

Selected features from games that can be also designed for learning activities. Analysing these features simplifies the process of understanding how to improve the design of an activity with respect to Gamification. This simplification is a starting point, not a full Gamification prescription. Use it as an easy way to start, learn and develop Gamification understanding and skills. Afterwards, it should not be needed anymore.

Feature	In a Game	In a Learning Activity	Potential Effects
<b>Open Resolution</b>	Players can face challenges in multiple ways. Some games even permit infinite ways.	There are multiple valid solutions to the activity. The learner reasons and chooses the way to approach it.	- Experimentality - Creativity - Autonomy
<b>Recognition of partial achievements</b>	Progress can be measured during a game. It can be overcoming levels, allowing to save the state in intermediate points or granting recognitions.	It is structured in measurable steps that make it possible to know the degree of progress. Ideally, it should be possible to measure it in two dimensions: progress and time.	- Feeling of progress - Motivation - Feedback - Recognition - Incrementality
<b>Incremental Difficulty</b>	They have increasing levels of difficulty. Some also adapt their difficulty to the player's style in a dynamic way.	It has variable content depending on the level of difficulty. Ideally, the activity is fine-grained to design incremental levels.	- Feeling of progress - Flow channel - Motivation
<b>Trial and error</b>	After each mistake it is possible to analyse and understand what produced it, learn and repeat until doing it well.	Mistakes are permitted or even encouraged and learners can use them to improve their abilities and repeat without punishments.	- Learn from mistakes - Experimental learning - Cause-Effect
<b>Side Challenges</b>	Games include many side challenges that players can take on their free will. These are optional and players perform them just for fun.	Optional parts, advanced challenges, side puzzles or additional activities can be included so that learners can practice on their own free will.	- Autonomy - Experimentality - Personal achievement
<b>Randomness</b>	Events with a random component occur, resulting in unexpected events and provoking the player's attention.	Activities or events with a random component occur, resulting unexpectedly and drawing the learner's attention.	- Surprise - Rythm change - Breaking the monotony - Unpredictability
<b>Feedback</b>	Immediate feedback is provided on all actions performed, allowing learning by cause-effect association.	Feedback from actions is provided. It can be slow (e.g. manual correction) or immediate (e.g. sports).	- Learning by Causality - Feeling of progress - Experimentality
<b>Competence Level</b>	They award points or measure merits that recognize the acquired experience and the evolution of the player. The levels reached are consolidated.	Points are awarded or merits are recognized that value the competencies or skills acquired. The levels reached are consolidated.	- Competence - Status - Feeling of Progress
<b>Discovery and Unlocking</b>	Many parts are hidden until the player overcomes previous challenges that block them. There are also hidden secrets that are discovered through exploration and creativity.	There are activities or hidden parts that are unlocked when others are cleared. Unlocking occurs explicitly, or implicitly when associated with the need for certain prior knowledge.	- Experimentality - Creativity - Feeling Special - Curiosity - Desire to discover
<b>Automation</b>	The game is played through some kind of technology that allows its implementation in an automated system with immediate feedback.	Technologies can be used to automate parts of the evaluation or activity development that include quick or immediate feedback.	- Immediate Feedback - Situation Awareness - Clear rules

Each feature can give an activity up to 3 points of Gamificación score. Final score is the sum of all points, being up to 30 points. More points identify more Gamified activities.

