

Assessment in Health Professions (Semester Year 2025/26)

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1.

dos S, Ribeiro C, van de Burgwal LHM, Regeer BJ. Overcoming challenges for designing and implementing the One Health approach: A systematic review of the literature. *One Health*. 2019 June;7.

2.

Hodges BD. A practical guide for medical teachers [Internet]. Fifth edition. Dent JA, Harden RM, Hunt D, editors. Edinburgh: Elsevier; 2017. Available from: <https://www.vlebooks.com/vleweb/product/openreader?id=GlasgowUni&isbn=9780702068935>

3.

Association for the Study of Medical Education. Understanding medical education: evidence, theory, and practice [Internet]. Third edition. Swanwick T, Forrest K, O'Brien BC, editors. Hoboken, NJ: Wiley-Blackwell; 2019. Available from: <https://ezproxy.lib.gla.ac.uk/login?url=https://dx.doi.org/10.1002/9781119373780>

4.

Marshall S, editor. A handbook for teaching and learning in higher education: enhancing academic practice [Internet]. Fifth edition. Abingdon, Oxon: Routledge; 2020. Available from: <https://ebookcentral.proquest.com/lib/gla/detail.action?docID=5983041>

5.

Holmboe EricS, Durning SJ. Practical Guide to the Assessment of Clinical Competence. Third Edition. 2024.

6.

Norcini J, Anderson B, Bollela V, Burch V, Costa MJ, Duvivier R, et al. Criteria for good assessment: Consensus statement and recommendations from the Ottawa 2010 Conference. *Medical Teacher*. 2011 Mar;33(3):206–14.

7.

Van Der Vleuten CPM. The assessment of professional competence: Developments, research and practical implications. *Advances in Health Sciences Education*. 1996 Jan;1(1):41–67.

8.

van der Vleuten CPM, Schuwirth LWT. Assessing professional competence: from methods to programmes. *Medical Education*. 2005 Mar;39(3):309–17.

9.

Schuwirth LW, van der Vleuten CP. How to Design a Useful Test: The Principles of Assessment. In: Swanwick T, editor. *Understanding Medical Education* [Internet]. 3rd ed. Oxford, UK: Wiley-Blackwell; 2019. p. 277–89. Available from: <https://ezproxy.lib.gla.ac.uk/login?url=https://onlinelibrary.wiley.com/doi/10.1002/9781119373780.ch20>

10.

van der Vleuten CPM, Schuwirth LWT, Driessen EW, Dijkstra J, Tigelaar D, Baartman LKJ, et al. A model for programmatic assessment fit for purpose. *Medical Teacher*. 2012 Mar;34(3):205–14.

11.

Biggs J. Enhancing Teaching through Constructive Alignment. *Higher Education* [Internet]. 1996;32(3):347–64. Available from: <https://www.jstor.org/stable/3448076>

12.

Miller G. The assessment of clinical skills/competence/performance. *Academic Medicine* [Internet]. 1990;65(9). Available from: <https://ezproxy.lib.gla.ac.uk/login?url=https://oce.ovid.com/article/00001888-199009000-00045/PDF>

13.

Schuwirth LWT, van der Vleuten CPM. Programmatic assessment and Kane's validity perspective. *Medical Education*. 2012 Jan;46(1):38-48.

14.

Epstein RM. Defining and Assessing Professional Competence. *JAMA*. 2002 Jan 9;287(2).

15.

Ten Cate O. Nuts and Bolts of Entrustable Professional Activities. *Journal of Graduate Medical Education*. 2013 Mar;5(1):157-8.

16.

Ten Cate O. Competency-Based Postgraduate Medical Education: Past, Present and Future. *GMS Journal for Medical Education* [Internet]. 2017;34(5). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5704607/>

17.

Cruess RL, Cruess SR, Steinert Y. Amending Miller's Pyramid to Include Professional Identity Formation. *Academic Medicine*. 2016 Feb;91(2):180-5.

18.

Cobb KA, Brown G, Jaarsma DADC, Hammond RA. The educational impact of assessment: A comparison of DOPS and MCQs. *Medical Teacher*. 2013 Nov;35(11):e1598-607.

19.

Jolly B, Dalton MJ. Written Assessment. In: Swanwick T, Forrest K, O'Brien BC, editors. Understanding Medical Education [Internet]. 3rd ed. Chichester, UK: John Wiley & Sons, Ltd; 2018. p. 291–317. Available from: <https://ezproxy.lib.gla.ac.uk/login?url=https://doi.wiley.com/10.1002/9781119373780.ch21>

20.

Jolly B. Written Assessment. In: Swanwick T, editor. Understanding Medical Education [Internet]. 3rd ed. Oxford, UK: Wiley-Blackwell; 2019. p. 261–261. Available from: <https://ezproxy.lib.gla.ac.uk/login?url=https://onlinelibrary.wiley.com/doi/10.1002/9781119373780.ch21>

21.

Epstein RM. Assessment in Medical Education. New England Journal of Medicine. 2007 Jan 25;356(4):387–96.

22.

Hift RJ. Should essays and other "open-ended"-type questions retain a place in written summative assessment in clinical medicine? BMC Medical Education. 2014 Dec;14(1).

23.

Paniagua M, Swygert K, editors. The Gold Book - constructing written test questions for the basic and clinical sciences [Internet]. Available from: https://www.nbme.org/sites/default/files/2020-01/IWW_Gold_Book.pdf

24.

Schuwirth LWT, van der Vleuten CPM. ABC of learning and teaching in medicine: Written assessment. BMJ. 2003 Mar 22;326(7390):643–5.

25.

Schuwirth LWT, van der Vleuten CPM. Different written assessment methods: what can be said about their strengths and weaknesses? Medical Education. 2004 Sept;38(9):974–9.

26.

