	Cn Me	Rf0 Ci0 CC1
[104]	2013	pharmacology	E	C Po	n/a	n/a	n/a	n/a	Rf1 Ci1 CC1
[105]	2006	radiology	E	We	T V Au I D An	Q F	n/a	n/a	Rf1 Ci1 CC1
[106]	2009	physiology	E	We	D	S Q I F	H	Ch Si Cn Pr Se Mo Me Pe	Rf1 Ci1 CC1
[107]	2009	urology	B	We	T I	S C Q I F	n/a	Me	Rf0 Ci1 CC1
[108]	2011	urology	E	We	T I D	S C I F P	n/a	Se	Rf2 Ci1 CC1



Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
[109]	2006	radiology	E	We	T I	n/a	n/a	Cn	Rf0 Ci0 CC1
[110]	2010	otolaryngology	E	We	T	S I	n/a	n/a	Rf1 Ci2 CC0
[111]	2013	general	B	We	n/a	V I F P	n/a	n/a	Rf1 Ci1 CC0
[112]	2009	general	B	We Pt	T	Cb C Q P	n/a	n/a	Rf1 Ci0 CC1
[113]	2011	ophthalmology	B	We	n/a	n/a	n/a	n/a	Rf0 Ci0 CC1
[114]	2012	anatomy	B	We	V Au	n/a	n/a	n/a	Rf0 Ci2 CC1
[115]	2012	gynaecology	E	T	T V Au I	n/a	n/a	n/a	Rf0 Ci0 CC0
[116]	2009	dermatology	B	We	T V Au I D An	G Q I F P	D	n/a	Rf1 Ci1 CC0
[117]	2009	otolaryngology	E	We	T I	C Q I	n/a	n/a	Rf2 Ci2 CC1
[118]	2008	urology	E	We	T Au I D	Q I F	n/a	Pr Se Me	Rf2 Ci2 CC1
[119]	2009	urology	E	M	T	Q	n/a	n/a	Rf2 Ci1 CC1
[120]	2012	urology	E	We M	T	G Q I F P	n/a	n/a	Rf2 Ci1 CC1
[121]	2007	urology	E	M	n/a	Q	n/a	n/a	Rf2 Ci1 CC1
[122]	2009	urology	E	We M	T I D	Q F	n/a	Se Me	Rf2 Ci1 CC1
[123]	2007	urology	B	We M	T Au	C Q I	n/a	n/a	Rf1 Ci1 CC1
[124]	2010	pathology	E	We M	T I D	Q F	n/a	Se Me	Rf2 Ci1 CC1
[125]	2011	physiology	E	We	T V Au I D	Cb S Q I F P	F	Pr Me V	Rf2 Ci1 CC1
[126]	2013	anatomy	E	We	n/a	S I	n/a	n/a	Rf2 Ci1 CC1
[127]	2010	general	E	We	T V Au I D	S C Q I F	n/a	Me	Rf0 Ci0 CC0

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
<a href="#">[128]</a>	2008	general	B	We	n/a	Cb S F P	I	Me	Rf1 Ci1 CC0
<a href="#">[129]</a>	2011	physiology	E	We	T V Au I D An	S I F	n/a	n/a	Rf1 Ci1 CC1
<a href="#">[130]</a>	2006	occupational medicine	E	We	T V Au I D	Q I F P	n/a	Me	Rf1 Ci1 CC1
<a href="#">[131]</a>	2012	general	E	We	T V Au I D	Cb	n/a	n/a	Rf1 Ci1 CC1
<a href="#">[132]</a>	2012	advanced life support	B	We	T V I	S V Q I F	n/a	Ch Si Cn Se Me	Rf1 Ci1 CC0
<a href="#">[133]</a>	2005	haematology	B	We	T I	C Q F P	n/a	Cn Pr Se Me	Rf0 Ci1 CC1
<a href="#">[134]</a>	2010	biochemistry	B	We	T Au I D An	Cb S Q I F	n/a	n/a	Rf2 Ci2 CC1
<a href="#">[135]</a>	2008	anatomy genetics histology	E B	We	T I D	G Q I F	I	Me	Rf1 Ci2 CC1
<a href="#">[135]</a>	2008	physiology	B	We Wi	n/a	Cb I	I F	n/a	Rf0 Ci2 CC1
<a href="#">[136]</a>	2008	evidence based medicine	E	We C	T Au I	I	D	Me	Rf2 Ci1 CC1
<a href="#">[137]</a>	2013	emergency	B	We Po	T V Au I D	Q	n/a	Se	Rf2 Ci1 CC1
<a href="#">[138]</a>	2010	paediatrics	B	We	T V Au I D	S V I	n/a	Me	Rf0 Ci1 CC0
<a href="#">[139]</a>	2013	paediatrics	B	We	T V Au I D	S Q I F	n/a	Cn Se Mo Me Pe	Rf1 Ci1 CC1
<a href="#">[140]</a>	2012	radiology	E	We	T I	Q I	n/a	Me	Rf0 Ci1 CC1
<a href="#">[141]</a>	2011	anaesthesia	B	We	T I D	S V C Q I F P	n/a	Se	Rf0 Ci1 CC0
<a href="#">[142]</a>	2009	primary	B	We	T V Au I D An	C Q I	F	n/a	Rf2 Ci1 CC1
<a href="#">[143]</a>	2006	cardiovascular surgery	B	n/a	n/a	S I	n/a	n/a	Rf0 Ci0 CC0
<a href="#">[144]</a>	2005	microbiology	E	We	T I D	G F P	n/a	Me	Rf0 Ci1 CC0

