

# Classcraft: from gamification to ludicization

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## Abstract

In this article, we discuss the concept of gamification, based on a literature review and preliminary feedback from teachers using Classcraft, a role-playing game supported by a digital platform and a mobile application that were developed to answer high school teachers' classroom management needs. We argue for the use of the term "ludicization" to emphasize that transforming a situation into a game doesn't consist of using elements that have a game-like aspect, but rather of a non-essentialistic vision of games, generating a metaphor around the situation to build a reflexive space within which the nature and meaning of interactions are modified.

## Keywords

Classcraft, gamification, ludicization, high school education

## INTRODUCTION

Classcraft is a role-playing game that was developed for classroom management at the high school level. The game is now available as a mobile and web application in which a teacher can sign up his students. Teachers can make teams and assign an avatar to every student, as well as points and "powers" as function of proper classroom conduct. Thus, the objective is to transform the manner in which students experience the act of coming to class by adding playful dimension.

The term *gamification* is generally used to describe the process in which one integrates aspects of play into a situation that is initially not playful. However, in this article, we argue for the use of the term *ludicization*, following from the idea that it's less about "making a game" (*gamify*) than it is about "making it possible for a situation to be seen as ludic" (*ludicise*). Thus, in our first section, a brief literature review pushes us to argue for the use of the term *ludicization* and to expose the keys components of this concept. A second section presents the game *Classcraft* and the experiments we have conducted around the game. In the last section, we present an analysis of the feedback of the first usage experiments of *Classcraft* and the elements we have decided to use to define the concept of *ludicization*.

## FROM GAMIFICATION TO LUDICIZATION

**Gamification, origin of a neologism**

According to Deterding, Khaled, Nacke, and Dixon (2011), the word *gamification* appeared in 2008 in the digital media economic sector. It was popularized during different conferences (Google Tech Talk) by Zimmermann in 2010 and Amy Jo Kim in 2011 (Kapp, 2012). Thereafter, the word spreads across the fields of academic research, marketing, and game design (Bonenfant & Genvo, 2014). Since, different definitions have been suggested: “Gamification is the use of game design elements in non-game contexts” (Deterding, Khaled, et al., 2011) or “using game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning, and solve problems” (Kapp, 2012).

*Gamification* should be distinguished from *ludification*, which means the spreading of games in culture, a phenomenon described by Henriot before the development of digital technologies. *Gamification* is applied to various fields such as urban architecture or employees’ relationships in companies, but the concept flourishes for the web interfaces design sector. Therefore, whether it is for catching the attention of consumers or building the loyalty of digital social network users, gamification is an economic approach of attention (Goldhaber, 1997). This approach aims at optimizing the mental engagement of an individual, ordinarily for economic purposes.

Etymologically, the word *gamification* is based on the Latin word *facere*, which reflects the idea that it is possible to “make the game.” Therefore, *gamification* is considered to be an automatic and non-problematic transformation (Silva, 2013). In their article published in 2011, Deterding *et al.* improve their first definition by underlining that *gamification* is “the use (rather than the extension) of design (rather than game-based technology or other game-related practices) elements (rather than full-fledged games) characteristic for games (rather than play or playfulness) in non-game contexts (regardless of specific usage intentions, contexts, or media of implementation)” (Deterding, Dixon, Khaled, & Nacke, 2011). This definition suggests that some specific elements belong to games. However, these authors underline the experience of the player, and the *gamification* would consist in addressing the issue of playfulness, the experiential and behavioral dimensions, and to use these dimensions for the design of structures that could be lived as real games (*Ibid.*).

### **Ludicization, play vs. Game**

Bonenfant and Genvo emphasize that *gamification* “consists in adopting an essentialist approach of ludic phenomenon” (Bonenfant & Genvo, 2014). Therefore, with the support of the seminal work of Henriot (1969), Genvo (2013) proposes to adopt the word *ludicization* in order to focus our attention not on the artefact but on the situation that takes place when an individual accepts to play. We adopted a similar approach in a previous work dedicated to develop a theoretical model of play for educational purposes (Sanchez & Emin Martinez, 2014).

According to this model, there is no specific game element that can be used to make a game (*gamification*), but it is possible to subtly combine elements in order to design a learning context where play can take place. We consider that the term *ludicization* is more appropriate when it comes to design a learning situation that combines educational purposes and ludic characteristics. Indeed, *ludus*, the latin root of *ludicization*, means both game and school work. In addition, the suffix “icization” does not mean that it is possible to “make” the game as suggested by the suffix “fication” (*facere*) of *gamification* but mainly that it is possible to transform the situation (Sanchez, 2011). Indeed, play emerges from an intention, and it is not “in the materiality of objects, in the factuality of gestures, that we have some chance to

find ludic elements” (Henriot, 1889). As a result, our approach leads us to inscribe the issue of game-based learning in the existentialist philosophy and to focus our attention on the behavior of the player within a frame that enables for its autonomy.