Schuwirth LWT, van der Vleuten CPM. General overview of the theories used in assessment: AMEE Guide No. 57. *Medical Teacher*. 2011 Oct;33(10):783-97.

27.

Charlin B, Roy L, Brailovsky C, Goulet F, van der Vleuten C. The Script Concordance Test: A Tool to Assess the Reflective Clinician. *Teaching and Learning in Medicine*. 2000 Oct;12(4):189-95.

28.

Fournier J, Demeester A, Charlin B. Script Concordance Tests: Guidelines for Construction. *BMC Medical Informatics and Decision Making* [Internet]. 2008;8. Available from: <https://ezproxy.lib.gla.ac.uk/login?url=https://bmcmedinformdecismak.biomedcentral.com/articles/10.1186/1472-6947-8-18>

29.

Case SM, Swanson DB. Extended-matching items: A practical alternative to free-response questions. *Teaching and Learning in Medicine*. 1993 Jan;5(2):107-15.

30.

Dory V, Gagnon R, Vanpee D, Charlin B. How to construct and implement script concordance tests: insights from a systematic review. *Medical Education*. 2012 June;46(6):552-63.

31.

Farmer EA, Page G. A practical guide to assessing clinical decision-making skills using the key features approach. *Medical Education*. 2005 Dec;39(12):1188-94.

32.

FENDERSON B. The virtues of extended matching and uncued tests as alternatives to multiple choice questions. *Human Pathology*. 1997 May;28(5):526-32.

33.

Haladyna TM, Downing SM, Rodriguez MC. A Review of Multiple-Choice Item-Writing Guidelines for Classroom Assessment. *Applied Measurement in Education*. 2002 July;15(3):309–33.

34.

McCoubrie P. Improving the fairness of multiple-choice questions: a literature review. *Medical Teacher*. 2004 Dec;26(8):709–12.

35.

Miller MD, Linn RL, Gronlund NE. *Measurement and assessment in teaching*. 11th ed., International ed. Boston, Mass: Pearson Education; 2013.

36.

Palmer EJ, Devitt PG. Assessment of higher order cognitive skills in undergraduate education: modified essay or multiple choice questions?: research paper. *BMC Medical Education*. 2007;7(1).

37.

Lubarsky S, Dory V, Meterissian S, Lambert C, Gagnon R. Examining the effects of gaming and guessing on script concordance test scores. *Perspectives on Medical Education*. 2018 June;7(3):174–81.

38.

Anderson LW, Bloom BS. *A taxonomy for learning, teaching, and assessing: a revision of Bloom's taxonomy of educational objectives*. Abridged ed. New York, N.Y.: Longman; 2001.

39.

Sam AH, Field SM, Collares CF, van der Vleuten CPM, Wass VJ, Melville C, et al. Very-short-answer questions: reliability, discrimination and acceptability. *Medical*

Education. 2018 Apr;52(4):447–55.

40.

Cotton DRE, Cotton PA, Shipway JR. Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. *Innovations in Education and Teaching International*. 2024 Mar 3;61(2):228–39.

41.

Boursicot KAM, Roberts TE, Burdick WP. Structured Assessments of Clinical Competence. In: Swanwick T, Forrest K, O'Brien BC, editors. *Understanding Medical Education* [Internet]. Chichester, UK: John Wiley & Sons, Ltd; 2018. p. 335–45. Available from: <https://ezproxy.lib.gla.ac.uk/login?url=https://doi.wiley.com/10.1002/9781119373780.ch23>

42.

Schoonheim-Klein M, Muijtjens A, Habets L, Manogue M, Van Der Vleuten C, Van Der Velden U. Who will pass the dental OSCE? Comparison of the Angoff and the borderline regression standard setting methods. *European Journal of Dental Education*. 2009 Aug;13(3):162–71.

43.

Regehr G1, MacRae H, Reznick RK, Szalay D. Comparing the psychometric properties of checklists and global rating scales for assessing performance on an OSCE-format examination. *Acad Med* [Internet]. 1998; Available from: <https://www.ncbi.nlm.nih.gov/pubmed/9759104>

44.

Harden RM. Misconceptions and the OSCE. *Medical Teacher*. 2015 July 3;37(7):608–10.

45.

Carraccio, Carol;Wolfsthal, Susan D.;Englander, Robert;Ferentz, Kevin;Martin, Christine. Shifting Paradigms: From Flexner to Competencies. *Academic Medicine* [Internet]. 77(5). Available from: https://journals.lww.com/academicmedicine/Fulltext/2002/05000/Shifting_Paradigms__From_Flexner_to_Competencies.3.aspx

46.

Rushforth HE. Objective structured clinical examination (OSCE): Review of literature and implications for nursing education. *Nurse Education Today*. 2007 July;27(5):481–90.

47.

Spielman A, Fulmer T, Eisenberg E, Alfano M. Dentistry, Nursing, and Medicine: A Comparison of Core Competencies. *Journal of Dental Education* [Internet]. 2005;69(11):1257–71. Available from: <https://pubmed.ncbi.nlm.nih.gov/16275689/>

48.

Harden RM, Stevenson M, Downie WW, Wilson GM. Assessment of clinical competence using objective structured examination. *BMJ*. 1975 Feb 22;1(5955):447–51.

49.

Watson R, Stimpson A, Topping A, Porock D. Clinical competence assessment in nursing: a systematic review of the literature. *Journal of Advanced Nursing*. 2002 Sept;39(5):421–31.

50.

Williams DM, Davies S, Horner M, Handley J. Peer and near-peer OSCE examiners. *Medical Teacher*. 2016 Feb;38(2):212–3.

51.

Brown C, Ross S, Cleland J, Walsh K. Money makes the (medical assessment) world go round: The cost of components of a summative final year Objective Structured Clinical Examination (OSCE). *Medical Teacher*. 2015 July 3;37(7):653–9.

52.

