From Input to Output Through Gamification in Primary English Teaching

Marta Fortunato*, Mário Cruz**

* Colégio Anjos do Saber
** Politécnico do Porto – Escola Superior de Educação/ inED / CIDTFF

ABSTRACT

Gamification is a new methodological approach that provides new experiences, using game elements in "non-game contexts" (Deterding, et al., 2011). This can be a strong ally in Primary English Teaching for reconciling elements with whom the twenty-first century learner is familiar with in the learning process, making it motivating, meaningful and experiential (Fernández-Corbacho, 2014).

With our project we intend to show that gamification can influence pupils' motivation and participation (Foncubierta & Rodríguez, 2015), during the learning process, and that it can consequently promote collaboration and competition among them. That's why we also sought to list the role of emotions in this process, showing that what does not attract emotion, does not capture attention and does not trigger meaningful learning, which involves pupils in the learning process (Mora, 2013; Fernández-Corbacho, 2014).

Our project was a case study with action research contours in a qualitative methodological perspective and it was carried out with fourth grade pupils from a private school in the Oporto area. The chosen data collection instruments were participant observation and content analysis (self-assessment worksheets and questionnaires). Its main goal was to answer the questions which led us to our investigation. The questions were: a) which is the contribution of gamified activities to pupils' academic and behavioural performance?; b) in what way can gamified activities be accomplished based on *Metas Curriculares* in Primary English Teaching? c) which attitudes do pupils reveal during the gamified activities performance?

Our main aims were the following: a) to enumerate learning behaviours in the classroom context; b) to verify what type of gamified activities contribute to the improvement of the student's academic and participatory performance in the classroom context; c) to observe the processes of the gamified pedagogy in the fulfillment of *Metas Curriculares* in Primary English Teaching; d) to verify pupils' reactions during the gamified activities accomplishment; e) to verify the effects of gamified activities on pupils' participation.

The results show that gamified activities can increase motivation and pupils' engagement during their accomplishment, arousing different emotions. We have also concluded that they can also be based on *Metas Curriculares* in Primary English Teaching, and at the same time it is possible to draw up strategies, to plan lessons, to predict attitudes and to structure evaluation elements.

Keywords: Gamification; Emotion; Primary English Teaching; Case Study.

Introduction

Globalization brought people together and communication between them became crucial. Therefore, people were introduced to new languages and, consequently, to other cultures, enlarging new horizons for new places and people. In this way, it was necessary to make some changes in some areas and the education was no exception. Furthermore, the need to find new teaching methodologies became mandatory, as well as the implementation of information and communication technologies, and the inclusion of game elements to improve teaching and learning experience.

Taking into account that today's students are "digital natives" (Prensky, 2001) and they feel attracted for the various mobile and technological devices, we consider that their use in the English language teaching (ELT) classroom may be a benefit for increasing pupils' self-esteem and motivation. It is a successful way to reach their different learning styles and it can also encourage team work, as well as collaboration. We believe that the use of technology in the ELT classroom is an effective way to help pupils to develop both their technological and language skills.

Our main purpose with this article is to present the Gamified Pedagogy as a recent methodological approach, which is considered to be learner-centered. Gamification can also be an alternative to traditional teaching models in English Primary Teaching in the learning context. We believe that by applying game elements in "non-game contexts" (Deterding et al., 2011), several emotions arise and these have a main role in the learning-teaching process, because they call for pupils' attention and they make the learning process more experiential, memorable and meaningful (Fernández- Corbacho, 2014; Foncubierta & Rodriguez, 2015).

In the first part of this article, we aim to focus on the theoretical basis of gamification pedagogy. The practical component begins with the justification within the framework of the qualitative methodology, applied in a case study with action-research contours. We also present participant observation and content analysis as chosen data collection, in order to find out the answers to our three research questions. In section 3.2., we described three sessions of a unit plan in which we present some analogue and digital activities within the gamified pedagogy framework. Then, we present some considerations in order to answer to the questions, which were the starting point of this study.

English Primary Teaching in Portugal and New Didactic Approaches

The English language was taught in Portugal in the scope of Curricular Enrichment Activities from the 2005/2006 to the 2012/2013 school year. This was rooted in the concept of full-time schooling (extended school schedule until 5:30 p.m.) and its main goal was to create the crucial conditions for quality education and to offer new learning opportunities to primary school pupils. In spite of being compulsory in all public schools, its attendance was optional. Therefore, some asymmetries were felt within the same teaching cycle as well as in the following ones, because pupils reached the 5th grade with different English knowledge levels, hampering the English teacher's work (CNE, 2014). Other obstacles were found, such as the lack of didactic teaching training for the early English teaching, as well as, teachers' recruitment, and the lack of a definition of the professional English teachers in Primary teaching. Furthermore, there was no agreement of the promoting entities in the creation of a consistent program of articulation between all the involved entities.

