Classification of Game Mechanics

QUESTLINE OVERVIEW

Classification of Game Mechanics

Quest	Task
Turns	Study
Quests	Study
Rewards	Study
Leaderboards	Study
Non-Player Characters (Optional)	Study
Level	7
Challenge	Choose 2 Learning Mechanics and provide a brief description of an educational intervention in a 3D Virtual Learning Environment.
Boss Fight	Quiz-Based Game
Experience Points	400
Achievement	The Mechanar

QUESTLINE DESCRIPTION

Highlights

✔ "Game Mechanics are constructs of rules and feedback loops intended to produce enjoyable gameplay."

✔ Different Game Mechanics are used to leverage players' motivational incentives and willingness to engage.

✔ In a similar manner, failure mechanics are utilised to communicate in a playful manner the actions that players should and should not perform.

✔ In a holistic gamification design, a combination of different motivational drivers may be at play. However, when learners are confronted with several game mechanics elements, it may be difficult to focus on the learning objectives.

TURNS

Informational

✔ "In turn-based games, game flow is partitioned into well-defined and visible parts, called turns."

✔ Turn-based games allow players to 'pause' the game world before making an action.

✔ Not all game turns are alike. For instance:

  ✔ In wargames, the amount of time each turn represents is usually specified.

  ✔ In sports games, a turn represents the 'one action play' that players can perform during their round but the amount of time varies.

✔ The most widely adopted approaches in the educational context are the timed turns and time compression which aim at adding time pressure to players to think and commit their actions.

QUESTS

Informational

✔ "A quest is a task in video games that a player-controlled character, party, or group of characters may complete in order to gain a reward."

✔ In quest-based educational games the players engage in interrelated activities which are usually involving movement across different action points.

✔ The successful completion of a quest or set of quests (questline) leads to the attainment of a concrete objective or reward.

✔ As an educational approach, Quest-Based Learning, is structured as a sequence of briefing, action, and debriefing.

✔ The integration of this method, is usually associated with the conduct of activities that involve problem-solving, as the student-players need to successfully address the posed challenges, as deriving in the given quests, in order to progress and eventually win.

REWARDS

✔ "Reward systems can be viewed as player motivators or as compromises for easing disappointment".

✔ The reward mechanisms can be classified into the following categories:

    (a)   the extrinsic motivation rewards (badges, points, physical or virtual goods)

    (b)   the intrinsic motivation rewards (progress bars, notifications, leaderboards).

✔ The delivery system can take different forms such as:

    (a)   random rewards,

    (b)   fixed reward schedule,

    (c)   time-dependent rewards.

✔ Some of the most notable types of rewards include tokens, achievements, feedback messages, experience points, item granting, and content unlocking.

✔ Players can use the obtained rewards to make game progress or as a means to demonstrate their knowledge advancement to instructors and peers.

LEADERBOARDS

Informational

✔ "A leaderboard is a game design element consisting of a visual display that ranks players according to their accomplishments; when used in an educational setting it serves as a way for students to directly compare their own performance with that of others."

✔ The structural elements of leaderboards can be divided into two levels:

    (a)   the macro level (overall performance)

    (b)   the micro level (performance at specific tasks).

✔ Despite the differences observed regarding the provided information at each level, the key structural elements remain similar.

✔ Considering the educational context, a typical leaderboard usually displays information related to students' identity (name or nickname), followed by their ranking, which is defined by either their learning progress (e.g., points, tasks completed) or performance (e.g., grade, budges earned).

NON-PLAYER CHARACTERS (OPTIONAL)

Informational

✔ "Non-Player Characters (NPCs) play an important part in many games, presenting the story line and serving as quest givers to the user who goes on an adventure."

✔ Pedagogical Agents are integrated as a means to facilitate the learning processes by providing learners additional instructional support and guidance.

✔ The key design elements and characteristics of the NPCs are decided following a three-tier approach which includes:

    (a)   the global design level which concerns the appearance of the NPC (human/non-human, animal, cartoon) and the motion capabilities (static/animated),

    (b)   the medium design level which regards the technical aspects of the NPC (role, behaviour, auditory output)

    (c)   the detail design level which relates to the visual presence of the NPC (gender,