Gamification in education: Gamebooks

(Teacher's guide)

Translated by Jason Booker within the initative PerMondo. Sponsored by Mondo Agit offering translations from Spanish into English

Since 2010 there has been more and more discussion of *gamification* on social networks. As we already know, *gamifying* means applying the workings and techniques of a game to other tasks in order to make them more enjoyable. However, far from its business applications, either commercially or from a marketing perspective, its broad educational effectiveness tends to be given less importance.

To begin this presentation, reference must be made to the article: "How to gamify your classroom" which can be seen **here**. This piece caught my attention because it made me see the growing desire amongst educators to renovate teaching methods so that students have fun and feel more comfortable learning. If teachers have really always known that the best way to teach children is by using fun, it is certain that, little by little, they are beginning to discover the possibility of *professionalizing* game-making for such a purpose, with the support of teams from a variety of disciplines (teachers, psychologists, marketing departments…) who would guide them towards the right path. Through *gamification*, various skills and values can be transmitted to students, whether in History, Philosophy or even in raising awareness of certain social needs.

My name is Jacobo Feijóo and I am an author of gamebooks, published in paper and digital format. I have also translated some books into English and am the co-founder and administrator of the spanish speaking community **www.librojuegos.org** and of its groups on Twitter and Facebook.

As many readers will know, a gamebook is a book in which the reader-player is the protagonist of the story they are reading, in which they have to make a series of decisions (where indicated) that will alter the plot of the story they are involved in. To begin with, they were known as "Choose Your Own Adventure" and now they are called interactive adventures, hypertext fiction, webquest, ergodic literature, etc...

This interest led me to the need to present my books in various schools so that students could read them. I soon realized that I should start with the most obvious thing: explaining what a gamebook is to teenagers, as they are so immersed in the digital world that the majority of them were unaware of their existence. Many of the teachers I spoke with understood the value of gamebooks as a combination of fun, literature and interaction between the reader and the text, but were unable to 100% visualize their application beyond gaming. This encouraged me, now with more experience, to create a mini-guide for teachers, showing the main ways a gamebook can teach certain values to children and teenagers through playing.

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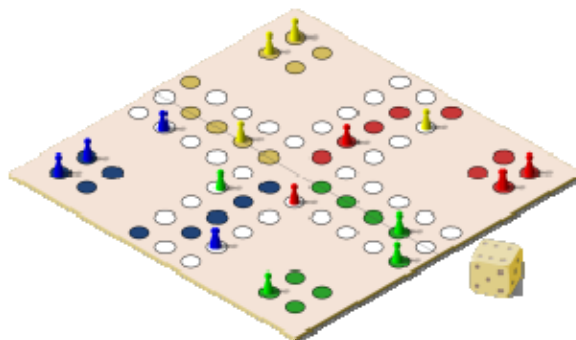
VALUES THAT CAN BE TAUGHT USING A GAMEBOOK

(Teacher's Guide)

1- Simple Reading: It has always been said that if riddles are verbalized games and videogames are audio-visualized, gamebooks are, as such, literature-ized games. This means that their main characteristic is the use of text and no other tool. One of the advantages of the gamebook is that (not having been initially divided into pages as to divide it later into short sections) it allows easy access to reading to those who do not like to read very much. Moreover, the language used is usually dynamic, not very descriptive and with lots of dialogue in order to make it more of a game, at the cost of reducing the writing. This allows a kind a swift and pleasant writing style that doesn't necessarily damage the plot as a whole.