<b>Característica</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Open Resolution</b>	Closed resolution: there is only one valid ending and one way to get to it.	There are some different ways of getting to a unique valid ending.	There exists a limited number of valid endings and/or resolutions.	Open resolution: many or infinite endings and/or ways to get there.
<b>Recognition of partial achievements</b>	The activity is performed in a single step or is binary (correct / incorrect).	Intermediate steps may be taken, but they are not necessary or assessable.	The intermediate steps are assessable but they are preestablished and/or they are not many.	There are many assessable intermediate steps.
<b>Incremental Difficulty</b>	Difficulty is unique and constant or not measurable	Presents unstructured or non-incremental variants of different difficulty.	There are different incremental difficulty levels.	Difficulty is selectable and distributed incrementally.
<b>Trial and error</b>	It does not allow error. Failures cannot be recovered.	Allows error and recovery, but decreasing the best achievable result (penalization)	Allows error and recovery without reducing better result, but with limitations.	Allows error and recovery without limitations.
<b>Side Challenges</b>	There is only one way or form to carry out the activity.	There are parallel challenges or optional ways of carrying out the activity but they are very similar.	There is a limited number of side challenges or optional ways of carrying out the activity.	High number of different parallel challenges and/or different ways of carrying out the activity.
<b>Randomness</b>	There's no random component. Every event is predictable.	Some parts may be unpredictable but is not purposely designed.	There are purpose-designed events that occur with roughly estimated probability	Random events with well studied probabilities are included.
<b>Feedback</b>	There is no feedback of any kind.	Delayed feedback in time that limits the ability to associate cause and effect.	Timely feedback to allow cause-effect learning.	Immediate feedback.
<b>Competence Level</b>	There is no recognition of the student's level of experience or evolution.	The evolution of the student is measured, but without defined recognitions.	There are levels or recognitions that are obtained when improving the level of competence.	Progress is made in levels and recognitions are obtained, and the challenges adapt.
<b>Discovery and Unlocking</b>	There is no hidden or blocked content in the activity.	Some parts require skills implicitly.	There are parts blocked by other previous and/or secret parts.	There is a progress design based on unlocks and secret parts.
<b>Automation</b>	No part is automatic. All development is manual.	Some parts are automated or performed in parallel to reduce time required.	Most of it is automated, although there are still parts that require manual intervention.	Everything is fully automated.

This is an application example of this rubric to the classic game Super Mario Bros from Nintendo (See a gameplay here <https://www.youtube.com/watch?v=ia8bhFoqkVE>)

Feature	0	1	2	3	Points
<b>Open Resolution</b>	Closed resolution: there is only one valid ending and one way to get to it.	There are some different ways of getting to a unique valid ending.	There exists a limited number of valid endings and/or resolutions.	Open resolution: many or infinite endings and/or ways to get there.	3
<b>Recognition of partial achievements</b>	The activity is performed in a single step or is binary (correct / incorrect).	Intermediate steps may be taken, but they are not necessary or assessable.	The intermediate steps are assessable but they are preestablished and/or they are not many.	There are many assessable intermediate steps.	3
<b>Incremental Difficulty</b>	Difficulty is unique and constant or not measurable	Presents unstructured or non-incremental variants of different difficulty.	There are different incremental difficulty levels.	Difficulty is selectable and distributed incrementally.	2
<b>Trial and error</b>	It does not allow error. Failures cannot be recovered.	Allows error and recovery, but decreasing the best achievable result (penalization)	Allows error and recovery without reducing better result, but with limitations.	Allows error and recovery without limitations.	3
<b>Side Challenges</b>	There is only one way or form to carry out the activity.	There are parallel challenges or optional ways of carrying out the activity but they are very similar.	There is a limited number of side challenges or optional ways of carrying out the activity.	High number of different parallel challenges and/or different ways of carrying out the activity.	1
<b>Randomness</b>	There's no random component. Every event is predictable.	Some parts may be unpredictable but is not purposely designed.	There are purpose-designed events that occur with roughly estimated probability	Random events with well studied probabilities are included.	1
<b>Feedback</b>	There is no feedback of any kind.	Delayed feedback in time that limits the ability to associate cause and effect.	Timely feedback to allow cause-effect learning.	Immediate feedback.	3
<b>Competence Level</b>	There is no recognition of the student's level of experience or evolution.	The evolution of the student is measured, but without defined recognitions.	There are levels or recognitions that are obtained when improving the level of competence.	Progress is made in levels and recognitions are obtained, and the challenges adapt.	2
<b>Discovery and Unlocking</b>	There is no hidden or blocked content in the activity.	Some parts require skills implicitly.	There are parts blocked by other previous and/or secret parts.	There is a progress design based on unlocks and secret parts.	3
<b>Automation</b>	No part is automatic. All development is manual.	Some parts are automated or performed in parallel to reduce time required.	Most of it is automated, although there are still parts that require manual intervention.	Everything is fully automated.	3
<b>Total &gt;</b>					<b>24</b>