Besides the Curricular Enrichment Activities, there are in Portugal other experiences of curriculum integration and complementarity/enrichment of the language curriculum at the initial levels: "Bilingual Schools Project", the "Escola a Tempo Inteiro" project of the Autonomous Region of Madeira, and some private schools which provide the language teaching since preschool. These can be a few examples that reveal some of the inequalities related to English Teaching in Portugal, which seem to have been reflected in the "Preliminary English Test" results. These show that half of the examiners revealed having little knowledge of the language.

In order to diminish the gaps and to give more coherence to the English teaching, according to the Law Decree number 176/2014 of December 12, since the 2015/2016 school year, the English language has become part of the Primary English Teaching curriculum as a compulsory subject from the 3rd grade on. Thus, as it happened in other education cycles in 2012, a legal document entitled "Metas Curriculares para o Ensino do Inglês no 1.º Ciclo do Ensino Básico" (Bravo et al, 2014) was written. This document aims to ensure the homogenization of language teaching, guaranteeing a solid progress throughout the seven compulsory education language years, making it possible to achieve a more demanding and harmonized domain linked to the international references (Decreto-Lei 176/ 2014).

Being in a globalized world, in which pupils, or "digital natives" according to Prensky (2001), need to have an active role in their learning process in order to be prepared for the future, teachers need to use different strategies and new and appealing didactic approaches. So, concepts as "collaboration", "creativity", "problem solving", "communication" and "critical thinking" should be classrooms' everyday agenda (Cruz & Orange, 2016). As an example, we can talk about "Flipped Classroom Approach", "20 Time Approach", and last but not least "Gamification", which is the main focus of our paper.

The Gamification Realm

Nowadays, there is a great concern in applying new methodologies in the classroom context, seeking to provide a holistic, meaningful and experiential learning (Fernández- Corbacho, 2014). Thus, pupils' interest increases and they are encouraged and empowered to take more responsibility for their own learning process, since their experiences and interests are taken into account.

When the learning process is transformed into a game, it can be appealing, because it adds a playful dynamic to non-stimulant behaviours, which is the potential of gamification. This is a methodological approach, which aims at breaking up with traditional teaching models, by providing new experiences to both the teacher and the student by using game elements in "non-game contexts" (Deterding et al, 2011, p. 9). Therefore, it allows teachers to rely on game dynamics (emotions, narrative, evolution …), mechanics (competition, collaboration, feedback, rewards, …) and components (points, rankings, levels, …) (Werbach & Hunter, 2012) to plan and organize their activities, in order to engage pupils, influence their behaviour (Star, 2015) and also their participation.

Motivation is a key element in the learning process and its two types seem to be influenced by the gamified elements. Extrinsic motivation is driven by external factors, such as the punctuation system and the ranking, in order to get a particular behaviour, such as encouraging the student to reach a certain goal or to perform a task (Ryan & Deci, 2000). Intrinsic motivation, on the other hand, is related to personal interests which lead pupils to proceed with the activities, because they feel pleasure and do not expect any external rewards (idem).

Connected to intrinsic motivation are the needs of competence, autonomy and relatedness of Ryan & Deci's Self-Determination theory (2008), which seem to influence pupils' participation during their performance in gamified tasks. The first one is related to problem-solving, to progression, to immediate feedback, and to the increased level of difficulty in the proposed tasks which awakens the pupils' sense of challenge (Werbach & Hunter, 2012). For example, pupils are competent when they feel able to face their schoolwork challenges. The second need is autonomy and it is associated to individual and group choices and to decision-making (Star, 2015). For instance, pupils are autonomous once in group, they are able to decide the role of each member or the task each member will do. The third one is the relatedness need and it is connected to the pupils' desire to be an important element, not only as part of a team, but also individually. This need is stimulated through teamwork, the sharing of achievements and the commitment to accomplishing goals. As another example, relatedness need is achieved when pupils feel they have an important role in the classroom and as a class member. Besides, collaboration (when a task is carried out jointly, with the goal of attaining the objectives which were previously negotiated by the group, and the result is shared by all) and competition (when a task is carried out in groups or individually, in order to achieve the goals first established or with the best performance) are promoted by the leaderboard and by the punctuation system, which are elements that encourage pupils' participation, decision-making as well as the desire to score points as the challenges are completed (Raban, Rafaeli & Ritcher, 2015) and the required level increases.

