



Chapter 17

Classcraft as a Resource to Implement Gamification in English–Medium Instruction

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ABSTRACT

The exponential growth of English-medium instruction (EMI) programs in higher education has driven to the search for new and innovative teaching resources and techniques to facilitate the teaching and learning of disciplinary content matter through a non-native language. During the last years, gamification has emerged as a great tool when it comes to foster students' motivation and, consequently, favour their learning. There are numerous ways of introducing gamification in the classroom and a high number of resources and tools available for teachers to design and implement gamification proposals. One of these tools is Classcraft, an online role-playing platform that allows the teacher to turn the classroom into a real role-playing scenario. This chapter will explore the benefits of including gamification—and more specifically Classcraft—for EMI in higher education. Exhaustive guidelines are described in order to serve as a base for EMI lecturers to implement gamification in their courses.

INTRODUCTION

Undoubtedly, motivating and involving students in the classroom sessions poses a challenge for teachers. Students' lack of motivation is a matter of concern at all educational levels and higher education is not an exception, especially when the instruction is provided in a foreign language, e.g. English. Nowadays, undergraduate students generally bring with them laptops and mobile devices with internet connection—

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including access to social networks—which may impact very negatively on students’ performance and concentration (Gómez-Gallardo & Macedo-Buleje, 2010). However, despite being a double-edged sword, new technologies are a great resource that should not be ignored during the teaching learning process given that they offer a wide range of resources for dynamizing the classroom, engaging and motivating students (Gómez-Gallardo & Macedo-Buleje, 2010; Martín-Laborda, 2005).

Gamification became very popular in marketing strategies and it has been expanded to the educational sphere as it is a resource with a great potential when it comes to encourage specific behaviours as well as increase motivation and engagement (Huang & Soman, 2013). Although gamification does not necessarily require the use of technology or multimedia support, there are numerous ways of introducing gamification in the classroom and a high number of resources and tools available for teachers to design and implement gamification proposals. One of these tools is Classcraft, an online role-playing platform that allows the teacher to turn the classroom into a real role-playing scenario.

The main aim of this proposal is to provide a complete guide for lecturers to apply gamification in their classrooms using Classcraft. As a result, EMI teachers will be able to design and implement their own proposals based on their individual disciplines and adapted to the duration and the contents of the courses that they are currently teaching. Therefore, this chapter will explore the benefits of including gamification—and more specifically Classcraft—for EMI in Higher Education. However, it is important to note that the objective of the guide proposed in this chapter is not to be replicated by the teachers, but to set the main procedures for teachers to implement gamification proposals in EMI courses based on Classcraft.

BACKGROUND

Computer-Mediated Techniques for English Medium Instruction

The increasing concern for training students to command more than two foreign languages, according to the guidelines of the European Higher Education Area (EHEA), together with the desire to attract international students and enhance the international profile of higher education institutions has led to the implementation of different teaching and learning approaches, such as EMI (Sánchez-Pérez & Sa-laberrri, 2017).

Such approaches have been reconsidered following the guidelines and instruction of the EHEA, which involves restructuring the traditional concepts ranging from the use of new technological resources to the understanding of new roles of both lecturers and students (Sánchez-Pérez, Galera-Masegosa, 2020). This new academic scenario requires adapting to the emerging demands of the university context. Therefore, some modifications are directly needed, which involve certain split-up from traditional educational strategies, techniques, methods and resources.

According to recent research, most of the European bilingual and EMI authorities consider their teaching staff has appropriate language proficiency (Wächter & Maiworm, 2014). Nonetheless, further recent studies still highlight the need for more rigorous and structured teacher training programmes both on language-related issues and, more particularly, on teaching approaches, methods, techniques and resources (Dearden, 2015; Halbach & Lázaro, 2015; Martín del Pozo, 2017). Most of the training courses currently available for EMI lecturers are based, primarily, on English language improvement, and, to a lesser extent, methodological and pedagogical issues. However, such teacher training courses

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are still scarce in comparison with the quick emergence of EMI programmes in European and Spanish universities (Lasagabaster, 2018).

As supported by the EHEA, new activities and tasks aimed to develop critical and creative thinking among students should be pursued. According to the EHEA, the level of the students and their cognitive needs have an essential role, especially when the teaching is conducted in a non-native language, e.g. English. Consequently, new methods and resources to improve the teaching-learning process should be introduced in EMI classrooms (Pérez et al., 2009).