Meskeel P, Burke E, Kropmans TJB, Byrne E, Setyonugroho W, Kennedy KM. Back to the future: An online OSCE Management Information System for nursing OSCEs. *Nurse Education Today*. 2015 Nov;35(11):1091–6.

53.

Tavakol M, Doody GA. A novel psychometric programme for the rapid analysis of OSCE data. *Medical Teacher*. 2016 Jan 2;38(1):104–5.

54.

Eva KW, Rosenfeld J, Reiter HI, Norman GR. An admissions OSCE: the multiple mini-interview. *Medical Education*. 2004 Mar;38(3):314–26.

55.

Lane P. Recruitment into training for general practice—the winds of change or a breath of fresh air? *BMJ*. 2005 Oct 8;331(7520):s153–s153.

56.

Hodges B, Regehr G, McNaughton N, Tiberius R, Hanson M. OSCE checklists do not capture increasing levels of expertise. 1999;74(10). Available from: https://journals.lww.com/academicmedicine/abstract/1999/10000/osce_checklists_do_not_capture_increasing_levels.17.aspx

57.

Hodges B, McIlroy JH. Analytic global OSCE ratings are sensitive to level of training. *Medical Education*. 2003 Nov;37(11):1012–6.

58.

Ma IWY, Zalunardo N, Pachev G, Beran T, Brown M, Hatala R, et al. Comparing the use of global rating scale with checklists for the assessment of central venous catheterization skills using simulation. *Advances in Health Sciences Education*. 2012 Oct;17(4):457–70.

59.

Wood TJ, Humphrey-Murto SM, Norman GR. Standard Setting in a Small Scale OSCE: A Comparison of the Modified Borderline-Group Method and the Borderline Regression

Method. *Advances in Health Sciences Education*. 2006 May;11(2):115-22.

60.

Harden RM. Revisiting 'Assessment of clinical competence using an objective structured clinical examination (OSCE)'. *Medical Education*. 2016 Apr;50(4):376-9.

61.

Harden RM, Lilley P, Patricio M, Norman GR. The definitive guide to the OSCE: the Objective Structured Clinical Examination as a performance assessment [Internet]. Edinburgh: Elsevier; 2016. Available from: <https://www.vlebooks.com/vleweb/product/openreader?id=GlasgowUni&isbn=9780702055492>

62.

Denison A, Bate E, Thompson J. Tablet versus paper marking in assessment: feedback matters. *Perspectives on Medical Education*. 2016 Apr;5(2):108-13.

63.

ten Cate O. Nuts and Bolts of Entrustable Professional Activities. *Journal of Graduate Medical Education*. 2013 Mar;5(1):157-8.

64.

Harden RM. Learning outcomes as a tool to assess progression. *Medical Teacher*. 2007 Jan;29(7):678-82.

65.

Ross M. Entrustable professional activities. *The Clinical Teacher*. 2015 Aug;12(4):223-5.

66.

ten Cate O, Young JQ. The patient handover as an entrustable professional activity: adding

meaning in teaching and practice. *BMJ Quality & Safety*. 2012 Dec 1;21(Suppl 1):i9-12.

67.

Aylward M, Nixon J, Gladding S. An Entrustable Professional Activity (EPA) for Handoffs as a Model for EPA Assessment Development. *Academic Medicine*. 2014 Oct;89(10):1335-40.

68.

Hauer KE, Soni K, Cornett P, Kohlwes J, Hollander H, Ranji SR, et al. Developing Entrustable Professional Activities as the Basis for Assessment of Competence in an Internal Medicine Residency: A Feasibility Study. *Journal of General Internal Medicine*. 2013 Aug;28(8):1110-4.

69.

Orsini C, Binnie VI. Entrustment decisions in dental education: Is it time to start formalising? *Medical Teacher*. 2016 Mar 3;38(3):322-322.

70.

Auewarakul C, Downing SM, Praditsuwan R, Jaturatamrong U. Item Analysis to Improve Reliability for an Internal Medicine Undergraduate OSCE. *Advances in Health Sciences Education*. 2005 June;10(2):105-13.

71.

NEWBLE DI, SWANSON DB. Psychometric characteristics of the objective structured clinical examination. *Medical Education*. 1988 July;22(4):325-34.

72.

Sturpe DA. Objective Structured Clinical Examinations in Doctor of Pharmacy Programs in the United States. *American journal of pharmaceutical education* [Internet]. 2010;74(8). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2987288/>

73.

Snell LS, Frank JR. Competencies, the tea bag model, and the end of time. *Medical Teacher*. 2010 Aug;32(8):629–30.

74.

Gravina EW. Competency-Based Education and Its Effect on Nursing Education: A Literature Review. *Teaching and Learning in Nursing*. 2017 Apr;12(2):117–21.

75.

Read EK, Bell C, Rhind S, Hecker KG. The Use of Global Rating Scales for OSCEs in Veterinary Medicine. *PLOS ONE*. 2015 Mar 30;10(3).

76.

Wood TJ, Pugh D. Are rating scales really better than checklists for measuring increasing levels of expertise? *Medical Teacher*. 2020 Jan 2;42(1):46–51.

77.

Hagel CM, Hall AK, Dagnone JD. Queen's University Emergency Medicine Simulation OSCE: an Advance in Competency-Based Assessment. *CJEM*. 2016 May;18(3):230–3.

78.

Tekian A, Ten Cate O, Holmboe E, Roberts T, Norcini J. Entrustment decisions: Implications for curriculum development and assessment. *Medical Teacher*. 2020 Mar 15;1–7.

79.

Peters H, Holzhausen Y, Boscardin C, ten Cate O, Chen HC. Twelve tips for the implementation of EPAs for assessment and entrustment decisions. *Medical Teacher*. 2017 Aug 3;39(8):802–7.

80.