Moreover, we believe that gamification elements can be considered positive reinforcements when pupils want to carry on with an activity in order to improve their performance and to try to outdo themselves. However, if these elements trigger their disinterest, making them want to give up, they may work as negative reinforcements. The same occurs with the reward system, because if it symbolizes the accomplishment of tasks with different levels of difficulty, pupils' interest and motivation increase (Star, 2015), but if they are handed out without representing a challenge or an achievement, they become meaningless and unattractive elements (Hamari & Kovisto, 2013).

We believe that pupils are familiar with gamified activities which allow them to use resources which belong to their universe and for which they are already intuitive, making the results memorable and meaningful (Fernández-Corbacho, 2014). The same happens with pupils' creativity which is also encouraged. At the same time, pupils' curiosity (Superfine, 2002) and feelings, such as joy, pride and frustration arise, which makes this methodological approach closer to real life.

The Game of Emotions in the Design of Gamified Tasks: our Action Research Project

Emotion and learning-teaching process are concomitant, insofar as pupils only remember what is meaningful to them and what provokes their curiosity (Fernández- Corbacho, 2014). We think that this can be a strong ally of the gamified activities, as during task accomplishment the interest, the involvement and the implication of the pupils are triggered (Foncubierta & Rodrígues, 2015). This process is Mora's "emotional awakening", which is closely related to game dynamics and it occurs by stimulating pupils' senses and encouraging their active participation in the gamified task.

Gamified activities awaken the pupils' curiosity to what comes next (Mora, 2013), in order to engage them in the activity: "(…) children who want to find out how something can be made to work or who are trying to make something of their own are driven, often, by a sense of curiosity" (Superfine, 2002, p. 32). This emotional connection to gamification shows that the learning process is something felt, experiential and emotionally active (Fernández-Corbacho, 2014; Foncubierta & Rodríguez, 2015). When gamification is applied in the second language learning context, it is sought to provide an attractive and effective experience because, while language learning occurs, other skills are developed and worked out. These skills help pupils solve the proposed challenges which are related with the topic. Consequently, the goals they set to themselves are fulfilled and they self-regulate their learning in order to reach the expected level (Figueroa, 2015). Both autonomy and competence of the Self-Determination Theory needs are both satisfied (Ryan & Deci, 2008). As follows, pupils' attention and desire are attracted, and their participation is stimulated through enigmas' resolution, contextualized narratives and the feeling of competition (Foncubierta & Rodríguez, 2015). Besides that, they feel intrinsically motivated within the learning process, being able to use

their creativity in the accomplishment of the proposed tasks (Superfine, 2002), by recurring to their previously knowledge, too.

It is up to the teacher to rethink his/ her practices relying on the elements and game structures to design contextual challenges, so that their classroom players overcome them. Hence, they will be engaged, dedicated and motivated with the learning process while, at the same time, they relate the two worlds they are familiar with: game and learning.

During an activity performance, the feeling of achievement can produce positive emotions. That occurs when they are associated to rewards, which can be medals, for example, for being "(...) a typical representation of excellence" (Dominguez et al., 2012, p.7). Rewards can not only foster pupils' commitment and dedication in a task accomplishment, but they also make them wanting to win as many medals as possible. As a result, competition among the players is encouraged (idem). However, classroom rewards can also be used in order to encourage some situations and special behaviours (ibidem), such as groups inter-help moments, for example.

Gamification in the learning context can be an interesting process, not only for being motivating, but also for fostering creativity, participation, motivation and collaboration among pupils, by combining all these aspects with technology and digital platforms, such as "Kahoot!" and "Plickers" (which promote immediate feedback on pupils' performance). Nevertheless, in English Primary Teaching context, the Gamification Pedagogy encompasses the use of the four skills which are considered as essential for learning a second language: listening, speaking, writing and reading. We worked out these skills during the implementation of this project.

In the following paragraphs, we will present the chosen methodology and the data collection instruments. We will also present and describe a three sessions' unit plan which were carried out during this project's implementation.