In this respect, different studies conducted by Pérez-Cañado (2018), Pérez-Cañado & Ráez Padilla (2015), Scott & Beadle (2014), among others, have highlighted the potential of combining computer-mediated techniques and multilingual approaches such as EMI, as they share some similar pedagogical principles. According to these authors, both computer-mediated techniques and EMI foster authentic, more active and participatory learning. Similarly, both encourage student-centered and communicative-oriented teaching processes as well as task-based and problem-solving methods. They also promote intercultural communicative competence, student autonomy, risk-taking, creativity and critical thinking; and encourage positive attitudes towards learning, self-confidence and motivation. Consequently, the use of computer-mediated teaching techniques such as gamification in EMI contexts seems to be an ideal resource to provide students with opportunities to engage in a more dynamic, active and motivating learning process.

Despite the extensive literature on gamification found in different educational contexts, there are, to the authors' knowledge, scant research related to the use of this innovative computer-mediated technique in multilingual or EMI contexts in higher education –only some isolated experiences have been reported (cf. Hays, 2005; Kétyi, 2016; Sánchez-Pérez & Galera, 2019). For this reason, this chapter intends to fill an existing research gap by describing the benefits and providing some guidance to implement gamification through Classcraft, a current and innovative teaching technique considered to promote classroom dynamism, student motivation and engagement in order to help in-service and future EMI lecturers design their lessons in a more active and engaging way.

Gamification

According to Deterding, Khaled, Lennart, & Dixon, “gamification is the use of game design elements in non-game context” (2011, p.2). On his part, Kapp defines gamification as “a careful and considered applications of game thinking to solving problems and encouraging learning using all the elements of games that are appropriate” (2012, p.15-16). Dominguez et al., (2013) remark that gamification' most common objective is to increase user experience and engagement with a system and, therefore, gamification is mainly based on technology and generally applied on desktop, web or smartphone applications and, thus, e-learning platforms are ideal to implement gamification initiatives in education. These authors define gamification as “incorporating game elements into a non-gaming software application to increase user experience and engagement” (Dominguez et al., 2013, p.2)

When using gamification in the classroom several aspects should be considered in order to achieve success. Firstly, no student should be obliged to play, gamification should be voluntary. Secondly, the aim of gamification should always be to learn how to solve a problem or task. Finally, there should be a balance between the gamification structure and the student freedom to explore. If gamification is successful it will increase students' motivation, autonomy, competitiveness, cooperation and engagement. In addition, meaningful learning will be achieved (Borras-Gené, 2015).

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The three main elements of gamification are game dynamics, mechanics and components. Dynamics are the global aspects of gamification and are related to satisfying players desires. They include game constraints, emotions, narrative progression and relationships. Mechanics are the processes used to generate player engagement. It is achieved by using challenges and competitions, by providing interaction opportunities with other players such as collaboration or partnership (playing in teams, for example) and including other elements as scoring points, levels or feedback. Finally, the components are the specific instantiations related to dynamics and mechanics, including achievements, gifts or rewards; conquers and progress; avatars, badges and virtual objects; combats or challenges; content unlocking; team formation; and levels, scores and ranking tables (Herranz, 2013; Werbach & Hunter, 2015)

Several studies have proved the positive impact of gamification at all educational levels on students' engagement (da Rocha Seixas, Gomez, & de Melo Filho, 2016) and learning motivation (Diaz, Diaz, & Ahumada, 2018; Hursen & Bas, 2019; Kaila, Laakso, Rajala, Makelainen, & Lokkila, 2018; Rajšp, Beranič, Heričko, & Horng-Jyh, 2017). More specifically, rewards systems and leaderboards have been proved to have a positive impact on motivation given that this way of representing progress is innovative, fun and encouraging for students as they are publicly and instantly recognized (Dominguez et al., 2013) In addition, other authors outline significant improvements in terms of attention to reference materials, participation and proactivity (Barata, Gama, Jorge, & Gonçalves, 2013). Concerning Second Language learning, Figueroa-Flores (2015) suggests that gamification contributes positively to enhance the learning of writing, reading and speaking as well as to motivate collaboration and interaction.