Kakadia R, Chen E, Ohyama H. Implementing an online OSCE during the COVID-19 pandemic. *Journal of Dental Education*. 2020 July 23;

81.

Ryan A, Carson A, Reid K, Smallwood D, Judd T. Fully online OSCEs: A large cohort case study. *MedEdPublish*. 2020;9(1).

82.

J. G. Boyle. Viva la VOSCE? *BMC Medical Education* [Internet]. 2020;20(1). Available from: <https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-020-02444-3>

83.

Hopwood J, Myers G, Sturrock A. Twelve tips for conducting a virtual OSCE. *Medical Teacher*. 2021 June 3;43(6):633–6.

84.

Norcini JJ. The Mini-CEX: A Method for Assessing Clinical Skills. *Annals of Internal Medicine*. 2003 Mar 18;138(6).

85.

Kessel D, Jenkins J, Neville E. Workplace based assessments are no more. *BMJ*. 2012 Sept 26;

86.

Norcini J, Burch V. Workplace-based assessment as an educational tool: AMEE Guide No. 31. *Medical Teacher*. 2007 Jan;29(9–10):855–71.

87.

Elstein AS, Sprafka SA, Shulman LS. *Medical Problem Solving: An Analysis of Clinical Reasoning*. Harvard University Press, 2013;

88.

Noel GL. How Well Do Internal Medicine Faculty Members Evaluate the Clinical Skills of Residents? *Annals of Internal Medicine*. 1992 Nov 1;117(9).

89.

Kogan JR, Bellini LM, Shea JA. Feasibility, Reliability, and Validity of the Mini-Clinical Evaluation Exercise (mCEX) in a Medicine Core Clerkship. *Academic Medicine* [Internet]. 2003;78(10). Available from: https://journals.lww.com/academicmedicine/Fulltext/2003/10001/Feasibility,_Reliability,_and_Vailidity_of_the.11.aspx

90.

Durning SJ, Cation LJ, Markert RJ, Pangaro LN. Assessing the Reliability and Validity of the Mini-Clinical Evaluation Exercise for Internal Medicine Residency Training. *Academic Medicine* [Internet]. 2002;77(9). Available from: <https://journals.lww.com/academicmedicine/pages/articleviewer.aspx?year=2002&issue=09000&article=00020&type=abstract>

91.

Holmboe ES, Huot S, Chung J, Norcini J, Hawkins RE. Construct Validity of the MiniClinical Evaluation Exercise (miniCEX). *Academic Medicine* [Internet]. 2003;78(8). Available from: <https://journals.lww.com/academicmedicine/pages/articleviewer.aspx?year=2003&issue=08000&article=00018&type=abstract>

92.

Torsney KM, Cocker DM, Slessor AAP. The Modern Surgeon and Competency Assessment: Are the Workplace-Based Assessments Evidence-Based? *World Journal of Surgery*. 2015 Mar;39(3):623-33.

93.

Mitchell C, Bhat S, Herbert A, Baker P. Workplace-based assessments of junior doctors: do scores predict training difficulties? *Medical Education*. 2011 Dec;45(12):1190-8.

94.

Williams RG, Verhulst S, Colliver JA, Dunnington GL. Assuring the reliability of resident

performance appraisals: More items or more observations? *Surgery*. 2005 Feb;137(2):141-7.

95.

Murphy DJ, Bruce DA, Mercer SW, Eva KW. The reliability of workplace-based assessment in postgraduate medical education and training: a national evaluation in general practice in the United Kingdom. *Advances in Health Sciences Education*. 2009 May;14(2):219-32.

96.

Archer JC. Use of SPRAT for peer review of paediatricians in training. *BMJ*. 2005 May 28;330(7502):1251-3.

97.

Quantrill SJ, Tun JK. Workplace-based assessment as an educational tool. *Guide supplement 31.5 - Viewpoint. Medical Teacher*. 2012 May;34(5):417-8.

98.

Hurst YK, Prescott-Clements LE, Rennie JS. The patient assessment questionnaire: A new instrument for evaluating the interpersonal skills of vocational dental practitioners. *British Dental Journal*. 2004 Oct 23;197(8):497-500.

99.

Humphrey-Murto S, Côté M, Pugh D, Wood TJ. Assessing the Validity of a Multidisciplinary Mini-Clinical Evaluation Exercise. *Teaching and Learning in Medicine*. 2018 Apr 3;30(2):152-61.

100.

Rekman J, Hamstra SJ, Dudek N, Wood T, Seabrook C, Gofton W. A New Instrument for Assessing Resident Competence in Surgical Clinic: The Ottawa Clinic Assessment Tool. *Journal of Surgical Education*. 2016 July;73(4):575-82.

101.

Sutherland RM, Reid KJ, Chiavaroli NG, Smallwood D, McColl GJ. Assessing Diagnostic Reasoning Using a Standardized Case-Based Discussion. *Journal of Medical Education and Curricular Development*. 2019 Jan;6.

102.

Driessen EW, Muijtjens AMM, van Tartwijk J, van der Vleuten CPM. Web- or paper-based portfolios: is there a difference? *Medical Education*. 2007 Nov;41(11):1067–73.

103.

Driessen E, van Tartwijk J. Portfolios in personal and professional development. In: Swanwick T, editor. *Understanding Medical Education* [Internet]. 3rd ed. Chichester, UK: Wiley-Blackwell; 2013. p. 255–62. Available from: <https://ezproxy.lib.gla.ac.uk/login?url=https://onlinelibrary.wiley.com/doi/10.1002/9781119373780.ch18>

104.

Siau K, Dunckley P, Valori R, Feeney M, Hawkes N, Anderson J, et al. Changes in scoring of Direct Observation of Procedural Skills (DOPS) forms and the impact on competence assessment. *Endoscopy*. 2018 Aug;50(08):770–8.

105.