Action Research Project Design

Our project, which was carried out in a fourth-grade class from a school in the Oporto area, is a case study with action research contours and we also relied on the qualitative methodology during the implementation of our study, in order to develop new knowledges related to learning and teaching (Bento, 2012). This

method has a greater focus on educational research, and our goal is to understand and seek out the meaning through the observation of pupils' behaviour.

The choice of action research methodology is due to the fact that it seems to be closer to the educational context and also because it is considered as the teacher-researcher methodology (Coutinho et al., 2009), because it allows teachers to observe not only class moments, but also what is inherent to the educational context. This one applies the scientific method to explain and look for solutions to problems, whose answers do not exist in a previously established theory (Carmo & Ferreira, 1998). For this reason, we propose to observe pupils' behaviours and reactions by interacting with them in a natural and discreet way (idem), in order to reduce and to manage possible influences and effects which can be felt by the investigated subjects, while the data collected are analyzed (ibidem). Besides, it is possible to understand, to explore and to describe several events and contexts in which several actors and factors are involved (Yin, 2005).

Our project's main goal was to seek the answers to the proposed questions which led us to this investigation: a) which is the contribution of gamified activities to pupils' academic and behavioural performance?; b) in what way ca gamified activities be accomplished based on *Metas Curriculares* in Primary English Teaching? c) which attitudes do pupils reveal during the gamified activities performance?

We would like to add that we chose participant observation and content analysis (self-assessment worksheets and questionnaires) as data collection instruments.

Presentation, Analysis and Results Discussion

The main topics, which were included in this three sessions' unit plan were "food", (cake/ rice/ meat/ cheese/ egg/ cereal/ spaghetti/ fish/ chips/ bread/ soup), "fruits and vegetables" (apple/ lemon/ pear/ strawberry/ orange/ grapes/ potato), "drinks" (milk/ water/ tea/ lemonade/ water/ tea/ orange juice), "meals" (breakfast/ morning snack/ lunch/ afternoon snack/ dinner) and "parts of the day" (morning/ afternoon/ evening/ night). Some grammar topics were also focused, such as "likes" and "dislikes" and the definite articles "a/an" in an implicit way. Pupils were already familiar with the topic and they recognized the vocabulary, and for this

reason, some review and consolidation activities were set out by using cultural rich contents and proactive strategies based on analogue and digital gamified activities, such as storytelling and *Plickers* digital platform comprehension questionnaire, which we are going to present next. These lessons were also planned according to the *Metas Curriculares* in Primary English Teaching document and on its aims.

The class was divided into four groups of six pupils and each group had a colour name (the *Blues*, the *Yellows*, the *Reds* and the *Greens*) and an identification card. According to the questionnaire results, most pupils (90%) reported preferring to accomplish activities with more than one friend, mentioning that it was funnier and easier, leading us to the conclusion that they appreciated the relationship among their peers (Foncubierta & Rodriguez, 2015) and making them feel they were group members (Ryan & Deci, 2000). Only 10% stated the preference to solve tasks with just one peer, mentioning that it was less confusing and also less crowding.

The activities were carried out according to the game mechanics and dynamics, previously explained by the teacher, and those groups who finished their tasks on time or first (depending on the activity dynamics) stuck a star on the leaderboard (see Picture 1), which was always within the pupils' scope.

According to the questionnaire analysis, the majority of pupils reported they liked to carry out activities which involved winning points and being winners. Some pupils justified that the victory was connected to the reward system and both were related to a successful activity accomplishment (Ryan & Deci, 2000). Therefore, we can presume that the reward awarding system, which was applied throughout the three sessions, was meaningful and it also represented an achievement (Hamari & Kovisto, 2013). Moreover, most pupils reported enjoying gamified activities, because they were fond of competition and they wanted to show to their colleagues what they were able to do. Thus, to compete was their motivation, so the victory of some would be the defeat of others (Star, 2015).

Picture 1. Leaderboard

In the first session, after playing the "Hangman game" and doing a gap-filling song activity ("The yummy food song" from student's book) in order to warm-up, to introduce the topic and to check what pupils knew about it, they did another pupil's book listening exercise, in which they had to stick pictures according to the instructions. The group who finished first won a point and stuck a star on the leaderboard. Then, the teacher corrected the exercise.