This element has been greatly encouraged recently following the appearance of gamebooks adapted to digital devices, such as iOS or Android, which has made it possible to tell the same stories and new stories using the tools found most comfortable by today's youth: mobile devices and pocket-sized devices. It is important to demonstrate, as I noted, that this does not involve a type of surrender to video games nor a confusion of concepts, given that at any point in the gamebook the interactive text is more important than the audiovisual aspect, despite occasionally using this method to achieve its purpose (images, sound effects, soundtrack…)

2- Decisión-Making: If one thing characterizes gamebooks, which were a literary innovation in their time, it is the readers' obligation to make decisions in order to carry on with their adventure. These choices or options usually presented at the end of each section (previously each page, which means that the reader-player-protagonist is constantly bombarded with situations that require a decision. And that's not all: the reader of a gamebook doesn't meet their obligation with a mere decision, but will also be subject to the consequences of the decision, whether they be good, neutral or bad. In order to continue the story being lived through reading, the reader will have to develop an ability to get involved and act. Using this technique, the gamebook teaches the student how to resolve life situations and the importance of decision making to do so.

We musn't forget the most important thing: in a game, negative consequences are, by their nature, harmless and cannot be compared to real life. For precisely that reason, games are ideal for teaching someone using simulation (in fighting, life lessons, the use of sophisticated machines…) meaning that any possible mistakes are never

harmful to the learner beyond the confines of the game. This observation is obvious in animals, for example: their young play hunt their prey so that in the future, when they know how, they can really hunt.

3- Organization: We are currently in the Third Generation of gamebooks and we are about to begin the Fourth. One of their most noted characteristics, and those that have been reached by pure evolution, is the inclusion of a character sheet and, quite often, a backpack or inventory for storing items. Using the character sheet, you have to assign a limited series of values and scores across certain character-player attributes (for example: skills, intelligence, courage, resistance…). The backpack provides a space for items or weapons, a space that is limited when compared to the number of items to be found throughout the adventure.

In both cases, the reader must develop and apply their organizational skills. When applying points, there is a maximum number to distribute amongst various options and the reader must evaluate and measure their resources. The use of the inventory is clear: the reader will have to select and organize their belongings because, at one point in the game, they may need an item they had previously discarded. Or, on the other hand, they will see how not everything fits inside and that they have to select what they want. On many occasions, the success or failure of their own odyssey will depend on this organization.

4- Prediction: Modern gamebooks, from the Second Generation onwards, introduced multiple endings, many of which were neither good or ideal. In the Third Generation, a way of ending the game like real life was included: using up all of your life points, regardless of where you are in the adventure, meaning a sudden end to the story. The player knows this beforehand, as such they will always bear in mind (from the explanation of the rules) that predicting future situations will help their survival. Linked to teaching organization, this characteristic of gamebooks allows us to teach students the importance of planning ahead and the need to be prepared for any eventuality. By necessity, the player-reader will have to expand their intuition and experience in order to play; and, as such, realize the possible development of the game and their story. To achieve this, they must make good use of the tools they currently have and get hold of the tools they will need in a brief matter of time to avoid harmful risks to their *avatar*.

5- Intellectual Development: What kind of gamebook would it be if you didn't have to solve brain teasers? From the first gamebooks that appeared on the market a series of puzzles or brain teasers have been included that must be solved in order to make the right decision and continue with the adventure. In fact, in many classic stories the hero sooner or later finds themselves faced with a problem that must be solved.

The extreme has even been reached where, due to certain rules of the game, if the problem is not solved, the play does not know how to continue. Here is a simple example: in a gamebook divided into sections, a child could be asked "If you want your adventure to carry on, go the section that is the result of adding the first three numbers of the number pi." Knowing that pi is represented as 3.14, the child should go to section 8. If they do not know, they will end up in part of the game that has nothing to do with

the story they are reading and they will have to return to the previous section in order to carry on.

With these conundrums or puzzles, the reader will have to hone their ingenuity skills and will not be able to cheat. We oblige them "to think." These tests may be mathematical, cultural, logical, imaginative, creative… the incentive is not only the challenge of solving them (the reward, the excitement) but also the obstacle presented by not solving them (punishment, defeat). The use of information sources (Internet, libraries…) is, of course, allowed to help them find the solution to these problems.