### **Aims and scope**

This article proposes a discussion of the *gamification* concept based on an empirical study. We describe *Classcraft*, a work that consists in the *ludicization* of classroom management. We analyse preliminary results of two experiments in France and Quebec in order to show how *ludicization* allows the teacher to manage classroom interactions. Our work also aims to identify the key elements that have been used for the *ludicization* process and their impact on student behavior.

## **CLASSCRAFT, A ROLE-PLAYING GAME FOR CLASSROOM MANAGEMENT**

In this section, we describe the game and the context of our experiment in two schools in France and Quebec.

### **A multiplayer game**

The objective of *Classcraft* is to transform the classroom into a role-playing game for the duration of the school year. For the teacher, the point is to foster desired behavior in students. Indeed, it is the positive behavior of students that allows them to progress in the game. For the student, the goal is to gain levels and thus acquire powers, to make their avatar progress and support their team.

Inspired by role-playing video games or RPGs (for example, *World of Warcraft*), the first version of *Classcraft* was conceived of by Shawn Young in January 2011. The first version of the digital platform, which was very basic, was built for personal use. Three years were then spent improving the rules. The first public version was made available in February 2014 as a beta version. The official global launch of the game was in August 2014.

**Fig. 1.** screen capture of the game

In *Classcraft*, students are placed in teams of four to six members and play as mages, warriors, or healers. Based on their character class, they gain access to powers they can use as they see fit (as long as they have sufficient action points, or AP). These powers are either related to game mechanics (heal another player, protect another player, regenerate action points, etc.) or to privileges having an impact on players' real lives (being allowed to eat in class, listen to one's iPod in class, hand in an assignment a day later, etc.). These powers are either beneficial to the individual or to the individual's team. Thus, players want to acquire these powers to help themselves and their team.

In order to acquire powers, the player must demonstrate behavior that is expected of him by the school, such as participating in class, helping other students, etc. These actions are rewarded by experience points (XP), which are distributed by the teacher, who plays the role of game master. These points enable players to level up and acquire powers and gold pieces (GP) to customize the appearance of their avatar. However, if a player exhibits behavior that is inappropriate, such as arriving to class late or not doing one's classwork, the teacher can remove health points (HP). If a player loses all of his HP, the player acquires a sentence and all of his teammates also lose HP. The sentences are real-life punishments, such as detention, copying a text, and so on. When players use their powers to help teammates, they are automatically awarded XP. Thus, students are rewarded for helping teammates and penalized when their fellows behave inappropriately too often.

Every class, the system generates a random event, which has an impact on gameplay (for example, "Everyone loses 10 HP") or classroom dynamics (for example, "Everyone must speak like a pirate for the day"). These events are random and affect the entire class. Like the powers, sentences, positive actions, and negative actions, these events can be completely customized by the teacher to adapt the game to their specific classroom setting.

Because these aspects have a direct impact on the real lives of the players, it is important for the teacher to customize them so that they are adapted to his students and classroom setting. For example, one of the default powers is to be able to listen to music during class work. However, in certain schools this isn't possible (or permitted), and the teacher can then alter the power to change its effect..

*Classcraft* is first and foremost a web application (it operates in a browser connected to the Internet). To play, the teacher projects the application in front of the classroom and manages all aspects of school life. In a setting where students have access to electronic devices, they can connect to the platform and customize their avatar, activate powers, and access classroom content. One can also play *Classcraft* on smartphones and tablets, by using the Android and iOS apps. Thus, the game consists in adding digital elements to the classroom, ludicizing real life interactions as they occur, without influencing the subject matter.

### **A large diffusion across the world**

Since it launched in August 2014, *Classcraft* has gained rapid usage by many teachers. Indeed, as of February 1, 2015, more than 1,500 teachers were using *Classcraft* in more than 60 countries (eight languages). This represents over 60,000 students connecting regularly to the platform, with a total of more than 15,000 daily logins (students and teachers). This does not include classroom settings where students don't actually connect to the platform. A class is considered active if more

than 50 game events, concerning at least five students, were recorded in the previous month. If we take into account inactive accounts, more than 150,000 accounts were created in the platform since launch. Also, more than 1.1 million game events (using powers, losing HP, gaining XP, etc.) occur each month. The following graphs show constant growth, from September to December (the drop in the last week can be explained by the Thanksgiving holiday in the United States).