Stages of Gamification

There is a broad consensus that gamification needs careful planning in order to be successful and motivate and engage students. An understanding of the theoretical rationale behind gamification will allow educators to evaluate the benefits and drawbacks, explore current implementation and future possibilities and, consequently, create effective gamification interventions (Lee & Hammer, 2011). Huang and Soman (2013) establish a five-step process for applying gamification in education.

The first step is to understand the target audience—identifying factors such as age group, learning abilities, current skillset, etc.—and the context, which includes the group size, environment, sequencing of skills and the time of frame. This process will allow teachers to anticipate possible pain points.

The second step is to define learning objectives, which can include general instructional goals such as completing a given assignment; specific learning goals as understanding a concept or being able to perform a task; and behavioural goals like minimizing distraction in class, for example.

The third step is to structure the experience by setting stages and milestones that enables the teacher to sequence knowledge and quantify learning achievements, while at the same time, it will make students see the objectives more achievable and measurable. In addition, the identification of obstacles within and between stages will be easier. It is advisable to start with easier milestones to engage and motivate students.

The fourth step is to identify resources in order to determine tracking mechanisms, currency—the unit of measure—rules, levels, feedback systems, etc. In this sense, it is very important for students to receive feedback as it will make gamification more appealing.

The fifth step is to apply gamification elements, also known as game mechanics, which can be classified as self-elements or social-elements. On the one hand, self-elements get students to focus on competing with themselves and they include points, badges, levels or time restrictions, among others. On the other

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hand, social elements serve to form communities among students which means that their progress and achievements are made public through resources such as leaderboards, for example. It is important for teachers to be especially careful when implementing these elements as they can have a negative impact on students given that they could feel intimidated by certain tasks or discouraged if they are constantly compared to other students.

CLASSCRAFT

Classcraft is an online platform that allows teachers to design and implement gamification proposals. Classcraft's aim is to turn the classroom into a role-playing scenario: students are organized in teams and each of them has a specific role and responsibilities. In this sense, collaboration and cooperation are promoted. Teachers can foster desired behaviours related to the management of the classroom by applying a reward/penalty system. Students gain points that enable them to acquire powers, to level up and progress in the game. Game duration and features are set by the teacher and students have their own account, which allows them to manage their character, powers, etc. (Sánchez, Young, & Jouneau-Sion, 2017). Classcraft is an emerging resource and, therefore, there is little research about it. However, some studies have already pointed out some of its benefits. In this sense, da Cunha Freire and Amorim Carvalho (2018) implemented Classcraft in a Math course. They use an experimental group and a control group. Their results show that implementing Classcraft was beneficial in terms student involvement in learning and academic performance. On its part, Haris and Sugito (2015) studied the factors affecting user acceptance of Classcraft and they concluded that these factors were e-learning motivation and behavioral intention. Finally, Rivera-Trigueros, (2018) conducted a research focused on the impact of Classcraft on English as a Foreign Language Secondary students' motivation. Results showed that Classcraft had a positive impact on students' extrinsic motivation, especially in the factors concerning students' participation.

Classcraft is not designed for specific branches of knowledge or subjects and it is not limited to any educational level. This online platform is available both in a web and App version, so teachers and students can access it from any device with internet access. The students have their own account, which allows them to manage their own performance. Classcraft offers a basic option—which is free of charge—and a premium upgrade. In addition, it offers a wide range of options to adapt both the duration of the gamification proposal and its objectives.

