

## Supplemental Digital Appendix 1

### Competency-Based Medical Education: Seminal Reference List<sup>a</sup>

#### Competency-Based Medical Education:

##### *Definition*

Frank J et al. Competency-based medical education: Theory to practice. Med Teach. 2010;32:631-637.

##### *Comprehensive description*

McGaghie WC, Miller GE, Sajid AW, Telder TV. Competency-based Curriculum Development in Medical Education. Geneva, CH. World Health Organization; 1978. Available at: [http://apps.who.int/iris/bitstream/10665/39703/1/WHO\\_PHP\\_68.pdf](http://apps.who.int/iris/bitstream/10665/39703/1/WHO_PHP_68.pdf)

#### Mastery Learning:

Block JH (Ed). Mastery Learning: Theory and Practice. New York, NY: Holt, Rinehart and Winston, Inc; 1971.

#### Constructive Alignment:

Biggs JB, Tang, C. Teaching for Quality Learning at University .4th edition. New York, NY: Open University Press: 2011.

#### Social Accountability:

Boelen C, Heck, JE. Defining and measuring social accountability of medical schools. Geneva: World Health Organization: 1995. Available at: [http://whqlibdoc.who.int/hq/1995/WHO\\_HRH\\_95.7.pdf](http://whqlibdoc.who.int/hq/1995/WHO_HRH_95.7.pdf)

#### Outcome-based Learning:

Harden RM, Crosby JR, Davis MH. AMEE Guide No. 14: Outcome-based education: Part 1 – An introduction to outcome-based education. Part 2 – Planning, implementing and evaluating. Part 3 – Assessment in outcome-based education. Medical Teacher. 1999;21:7-25.

#### Backwards Design:

Wiggins and McTighe. Understanding by Design. New York, NY: Pearson: Merrill Prentice Hall. 2006.

#### Job Task Analysis:

Larsson JA, White B, eds. Learning Analytics: From Research to Practice. New York, NY: Springer; 2014.

#### Expertise Theory:

Ericsson KA, Charness N, Feltovich PJ, Hoffman RR, eds. The Cambridge Handbook of Expertise and Expert Performance. 1st edition. New York, NY: Cambridge University Press; 2006.

#### Entrustable Professional Activities:

ten Cate O. Entrustability of professional activities and competency-based training. Medical Education. 2005. 39;12:1176-1171.

#### Surface & Deep Approaches to Learning:

Marton F, Saljo R. On qualitative differences in learning 1: Outcome and process. Brit. J. Educ. Psych. 1976. 46: 4-11

Marton F, Saljo R. On qualitative differences in learning 2: Outcome as a function of the learner's conception of the task. Brit. J. Educ. Psych. 1976. 46: 115-27.

**Situated learning:**

Lave J, Wenger E. Situated Learning: Legitimate Peripheral Participation. Cambridge University Press; 1991.

**Deliberate Practice:**

Ericsson KA, Charness N, Feltovich PJ, Hoffman RR, eds. The Cambridge Handbook of Expertise and Expert Performance. 1st edition. New York, NY: Cambridge University Press; 2006.

**Self-regulated Learning:**

Zimmerman BJ, Schunk DH, eds. Self-Regulated Learning and Academic Achievement: Theoretical Perspectives. Hillsdale, NJ: Lawrence Erlbaum Associates; 2001.

**Workplace-Based Learning:**

Boud D, Garrick J, eds. Understanding Learning at Work. New York, NY: Routledge  
Billett S. Learning in the Workplace: Strategies for Effective Practice. Crow's Nest, New South Wales: Allen & Unwin; 2001.

**Professional Identity Formation:**

Schwartz SJ, Luyckx K, Vignoles VI, eds. Handbook of Identity Theory and Research. New York, NY: Springer; 2011.

**Zone of Proximal Development & Scaffolding:**

Vygotsky LS. Mind in Society: The Development of Higher Psychological Processes. Cambridge, MA: Harvard University Press; 1978.

**Constructive Friction:**

Vermunt JD, Verloop N. Congruence and friction between learning and teaching. Learning and Instruction. 1999. 9: 257-280.

**Learner-Centered Teaching:**

Blumberg P. Developing Learner-Centered Teaching: A Guide for Faculty. San Francisco, CA: Jossey-Bass; 2009.

**Cognitive Apprenticeship:**

Collins A. Cognitive Apprenticeship. Chapter 4 In: KK Sawyers, ed. The Cambridge Handbook of the Learning Sciences. Cambridge University Press; 2006.

**Coaching Theory:**

Garvey B, Stokes P, Megginson D. Coaching and Mentoring: Theory and Practice. Thousand Oaks, CA: Sage Publications; 2017.

Gloss, EJ. A hint of this and a pinch of that: Theories that inform coaching and consulting. Graduates Studies Journal of Organizational Dynamics. 2012;2:1-13.

**Growth Mindset**

Dweck, CS. Mindset: The New Psychology of Success. New York, NY: Random House; 2016.

**Programmatic Assessment:**

van der Vleuten CPM, Schuwirth LWT. Assessing professional competence: From methods to programmes. Med Educ. 2005;39:309-317.

**Formative Assessment**

Black P, William D. Assessment and classroom learning. Assessment in Education: Principles, Policy & Practice. 1998;5:7-74.

**Learning Analytics:**

Larsson JA, White B, eds. Learning Analytics: From Research to Practice. New York, NY: Springer; 2004.

---

<sup>a</sup>This is not intended to be a definitive list. Rather it is expected that, depending on the component of CBME being evaluated, and as our understanding of CBME continues to evolve, other work may also be useful in representing ways of how we think particular aspects of CBME work.