**Fig. 2.** Traction since September 2014

<https://dl.dropboxusercontent.com/s/6a4yl9xzpzv58vb/2015-02-23%20at%2012.56.png>

<https://dl.dropboxusercontent.com/s/4uzjnhkw6005d7i/2015-02-23%20at%2012.57.png>

This data shows that *Classcraft* has gained approval from its market and meets the needs of numerous teachers.

### **Elements of play in Classcraft**

The design of *Classcraft* rests on the combination of different game elements such as described by Caillois [12]. First of all, *Classcraft*, directly inspired from massively multiplayer online role-playing games (MMORPGs) such as *World of Warcraft*, is itself a role-playing game (*mimicry*). An avatar represents each player. *Classcraft* also leverages competition (*agon*). This competition exerts itself against the game itself, which, based on one's behavior, leads to gaining or losing points. It also exerts against the entire class because the points allow one to advance in relation to one's classmates.

Another gameplay element that is leveraged in *Classcraft* is that of randomness (*alea*). Indeed, every class starts with a random event that has an impact on the entire class. Randomness also manifests itself when, having lost all of their HP, the player must throw the "cursed die," which can have profound consequences like detention. To a degree, this die can lead to a feeling of vertigo (*ilinx*), another element identified by Caillois.

Thus, the design of *Classcraft* encompasses all of the gameplay elements formalized by Caillois, and this most likely explains some of its success. Indeed, the design of *Classcraft* doesn't limit itself to mobilizing *gamification* elements (avatars, points, etc.) but consists in the combination of multiple gameplay elements to create a situation in which the student will find a favorable context to develop a playful attitude.

### **Context and data collected**

Other than the results pertaining to traction within a global market, the data we have pertains more specifically to two experiments being carried out since September 2014. The first one is in a history-geography class in grade 10 at Germaine Tillion lycée in Sain Bel (Rhône, France), and the second one is in two physics classes in grade 11 in Sherbrooke (Quebec, Canada).

In both cases, the schools have approximately 800 students in a well-off social context. In the case of the French experiment, the class of 35 students had a group of 10 undisciplined, talkative youths who recognized themselves as having inappropriate classroom behavior but stated that they were unable to master themselves. Many of these students said that they are badly oriented, and many are anxious in the face of future academic challenges as they arrive in a new school where many of their classroom peers are strangers. In the case of the Canadian

experiment, the students are generally academically successful and have access in class to a personal portable computer that is connected to the Internet.

## **LESSONS LEARNED**

In this section, we describe the way the game is played in the two contexts, and we analyse the results of these experiments.

### **Description of two experimentations**

To experiment with *Classcraft* in her classroom in Sain Bel (France), the teacher followed the tips given on the website: Once they are introduced to the game, the pupils can choose to play or not. All the pupils agreed to play and were asked to choose their five teammates following the teacher's instructions: Each team should contain different kind of pupils, slow achievers, and good learners, with or without behavioral difficulties. It should be noticed, however, that this rule has been only partially followed and many of the groups were rather homogeneous.

The parents have been informed, and they have shown some interest in the game, if not being totally enthusiastic about the project. As advised by the headmaster, some rules of the game have been modified for compliance with the current code of conduct of Sain Bel. He particularly insisted on the fact that all pupils in Sain Bel must be treated equally. What is explicitly prohibited by the current code of conduct—such as using mp3 players, audiphones, and eating in class—cannot be allowed in the game. The modifications have been designed by the pupils themselves during dedicated class sessions. Some powers that violate the code of conduct (eating in class, playing music) have been replaced by equivalent and compliant ones. For instance, "eating in class" has been changed to "eating a sweet," since eating in class is prohibited on the ground that it may increase cleaning's burden, and "eating a sweet" provides an equivalent pleasure as "eating in class." "Listening to a music player" is a personal power that provides the pleasure through transgression of a rule, common to many classes. However, it is also prohibited to avoid trafficking and out of courtesy for other people. Pupils have proposed to replace this power with a very similar one, namely "listening to music," which makes no explicit mention to prohibited devices, such as "audio/video players." Then a "debating session," whose subject was "Classcraft, a perfect game for the lycée Germaine Tillion," took place among the pupils.

The game is now played in each class, but the teacher faces some technical difficulties: the computer in the class cannot be used to show the platform of the game because it is filtered out by the firewall. For two months, the teacher used the mobile application, disturbing both the class (because she was forced to look at the phone instead of the pupils) and the game (because she was unable to show the website). She is currently using her own computer together with a mobile phone connection to show the website and manage the computation of the points.