Another variation that has been suggested is the appearance of successive clues that, properly put together, will allow the reader-player to solve the test or mystery.

6- Problem Solving: Gamebooks essentially propose various problems, not only of a mental nature. On the contrary, decisions to be made at the end of a section, discarding an item to make room for another, trusting or making enemies with other characters, fighting with certain weapons or changing them for others, choosing to draw a map (or not) when entering a labyrinth, etc… are decisions the read has to make. The value, the tool that is learned in this way, is the ability to be decisive, especially during adolescence where doubt and indecision tend to eat away at the personality of many human beings. Using the gamebook (as I said, a way of learning that is harmless by definition) will teach students the need to solve conflicts with the available means, adapting to the circumstances of every moment to ensure the survival of their character and later on, if necessary, changing their behavior.

7- Losing: As we have stated, for some time there has not always been a positive resolution to gamebooks (except in children's versions). Sometimes the game ends suddenly due to a series of bad choices, on other occasions a bland and not entirely satisfying end is reached. Not only this: our choices may be right, our organization and problem solving impeccable, but we lose all our life points and our adventure ends.

The gamebook teaches us how to lose and that nothing bad happens when we do, as we are able to try again and reach a good ending through a different combination of choices and the strengthening of certain attributes (more caution, more daring, more cunning… It has always been said, at least in the chess world, that you learn more from a humble loss than a comfortable win. Accepting failure is an important part of human life, and it is directly linked with…

8- Resilience: This value is inherent in gamebooks. The player-reader-protagonist must learn the ability to accept the means they have at their disposal and to continue on the adventure in the face of adversity, using whatever tools or options they have in that moment. Are they lost in a labyrinth? No problem, they will get out with methodical planning. They don't have many life points left? Don't worry, they're still alive, the game is not lost. Did they lose items, were they robbed? Did they make a mistake when choosing them? Other multifunction items or better items will appear. This highly optimistic lesson will help them to see that being a survivor is what has

allowed evolution in nature, that never surrendering is the ultimate goal, that you have to combine factors so that they become more favorable.

I should add that once, in relation to this point, I was surprised by a 15 year old student who interrupted my presentation saying "*but, that is like life!*" She explained it perfectly.

Resilience in the gamebook could be summed up with a simple declaration of: "onwards!" and never letting a cruel fate make us abandon our goals.

9- Learning: As with any game, the gamebook makes it much easier to take on the values mentioned above. Moreover, moral values can be taught in the story, practical values, periods of history, philosophical thought… depending on what lies beneath each story. Given that the game is played in the second person (*you, reader, are the protagonist*) the introduction of certain values is done in a more personalized way.

Let's say that the protagonist is a black woman, regardless of the sex or race of the reader. Or, another example: to invite the reader to put themselves in the shoes of a *sans-culotte* in a real historical context based on certain facts about the French Revolution. In both cases, the reader-player-protagonist will have to get into the role of their avatar and will better understand their motivations and problems.

Values in social integration, economic culture, encouraging creative solutions, raising awareness of common problems can be included; or, more generally, any message that we want to express to students in a relaxed way using games. To mention a case that applies to adults; recently, collections of erotic gamebooks have appeared in which readers discover new ideas, variations and options that may be helpful in this part of their private lives.

10- Imagination: At this point, there is no doubt that imagination is the ability to create or combine solutions where there didn't appear to be any. Whatever the area. It is as useful in economics as in mechanics,in fantasy as in the handmade, in science as in advertising.

The reader is the protagonist. The development and end of the adventure depends on them to a great extent. The gamebook not only allows them to walk in the shoes of someone else (a soldier, a spy, a pirate, an elf, a taxi driver, an archeologist, a scientist…) but also, the complex web that forms the structure of the gamebook offers a wide variety of adventures. In difference to the video game, which presents things according to the wishes of the illustrator or graphic designer, in the gamebook it is the reader who creates their universe with minimal guidance from the author throughout the story. Through reading alone, playing as a thief in medieval times will be different for every player and every new game the reader plays. In video games, as we have said, the audiovisual aesthetic forces things to be presented clearly and unmistakably. The very charm of literature is the capacity for mistakes or multivision that it offers us.

