

Batman Meets Gagne:

Analyzing Commercial Video Game
Instruction through the Lens of Instructional Design

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Overview:

- How Gagne's Nine Events of Instruction (1992) appear in commercial games
- Determine if the instructional design model employed by commercial game designers is similar to Gagne's instructional design model
- Determine if an experiential game setting has the potential to be a platform for learning new skills



About videogames:

- 97% of American teens aged 12-17 played some kind of video game in 2008 (Lenhart, Kahne, Middaugh, Macgill, Evans, & Vitak, 2008)
- In 2012 the global market for games was \$67 billion (Gaudiosi, 2012)
 - Total movie sales were \$10.9 billion and music sales were \$16.5 billion (Germain, 2012; Collett-White, 2012)



Method

- For the study Batman: Arkham Asylum was chosen because of its strong sales in 2010 (Game of the Year 2009)
- Requires 40 to 80 hours to complete the main storyline, and encourages players to use increasingly complex strategies to overcome obstacles



Method

- Research consisted of 160 combined hours of gameplay,
19 of which were spent replaying the first hour of gameplay
- Data was sorted into 9 categories (based on Gagne's Events of Instruction)



Gain Attention

- Attention of the user is gained through sound, and a system of cinematic cutscenes used to introduce new sections of the game or introduce the player to a new task.
- “These cutscenes use three dimensional rendering and professional voice acting to create an immersive experience” (Copp 2003)
- [Gain Attention](#)



Inform of Objectives

- In-game cutscenes are used to progress the narrative story
- Objectives are expressed implicitly through the narrative as well as through explicit instructions regarding basic movement
- Mastery of controls is necessary to advance through the game's introductory sequences
- [Inform of Objectives](#)



Stimulate Recall

- Game utilizes a reminder system, almost identical to the manner in which instructions are given to the player initially
- In some situations these require performance tracking, and recognizing when a player needs help
- [Stimulate Recall](#)



Present Stimulus/Lesson

- Lessons can be provided either in a custscene along with objectives as noted above, or can be directly addressed to the player during gameplay
- Providing the player with specific controls or button combinations is common early in the game
- [Present Lesson](#)



Provide Learner Guidance

- The detective mode displayed in the last video is used consistently throughout the game to direct the player towards the intended path
- Displays contextual clues using color coding



Provide Learner Guidance

- When missions fail the player is given meaningful feedback regarding what went wrong, and how to avoid it in the future
- Feedback is immediate after failure
- [Learner Guidance](#)



Elicit Performance

- Upon being introduced to each in game skill the player is immediately presented with an opportunity to use the skill
- These sections are easier than other portions of the game



Elicit Performance

- Non-narrative practice portions of the game are also available for player use, should they desire to hone their skills outside of the main story



Provide Feedback

- Positive feedback is given to players as they defeat enemies and progress through the game.
- This is given explicitly in score-sheet like form after completing a section



Provide Feedback

- This feedback allows players to see their areas of improvement and have an understanding of what methods proved effective
- [Provide Feedback](#)
- Along with this, an online community of expert players has grown, sharing video capture of gameplay and posting them online for others to view and comment on



Assess Performance

- Performance is assessed through a number of in-game stats and items
- These include:
 - “completeness” (expressed as a percentage)
 - Badges/trophy’s recognizing difficult optional challenges
 - Experience point system (used as a sort of in-game currency)



Retention and Transfer

- Continuous chances for practice of each skill consistently appear throughout the game
- Transfer of skills is also demonstrated (see grappling hook)
- Skills learned in *Arkham Asylum* can be easily applied to *Arkham City* with almost no further instruction needed



Conclusions

- Each of Gagne's Nine Events of Instruction are identifiable within *Batman: Arkham Asylum*
- *BAA* does a particularly good job of encouraging trial and error, and using embedded context specific support (something unique to modern digital media)
- Natural parallels arise between instructional design, and video game design



References

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