Martinsen SSS, Espeland T, Berg EAR, Samstad E, Lillebo B, Slørdahl TS. Examining the educational impact of the mini-CEX: a randomised controlled study. *BMC Medical Education*. 2021 Dec;21(1).

106.

Cohen L, Manion L, Morrison K. *Research methods in education* [Internet]. Eighth edition. London: Routledge; 2018. Available from: <https://www.vlebooks.com/vleweb/product/openreader?id=GlasgowUni&isbn=9781315456522>

107.

Joanna Briggs Institute QARI [Internet]. Available from: <https://jbi.global/>

108.

Buckley S, Coleman J, Davison I, Khan KS, Zamora J, Malick S, et al. The educational effects of portfolios on undergraduate student learning: A Best Evidence Medical Education (BEME) systematic review. BEME Guide No. 11. Medical Teacher. 2009 Jan;31(4):282–98.

109.

Brookfield S. Developing critical thinkers: challenging adults to explore alternative ways of thinking and acting. Milton Keynes: Open University Press; 1987.

110.

Burls A. What is critical appraisal? [Internet]. 2009. Available from: https://www.academia.edu/92786872/What_Is_Critical_Appraisal

111.

The Campbell Collaboration [Internet]. Available from: <http://www.campbellcollaboration.org/>

112.

CASP Critical Appraisal Skills Programme Oxford UK [Internet]. Available from: <http://www.casp-uk.net/>

113.

Cochrane | Trusted evidence. Informed decisions. Better health. [Internet]. Available from: <http://www.cochrane.org/>

114.

Kee F, Bickle I. Critical thinking and critical appraisal: the chicken and the egg? QJM [Internet]. 2004 Sept 1;97(9):609–14. Available from: <https://ezproxy.lib.gla.ac.uk/login?url=https://academic.oup.com/qjmed/article/97/9/609/15>

94870

115.

Da Silva A, Dennick R. Corpus analysis of problem-based learning transcripts: an exploratory study. *Medical Education*. 2010;44(3):280–8.

116.

Garrison DR. Critical thinking and adult education: a conceptual model for developing critical thinking in adult learners. *International Journal of Lifelong Education*. 1991 Oct;10(4):287–303.

117.

Hammick M, Dornan T, Steinert Y. Conducting a best evidence systematic review. Part 1: From idea to data coding. BEME Guide No. 13. *Medical Teacher*. 2010 Jan;32(1):3–15.

118.

Horsley T, Hyde C, Santesso N, Parkes J, Milne R, Stewart R. Teaching critical appraisal skills in healthcare settings. *Cochrane Database of Systematic Reviews*. 1996 Sept 1;

119.

Huang GC, Newman LR, Schwartzstein RM. Critical Thinking in Health Professions Education: Summary and Consensus Statements of the Millennium Conference 2011. *Teaching and Learning in Medicine*. 2014 Jan;26(1):95–102.

120.

Jenicek M. The hard art of soft science: Evidence-Based Medicine, Reasoned Medicine or both? *Journal of Evaluation in Clinical Practice*. 2006 Aug;12(4):410–9.

121.

Kirkpatrick D. Great Ideas Revisited: Revisiting Kirkpatrick's Four-Level Model. *Training and Development [Internet]*. 1996;50(1):54–9. Available from:

<https://ezproxy.lib.gla.ac.uk/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=tfh&AN=9602066395&site=ehost-live>

122.

Missimer CA. Good arguments: an introduction to critical thinking. 3rd ed. Englewood Cliffs, N.J.: Prentice Hall; 1995.

123.

Moore TJ. Critical thinking and disciplinary thinking: a continuing debate. Higher Education Research & Development. 2011 June;30(3):261-74.

124.

Paul R. Critical thinking: how to prepare students for a rapidly changing world. foundation for critical thinking; 1995.

125.

Paul R, Elder L. The Miniature Guide to Critical Thinking: Concepts and Tools [Internet]. 2006. Available from: https://www.criticalthinking.org/files/Concepts_Tools.pdf

126.

Yardley S, Dornan T. Kirkpatrick's levels and education 'evidence'. Medical Education. 2012 Jan;46(1):97-106.

127.

Devine OP, Harborne AC, McManus IC. Assessment at UK medical schools varies substantially in volume, type and intensity and correlates with postgraduate attainment. BMC Medical Education. 2015 Dec;15(1).

128.

Ertmer PA, Richardson JC, Belland B, Camin D, Connolly P, Coulthard G, et al. Using Peer Feedback to Enhance the Quality of Student Online Postings: An Exploratory Study. Journal

of Computer-Mediated Communication. 2007 Jan;12(2):412–33.

129.

Nicol DJ, Macfarlane-Dick D. Formative assessment and self-regulated learning: a model and seven principles of good feedback practice. *Studies in Higher Education*. 2006 Apr;31(2):199–218.

130.

Piedra N, Chicaiza J, Lopez J, Romero A, Tovar E. Measuring collaboration and creativity skills through rubrics: Experience from UTPL collaborative social networks course. In: *IEEE EDUCON 2010 Conference*. IEEE; 2010. p. 1511–6.

131.

De Wever B, Van Keer H, Schellens T, Valcke M. Assessing collaboration in a wiki: The reliability of university students' peer assessment. *The Internet and Higher Education*. 2011 Sept;14(4):201–6.

132.

Verkerk MA, de Bree MJ, Mourits MJE. Reflective professionalism: interpreting CanMEDS' 'professionalism'. *Journal of Medical Ethics*. 2007 Nov 1;33(11):663–6.

133.

Cleland JA, Knight LV, Rees CE, Tracey S, Bond CM. Is it me or is it them? Factors that influence the passing of underperforming students. *Medical Education*. 2008 Aug;42(8):800–9.

134.

