Supplemental Digital Content 4.

A list of the top 100 cited articles, and their associated numbers of citations, relating to simulation in healthcare education and research and healthcare professionals, retrieved from ISI Web of Science on 03/07/17. Articles with the same number of citations were given the exact same rank.

Rank	Author and year	Total no. of citations
1	Seymour NE, Gallagher AG, Roman SA, O'Brien MK, Bansal VK, Andersen DK, Satava RM. Virtual reality training improves operating room performance: results of a randomized, double-blinded study. *Ann Surg* 2002 Oct;236(4):458.	1188
2	Issenberg SB, Mcgaghie WC, Petrusa ER, Lee Gordon D, Scalese RJ. Features and uses of high-fidelity medical simulations that lead to effective learning: a BEME systematic review. *Med Teach* 2005 Jan 1;27(1):10-28.	1022
3	Reznick R, Regehr G, MacRae H, Martin J, McCulloch W. Testing technical skill via an innovative "bench station" examination. *Am J Surg* 1997 Mar 1;173(3):226-30.	982
4	Epstein RM, Hundert EM. Defining and assessing professional competence. Jama. 2002 Jan 9;287(2):226-35.	958
5	Ericsson KA. Deliberate practice and the acquisition and maintenance of expert performance in medicine and related domains. *Acad Med* 2004 Oct 1;79(10):S70-81.	796
6	Reznick RK, MacRae H. Teaching surgical skills—changes in the wind. *New Engl J Med* 2006 Dec 21;355(25):2664-9.	635
7	Peabody JW, Luck J, Glassman P, Dresselhaus TR, Lee M. Comparison of vignettes, standardized patients, and chart abstraction: a prospective validation study of 3 methods for measuring quality. *JAMA*. 2000 Apr 5;283(13):1715-22.	605
8	Grantcharov TP, Kristiansen VB, Bendix J, Bardram L, Rosenberg J, Funch-Jensen P. Randomized clinical trial of virtual reality simulation for laparoscopic skills training. *Brit J Surg* 2004 Feb 1;91(2):146-50.	591
9	Reznick R, Regehr G, MacRae H, Martin J, McCulloch W. Testing technical skill via an innovative "bench station" examination. *Am J Surg* 1997 Mar 1;173(3):226-30.	537
10	Epstein RM. Assessment in medical education. *New Engl J Med.* 2007 Jan 25;356(4):387-96.	474
11	Roter DL, Hall JA, Kern DE, Barker LR, Cole KA, Roca RP. Improving physicians' interviewing skills and reducing patients' emotional distress: a randomized clinical trial. *Arch Iintern Med* 1995 Sep 25;155(17):1877-84.	455
12	Issenberg SB, McGaghie WC, Hart IR, Mayer JW, Felner JM, Petrusa ER, Waugh RA, Brown DD, Safford RR, Gessner IH, Gordon DL. Simulation technology for health care professional skills training and assessment. *JAMA* 1999 Sep 1;282(9):861-6.	430

13	Fallowfield L, Jenkins V, Farewell V, Saul J, Duffy A, Eves R. Efficacy of a Cancer Research UK communication skills training model for oncologists: a randomised controlled trial. *Lancet* 2002 Feb 23;359(9307):650-6.	429
14	Fried GM, Feldman LS, Vassiliou MC, Fraser SA, Stanbridge D, Ghitulescu G, Andrew CG. Proving the value of simulation in laparoscopic surgery. *Ann Surg* 2004 Sep;240(3):518.	421
15	Scott DJ, Bergen PC, Rege RV, Laycock R, Tesfay ST, Valentine RJ, Euhus DM, Jeyarajah DR, Thompson WM, Jones DB. Laparoscopic training on bench models: better and more cost effective than operating room experience?.*J Am Coll Surgeons* 2000 Sep 30;191(3):272-83.	412
16	Gallagher AG, Ritter EM, Champion H, Higgins G, Fried MP, Moses G, Smith CD, Satava RM. Virtual reality simulation for the operating room: proficiency-based training as a paradigm shift in surgical skills training. *Ann Surg*. 2005 Feb;241(2):364.	393
17	Van Der Vleuten CP, Schuwirth LW. Assessing professional competence: from methods to programmes. *Med Educ* 2005 Mar 1;39(3):309-17.	380
18	Cook DA, Hamstra SJ, Brydges R, Zendejas B, Szostek JH, Wang AT, Erwin PJ, Hatala R. Comparative effectiveness of instructional design features in simulation-based education: systematic review and meta-analysis. *Med Teach* 2013 Jan 1;35(1):e867-98.	374
19	Derossis AM, Fried GM, Abrahamowicz M, Sigman HH, Barkun JS, Meakins JL. Development of a model for training and evaluation of laparoscopic skills. *Am J Surg* 1998 Jun 30;175(6):482-7.	371
20	Wass V, Van der Vleuten C, Shatzer J, Jones R. Assessment of clinical competence. *Lancet* 2001 Mar 24;357(9260):945-9.	369
21	Fletcher G, Flin R, McGeorge P, Glavin R, Maran N, Patey R. Anaesthetists' Non- Technical Skills (ANTS): evaluation of a behavioural marker system. *Brit J Anaesth* 2003 May 1;90(5):580-8.	364
22	Regehr, G., MacRae, H. , Reznick, R. K., Szalay, D. Comparing the psychometric properties of checklists and global rating scales for assessing performance on an OSCE-format examination. *Acad Med 1*998 Sep;73(9):993-997.	362
23	McGaghie WC, Issenberg SB, Petrusa ER, Scalese RJ. A critical review of simulation-based medical education research: 2003–2009. *Med Educ* 2010 Jan 1;44(1):50-63.	351
24	Barrows HS. An overview of the uses of standardized patients for teaching and evaluating clinical skills. AAMC. *Acad Med* 1993 Jun 1;68(6):443-51.	341
25	Peabody JW, Luck J, Glassman P, Jain S, Hansen J, Spell M, Lee M. Measuring the quality of physician practice by using clinical vignettes: a prospective validation study. *Ann Intern Med* 2004 Nov 16;141(10):771-80.	315
26	McGaghie WC, Issenberg SB, Cohen ME, Barsuk JH, Wayne DB. Does simulation-based medical education with deliberate practice yield better results than traditional clinical education? A meta-analytic comparative review of the evidence. Academic medicine: *J Assoc Am Med Coll* 2011 Jun;86(6):706.	305
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31	Reznick RK. Teaching and testing technical skills. *Am J Surg* 1993 Mar 1;165(3):358-61.	296
32	Vassiliou MC, Feldman LS, Andrew CG, Bergman S, Leffondré K, Stanbridge D, Fried GM. A global assessment tool for evaluation of intraoperative laparoscopic skills. *Am J Surg* 2005 Jul 31;190(1):107-13.	281
33	Wayne DB, Didwania A, Feinglass J, Fudala MJ, Barsuk JH, McGaghie WC. Simulation-based education improves quality of care during cardiac arrest team responses at an academic teaching hospital: a case-control study. *Chest* Journal. 2008 Jan 1;133(1):56-61.	278
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38	Yule S, Flin R, Paterson-Brown S, Maran N. Non-technical skills for surgeons in the operating room: a review of the literature. *Surgery* 2006 Feb 1;139(2):140- 9.	252
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