11- Personality Development: Mainly in younger ages, childhood and adolescence, the gamebook technique can alter the personality of the reader. Every reader-player-protagonist (let us remember that the person living the adventure is always YOU, reader) will first of all make decisions based on their personality. The

daring will give less thought to danger, the prudent will better manage their goods, the astute will seek the trick or error in their favor. It not only reaffirms the personality of the player, but it also causes them to learn from their mistakes and to moderate the tendencies of their personality thanks to accumulated experience, turning the daring person or risk-taker into the brave, making the cunning or fearful merely cautious, the cheater into a mere opportunist.

The gamebook presents us with enough experience, decision making and situations to allow us to observe, as players, if we are doing things well or badly when we follow the tendencies of our personality— instead of filtering them by using our learning and accumulated experience.

12- Patience: This is one of the most clear values used in the gamebooks, without it, riddles cannot be solved, you can't get out of labyrinths, missions cannot be successfully finished. The player knows, beforehand, that the journey will be long, full of difficulties, false hope and traps. But they will also find a series of rewards on the way before reaching the biggest, final prize: winning the game.

Always in life, but more at certain ages, it is very important to learn patience as an invaluable tool to solve problems and achieve goals.

13- Cooperation: Although somewhat extraneous and less common, I have seen collective games of gamebooks. I know therapies amongst adolescents in which they play one game between various people, playing together as one character. What these young people learn is to decide which direction to take in the adventure as a group (by majority vote, consensus, convincing one another with sensible arguments…). I always explain this cooperation and sharing of responsibilities in the same way: " The mammoth is too big for one person. Reach an agreement if you want to eat because if you don't, it will crush you all like cockroaches."

Using these therapies I have taught children not to berate others because things aren't going well when the decision was made as a group, or to coordinate themselves with convincing arguments to make many into one, into a team. They should also disregard their personal preferences when managing items or using points in favor of the mutual respect and understanding that a common goal requires.

Although it is a rarely seen way of playing, it is not impossible and I have evidence that it has been used.

14- Parallel Thinking: Shortly after writing this guide, a friend of mine (a computer expert and teacher) attended one of my conferences. After hearing me speak, he showed me one aspect that I had not realized.

Basically, when the reader wants to make the jump to being a gamebook writer, the need to learn math appears. Why? Because in the designing of a gamebook you have to apply graph theory, decision trees and flow diagrams to be able to display all the options we want to show and the various pathways to them. Probabilistic logic and combinatorics are fundamental, even in the study of difficulty curves. This allows an

important development in 'multiple' 'divergent' or 'parallel' thinking in which the author has many linear stories in their head with their ramifications and the interrelation between them all. In one activity, in fact, that programmers use daily, they need to know the function of every variable or constant that they are programming. In the creation of a gamebook the ability to concentrate is strengthened, as the author needs to be able to clearly differentiate different threads of the story and the points where they intertwine or split off, like branches of a tree. It is even necessary to bear possible incorrect loops in mind, linguistic or plot related inconsistencies (given that a phrase must be built with logic, even though that phrase is reached from various different places) and even circular plots that return to a previous moment of the story.

I remember with great affection the time when an autistic teenager bought a gamebook from me, smiling from ear to ear. Their guardian said to me: "He is going to be happy. He loves combinations"

Anyway. The guide is long but I consider it to be very complete. As you will see, through gamebooks you can *gamify* the education of many students, children or teenagers, it can provide us with very powerful didactic content. I invite those of you who are educators to try to apply these principles in your lessons, whether it be creating a gamebook to play with students, or inviting them to play, individually or together.