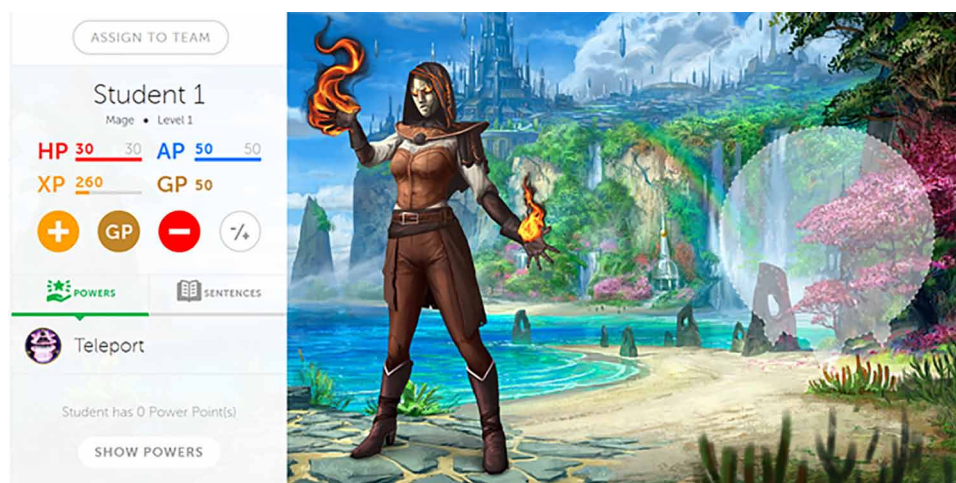
Getting Started

The first thing to do is to create a teacher account on Classcraft website. Once the teacher has logged in, a class should be created. It is advisable to create a demo class or use the one provided by the platform in order to get familiar with Classcraft interface and features. Once the class is created, Classcraft will ask for the duration of the course and the sessions, that is to say, for how long the gamification proposal is to be implemented and during how many hours per week. It is advisable to set a duration of, at least, three weeks, as students will need to get familiar with the platform and this may take around a week. This is an important step, as Classcraft will adjust levels and points according to the established duration.

The following step is to add the students either by adding them manually, via Google Classroom or by giving students a code to join the class, which is the easiest and quickest option. If students are added manually or via Google Classroom, an individual code for each of them will be generated and the teacher

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Figure 1. Example of an avatar



should provide it to students so they can create their accounts on Classcraft and register into the class. Once this step is completed and students are registered, they can be grouped in teams—this step can be done at any time and teams can be modified and reorganized according to the class needs.

When the whole process is completed it is advisable to check the section *Class settings* in order to select the course language—English, in this case—and other options such as allowing students to see only the statistics of their teams instead of the ones of the entire class, which can be very useful if the teacher—or Gamemaster—wants to control competitiveness among the students. In addition, it is desirable to download the rules of the class and send them to the students in advance so they can get familiar with the game dynamics and solve any doubt before starting the gamification experience.

Finally, to start the experience, it is recommended to devote at least one hour to explain Classcraft to the students and let them some time to register, create their avatars, etc. Classcraft has an option that allows teachers to present it to students showing an introductory video as well as other Classcraft resources such as the summary of the rules, the students code and the Hero Pact, which is to be signed by the students to state their commitment with Classcraft rules.

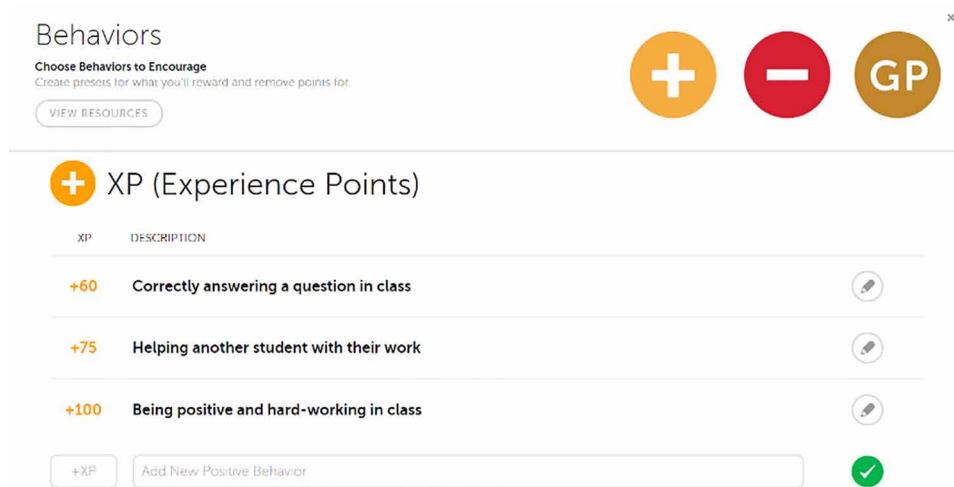
Avatars and Teams

Even though the teacher can create the avatar and assign the role for each of the students it is advisable to let them decide if they want their avatars to be a Warrior, Mage or Healer (see Figure 1). Warriors are in charge of protecting the team and they can use their powers to absorb the damage for other players, however, their powers are not very strong and cannot be used very often. Mages supply Action Points for their teams, and they have the strongest powers. On the contrary, they are weaker and have more risk of *falling in battle*. Finally, Healers are very important in the game as they use their powers to restore Health Points for their teams or themselves, that is why the team should protect them and help them to survive.