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
[145]	2006	informatics	E	We	n/a	n/a	F	n/a	Rf0 Ci2 CC1
[146]	2011	psychiatry	B	We M Wi	T	C	F D	n/a	Rf2 Ci1 CC0
[147]	2010	telemedicine	B	T	n/a	Cb	n/a	n/a	Rf0 Ci1 CC0
[148]	2009	radiology	B	We Po	T V Au I D	I F	n/a	n/a	Rf0 Ci0 CC0
[149]	2010	anatomy	E	We	n/a	S I	n/a	n/a	Rf1 Ci1 CC0
[150]	2013	paediatrics	B	We	T V Au I D	Cb S V C Q I F	n/a	Se Me	Rf1 Ci0 CC0
[151]	2008	evidence based medicine	B	We	T	I	n/a	n/a	Rf1 Ci1 CC1
[152]	2011	urology	E	We	T V Au I D An	F	n/a	n/a	Rf1 Ci1 CC1
[153]	2011	radiology	E	We	T I	C Q I F P	n/a	Cn Se Mo Me Pe	Rf0 Ci2 CC1
[154]	2005	microbiology	B	We M	T I An	n/a	I F D	n/a	Rf2 Ci2 CC0
[155]	2009	urology	E	M	T	n/a	n/a	n/a	Rf1 Ci1 CC1
[156]	2013	dermatology	E	We	T I	Q	n/a	n/a	Rf1 Ci0 CC0
[157]	2010	infectious diseases	B	We	n/a	C I	n/a	n/a	Rf2 Ci1 CC0
[158]	2012	neurology	E	We	T I	Q I	n/a	Cn Me	Rf0 Ci0 CC0
[159]	2009	geriatrics	E	We	T	n/a	n/a	n/a	Rf1 Ci1 CC1
[160]	2011	pharmacology	B	We	T V Au I D	Q I	I F	Me	Rf2 Ci1 CC0
[161]	2010	paediatrics	B	We Wi	T V I	C I	I	Me	Rf1 Ci1 CC1
[162]	2010	biochemistry	E	We	T V I	G I F P	n/a	Me	Rf1 Ci2 CC1

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
[163]	2012	haematology	E	We	T V Au I D	C Q I F P	n/a	Ch Si Cn Pr Se Mo Me V	Rf2 Ci2 CC1
[164]	2010	informatics	B	We M	T	Q	D Ca	n/a	Rf0 Ci1 CC1
[165]	2012	general	B	Po	n/a	n/a	n/a	n/a	Rf1 Ci1 CC1
[166]	2009	dermatology	B	We T	V Au	n/a	n/a	Me	Rf1 Ci1 CC1
[167]	2012	anatomy	B	We	T V Au I D	n/a	n/a	n/a	Rf2 Ci1 CC1
[168]	2008	cardiology	B	We	T I D An	S C Q I F	n/a	n/a	Rf1 Ci1 CC1
[169]	2011	emergency	E	We C	n/a	S C I	n/a	n/a	Rf0 Ci1 CC0
[170]	2010	paediatrics	E	We	n/a	n/a	n/a	n/a	Rf1 Ci1 CC1
[171]	2013	anaesthesia	E	We	n/a	S	n/a	n/a	Rf2 Ci1 CC0
[172]	2010	radiology	E	T	n/a	n/a	n/a	n/a	Rf0 Ci1 CC0
[173]	2005	cardiology	E	We	T V Au I D	I F	n/a	n/a	Rf0 Ci0 CC0
[174]	2003	general	E	We E	T Au I	C Q I F	I F D	n/a	Rf0 Ci1 CC1
[175]	2008	geriatrics	E	We	T V Au I	S C I F P	D	Me	Rf2 Ci1 CC0
[176]	2011	microbiology	B	We	T	Q I F	n/a	n/a	Rf1 Ci2 CC0
[177]	2004	radiology	E	We	T I D	Cb S Q I F	n/a	n/a	Rf0 Ci1 CC0
[178]	2013	nuclear medicine	E	We T	T V Au I D	V Q I F	I F	n/a	Rf0 Ci0 CC0
[179]	2012	urology	E	C	T I	n/a	n/a	n/a	Rf1 Ci0 CC0
[180]	2012	general surgery	E	We Po	T V Au I	n/a	n/a	n/a	Rf2 Ci1 CC1
[181]	2007	anatomy	B	We M	n/a	Q I	F D	n/a	Rf2 Ci2 CC1

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
[182]	2010	advanced life support	E	C	T V Au I D	S I	n/a	Me	Rf2 Ci1 CC1
[183]	2012	advanced life support	B	We	V Au	Q F	n/a	n/a	Rf2 Ci1 CC1
[184]	2011	neuroscience	B	We	n/a	Q	F	n/a	Rf2 Ci1 CC1
[185]	2006	occupational medicine	B	We	T V Au I D	C Q I F	n/a	Me	Rf1 Ci1 CC1
[186]	2013	primary	E	We	T I	Q	n/a	n/a	Rf0 Ci0 CC0
[187]	2010	physiology	B	We	T I	C Q I F	F	n/a	Rf2 Ci2 CC1
[188]	2012	anatomy	B	We	T I D	Q I F P	n/a	Ch Si Cn Se Mo Me Pe	Rf1 Ci1 CC1
[189]	2007	general surgery	E	We	T Au I D	n/a	n/a	Me V	Rf1 Ci1 CC1
[190]	2012	evidence based medicine	E	We	T	C I	F	n/a	Rf1 Ci0 CC0
[191]	2003	general	B	We	T V Au I D	Cb Q I F P	F D Ca	Se Me	Rf1 Ci2 CC1
[192]	2006	emergency	E	We	T I D An	S I F P	n/a	n/a	Rf1 Ci1 CC0
[193]	2012	radiology	E	We	D	n/a	n/a	n/a	Rf1 Ci1 CC1
[194]	2007	geriatrics	B	We	T V Au I	S Q F	n/a	Pr Me	Rf2 Ci2 CC0
[195]	2013	general surgery	E	We	T V Au I D An	Cb S Q I F P	n/a	Ch Si	Rf1 Ci0 CC0
[196]	2012	histology	B	We	T I D	I F	F	n/a	Rf2 Ci1 CC1
[197]	2008	anatomy	B	C	V	n/a	n/a	n/a	Rf2 Ci1 CC1
[198]	2006	informatics	B	We	T	Cb P	F	n/a	Rf1 Ci2 CC1
[199]	2012	radiology	E	We	T V Au I D	C	n/a	Ch Se	Rf1 Ci1 CC0

