

Games and Virtual Worlds



LEARNING ENVIRONMENTS

LEARNER IMPACTS

- Attitude
- Behavior
- Self-regulation
- Achievement

DESCRIPTION

Well-designed games include features that make them intrinsically motivating and thus engaging (Fullerton, 2008; Malone & Lepper, 1987; Shute, Rieber, & Van Eck, 2011). Some of the features of good games include adaptive challenges, goals, and rules, interactive problem solving, control (of learning and the game environment), ongoing feedback, and sensory stimuli. There is growing evidence of video games and simulations supporting learning (Coller & Scott, 2009; Tobias & Fletcher, 2011; for a review see Wilson et al., 2009). An additional advantage of using video games and simulations in education is the vast amount of data that can be used for assessment purposes (Dede, 2005; DiCerbo & Behrens, 2012; Quellmalz, Timms, Silbergliitt, & Buckley, 2012; Shute & Ventura, 2013). Formative assessments embedded within a video game can enable us to more accurately provide feedback and change gameplay to maximize learning according to the ability level of the player.

CAPABILITIES

- Instruction: Active learning experience

SAMPLE DESIGN IMPLEMENTATIONS

- Robust Technology: Online 3D virtual worlds
- Simple Technology: 2D HTML games
- Content Support: Using the Evidence-Centered Design (ECD) approach



Pearson



Principle Criteria	Integration (4-5 points)	Exploration (2-3 points)	Consideration (1 point)	Not Applicable (0 Points)	Total Points
Purpose/ Model	The product strategy is aligned to game-based learning as a core principle of a learner-centered product	The product team is exploring game-based learning as a core LDP for creating a more learner-centered product The product strategy is exploring integrating an evidence-based model of game-based learning	The product team considers game-based learning to be an important LDP for creating a more learner-centered product The product strategy considers game-based learning at a high level but does not currently align to an evidence-based model	The game-based learning LDP does NOT align to the product strategy and is not necessary to explore further	= ____
Game-based Learning Application	The product uses empirically-based recommendations concerning game-based learning	Principle is applied only to a specific area of the product and more learner feedback is needed to improve principle application	Product team thinks applying this principle would add value to their product strategy Product team has applied similar principles to their product strategy	This principle is NOT currently being applied to any area of the product and is NOT needed to improve the product	= ____
Game-based Learning Delivery	The impact on a capability or service aligned to this principle has been gathered/reported on	Product team is in early discussions about partnering with LD team to validate this principle with learners. Product team has specific capabilities they need to validate this principle with	Product team needs more information about how this principle might be tested with learners using LD's validation services	This principle does NOT need to be validated in order to inform product design & development	= ____
Learner Characteristics	Design & development are currently using validation reports to further align the principle and the product strategy	Product team is currently exploring how validation results and recommendations could be used in product design & development	Product team feels there is time in the schedule to include validation data to inform product design & development Product team needs a consultation to learn more about validation services and results reports	Validation data will NOT be used to inform product design & development	= ____
Formative/ Summative Applications	The formative and summative applications make proper use of game-based learning LDP recommendations for creating assessments.	Product team is currently exploring how recommendations for designing assessments for game-based learning could be used in product design & development	Product team feels there is time in the schedule to include time spent on assessment application design & development Product team needs a consultation to learn more about designing game-based learning assessments	Formative/summative applications will NOT be used to inform product design & development	= ____