Once every student is registered and has created their avatar, the teacher can assign students to teams so that collaboration and cooperation among students is promoted. It is better if the teacher groups the students instead of letting them form the teams given that, as every character has its own strength and

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Figure 2. Example of experience points



weakness the teacher should ensure a balance within the characters of each of the teams. Therefore, at least one Mage, one Warrior and one Healer should be in each of the teams. If the teams are very big some students may not have the chance to participate and collaborate in the game, so it is advisable for the teams to include four or five students.

In addition, Classcraft allows the teacher to have both a global and individual vision of the game progress. Therefore, the teacher can view the individual progress of a given student, a specific team or the whole classroom

Experience, Health, Action and Power Points

There are several kinds of points students can lose or earn—the teacher can modify their settings in order to meet the needs of the class. These are Experience Points (XP), Health Points (HP), Action Points (AP) and Power Points (PP).

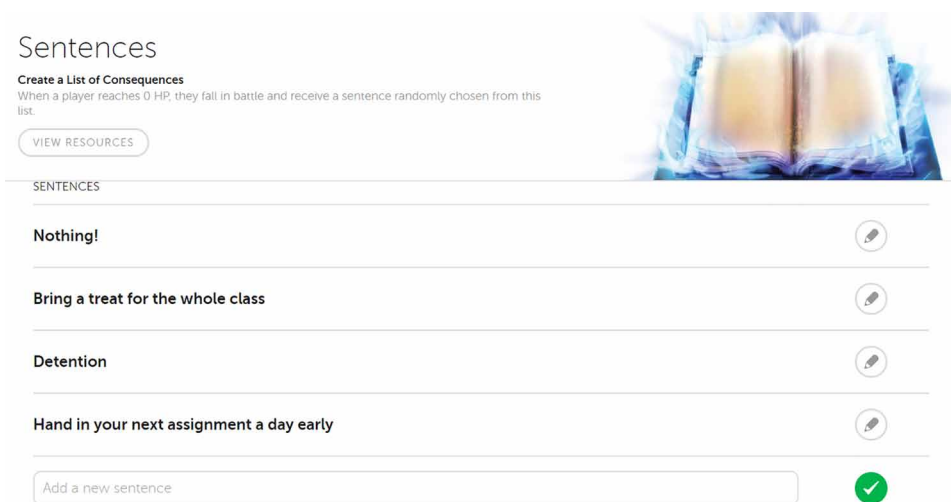
Experience Points (XP) allow students to level up and unlock powers. These points are earned when students have positive behaviours during the course. Figure 2 shows the behaviours set by default—both the amount of points earned and the behaviours can be edited to adjust them to the classroom needs—. New positive behaviours can be added according to the objectives of the teacher and the course. In this sense, for EMI students, behaviours such as talking with other students in English could be rewarded. It is also important to adapt the behaviours to the age of students, for instance, “being positive and hard-working in class” could not be appropriate for adult students so it would be better to edit this behaviour to meet the needs and expectations of the students.

Health Points (HP) are necessary to remain active in the game. Mages, Warriors and Healers have different amount of HP—this can also be modified by the teacher—. Points are lost when students have negative behaviours in class like arriving late to class or not submitting an assignment on time.

If students lose all the HP points, they *fall in battle* and should face a *sentence*. Sentences can also be defined by the teacher and they are listed in the *Book of Laments* so the teacher can check if students have completed the sentence or not. Figure 3 shows the sentences that are set by default. It is advisable

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Figure 3. Example of sentences



to edit them as some of the could be childish for undergraduate students. This is the case of *Detention*, which should be changed to something more appropriate such as doing a critical review of a given paper.

Action Points (AP) enable students to use powers, these points are earned automatically each day—the amount of AP can be set by the teacher—and they are deducted every time students use powers. Each character has a maximum amount of AP, Mages have the most and they can replenish their teammates AP with specific powers.

Power Points (PP) are earned each time students level up and allow them to unlock powers. Each power costs between 1 and 3 PP, depending if they are basic (1 PP), medium (2 PP) or advanced (3 PP) powers. Teachers can unlearn powers for students and return Power Points back to them.