Cruess R. The Professionalism Mini-Evaluation Exercise: A Preliminary Investigation. *Academic Medicine* [Internet]. 81(10). Available from: https://journals.lww.com/academicmedicine/Fulltext/2006/10001/The_Professionalism_Mini_Evaluation_Exercise__A.19.aspx

135.

Goldie J. Assessment of professionalism: A consolidation of current thinking. *Medical Teacher*. 2013 Feb;35(2):e952-6.

136.

van Mook WNKA, Gorter SL, O'Sullivan H, Wass V, Schuwirth LW, van der Vleuten CPM. Approaches to professional behaviour assessment: Tools in the professionalism toolbox. *European Journal of Internal Medicine*. 2009 Dec;20(8):e153-7.

137.

Ginsburg S, Regehr G, Lingard L. Basing the evaluation of professionalism on observable behaviours: a cautionary tale. *Academic Medicine* [Internet]. 2004;79(10):S1-4. Available from: https://ezproxy.lib.gla.ac.uk/login?url=https://journals.lww.com/academicmedicine/Fulltext/2004/10001/Basing_the_Evaluation_of_Professionalism_on.1.aspx

138.

Hodges BD, Ginsburg S, Cruess R, Cruess S, Delpont R, Hafferty F, et al. Assessment of professionalism: Recommendations from the Ottawa 2010 Conference. *Medical Teacher*. 2011 May;33(5):354-63.

139.

Schubert S, Ortwein H, Dumitsch A, Schwantes U, Wilhelm O, Kiessling C, et al. A situational judgement test of professional behaviour: development and validation. *Medical Teacher*. 2008 Jan;30(5):528-33.

140.

Arnold L, Shue CK, Kritt B, Ginsburg S, Stern DT. Medical students' views on peer assessment of professionalism. *Journal of General Internal Medicine*. 2005 Sept;20(9):819-24.

141.

Arnold L, Shue CK, Kalishman S, Prislun M, Pohl C, Pohl H, et al. Can There Be a Single

System for Peer Assessment of Professionalism among Medical Students? A Multi-Institutional Study. *Academic Medicine*. 2007 June;82(6):578–86.

142.

Finn G, Sawdon M, Clipsham L, McLachlan J. Peer estimation of lack of professionalism correlates with low Conscientiousness Index scores. *Medical Education*. 2009 Oct;43(10):960–7.

143.

Gaufberg E, Fitzpatrick A. The favour: a professional boundaries OSCE station. *Medical Education*. 2008 May;42(5):529–30.

144.

Ginsburg S. Context, Conflict, and Resolution: A New Conceptual Framework for Evaluating Professionalism. *Academic Medicine* [Internet]. 75(10). Available from: https://journals.lww.com/academicmedicine/Fulltext/2000/10001/Context,_Conflict,_and_Resolution__A_New.3.aspx

145.

Ginsburg S, Regehr G, Mylopoulos M. From behaviours to attributions: further concerns regarding the evaluation of professionalism. *Medical Education*. 2009 May;43(5):414–25.

146.

Ginsburg S, van der Vleuten C, Eva KW, Lingard L. Hedging to save face: a linguistic analysis of written comments on in-training evaluation reports. *Advances in Health Sciences Education*. 2016 Mar;21(1):175–88.

147.

GMC. Development of generic professional capabilities [Internet]. General Medical Council; Available from: <http://www.gmc-uk.org/education/23581.asp>

148.

Kelly M, O'Flynn S, McLachlan J, Sawdon MA. The Clinical Conscientiousness Index. *Academic Medicine*. 2012 Sept;87(9):1218-24.

149.

McCormack WT, Lazarus C, Stern D, Small PA. Peer Nomination: A Tool for Identifying Medical Student Exemplars in Clinical Competence and Caring, Evaluated at Three Medical Schools. *Academic Medicine*. 2007 Nov;82(11):1033-9.

150.

McLachlan JC, Finn G, Macnaughton J. The Conscientiousness Index: A Novel Tool to Explore Students' Professionalism. *Academic Medicine*. 2009 May;84(5):559-65.

151.

Norcini JJ. Peer assessment of competence. *Medical Education*. 2003 June;37(6):539-43.

152.

Papadakis MA, Teherani A, Banach MA, Knettler TR, Rattner SL, Stern DT, et al. Disciplinary Action by Medical Boards and Prior Behavior in Medical School. *New England Journal of Medicine*. 2005 Dec 22;353(25):2673-82.

153.

Pohl CA, Hojat M, Arnold L. Peer Nominations as Related to Academic Attainment, Empathy, Personality, and Specialty Interest. *Academic Medicine*. 2011 June;86(6):747-51.

154.

Ramsey PG. Use of Peer Ratings to Evaluate Physician Performance. *JAMA: The Journal of the American Medical Association*. 1993 Apr 7;269(13).

155.

Royal College of Physicians. Doctors in Society: Medical professionalism in a changing world [Internet]. 2005. Available from: https://cdn.shopify.com/s/files/1/0924/4392/files/doctors_in_society_reportweb.pdf?15745311214883953343

156.

Stern DT, Frohna AZ, Gruppen LD. The prediction of professional behaviour. *Medical Education*. 2005 Jan;39(1):75–82.

157.

Stern DT. Measuring medical professionalism [Internet]. New York: Oxford University Press; 2006. Available from: <https://ebookcentral.proquest.com/lib/gla/detail.action?docID=3053707>

158.

van Mook WNKA, van Luijk SJ, O'Sullivan H, Wass V, Schuwirth LW, van der Vleuten CPM. General considerations regarding assessment of professional behaviour. *European Journal of Internal Medicine*. 2009 July;20(4):e90–5.

159.

Wilkinson TJ, Wade WB, Knock LD. A Blueprint to Assess Professionalism: Results of a Systematic Review. *Academic Medicine*. 2009 May;84(5):551–8.

160.

