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Star, Jon R.; Chen, Jason; Dede, Chris

Applying motivation theory to the design of game-based learning environments.

Torbeyns, Joke (ed.) et al., Describing and studying domain-specific serious games. Cham: Springer (ISBN 978-3-319-20275-4/hbk; 978-3-319-20276-1/ebook). Advances in Game-Based Learning, 83-91 (2015).

Summary: Although there has been a wealth of research exploring motivation within game-based learning environments, few of these studies employ frameworks that are grounded in well-established theories of motivation. This chapter brings a rigorous theoretical framework for motivation to the study and design of a game-based learning environment. First, we outline a key motivation construct that has potential value for the design of game-based learning environments – *A. Wigfield* and *J. Eccles*'s expectancy-value theory [“Expectancy-value theory of motivation”, *Contemp. Educ. Psychol.* 25, No.1, 68–81 (2000; doi:10.1006/ceps.1999.1015)]. We then provide a description of a game whose design was informed by this motivational theory, where the game was intended to promote students' interest in and motivation to pursue science, technology, engineering, and mathematics (STEM) careers.

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