Powers

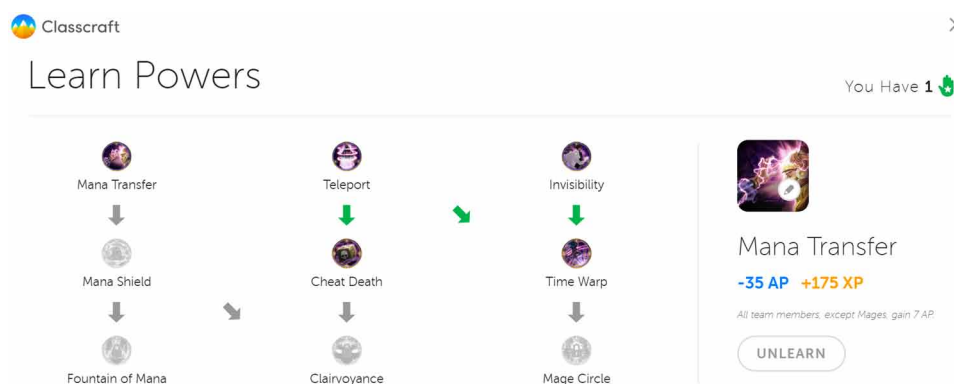
Powers enable students to gain privileges for themselves and their teams during the game. Some of the powers are set by default and cannot be modified by the teacher, but others can be adapted to the needs of the class. Each character has their own powers according to their role in the team. In this sense, Warriors have powers related to protecting the team such as *Protect 1* which enables the warrior to take up to 10 HP damage instead of one of their teammates, receiving only 80% of the initial damage. Some of the powers of the Mages included *Mana Transfer* which makes all the teammates, except Mages, gain 7 AP. To finish with, Healers could use, among others, *Heal 3* to make a teammate gains 30 HP.

Each character has their own *Power tree* which allows the students and the teacher to see which powers they can learn and how many Power Points they have available. Figure 4 shows a *Power tree* in which can be seen that, for example, in order to learn *Clairvoyance* it is necessary to unlock first *Teleport* or *Mana Transfer* and then *Mana Shield* or *Cheat Death*.

Powers should also be adapted to the objectives of the teacher and the expectations of students. In this sense, the power *Teleport*, which enable students to trade places with other classmates may not be appealing for undergraduate students and could be changed for leaving the class five minutes earlier, for instance. It is also advisable to set the powers in a scalable system so that powers cost more AP as they get

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Figure 4. Example of a power tree



more appealing for students. For example, advance powers can be related to leaving blank a question of the exam without penalty or being allowed to use the notes during the exam for some minutes. The first day, it could be a good idea to let students suggest which powers would be appealing for them. In addition, it is a great way to introduce Classcraft to students and to engage them with the game as they feel that their opinion matters and that they could have decision power throughout the gamification experience.

Quests

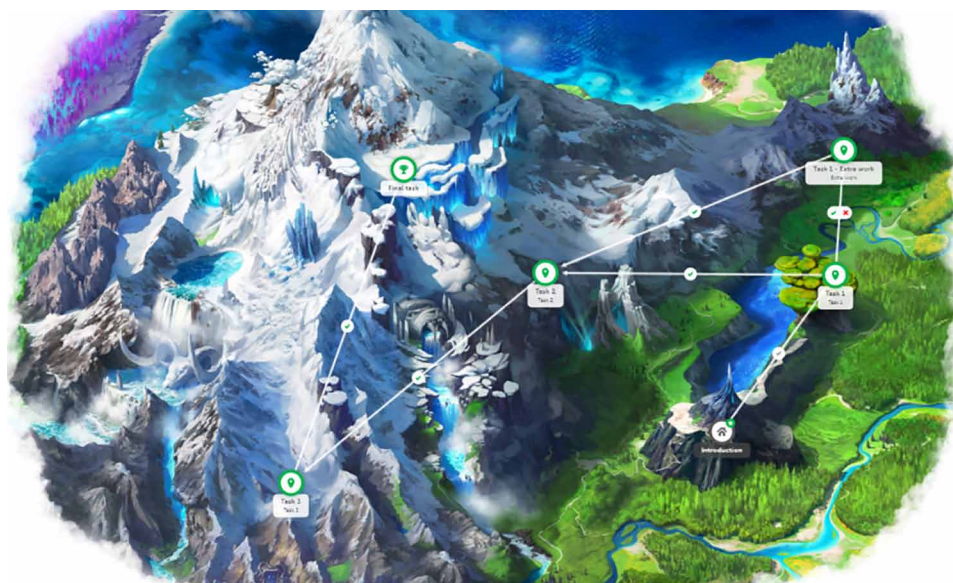
Quests allow teachers to implement their course curriculum as personalized learning adventures for the students that will be shown in a map (see Figure 5). Quest can be created by teachers or imported from the marketplace. Moreover, one quest can be assigned to several classes, which means that all the changes made in the quest will sync automatically for all the classes to which the quest is assigned.