Zijlstra-Shaw S, Robinson PG, Roberts T. Assessing professionalism within dental education; the need for a definition. *European Journal of Dental Education*. 2012 Feb;16(1):e128–36.

161.

Patterson F, Zibarras L, Ashworth V. Situational judgement tests in medical education and training: Research, theory and practice: AMEE Guide No. 100. *Medical Teacher*. 2016 Jan 2;38(1):3–17.

162.

Gorania R. Situational judgement stress. *British Dental Journal*. 2021 Oct 22;231(8):426–426.

163.

Royal College of Physicians. Advancing medical professionalism [Internet]. 2018. Available from: <https://www.healthcarevalues.ox.ac.uk/files/ampsummarypdf>

164.

Rimmer A. Situational judgment test is scrapped under new system for allocating foundation training places. *BMJ*. 2023 June 2;

165.

McKinley DW, Norcini JJ. How to set standards on performance-based examinations: AMEE Guide No. 85. *Medical Teacher*. 2014 Feb;36(2):97–110.

166.

Ben-David MF. AMEE Guide No. 18: Standard setting in student assessment. *Medical Teacher*. 2000 Jan;22(2):120–30.

167.

De Champlain AF. Standard Setting Methods in Medical Education. In: Swanwick T, editor. *Understanding Medical Education* [Internet]. Oxford, UK: Wiley-Blackwell; 2019. p. 347–59. Available from: <https://ezproxy.lib.gla.ac.uk/login?url=https://onlinelibrary.wiley.com/doi/10.1002/9781119373780.ch24>

168.

Cohen-Schotanus J, van der Vleuten CPM. A standard setting method with the best performing students as point of reference: Practical and affordable. *Medical Teacher*. 2010 Jan;32(2):154–60.

169.

Downing SM, Tekian A, Yudkowsky R. RESEARCH METHODOLOGY: Procedures for Establishing Defensible Absolute Passing Scores on Performance Examinations in Health Professions Education. *Teaching and Learning in Medicine*. 2006 Jan;18(1):50-7.

170.

Hofstee WKB. The Case for Compromise in Educational Selection and Grading. On Educational Testing [Internet]. 1984; Available from: https://benwilbrink.nl/publicaties/83hofstee_compromise.htm

171.

Fowell SL, Fewtrell R, McLaughlin PJ. Estimating the Minimum Number of Judges Required for Test-centred Standard Setting on Written Assessments. Do Discussion and Iteration have an Influence? *Advances in Health Sciences Education*. 2008 Mar;13(1):11-24.

172.

Taylor CA. Development of a modified Cohen method of standard setting. *Medical Teacher*. 2011 Dec;33(12):e678-82.

173.

Karantonis A, Sireci SG. The Bookmark Standard-Setting Method: A Literature Review. *Educational Measurement: Issues and Practice*. 2006 Mar 20;25(1):4-12.

174.

Puryer J, O'Sullivan D. An introduction to standard setting methods in dentistry. *BDJ*. 2015 Oct 9;219(7):355-8.

175.

Linn AMJ, Tonkin A, Duggan P. Standard setting of script concordance tests using an adapted Nedelsky approach. *Medical Teacher*. 2013 Apr;35(4):314-9.

176.

Woodhouse, L. Comparison of Cohen and Angoff methods of standard setting: is Angoff worth it? European Board of Medical Assessors Annual Academic Conference: Crossing Boundaries: Assessment in Medical Education [Internet]. Available from: <https://eprints.ncl.ac.uk/251674>

177.

Barbara S. Plake, James C. Impara and Patrick M. Irwin. Consistency of Angoff-Based Predictions of Item Performance: Evidence of Technical Quality of Results from the Angoff Standard Setting Method. *Journal of Educational Measurement* [Internet]. 2000;37(4). Available from: <https://www.jstor.org/stable/1435245>

178.

IC McManus. Implementing statistical equating for MRCP(UK) parts 1 and 2. *BMC Medical Education* [Internet]. 2014;14(1). Available from: <https://bmcmmededuc.biomedcentral.com/articles/10.1186/1472-6920-14-204>

179.

Wood DF. Formative Assessment. In: Swanwick T, editor. *Understanding Medical Education* [Internet]. Oxford, UK: John Wiley & Sons, Ltd; 2019. p. 317–28. Available from: <https://ezproxy.lib.gla.ac.uk/login?url=https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119373780.ch25>

180.

Bing-You RG. Why Medical Educators May Be Failing at Feedback. *JAMA*. 2009 Sept 23;302(12).

181.

Ramani S, Krackov SK. Twelve tips for giving feedback effectively in the clinical environment. *Medical Teacher*. 2012 Oct;34(10):787–91.

182.

Van De Ridder JMM, Stokking KM, McGaghie WC, Ten Cate OTJ. What is feedback in clinical education? *Medical Education*. 2008 Jan 22;42(2):189–97.

183.

Rushton A. Formative assessment: a key to deep learning? *Medical Teacher*. 2005 Sept;27(6):509–13.

184.

Sender Liberman A, Liberman M, Steinert Y, McLeod P, Meterissian S. Surgery residents and attending surgeons have different perceptions of feedback. *Medical Teacher*. 2005 Aug;27(5):470–2.

185.

Duers LE, Brown N. An exploration of student nurses' experiences of formative assessment. *Nurse Education Today*. 2009 Aug;29(6):654–9.

186.

Olson BL, McDonald JL. Influence of Online Formative Assessment Upon Student Learning in Biomedical Science Courses. *Journal of Dental Education*. 2004 June;68(6):656–9.

187.

Garrison C, Ehringhaus M. *Formative and Summative Assessments in the Classroom*. 2007; Available from:
https://www.amle.org/portals/0/pdf/articles/Formative_Assessment_Article_Aug2013.pdf

188.

Sadler DR. Formative Assessment: revisiting the territory. *Assessment in Education: Principles, Policy & Practice*. 1998 Mar;5(1):77–84.

