

Quandary: Developing Ethical Thinking Skills Through Play

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Abstract: How do you create a playful space that encourages children to recognize ethical issues and develop skills that enable them to deal with challenging situations in their own lives? *Quandary* is a unique game designed to do just that. Rather than teaching content knowledge, the *Quandary* story and mechanics provide much-needed opportunities to engage with ethical issues and develop skills such as critical thinking, perspective taking and decision-making. The game avoids teaching players *what* to think, and instead provides a framework for *how* to think.

A unique game for young learners

Quandary is a free, online Flash game in which players aged 8-14 shape the future of a new society while learning how to recognize ethical issues and deal with challenging situations in their own lives. Players lead a new human colony on a distant planet. They must make difficult decisions in which there are no clear right or wrong answers but important consequences – to themselves, to others in the colony and to the planet Braxos.

Quandary was funded by a private family foundation and produced by the Learning Games Network (LGN). It launched in September 2012. Scholars from Harvard and Tufts University devised and tested the initial prototype. Designers at the MIT Education Arcade and the Learning Games Network refined the game with artistic and technical production by FableVision.

Game design challenges

Skills, not knowledge

In both its content and design, *Quandary* was created to support the development of ethical thinking skills, which comprise a number of abilities including reasoning and understanding ethical problems (Staines, 2010). In regular conditions, our decision-making often relies on situational or emotional cues that can lead people to be unintentionally unethical (Mazar & Ariely, 2006). Practicing perspective taking and critical thinking together contribute to better decision-making. The reasoning skills that are the foundation of critical thinking are a very basic ability but are not necessarily utilized; only through practice does taking an abstracted approach become habit (Luria, 1976; Dias, Roazzi & Harris, 2005).

A playful space to investigate ethical thinking

The designers envisaged an engaging narrative that was both relatable but also fantastical, supporting engagement by being a source of novelty and aesthetic value (Bober, 2010). The game-world provides a space rife with ethical dilemmas and a diverse set of characters and perspectives. An initial character selection encourages involvement of the player's identity in the game (Gee, 2005).

Of the three scenarios currently in the game, the creators sought a balance between dilemmas immediately relevant to the target audience (e.g. the formation of cliques within a group) and novel situations (e.g. a predator attacking precious food supplies). A mix of individual, community and societal dilemmas was also sought.

Encouraging investigation and perspective-taking

Quandary's core game mechanic was designed to encourage player reflection. Having identified possible solutions and facts for a particular dilemma, players investigate the situation in order to make an informed decision. Players gain points by presenting possible solutions to the members of the colony in order to understand their perspectives. Players also gain points when they present a *relevant* fact to a character. A relevant fact makes a character think in more detail about the current dilemma, and may even change their opinion. Playing an irrelevant fact reduces the player's potential to gain points, thus encouraging thoughtfulness and reflection.



Figure 1: Interaction with the NPCs, their perspectives, solutions and relevant facts takes place through a digital card approach.

Success, failure and scoring when there's no clear 'right' answer

Players are taken through the stages of ethical decision-making: identifying facts and solutions, uncovering others' opinions, making informed decisions, and understanding the consequences. Although a player's decisions have a direct impact on the game world, a key part of the game is that there isn't one 'correct' answer.

If the player has carried out a thorough investigation - uncovered all the facts, and understood the various colonists' positions and concerns - then he or she is recommended to implement their chosen solution with modifications that address potential problems. If not, the player is given the go-ahead to implement the raw version of the solution. Hence a player's score is indicative of the process they went through rather than the exact choice they made. However well the player does, no ending is absolutely perfect, and not all of the colonists are pleased.

Facilitating discussion

Key to the success of *Quandary's* mission is the conversations that occur around the game. The leaderboards and overall score across all episodes provide a way for players to compare themselves to other players, and understand that there are multiple routes to a successful outcome. A set of teacher materials was developed to support dialogue and discussions. These include a game guide, lesson plan, set of key discussion questions, and worksheets.

References

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