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
<a href="#">[200]</a>	2011	legal medicine	B	We	T Au I D	S C I F P	n/a	n/a	Rf1 Ci1 CC1
<a href="#">[201]</a>	2011	histology	E	We	T I	S I	n/a	Me	Rf1 Ci1 CC0
<a href="#">[202]</a>	2013	emergency	B	We	T V Au I D An	S Q I F P	n/a	n/a	Rf1 Ci1 CC1
<a href="#">[203]</a>	2011	physiology	B	We	T V Au I D	Q C I I	I F D Ca	n/a	Rf0 Ci1 CC1
<a href="#">[204]</a>	2013	radiology	E	We T	V Au	n/a	D	Se	Rf2 Ci1 CC1
<a href="#">[205]</a>	2010	paediatrics	E	We	V	n/a	n/a	n/a	Rf1 Ci0 CC1
<a href="#">[206]</a>	2004	anatomy	B	We	T I D	Cb C Q I	n/a	Cn Pr Se Me	Rf1 Ci2 CC1
<a href="#">[207]</a>	2007	emergency	B	We	n/a	C	n/a	n/a	Rf0 Ci0 CC0
<a href="#">[208]</a>	2011	primary	B	We M	T	C Q F	n/a	n/a	Rf2 Ci1 CC1
<a href="#">[209]</a>	2004	general	E	We T	T V Au I	Cb C I F P	F	Me	Rf0 Ci0 CC1
<a href="#">[210]</a>	2008	radiology	E	We	n/a	n/a	n/a	Se	Rf1 Ci1 CC1
<a href="#">[211]</a>	2011	dermatology	B	We	T V Au I	Q I F	F	Me	Rf1 Ci1 CC0
<a href="#">[212]</a>	2009	pathology	E	We M	T V Au I D An	Q I F	I F D Ca	n/a	Rf1 Ci0 CC1
<a href="#">[213]</a>	2013	urology	B	We	V	n/a	n/a	n/a	Rf2 Ci0 CC0
<a href="#">[214]</a>	2007	emergency	E	We	T I D	S I	n/a	Si Cn Me	Rf1 Ci1 CC1
<a href="#">[215]</a>	2007	paediatrics radiology	E	We	T V I D	C Q I	n/a	Me	Rf2 Ci2 CC1
<a href="#">[216]</a>	2010	neurosurgery	B	We	n/a	S	n/a	n/a	Rf1 Ci0 CC1
<a href="#">[217]</a>	2012	rheumatology	B	We Pt	V	Q I F	D	Si Pr	Rf2 Ci0 CC1
<a href="#">[218]</a>	2012	ophthalmology	E	We	V Au	n/a	n/a	n/a	Rf0 Ci0 CC1

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
[219]	2009	pathology	E	We	T I D	Cb C Q I F	F D Ca	n/a	Rf0 Ci1 CC0
[220]	2012	paediatrics	B	We	T V Au I	n/a	n/a	Me	Rf0 Ci2 CC1
[221]	2013	ophthalmology	B	We	T V Au I	V C I	n/a	n/a	Rf1 Ci1 CC0
[222]	2008	anatomy	B	We	T V Au I D	C Q I F	n/a	Me	Rf0 Ci1 CC1
[223]	2008	paediatrics	E	We	T An	Cb G Q	n/a	n/a	Rf1 Ci1 CC0
[224]	2004	radiology	E	E	T I	n/a	n/a	Cn Se Me	Rf1 Ci1 CC0
[225]	2009	radiology	E	We	T I D	C Q I F	n/a	n/a	Rf0 Ci1 CC0
[226]	2012	otolaryngology	E	We	T I D An	V I	n/a	n/a	Rf1 Ci1 CC0
[227]	2004	physiology	B	We A	T V Au I D An	Cb S Q C I I F P	I F	Si Pr Se Me	Rf0 Ci2 CC1
[228]	2006	pathology	E	We	n/a	C Q I	n/a	n/a	Rf0 Ci1 CC0
[229]	2008	gastrointestinal	E	We	T V Au I D An	C Q I F P	n/a	Se Me	Rf1 Ci0 CC0
[230]	2011	advanced life support paediatrics	B	We	n/a	n/a	n/a	n/a	Rf1 Ci1 CC1
[231]	2011	evidence based medicine	E	We T	T V Au	Q I F	I	n/a	Rf2 Ci2 CC1
[232]	2011	emergency	B	n/a	n/a	n/a	n/a	n/a	Rf2 Ci1 CC1
[233]	2010	professionalism	B	We B Wi	T	Cb	F	n/a	Rf1 Ci2 CC1
[234]	2012	biochemistry	B	We	n/a	C Q F	F D	n/a	Rf2 Ci1 CC1
[235]	2010	psychiatry	B	n/a	n/a	C I	D	n/a	Rf0 Ci1 CC1
[236]	2013	nephrology	E	We	T D	I	n/a	Ch Si	Rf2 Ci1 CC1

Ref	Year	Subject	Teach. Method	Platform support	Media features	Interactive features	Accessibility features	Instructional design principles	Citations
<a href="#">[237]</a>	2012	general surgery	E	Pt	n/a	n/a	n/a	n/a	Rf1 Ci1 CC0
<a href="#">[238]</a>	2007	neurology	E	We M	n/a	Cb Q I	I F	n/a	Rf2 Ci1 CC1
<a href="#">[239]</a>	2006	primary	E	We	T	C I	F	n/a	Rf2 Ci1 CC1
<a href="#">[240]</a>	2003	psychology	E	We	T V	I F P	F	Me	Rf0 Ci2 CC1
<a href="#">[241]</a>	2011	physiology	E	n/a	T D	S I	n/a	Me	Rf0 Ci0 CC0
<a href="#">[242]</a>	2006	rheumatology	B	We	T I	S C Q I F	n/a	Me	Rf1 Ci1 CC1
<a href="#">[243]</a>	2010	general	B	We Wi	T V Au I	Cb S Q I F P	n/a	Pr Me	Rf1 Ci2 CC1
<a href="#">[244]</a>	2009	traditional medicine	E	We	n/a	C	F	n/a	Rf2 Ci1 CC1
<a href="#">[245]</a>	2013	general	B	We	T V Au I D An	Cb C	I F	n/a	Rf2 Ci1 CC1
<a href="#">[246]</a>	2006	orthopaedics	E	We	T Au I An	C Q I F	n/a	Cn	Rf2 Ci1 CC1
<a href="#">[247]</a>	2010	orthopaedics	E	We	T V Au I D An	S V C I F P	n/a	n/a	Rf2 Ci1 CC1
<a href="#">[248]</a>	2006	radiology	E	We	V I	n/a	n/a	n/a	Rf1 Ci1 CC0
<a href="#">[249]</a>	2012	general surgery	B	We	T V Au I	V I P	n/a	n/a	Rf2 Ci1 CC1
<a href="#">[250]</a>	2009	anaesthesia	E	We	T I D	C Q I F	n/a	Me	Rf2 Ci2 CC1
<a href="#">[251]</a>	2006	radiology	B	We	T V Au I D An	C	n/a	Cn Me	Rf0 Ci1 CC0

## Experiment variables

Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
<a href="#">[1]</a>	2011	Pr	190	B	<3Mo	n/a	Fo Lb	n/a	n/a	n/a	A+



Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[2]	2012	Pr Pp C	277	C	<3Mo	M Li F E	Li	n/a	n/a	11	K+ A+
[3]	2013	Pr	522	C	<3Mo	n/a	Li	A	Ti	6	A+ U~S+
[4]	2012	Pr	130	B	<3Mo	n/a	Li	n/a	Po R A	8	A+ U+
[5]	2009	Pr	150	B	<3Mo	M	Li	n/a	n/a	10	K+ A+
[6]	2011	Pr R Mt Pp C	37	R	<3Mo	M Li	Li	n/a	A Ti	11	K+ A+ U+
[8]	2012	Pr Pp	40	S	<1Wk	n/a	Li	A P	n/a	10	A+ S+
[9]	2012	Pr R C	60	B	<1Wk	M Li	Li	n/a	n/a	10	K~A+
[10]	2012	Pr R Pp C	204	B	<1Wk	n/a	Li Lb	n/a	n/a	11	A-
[11]	2010	Rt	200	B	>3Mo	M E	Li	n/a	A Ti	7	K~A+ U+
[12]	2012	Pr	101	S	>3Mo	n/a	Li Tx	n/a	A	9	A+ U~
[14]	2008	Pr Pp	166	n/a	<1Wk	Tx P Lb	Li Lb	n/a	Ti	11	K+ A+ U+
[15]	2010	Pr Pp	137	S	<3Mo	M	Li	n/a	n/a	8	K+ A+
[16]	2009	Pr R Pp C	148	B	<1Wk	M	Li	n/a	n/a	12.5	K+ A+
[17]	2013	Pr Pp C	158	B	<3Mo	n/a	Li	n/a	n/a	10	A+
[18]	2010	Pr R Pp C	49	C	>3Mo	n/a	n/a	A	n/a	11	S+
[18]	2010	Pr R Mt Pp C	216	C	>3Mo	E	n/a	A P	n/a	11	S+
[20]	2012	Pr	125	B	>3Mo	M E	Li	n/a	Ti	11	K+ A+ U+
[21]	2011	Pr Mt	963	B	>3Mo	n/a	Tx	n/a	T A	9	A+ U~

Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[22]	2009	Rt	1736	B	>3Mo	E	n/a	n/a	n/a	11.5	K+
[22]	2009	Pr	1736	B	can't tell	E	Li	n/a	n/a	10	K+ A+
[23]	2013	Pr R Pp C	55	B	<3Mo	M	n/a	n/a	n/a	11	K+
[24]	2004	Pr R Pp C	11	C	<3Mo	n/a	Li P Fo Lb	n/a	Ti	8	A+ U~
[25]	2013	Pr Pp	40	R	<1Wk	M	Li	n/a	n/a	9	K+ A+
[26]	2008	Pr C	49	n/a	<3Mo	Li P	Li	A P Lb	Po	11	K+ U~S~
[28]	2012	Pr Mt	10261	S	>3Mo	n/a	Li	n/a	n/a	9	A+
[29]	2011	Pr Mt	7405	R	>3Mo	n/a	Li	n/a	n/a	7	A+
[30]	2003	Pr R Mt Pp C	3067	S	<1Wk	M	n/a	n/a	n/a	9	K+
[31]	2012	Pr Pp C	167	C	<1Wk	M Lb	n/a	n/a	n/a	10	K~
[32]	2009	Pr	50	C	can't tell	n/a	Li	n/a	n/a	9	A+
[33]	2009	Pr R C	80	C	<1Wk	M	Li	n/a	n/a	11	A+
[34]	2012	Pr	30	C	can't tell	n/a	Li	n/a	n/a	9	A+
[35]	2008	Pr	90	C	<3Mo	n/a	Li Tx	n/a	Po R A	9	A+ U~
[36]	2009	Pr	309	n/a	<3Mo	n/a	Li	n/a	A	7.5	A+ U+
[37]	2009	Pr	10	B	<3Mo	n/a	n/a	n/a	n/a	7	A+
[38]	2012	Pr C	150	S	>3Mo	n/a	n/a	n/a	n/a	9	K+
[39]	2011	Pr C	12	B	<1Wk	M	Li	n/a	n/a	10	K~A+

Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[40]	2012	Pr Mt	50	B	<3Mo	n/a	P	n/a	Po A	n/a	A+ U~
[41]	2012	Pr Mt	60	C	<3Mo	n/a	Li Fo Lb	n/a	Po A	8.5	A+ U+
[42]	2008	Pr C	117	C	>3Mo	E	Li	n/a	A	10.5	K+ A+ U~
[43]	2008	Pr	118	C	>3Mo	n/a	Li Tx	A P	Po Ti	7	A+ U~S+
[44]	2012	Pr Pp C	30	B	>3Mo	tf Lb	n/a	A P Lb	n/a	10	K+ S+
[45]	2009	Pr	149	C	<3Mo	M Tx E Lb	Tx	n/a	T A Ti	10.5	A+ U+
[46]	2012	Pr	43	S	>3Mo	n/a	Li	n/a	n/a	7	A+ U+
[47]	2013	Pr Mt C	562	C	<3Mo	M tf E Lb	Li	n/a	n/a	9	K+ A+
[48]	2011	Pr	70	S	<1Wk	n/a	Li Lb	n/a	n/a	10	A+
[49]	2011	Pr Pp	300	n/a	>3Mo	Li	Li	n/a	n/a	10.5	K+ A+
[50]	2012	Pr	387	B C	>3Mo	n/a	Li Fo	n/a	A	9	A+ U~
[51]	2007	Pr R Mt Pp C	229	R	<1Wk	M O P Lb	Li Lb	n/a	n/a	12.5	K~A+
[52]	2012	Pr C	128	S	<1Wk	n/a	n/a	A P Lb	n/a	12	S+
[53]	2012	Pr	106	B	>3Mo	n/a	Li	n/a	n/a	6	A+
[54]	2006	Pr	355	B	<3Mo	n/a	Li	n/a	n/a	6	A+
[55]	2007	Pr	21	B	>3Mo	n/a	Fo	n/a	n/a	6	A+
[57]	2011	Pr Pp	20	R	>3Mo	n/a	n/a	n/a	Po R	8	K~U~
[59]	2010	Pr	246	B	<3Mo	Li	Li	n/a	n/a	10	K+ A+
[61]	2012	Pr Pp	137	B	<3Mo	M Lb	Li	n/a	n/a	6	K+ A+

Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[63]	2008	Rt Mt C	612	R	>3Mo	M	n/a	n/a	n/a	6	K+
[64]	2003	Pr	can't tell	B	can't tell	n/a	n/a	n/a	T A	10.5	A+ U+
[65]	2005	Pr	13	C	<1Wk	n/a	Li Tx Lb	n/a	n/a	8	A+
[66]	2013	Pr Pp	21	B R	<3Mo	M Li	Li	n/a	n/a	8	K+ A+
[68]	2009	Pr R Pp C	102	B	<3Mo	n/a	n/a	A P Lb	n/a	11	S+
[69]	2013	Pr Mt Pp	185	R	<1Wk	M Li	n/a	n/a	A Ti	11	K+ U~
[70]	2005	Pr Pp	30	B C R	<3Mo	M E	Li Tx	n/a	n/a	8	K+ A+
[71]	2006	Pr R Pp C	126	B C	<1Wk	M Lb	Li Tx	A P Lb	Ti	9	K~A+ U+ S+
[72]	2012	Pr	116	C	<3Mo	M F	Li	n/a	n/a	7	K+ A+
[73]	2006	Pr	6	C	<3Mo	n/a	Li Fo	n/a	Po R A Ti	6	A+ U~
[74]	2013	Pr	26	B	>3Mo	n/a	Li	n/a	n/a	9	A+
[77]	2012	Rt C	36	B	<3Mo	E	Li	n/a	n/a	10	K+ A+
[78]	2013	Pr	112	C	<3Mo	n/a	Li	n/a	n/a	8	A+
[79]	2011	Pr Pp C	223	R	<3Mo	M	Li	n/a	n/a	11	K+ A+
[80]	2011	Pr	260	C	<3Mo	n/a	Li	n/a	n/a	10	A+
[81]	2006	Pr	276	B	<3Mo	M	Li Tx	n/a	T Po R A Ti	10.5	K+ A+ U~
[82]	2008	Pr Mt	62	B S	<1Wk	n/a	Li	n/a	n/a	8	A+
[83]	2012	Pr Pp	245	C	<1Wk	M	Li	n/a	Ti	11	K+ A+ U~

Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[84]	2010	Pr Pp C	88	C	<3Mo	n/a	Li	A P	Po R A Ti	10	A+ U~S~
[85]	2010	Pr R Pp C	133	B	<3Mo	M Li tf Tx Lb	Li Lb	A P Lb	n/a	12.5	K+ A+ S+
[86]	2007	Pr	93	n/a	can't tell	n/a	Li	n/a	A	6	A+ U~
[87]	2013	Pr Mt	54	R	<1Wk	Li	Li	n/a	Ti	10	A+ U+
[89]	2012	Pr R C	155	B	<1Wk	M E	n/a	n/a	Po Ti	11	K- U-
[90]	2013	Pr R C	97	R	<3Mo	M	Li	n/a	n/a	12	K+ A+
[91]	2010	Pr R Mt Pp C	237	B	<3Mo	M E	n/a	n/a	n/a	12	K~
[92]	2011	Pr	304	B	<3Mo	n/a	Li	n/a	n/a	7	A~
[94]	2012	Pr R Pp C	58	R	<1Wk	n/a	n/a	A P	n/a	11	S~
[95]	2010	Pr	10	R	<3Mo	n/a	Li	n/a	Ti	9	A+ U~
[96]	2008	Pr	82	B	>3Mo	n/a	Li Tx	n/a	n/a	6	A~
[97]	2013	Pr R Mt C	120	S	<1Wk	M	n/a	n/a	Ti	11	K~U~
[98]	2013	Pr	341	B	<3Mo	n/a	Li	n/a	n/a	9	A+
[99]	2008	Pr	302	C	<3Mo	Tx P Lb	Li Tx Fo Lb	n/a	n/a	10.5	K+ A+
[100]	2012	Pr R Pp C	166	B	<3Mo	n/a	n/a	A P	n/a	13	S+
[101]	2009	Pr C	92	C	<3Mo	M E	n/a	A P Lb	n/a	10.5	K~S+
[103]	2010	Rt	can't tell	n/a	can't tell	E	n/a	n/a	n/a	9	K+ A+
[104]	2013	Pr	62	n/a	<3Mo	n/a	Li	n/a	n/a	7	A+

Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[106]	2009	Pr R Pp C	92	B	<1Wk	M	n/a	n/a	n/a	11	K+
[107]	2009	Pr	83	C	can't tell	n/a	Li Tx P Fo Lb	n/a	n/a	8	A+
[110]	2010	Pr R C	100	B C	<1Wk	M Lb	Li Lb	n/a	n/a	11	K~A+
[111]	2013	Pr C	116	C	>3Mo	n/a	Fo	n/a	n/a	11	A+
[112]	2009	Pr	can't tell	n/a	can't tell	n/a	n/a	n/a	A	n/a	U+
[113]	2011	Pr R Pp C	16	R	>3Mo	M	Li	n/a	n/a	11	K~A+
[114]	2012	Pr	91	B	>3Mo	n/a	Li	n/a	A Ti	7	A+ U~
[115]	2012	Pr	84	B	<3Mo	n/a	Li	n/a	n/a	9	A~
[116]	2009	Pr	42	B	<3Mo	M	Li	n/a	n/a	9	K~A+
[117]	2009	Pr R Pp C	133	B	<1Wk	M	Li	n/a	Ti	11	K+ A+ U+
[118]	2008	Pr R C	237	B	<3Mo	M E Lb	Tx	n/a	n/a	12.5	K~A+
[119]	2009	Pr R Mt C	537	R	>3Mo	M	n/a	n/a	n/a	12	K+
[120]	2012	Pr R Mt C	1470	R	>3Mo	M	Li	n/a	n/a	11	K+ A+
[121]	2007	Pr R Mt Pp C	537	R	>3Mo	M	n/a	n/a	Ti	10	K+ U~
[122]	2009	Pr R Mt Pp C	330	B	>3Mo	M Li Tx E Lb	Li	n/a	n/a	12	K+
[123]	2007	Pr R Pp C	133	B	>3Mo	M Lb	Li Tx	n/a	n/a	12	K+
[124]	2010	Pr R Mt Pp C	724	R	>3Mo	M	n/a	n/a	n/a	12.5	K+ A+
[125]	2011	Pr	164	B	<3Mo	n/a	Li Tx Lb	n/a	Ti	7.5	A+

Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[126]	2013	Pr R C	60	B	<1Wk	M Lb	n/a	n/a	n/a	11	K-
[127]	2010	Pr Mt	153	S	can't tell	n/a	Li	n/a	T	9	A+ U~
[130]	2006	Pr Mt	212	B	<3Mo	n/a	Li	n/a	n/a	9	A+
[132]	2012	Pr R Pp C	226	B	<3Mo	tf F Lb	Li	A P Lb	T A Ti	12	K+ A+ U+ S+
[133]	2005	Pr	150	B C	<3Mo	M E	Li	n/a	T	7	K+ A+ U+
[134]	2010	Pr R C	295	B	<1Wk	M O Tx F	Li	n/a	n/a	10	K+ A+
[135]	2008	Pr Mt Pp	68	B	<1Wk	n/a	Li	n/a	T A	11.5	K+ A+ U~
[135]	2008	Pr Mt Pp	68	S	can't tell	n/a	Li	n/a	n/a	8	K+ A+
[136]	2008	Pr Mt Pp	112	S	<1Wk	M	n/a	n/a	n/a	6	K+ A+
[137]	2013	Rt Pp	121	C	<3Mo	M	Li	n/a	n/a	8	K+ A+
[138]	2010	Pr	30	C	can't tell	n/a	Li Tx	n/a	n/a	8	A+
[139]	2013	Pr	310	C	<3Mo	Li	Li Tx	A	n/a	8	K+ A+ S+
[140]	2012	Pr Pp C	127	C	<3Mo	Lb	Li Lb	n/a	A	11	K+ A+ U+
[141]	2011	Pr	140	C	>3Mo	n/a	Li	n/a	A	6	A+ U~
[142]	2009	Pr C	41	B	<3Mo	M E	Li	n/a	Ti	9	K~A+ U+
[143]	2006	Pr	209	B	<1Wk	n/a	Li	n/a	n/a	6	A+
[144]	2005	Pr	134	B	<1Wk	n/a	Li	n/a	n/a	8	A+
[145]	2006	Pr	1232	B	<1Wk	n/a	Li Lb	n/a	n/a	8	A~

Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[146]	2011	Pr Pp	272	S	<3Mo	M	Tx	n/a	n/a	8	K+ A+
[147]	2010	Pr R Mt C	42	S	<1Wk	M Lb	Li	n/a	Ti	9	K~A~U~
[148]	2009	Pr	102	S	<1Wk	n/a	Li	n/a	n/a	9	A+
[149]	2010	Pr	22	C	can't tell	n/a	Li	n/a	n/a	9	A+
[150]	2013	Pr R C	207	C	<3Mo	M F E Lb	n/a	n/a	T A	9	K~U+
[151]	2008	Pr	141	B	>3Mo	n/a	Li Tx	n/a	n/a	7.5	A+
[152]	2011	Pr Pp	20	C R	<1Wk	M	n/a	n/a	n/a	9	K+
[153]	2011	Pr Pp	177	R	<3Mo	M	n/a	n/a	n/a	10	K+
[154]	2005	Pr Pp	50	B	<3Mo	n/a	Li	n/a	n/a	9	A~
[155]	2009	Pr R C	55	R	>3Mo	n/a	Li	n/a	n/a	11	n/a
[156]	2013	Pr Pp	82	R	<1Wk	M	Li	n/a	n/a	10	K+ A+
[157]	2010	Pr	can't tell	n/a	<1Wk	n/a	n/a	n/a	R A Ti	n/a	U~
[158]	2012	Pr	52	C S	can't tell	n/a	Li	n/a	n/a	8	A+
[159]	2009	Pr R Pp C	72	R	<3Mo	M	Li	A	R A	12	K+ A+ U~S+
[161]	2010	Pr R Pp C	237	n/a	<3Mo	M Li Lb	Li P Fo	n/a	n/a	12.5	K+
[162]	2010	Pr R C	143	n/a	<1Wk	n/a	Li Lb	n/a	n/a	10	A+
[163]	2012	Pr R Pp C	520	C	<3Mo	M Lb	Li Tx Lb	n/a	Ti	11.5	K+ A+ U+
[164]	2010	Pr Pp	38	B	>3Mo	M E Lb	Li Lb	n/a	n/a	10.5	K+ A+



Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[165]	2012	Pr R Mt C	70	C	<3Mo	n/a	Li	n/a	n/a	10	A+
[166]	2009	Pr	325	n/a	>3Mo	n/a	Li	n/a	n/a	8	A+
[167]	2012	Pr	804	B	>3Mo	n/a	n/a	n/a	A Ti	9	U+
[168]	2008	Pr C	62	B	>3Mo	M E	Li	n/a	A	8	K+ A+ U~
[169]	2011	Pr Pp	93	S	<3Mo	M Li	Li	n/a	n/a	12	K+ A+
[170]	2010	Pr Pp	28	B	<3Mo	M Li Lb	Tx	A P Lb	n/a	11	K+ A+ S+
[171]	2013	Pr R C	20	B	<1Wk	n/a	n/a	A	n/a	11	S+
[172]	2010	Pr	18	R	>3Mo	n/a	Li Tx	n/a	n/a	10	A+
[175]	2008	Pr Mt	287	C	can't tell	n/a	Li	n/a	Ti	8	U~
[176]	2011	Pr Pp	307	B	<3Mo	M	Li	n/a	n/a	10	K+ A+
[177]	2004	Pr	17	R	can't tell	n/a	Li Lb	n/a	n/a	6	A+
[179]	2012	Pr Pp	10	S	<1Wk	M Li	Li	n/a	n/a	8	K+ A+
[180]	2012	Pr R Pp C	154	C	<1Wk	M Li	Li	n/a	n/a	11	K~A-
[181]	2007	Pr C	134	B	>3Mo	M E	Li	n/a	A	8	K+ A+ U+
[182]	2010	Pr R Mt Pp C	657	S	can't tell	M E	Li	A P Lb	n/a	13.5	K~A+ S~
[183]	2012	Pr R Mt Pp C	3732	S	<1Wk	M E	n/a	A P	n/a	12	K- S-
[184]	2011	Pr Pp	73	B	<1Wk	M O E Lb	Li	n/a	n/a	11	K+ A+
[185]	2006	Pr Mt	557	C	>3Mo	M	Li	n/a	T Ti	8	K+ A+ U~

Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[186]	2013	Pr	280	S	can't tell	Li	n/a	n/a	n/a	8	K+
[187]	2010	Pr R C	183	C	<3Mo	M Li	n/a	n/a	n/a	11	K+
[188]	2012	Pr Pp	129	B	>3Mo	M O Tx E Lb	Li Tx	n/a	A	7	K~A+ U~
[189]	2007	Pr C	88	C	<3Mo	M E Lb	Li	n/a	A	10	K+ A+ U~
[190]	2012	Pr	61	R	<1Wk	n/a	Li Fo	n/a	n/a	8	A+
[192]	2006	Pr Pp C	29	S	<1Wk	M F E	n/a	n/a	n/a	8	K+ U+
[193]	2012	Pr Mt C	80	B S	<1Wk	n/a	Li Lb	A P Lb	Ti	10	A+ U~S+
[194]	2007	Pr Pp C	140	B	can't tell	M Li	Li P Fo Lb	A P Lb	n/a	10.5	K+ A+ S+
[195]	2013	Pr	10	S	<1Wk	n/a	Li Tx	n/a	n/a	10	A+
[196]	2012	Pr Pp	89	B	>3Mo	n/a	Li	n/a	A	7	A+ U+
[197]	2008	Pr	282	B	<3Mo	M E	Li	n/a	A	11	K~A+ U~
[198]	2006	Pr R Pp C	238	B	<3Mo	Li O Tx F E P	Li	A P Lb	n/a	12.5	K+ A+ S+
[200]	2011	Pr Pp	36	B	<3Mo	n/a	Li	n/a	n/a	8.5	A+
[201]	2011	Pr	447	B	<3Mo	n/a	Li	n/a	A	8	A+ U+
[203]	2011	Rt C	104	B	>3Mo	M E	Li	n/a	T Po R A Ti	10	K+ A+ U+
[204]	2013	Pr C	191	B	<1Wk	P	Li	A P	n/a	10	K+ A+ S+
[205]	2010	Pr	100	C	can't tell	n/a	n/a	n/a	A	9	A+
[206]	2004	Pr	508	B	>3Mo	n/a	Li Tx	n/a	n/a	8.5	A+
[207]	2007	Pr	210	C	<3Mo	n/a	Li	n/a	n/a	n/a	A+

Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[208]	2011	Pr R C	300	S	>3Mo	n/a	Li	n/a	n/a	14	A+
[210]	2008	Pr	62	B	<3Mo	n/a	Li	n/a	n/a	6	A+
[211]	2011	Pr R Pp C	44	B	<3Mo	M	Li	n/a	n/a	12.5	K+
[212]	2009	Pr	38	C	<3Mo	n/a	Li	n/a	Po R A	9	A+ U+
[213]	2013	Pr Pp	7	R	<1Wk	Li	n/a	A P	n/a	7	K+ S+
[214]	2007	Pr Pp	41	C	<1Wk	M Lb	Tx Lb	n/a	Ti	10.5	K+ A+ U+
[215]	2007	Pr	can't tell	n/a	can't tell	n/a	n/a	n/a	Po A Ti	n/a	U~
[216]	2010	Pr R C	65	C R	<1Wk	n/a	Li Lb	A P Lb	n/a	11	A- S-
[217]	2012	Rt C	18	C	<3Mo	M E	Li Fo	n/a	A	9	K~A+ U+
[218]	2012	Pr R C	25	B	<1Wk	M	Li	n/a	Ti	11	K+ A+ U+
[219]	2009	Pr	14	S	<3Mo	n/a	Li Tx Fo Lb	n/a	n/a	7	A+
[220]	2012	Pr R C	81	C	<3Mo	n/a	Li	A P Lb	n/a	12.5	A+ S+
[221]	2013	Pr R Mt Pp C	188	C	<3Mo	M	Li	n/a	n/a	11	K+ A+
[222]	2008	Pr	205	B	<3Mo	M E Lb	Li Lb	n/a	n/a	10.5	K~A~
[223]	2008	Pr R Pp C	108	B	<3Mo	M	Li Tx	n/a	n/a	11	K~
[226]	2012	Pr R C	40	R	<1Wk	M Lb	Li	n/a	n/a	12	K~A+
[227]	2004	Pr C	121	B	<3Mo	Lb	Li Lb	n/a	T	11.5	K+ A+ U+
[228]	2006	Pr	can't tell	n/a	can't tell	n/a	n/a	n/a	n/a	n/a	A+

Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[229]	2008	Pr	200	B	<3Mo	n/a	n/a	n/a	n/a	9	A+
[230]	2011	Pr Pp	21	B C	can't tell	M Li	Li Tx	n/a	n/a	10.5	K+ A+
[231]	2011	Pr	176	S	>3Mo	M F E	n/a	n/a	A	9	K+ U~
[232]	2011	Pr R Pp C	19	C	<3Mo	O E P Lb	Li Tx	n/a	n/a	12.5	K+ A+
[233]	2010	Pr	32	B	<3Mo	n/a	Li P Fo Lb	n/a	n/a	8	A+
[234]	2012	Pr	60	B	>3Mo	F E	Li Tx	n/a	A	11	K~A+
[235]	2010	Pr R Pp C	389	S	<3Mo	M	Li	n/a	T	11	K~A+ U+
[236]	2013	Pr Pp	35	C	<3Mo	M Li	Li	A P	T	8	K+ A+ S+
[237]	2012	Pr	40	R	>3Mo	n/a	Li Fo	n/a	n/a	10	A+
[238]	2007	Pr Pp C	41	S	>3Mo	M E	Li	n/a	Ti	8	K+ A+ U~
[239]	2006	Pr R Pp C	159	B	>3Mo	M Tx	Li	n/a	Ti	9	K+ A~U~
[240]	2003	Pr Mt Pp	10	C	<3Mo	Li O P	Li P Lb	n/a	T Po R A	13.5	K+ A+ U+
[241]	2011	Pr	310	n/a	can't tell	n/a	n/a	n/a	T	n/a	U~
[242]	2006	Pr	84	B R	can't tell	M O P	Li Tx	n/a	n/a	n/a	K+ A+
[243]	2010	Pr Pp C	185	B	<3Mo	M E	Li Tx P Lb	n/a	T A	10.5	A+ U+
[244]	2009	Pr R C	1267	S	<3Mo	M Li	n/a	n/a	T Po R A Ti	12	K+ U+
[245]	2013	Pr R Pp C	120	B C	<1Wk	M tf	Li	n/a	n/a	11	K+ A+
[246]	2006	Pr	18	n/a	can't tell	n/a	Li	n/a	n/a	6	A+

Ref	Year	Study type	Participant total	Educ.	Duration	Knowledge	Attitudes	Skills	Usage	MERSQI	Findings
[247]	2010	Pr Pp	160	C	<1Wk	M	Li Tx	n/a	A Ti	8	K+ A+ U~
[249]	2012	Pr C	99	B	<3Mo	Li	Li	A P Lb	n/a	10	A+ S~
[250]	2009	Pr Mt Pp	454	S	can't tell	n/a	n/a	n/a	n/a	9	n/a