189.

Ditchfield C. How do learners make sense of the formative assessment opportunities available to inform their learning in a PBL course. 2007;

190.

Weaver MR. Do students value feedback? Student perceptions of tutors' written responses. *Assessment & Evaluation in Higher Education*. 2006 June;31(3):379-94.

191.

Ferrell G. Supporting assessment and feedback practice with technology: from tinkering to transformation [Internet]. 2013. Available from: <https://repository.jisc.ac.uk/5450/>

192.

Black P, Wiliam D. Assessment and Classroom Learning. *Assessment in Education: Principles, Policy & Practice*. 1998 Mar;5(1):7-74.

193.

Sadler DR. Formative assessment and the design of instructional systems. *Instructional Science*. 1989 June;18(2):119-44.

194.

Elnicki DM, Layne RD, Ogden PE, Morris DK. Oral versus written feedback in medical clinic. *Journal of General Internal Medicine*. 1998 Mar;13(3):155-8.

195.

Norcross WA. The Consultation: An Approach to Learning and Teaching. *JAMA: The Journal of the American Medical Association*. 1985 Jan 18;253(3).

196.

Jackson JL, Kay C, Jackson WC, Frank M. The Quality of Written Feedback by Attendings of Internal Medicine Residents. *Journal of General Internal Medicine*. 2015 July;30(7):973-8.

197.

Rudolph J, Raemer D, Shapiro J. We know what they did wrong, but not why : the case for 'frame-based' feedback. *The Clinical Teacher*. 2013 June;10(3):186-9.

198.

Scally G, Donaldson LJ. Looking forward: Clinical governance and the drive for quality improvement in the new NHS in England. *BMJ*. 1998 July 4;317(7150):61-5.

199.

Shaw S. Research governance: where did it come from, what does it mean? *Journal of the Royal Society of Medicine* [Internet]. 2005 Nov 1;98(11):496-502. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1275997/pdf/496.pdf>

200.

Dimensions of Quality [Internet]. 2010. Available from: <https://www.advance-he.ac.uk/knowledge-hub/dimensions-quality>

201.

Anderson D, Ackerman-Anderson LS. Beyond change management: how to achieve breakthrough results through conscious change leadership [Internet]. 2nd ed. Vol. 36. San Francisco: Pfeiffer; 2010. Available from: <https://ebookcentral.proquest.com/lib/gla/detail.action?docID=624404>

202.

Hay D, Kinchin I, Lygo-Baker S. Making learning visible: the role of concept mapping in higher education. *Studies in Higher Education*. 2008 June;33(3):295-311.

203.

Hay DB, Tan PL, Whaites E. Non-traditional learners in higher education: comparison of a traditional MCQ examination with concept mapping to assess learning in a dental radiological science course. *Assessment & Evaluation in Higher Education*. 2010

Aug;35(5):577-95.

204.

Richstone L, Schwartz MJ, Seideman C, Cadeddu J, Marshall S, Kavoussi LR. Eye Metrics as an Objective Assessment of Surgical Skill. *Annals of Surgery*. 2010 July;252(1):177-82.

205.

Suetsugu N, Ohki M, Kaku T. Quantitative Analysis of Nursing Observation Employing a Portable Eye-Tracker. *Open Journal of Nursing*. 2016;06(01):53-61.

206.

Gould J, Day P. Hearing you loud and clear: student perspectives of audio feedback in higher education. *Assessment & Evaluation in Higher Education*. 2013 Aug;38(5):554-66.

207.

Frost J, de Pont G, Brailsford I. Expanding assessment methods and moments in history. *Assessment & Evaluation in Higher Education*. 2012 May;37(3):293-304.

208.

Harrison CJ, Molyneux AJ, Blackwell S, Wass VJ. How we give personalised audio feedback after summative OSCEs. *Medical Teacher*. 2015 Apr 3;37(4):323-6.

209.

Voelkel S, Mello LV. Audio Feedback – Better Feedback? *Bioscience Education*. 2014 July;22(1):16-30.

210.

Ashraf H, Sodergren MH, Merali N, Mylonas G, Singh H, Darzi A. Eye-tracking technology in medical education: A systematic review. *Medical Teacher*. 2018 Jan 2;40(1):62-9.

211.

Mayer RE. Cognitive Learning. In: Encyclopedia of the sciences of learning [Internet]. [S.l.]: Springer; 2012. Available from: https://ezproxy.lib.gla.ac.uk/login?url=https://link.springer.com/referenceworkentry/10.1007/978-1-4419-1428-6_390

212.

Ho VW, Harris PG, Kumar RK, Velan GM. Knowledge maps: a tool for online assessment with automated feedback. *Medical Education Online*. 2018 Jan;23(1).

213.

Guraya SY. The Desired Concept Maps and Goal Setting for Assessing Professionalism in Medicine. *JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH*. 2016;

214.

Kassab SE, Fida M, Radwan A, Hassan AB, Abu-Hijleh M, O'Connor BP. Generalisability theory analyses of concept mapping assessment scores in a problem-based medical curriculum. *Medical Education*. 2016 July;50(7):730-7.

215.

Courteille O, Bergin R, Courteille O, Bergin R, Stockeld D, Ponzer S, et al. The use of a virtual patient case in an OSCE-based exam – A pilot study. *Medical Teacher*. 2008 Jan;30(3):e66-76.

216.

Downing SM. Guessing on selected-response examinations. *Medical Education*. 2003 Aug;37(8):670-1.

217.

Ingrid Tonni, Cynthia C. Gadbury-Amyot, Marjan Govaerts, Olle ten Cate, Joan Davis, Lily T. Garcia, Richard W. Valachovic. ADEA-ADEE Shaping the Future of Dental Education III. *Journal of Dental Education*. 2020;84(1):97-104.