As for the experimentation in Sherbrooke, the teams have been chosen by the teacher himself, based on the previous scholar achievements, so as to obtain balanced teams, in terms of scholarly performance. The default rules have been used. Neither the parents nor the administrative staff have been explicitly informed about the game. They did not interfere during the experiment. The game has been played at each class, without technical problem, and the pupils accessed the platform using their personal computers.

## **Feedback on the Sain Bel experimentation**

The teacher stresses that the game is an efficient way to enhance motivation about scholarly work: Work groups are often build as in the game, and the accomplishment of the scholarly productions is greater, especially for slow achievers. Oral participation also increased in particular because the teacher intensified the usage of Classcraft to reward actions. Pupils are asking about their points, albeit not systematically, and they work hard to get them.

Nevertheless, behavioral problems have not disappeared completely. It highlights the fact that the teacher's role remains complex even in a playful situation. When the teacher acts as game master, their role is not deeply changed. The assignment of the points is not automatic: The teacher is still the one who evaluates and punishes. But the nature of the punishment changes, explicit rules constraint the assignment of the points, and positive actions induce explicit positive feedbacks.

An important goal of the game is to build upon collaboration between pupils to induce better behavior from those who show frequent misconduct. But collaboration between pairs, understood here as the participation to a common achievement, remains problematic. It often takes the form of mutual assistance for scholarly work. It exists outside the strict game context, through direct as well as remote relationships (phone, Facebook). Involved pupils do not think to claim their points for such mutual assistance. But misconduct in class is not subject to collaboration. Watchful pupils fail to teach others the correct way to take part or speak in the class. Also, when it comes to choosing powers, individual powers have been strongly preferred to collective ones. With the teacher being reluctant to withdraw health points, teams seldom stick together. Since then, the teacher intensified usage of the game, including for punishments. This induced the pupils to rely more on collective powers. The players are now eager to buy collective powers.

## **Feedback on the Sherbrooke experimentation**

As in Sain Bel, the teacher remarked increased motivation and deeper interest for class work.

Pupils tend to show more participative behavior, in every dimensions of the class: to answer questions and to work in class. They want to claim points.

Pupils on the same team are more united than in the Sain Bel case. They help team members when they lose health points. Usage of power as a mutual assistance device is common, and they show the ability to self-govern. As the teacher often withdraw health points, pupils often feel unsafe, so they must develop survival strategies or modify behaviors not to lose health points (and gain experience points).

Also, computer access to the game allows for interactions between pupils without disturbing the course. They then have more opportunities to assist one another, to visit their status and train their partners. They then show more interest for the game since their interactions are more frequent, even on a voluntary basis.

## **CLASSCRAFT, A SPACE FOR REFLEXIVITY**

In this section, we offer an analysis of the game and observations based on the concept of *ludicization* as defined in the first section.

### **From simulation to metaphor**

Games are generally based on a model that allows for simulating a reference situation. The term “simulation” refers to the idea of an “experience of second kind” in contrast with a “first kind,” which is about the “immediate experience.” Therefore, simulation is a field for experimentation that allows living a true empirical experience. This aspect of simulation is very often highlighted by authors who are interested in learning with digital games. It is also used to design games for educational use. However, in the case of *Classcraft*, the idea of simulation doesn’t account for the environment developed in the game. The game is also to be seen as a trope [14][14]. The expressed ideas are interpreted differently in order to build an imaginary world. There is an analogical relation between elements of the game and those of reference situation. For example, in *Classcraft*, mutual educational support is represented as powers that the healer can use to “heal” teammates or exclude them by pushing them to “fall in battle.” Simulation becomes a metaphor with a hidden meaning, that is of acceptable academic behavior, which is behind the imaginary world of *Classcraft*.

Furthermore, the distance between the metaphor and the reference situation it accounts for, that is the second degree in the game, gives it power and ontological significance because as in literature, a metaphor in a game captures the essence of a situation that it describes. Therefore, metaphors are a refined form of the reference situation, and the player is led to focus on the core of the situation. *Classcraft* can be considered as a way to metaphorize the functioning of a classroom as a battle combining collaboration and competition.

### **Game appropriation and engagement**

Another important game dimension is the ability to encourage the involvement of students. In this case, this goal is achieved by transforming educational goals into play goals. Thus, decoding the teacher’s expectations becomes easier. The goals to achieve by students are clear since it is not about behaving in class anymore but about interacting according to the game rules in order to earn points. The devolution of the teachers’ goals is made easier because the game changes the meaning of their goals, and the game rules are a simple way to put those expectations into words.