The first step is to create a quest name and select a map for it—quest will be invisible to students until the teacher makes them visible. Once the map is selected, the teacher should create the introduction to the quest—images, videos, embed links, tables and files can be also inserted—in order for students to be familiar with the objective of the quest.

The following step is to set the objectives, Classcraft allow free accounts to set up to six objectives for each quest. The objectives can be tasks or Google Classroom Assignments. Quest objectives offer an option to enable assignment, which require student to submit work—files could be also attached—to complete the task. A due date is set by the teacher and students can be rewarded for submitting assignments on time and/or for early submission. Teachers can leave feedback for students and grade the assignments once submitted. If the *Self-Pace* option is enabled in the task, students can move on to the next objective as they complete the task without the manual approval of the teacher. In addition, tasks can be set to allow discussions and students can be rewarded for valuable posts, which can be very useful for students to interact among them and foster cooperation. When the objectives are created, paths can be added, which represent student progression between each objective. Paths can be set to allow students to move to the next objective if they have successfully completed a task or, on the contrary, branching paths can be set so that students who unsuccessfully completed a task move to objectives that involves more work such as extra activities, readings, etc. Once all the objectives are set a *Quest End* should be added, which concludes the quest and rewards students for completing the whole quest

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Figure 5. Example of a quest map



Other Resources from Classcraft

Classcraft offers several tools to dynamize the class. The *Wheel of Destiny* can be used to randomly select student or teams to answer questions, solve activities, etc. This resource is very useful as it makes students stay alert and pay attention during class as they know that they can be selected at any moment by the *Wheel of Destiny*.

The Riders of Vay is based on random events—which can be modified by the teacher. At the beginning of the class, a random event appears on the screen and all the students must face its consequences. Events could be beneficial or unfortunate for one individual student, team or for the whole class. For example, *Abundance of Energy* makes the player with least AP gain 15 AP while *Battle of Champions* makes the player with most XP lose 20 HP. Some of the events add fun elements to the class such as *Good Manners* which penalises students with 10 HP if they did not address each other using *milord* or *milady* instead of their names. Given the nature of some events, some students may find them funny while others can think that it is childish so, again, events should be adapted to each class according to students' features and involvement with the game.

Lastly, Classcraft has a messaging platform which allow the teacher to send messages—files could also be attached—to a given student or the whole class. The platform also shows the teacher how many students have seen the message. This option could be very useful for reminding due assignments or recommending readings or providing extra material, for example.

Issues, Controversies, Problems

Gamification have proved to be a great tool to motivate and engage students. However, some limitations should be outlined. Some authors argue that there are still few controlled studies demonstrating positive or negative results of using gamification in particular educational contexts and, therefore, more empiri-

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cal research is needed on the topic (Dicheva, Christo, Agre, & Angelova, 2015; Hamari, Koivisto, & Sarsa, 2014). More specifically, Hung (2017) remarks that empirical studies on gamification in Higher Education have showed modest gains in some areas and Hamari et al. (2014) indicate that gamification effects depend greatly on the context and users.

Other authors suggest that gamification could not be motivating enough and could also discourage students as they do not find fun to compete with their pairs (Dominguez et al., 2013) while others authors point out that gamification relays in external rewards which can be problematic for students (Hung, 2017; Lee & Hammer, 2011). In addition, gamification is reported to be time and resource-consuming for teachers (Lee & Hammer, 2011).

