Selene players construct the Earth's Moon, then pepper it with impact craters and flood it with lava flows.

The CyGaMEs Approach

Quantify Player's Knowledge Growth (Reese & Tabachnick, 2010)

The CyGaMEs approach to instructional game design and assessment aligns the game system, gameplay, and game goal with a correlated learning domain (Reese, 2007, 2008, 2009). Thus, CyGaMEs measures of player progress toward the game goal capture player's growing knowledge of that domain. The CyGaMEs timed report tool collects embedded measures of player's knowledge growth. CyGaMEs uses timed report for assessment and evaluation. Quantitative analyses demonstrated that Selene Classic timed report is reliable, valid, and sensitive assessment measure. Analysis of timed report data during formative evaluation of Selene II informed revision by revealing and quantifying design flaws in performance, game-system/gameplay, and/or timed report algorithm. The timed report tool enhances designer's ability to efficaciously evaluate game-based instructional environments and assess player's knowledge growth.

CyGaMEs Timed Report: Embedded Tool for Evaluation and Assessment

ABSTRACT

The CyGaMEs approach to instructional game design and assessment aligns the game system, gameplay, and game goal with a correlated learning domain (Reese, 2007, 2008, 2009). Thus, CyGaMEs measures of player progress toward the game goal capture player’s growing knowledge of that domain. The CyGaMEs timed report tool collects embedded measures of player’s knowledge growth. CyGaMEs uses timed report for assessment and evaluation. Quantitative analyses demonstrated that Selene Classic timed report is reliable, valid, and sensitive assessment measure. Analysis of timed report data during formative evaluation of Selene II informed revision by revealing and quantifying design flaws in performance, game-system/gameplay, and/or timed report algorithm. The timed report tool enhances designer’s ability to efficaciously evaluate game-based instructional environments and assess player’s knowledge growth.

The CyGaMEs Approach

Quantify Player's Knowledge Growth (Reese & Tabachnick, 2010)

The CyGaMEs approach to instructional game design and assessment aligns the game system, gameplay, and game goal with a correlated learning domain (Reese, 2007, 2008, 2009). Thus, CyGaMEs measures of player progress toward the game goal capture player’s growing knowledge of that domain. The CyGaMEs timed report tool collects embedded measures of player’s knowledge growth. CyGaMEs uses timed report for assessment and evaluation. Quantitative analyses demonstrated that Selene Classic timed report is reliable, valid, and sensitive assessment measure. Analysis of timed report data during formative evaluation of Selene II informed revision by revealing and quantifying design flaws in performance, game-system/gameplay, and/or timed report algorithm. The timed report tool enhances designer’s ability to efficaciously evaluate game-based instructional environments and assess player’s knowledge growth.

Selene players construct the Earth's Moon, then pepper it with impact craters and flood it with lava flows.

The CyGaMEs Approach

Quantify Player's Knowledge Growth (Reese & Tabachnick, 2010)

The CyGaMEs approach to instructional game design and assessment aligns the game system, gameplay, and game goal with a correlated learning domain (Reese, 2007, 2008, 2009). Thus, CyGaMEs measures of player progress toward the game goal capture player’s growing knowledge of that domain. The CyGaMEs timed report tool collects embedded measures of player’s knowledge growth. CyGaMEs uses timed report for assessment and evaluation. Quantitative analyses demonstrated that Selene Classic timed report is reliable, valid, and sensitive assessment measure. Analysis of timed report data during formative evaluation of Selene II informed revision by revealing and quantifying design flaws in performance, game-system/gameplay, and/or timed report algorithm. The timed report tool enhances designer’s ability to efficaciously evaluate game-based instructional environments and assess player’s knowledge growth.