### Experimental groups for controlled trials

Ref	Year	Controls
[2]	2012	B-learning vs. Lecture
[6]	2011	B-learning vs. Lecture
[9]	2012	Exploratory practice vs. Blocked practice
[10]	2012	Virtual Patient vs. OSCE vs. Role-play
[16]	2009	E-learning vs. Lecture
[17]	2013	B-learning vs. Lecture
[18]	2010	Simulation vs. Lecture
[18]	2010	Virtual patient + lecture vs. Virtual patient vs. Lecture
[23]	2013	Multimedia content vs. Text content
[24]	2004	Complex user interface vs. Simple user interface
[26]	2008	B-learning vs. Lecture
[30]	2003	B-learning vs. No intervention
[31]	2012	E-learning vs. Lecture

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Ref	Year	Controls
[33]	2009	Adaptive system vs. Non-adaptive system
[38]	2012	E-learning vs. Lecture
[39]	2011	Simulation vs. Dissection + Simulation vs. No intervention
[42]	2008	B-learning vs. Lecture
[44]	2012	Immediate feedback vs. Delayed feedback
[47]	2013	B-learning vs. Lecture
[51]	2007	E-learning vs. Lecture
[52]	2012	E-learning vs. No intervention
[63]	2008	B-learning vs. Lecture
[68]	2009	Simulation vs. No Intervention
[71]	2006	Digital multimedia content vs. Printed content
[77]	2012	B-learning vs. Lecture
[79]	2011	E-learning vs. No intervention
[84]	2010	E-learning vs. Lecture
[85]	2010	E-learning vs. Lecture
[89]	2012	Timed virtual patient vs. Untimed virtual patient
[90]	2013	Spaced education vs. No intervention
[91]	2010	E-learning vs. Lecture
[94]	2012	Lecture notes vs. Lecture + Group discussion

Ref	Year	Controls
<a href="#">[97]</a>	2013	Interactive virtual patient vs. Audio virtual patient vs. No intervention
<a href="#">[100]</a> ]	2012	Immediate feedback vs. Delayed feedback
<a href="#">[101]</a> ]	2009	B-learning vs. Lecture
<a href="#">[106]</a> ]	2009	Simulation + Explanation vs. Simulation vs. Multimedia content
<a href="#">[110]</a>	2010	3d content vs. 2d content
<a href="#">[111]</a>	2013	Different sequences of Lecture, Discussion and Virtual patient activities
<a href="#">[113]</a>	2011	E-learning vs. No intervention
<a href="#">[117]</a>	2009	Clinical cases vs. Research articles
<a href="#">[118]</a>	2008	Spaced education vs. Bolus education
<a href="#">[119]</a>	2009	Spaced education vs. Bolus education
<a href="#">[120]</a> ]	2012	Two-week spaced education vs. Four-week spaced education
<a href="#">[121]</a> ]	2007	Spaced education vs. Bolus education
<a href="#">[122]</a> ]	2009	Spaced education vs. Bolus education
<a href="#">[123]</a> ]	2007	Spaced education vs. No intervention
<a href="#">[124]</a> ]	2010	Spaced education vs. Bolus education
<a href="#">[126]</a> ]	2013	3d content vs. 2d content vs. Physical model
<a href="#">[132]</a> ]	2012	B-learning vs. Lecture
<a href="#">[134]</a> ]	2010	Simulation vs. Laboratory vs. No intervention

Ref	Year	Controls
[ <a href="#">140</a> ]	2012	In-person e-learning session vs. Distant e-learning session
[ <a href="#">142</a> ]	2009	B-learning vs. Lecture
[ <a href="#">147</a> ]	2010	In-person e-learning session vs. Distant e-learning session
[ <a href="#">150</a> ]	2013	Spaced education vs. Bolus education
[ <a href="#">153</a> ]	2011	E-learning vs. No intervention
[ <a href="#">155</a> ]	2009	Spaced education vs. No intervention
[ <a href="#">159</a> ]	2009	B-learning vs. Lecture
[ <a href="#">161</a> ]	2010	Wiki vs. Instant messaging vs. Links to external resources
[ <a href="#">162</a> ]	2010	B-learning vs. Lecture
[ <a href="#">163</a> ]	2012	Integrated web-application vs. Online resources
[ <a href="#">165</a> ]	2012	E-learning vs. No intervention
[ <a href="#">168</a> ]	2008	B-learning vs. Lecture
[ <a href="#">171</a> ]	2013	E-learning vs. No intervention
[ <a href="#">180</a> ]	2012	E-learning vs. Lecture
[ <a href="#">181</a> ]	2007	B-learning vs. Lecture
[ <a href="#">182</a> ]	2010	B-learning vs. Lecture
[ <a href="#">183</a> ]	2012	B-learning vs. Lecture



Ref	Year	Controls
[187]	2010	B-learning vs. Lecture
[189]	2007	Multimedia content vs. Text content
[192]	2006	Adaptive system vs. Non-adaptive system
[193]	2012	3d content vs. 2d content
[194]	2007	B-learning vs. Lecture
[198]	2006	B-learning vs. Lecture
[203]	2011	B-learning vs. Lecture
[204]	2013	E-learning vs. Lecture
[208]	2011	Immediate feedback vs. Delayed feedback
[211]	2011	E-learning vs. Lecture
[216]	2010	3d content vs. 2d content vs. Physical model
[217]	2012	B-learning vs. Lecture
[218]	2012	Multimedia content vs. Text content
[220]	2012	B-learning vs. Lecture
[221]	2013	B-learning vs. Lecture
[223]	2008	Exploratory practice vs. Blocked practice
[226]	2012	3d content vs. 2d content

Ref	Year	Controls
[ <a href="#">227</a> ]	2004	B-learning vs. Lecture
[ <a href="#">232</a> ]	2011	Spaced education vs. Bolus education
[ <a href="#">235</a> ]	2010	B-learning vs. Lecture
[ <a href="#">238</a> ]	2007	E-learning vs. No intervention
[ <a href="#">239</a> ]	2006	E-learning vs. Lecture
[ <a href="#">243</a> ]	2010	B-learning vs. Lecture
[ <a href="#">244</a> ]	2009	Many hyperlinks vs. Few hyperlinks, Spaced education vs. Bolus education
[ <a href="#">245</a> ]	2013	Complex user interface vs. Simple user interface
[ <a href="#">249</a> ]	2012	Virtual patient vs. No intervention

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