SOLUTIONS AND RECOMMENDATIONS

Gamification can be a great ally for EMI teachers, but in order for it to be successful it requires a great effort and careful planification. As stated in previous sections, teachers first need to understand the context of their students and the general atmosphere of the classroom. It is important to remember that gamification should be voluntary, and no student should be forced to play. In addition, if any student who was reluctant to play on first instance is willing to play once the gamification has started teachers should allow them to join the game. Secondly, the learning objectives should be clearly defined, and specific learning goals should be set. To this aim, Classcraft Quests can result very useful as teacher can plan their curriculum in advance and prepare Quests prior to the starting of the gamification experience. Once the gamification experience is thoroughly designed considering students' expectations, available resources, reward and penalty systems, duration, etc. it should be presented to students with enough time for them to explore and to get familiar with the game. Teachers should keep in mind that their work has not finished when the gamification experience starts, as they have to give feedback to students and supervise the development of the game to make any necessary changes such as reorganizing teams, or adjusting the points of the reward or penalty systems. Finally, gamification proposals must serve both the interests of the students—getting rewards, acknowledgement, fun, etc.—and those of the teacher—foster students' performance, improve classroom atmosphere, etc. Consequently, it is essential to balance these two aspects in order to ensure success.

FUTURE RESEARCH DIRECTIONS

Future research directions should focus on empirically analyse the positive or negative impact of implementing Classcraft in EMI courses. In this sense, close and open questionnaires should be passed to students which should be complemented with in-depth interviews and focus groups. Future works should also include research about students' expectations towards gamification as they could serve as a base to design gamification experiences.

Furthermore, other trends concerning gamification should be researched such us using mobile applications, videogames or other platforms like ClassDojo. To finish with, general trends in education, specifically those related to EMI should be considered. This research should include but is not limited to disruptive methodologies, flipped classroom, competence and project-based learning and cooperative and collaborative learning, among others.

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CONCLUSION

EMI has exponentially increased in higher education institutions worldwide. Within this scenario, students following EMI lessons find an extra degree of difficulty, as they need to learn new and complex knowledge through a foreign language, e.g. English. This may lead to content understanding issues, low in-class participation rates and increasing student inhibition. The lack of motivation of students undoubtedly poses a great challenge for university lecturers, particularly when the instruction is provided in a non-native language. For this reason, lecturers should be opened to explore new methodologies and ways to design their courses to engage their students. New technologies are here to stay and, although some teachers may be reluctant to allow students to use their mobile devices in class as they may lead to distractions, their benefits clearly outweigh their disadvantages. Technologies can be combined with emerging methodologies in order to design appealing courses. This would be the case of gamification, which is a great tool to engage and foster students' motivation and engagement.

This chapter has provided a deep insight of how to implement gamification experiences based on Classcraft in EMI courses. Classcraft offers numerous advantages to lecturers and students as it offers an innovative and new experience that is fun both for the teacher as for the students. In addition, Classcraft have been proved to have a positive impact on students' engagement, academic performance, motivation and participation. In this sense, Classcraft can be potentially useful for EMI courses given that, as stated above, most common problems that experience EMI teachers are related to low participation rates and student inhibition. However, teachers should be aware that designing this kind of experiences are very demanding and require a great involvement from all the actors involved. Consequently, this chapter has presented the procedures for EMI instructors to implement gamification proposals based on Classcraft in their courses and advice to overcome the main issues concerns and problems has been provided. Nevertheless, given that Classcraft it is not designed for specific courses, these guidelines could also be extended to other courses from all educational levels.

Additionally, in order to benefit from the implementation of gamification in EMI courses, there is a dire need for teacher training on computer-mediated techniques. The development of computer-mediated competences through integrated curricula could be a possible solution. However, despite the great amount of literature concerning the benefits of computer-mediated techniques in educational contexts, the development of computer-mediated integrated curricula still remains underperformed (Arzal & Chen, 2017). Therefore, in order to benefit from the positive effects of gamification in EMI university classrooms, both authorities and practitioners should be aware of the need to incorporate digital and computer-mediated competences in university curricula, particularly in EMI scenarios, where the teaching and learning of content in a foreign language, e.g. English is doubly challenging.

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KEY TERMS AND DEFINITIONS

Curriculum: It includes the lessons and content which are taught in a specific education course or program.

English Medium Instruction: Education system that uses foreign or second language, particularly, English as the primary medium of instruction.

Extrinsic Motivation: Motivation which is driven by external factors.

Gamification: In education, it is referred to add game dynamics, mechanics or components to a given academic course or educational content with a specific learning objective in order to foster students' engagement.

Intrinsic Motivation: Motivation which arises from the individual and it is under its own control.

Motivation: The reasons that make a certain behaviour arouse, be directed and maintained over time.

Role-Playing Game: Game which is played in a fictional setting and in which players assume the roles of given characters.