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The Design of Educational Games

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The sordid past of educational gaming...

- ▶ “Edutainment” seems to be a title given to any multimedia device that is considered to have educational potential
 - Scores of low-grade titles fill the bargain bins at retailers across the world
 - Most are unrecognizable, picked up by unsuspecting parents to unwittingly torture their children
 - However, a few titles remain etched in our memory for one reason or another...

Design features of good educational games...

▶ Malone (1981)

- Challenge – One of the most important determinants of fun in any type of video game.
 - Too easy, the game is not fun
 - Too hard, the game is frustrating
- Curiosity – A primary motivating factor in educational games.
 - A motivating game (intrinsic or extrinsic) will be played more often and enjoyed more thoroughly than a similar game lacking motivational aspects (Garris et al., 2002).

Design features of good educational games...

▶ Malone (1981, cont'd)

- Fantasy – This refers to an environment “that evokes mental images of physical or social situations not actually present (Habgood et al., 2005)”.
- Performance in an exogenous fantasy environment does not depend on learned skills, nor do the skills learned depend on the environment.
- Performance in an endogenous fantasy environment depends on the skills learned and the skills learned depend on the environment.

Design features of good educational games...

▶ Paras and Bizzocchi (2005)

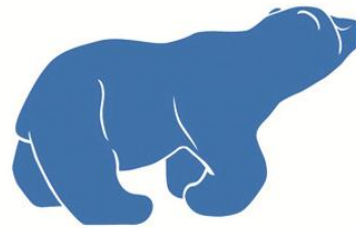
- Reflection – Players must be given time to reflect on what they have learned.
 - This is problematic, as players rarely reflect on learning that is taking place while in a state of flow.

A level design demonstration using Little Big Planet...

- ▶ Many retail games now include powerful level editors
 - These can and have been used by gamers to create levels far beyond what the original designers imagined
 - There is a great potential for educational game design in these editors

Questions?

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