Moreover, each player is represented by an avatar, which is a projective identity in two different ways. First, it allows the players to have a self-experience through introjection. For example, they are led to check the relevance of the decisions they make by earning or losing points. Second, the avatar, an emblematic figure of a warrior, a mage, or healer, becomes the projection of an identity that is being built and an experimentation field that allows it to be built. Roles that students play help them get involved in the situation.

### **Feedback and sense of competence**

In *Classcraft*, feedback taking the shape of earned or lost points or powers is the response given by the game environment to the players’ actions. They are not only reinforcement modalities used to design games based on a behavioristic approach, as described by Block & King (1987). They are information with potentially high semantic content that have to be analyzed and interpreted in order to rethink the implemented strategies if necessary. From a feedback perspective, what makes this game different from a regular class situation is that this feedback is continuously generated (Mayo, 2006). The game offers the students a space of liberty in making decisions. It also gives them information about the consequences of their choices,



information that is necessary for the decision-making process. At any moment, players can judge the relevance of the decisions they are making. Giving feedback is made possible by the fact that the teacher is constantly collecting information about the players' actions and therefore about their ability to follow the classroom rules. So, the game provides the right environment for developing autonomy because it offers the players the liberty of choice and action as well as information, in the form of feedback, which allow them to practice their liberty of choice and action. The game is in this case considered as a space for reflexivity.

Moreover, the instant feedback increases the students' feeling of competency. Indeed, losing points or even "death" in the game is feedback that can be perceived as negative play-wise. However, because of the ludic context, negative consequences are less severe. It is always possible to go forward by carrying out actions to earn points and "resurrect" in the game. This negative feedback doesn't alter the feeling of being competent while positive feedback such as earning points or evolving in the charts increases the feeling of competency. This point is very important to note since the feeling of being competent is a key aspect of academic motivation (Ryan & Deci, 2000).

## CONCLUSION

The observations that we were able to make show that, depending on the setting, the game is not experienced in the same way by the students. These observations promote a model that consists in considering the experience of the students, rather than the game itself. This experiment seems to depend on a multitude of factors, among which we've identified the institutional acceptability of the game, the equipment available in class, and the way the teacher presents and implements the game. Among these different factors, the role of the teacher and his own appropriation of the game are key.

These elements considered, *ludicization* consists in a reconfiguration of the class setting. This *ludicization* translates itself in the implementation of new interactions. In the game *Classcraft*, students are, for example, led to make decisions to "save" other students. Nevertheless, it is mainly the meaning of normal interactions within the classroom that is redefined. It isn't about the student adopting behavior to conform to the class rules but rather about adopting behavior that, because it takes into account the rules of the game, leads to progressing within it. This progress materializes itself in points or other elements that then can be visualized in the platform. In *Classcraft*, the classroom rules are translated into arbitrary game rules. In this sense, we can say that *Classcraft* is a metaphor of class life. Indeed, it constitutes a refined version of the reference situation, and the player is incentivized to bring his attention to what is at the heart of the situation. This metaphor allows for the implementation of a reflexive space within which the player can test his ways of behaving because his decisions translate into immediate feedback. This reflexive space thus fosters autonomy.

Ludicizing doesn't consist in using game elements in a mechanical way, but rather, with a non-essentialist vision of the game, in metaphorizing a situation to conceive of a reflexive space where the nature and the meaning of interactions are modified. Nevertheless, from this report stems the question of the emancipation of the player, who, in accepting to play the game, accepts to trade his freedom for a freedom constrained by the arbitrary rules that are the game rules (Duflo, 1997).

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## Biography



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**Shawn Young** is the founder of Classcraft. With a unique background in physics, education, gamification and web development, he's interested in how we can create community in the classroom and how games can make learning fun and interactive. Shawn teaches 11th grade physics in Sherbrooke, Quebec, where he has implemented innovative approaches such as flipped classroom, project-based and game-based learning. He holds a bachelor's degree in physics and master's in education from Université de Sherbrooke. Shawn is also a seasoned web developer working for clients such as Chanel; The Future of Storytelling Summit; Carnaval de Sherbrooke, Hydro-Quebec; and The Feast Social Innovation Conference. At Classcraft, he leads product development, education and game design, leading the development team in building out the tech that drives the game, designing new features and coordinating educational research projects.



**Caroline Joneau-Sion** is a secondary history and geography teacher. She is involved in research & development projects into the uses of digital technologies for secondary education at the EducTice, a research team of the French Institute of Education (Ecole Normale Supérieure de Lyon).

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