In the following exercise, each group rewrote "The yummy food song" (Abreu & Esteves, 2016), according to their likes and dislikes (see Picture 2), by using the previous model. The original song version ended in a silly way by asking if they liked fish ice cream and pupils had to find out a silly way to end theirs. The groups' choices were: "broccoli ice cream", "tomato soup yoghurt" and "chicken cake". Pupils could check their class book's vocabulary if they needed. The groups who finished the activity on time stuck a star on the leaderboard. Then, they all performed their songs. The use of songs as a teaching tool can help young learners to improve their listening skills, pronunciation and their speaking skills.
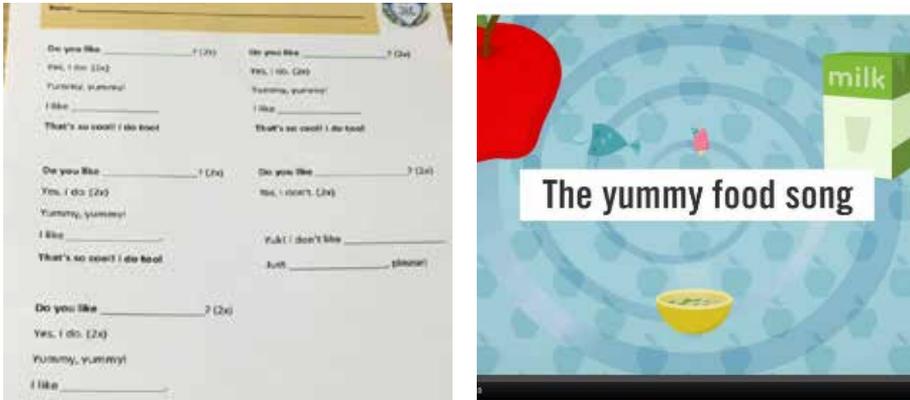
Picture 2. "The yummi food song" template

After revising meals and time by doing a listening exercise about Sarah's routine (which was one of the previous unit plans' character), and in order to check and to consolidate the vocabulary learnt and reviewed, the teacher told the class that the girl had a problem and she asked pupils to guess what it was. After giving them some clues of what it could be, the teacher showed the class a picture of Sarah's empty fridge and pupils were challenged to help the girl (see Picture 3).

The teacher gave each group an envelope with a different meal card inside ("breakfast", "lunch", "snack" and "dinner") and explained the exercise dynamics: pupils were asked to write a shopping list according to the previously meal card given, and they went shopping. Some food realia (cereal boxes and water bottles, for example) and flashcards were used, to provide pupils real lives' experiences, to engage them and to make lessons memorable. The groups who finished on time stuck a star on the leaderboard. Then, each group did the "show and tell" activity to present the decisions they took about what Sarah was going to have for each meal.

We believe this is a problem-solving activity, since pupils had to help the character by choosing the food she needed to have in her fridge for each meal by using their critical and their creative abilities. This kind of activities might support pupils to face future problems and it is up to the teacher to question them, in order to help them to think and to use their creativity in solving potential future challenges (Cruz & Orange, 2016).

Picture 3. The shopping list activity

In the second session, after homework correction, pupils were shown the cover of the story "Food Project" as a pre-reading activity and they were asked about the continents' names and the story's topic. Pupils were also questioned about what a school project was and about what Sarah and John's project was. It was used a data show projector, so pupils could read and listen to it at the same time as the teacher, in order to become a whole-class activity.

Then, pupils listened to and read the interactive story in which pupils had to answer Sarah and John's emails to four pupils from four different countries: Madagascar, India, Italy and Portugal. The mails were about traditional meals. Sarah and John presented theirs and they asked the other children what theirs was. The answers to these emails were written by the groups by following the given clues at four different moments (see Picture 4). After answering each email, a member of the group was chosen in order to read the group's answer in a "show and tell" activity. In spite of having revised and taught some language structures in the previous lesson and of reading and showing Sarah and John's emails, pupils were free to use the language structures they preferred in order to express what they learnt in their own way. They could use their notebooks and books for research if they wished. They had five minutes to answer and the groups who finished on time won a star that was stuck on the leaderboard.

The first email written was to Aina, a Madagascan girl. The two main characters wrote to her about their traditional English breakfast and sent her pictures. They also wrote about one food they liked and another that they didn't like. Then, they

also asked Aina about her breakfast. Each group received an envelope with three different pictures and wrote on their notebooks the email's answer. When the time was over, the teacher checked the texts of the groups who accomplished the task on time and, then, a group member threw a dice in order to decide which group was going to do the "show and tell" activity to the class. The following emails were written to an Indian boy, who was asked about his lunch and to an Italian girl, who was asked about her dinner. The last email was written to the class. Pupils were asked about what they had for afternoon snack, but there were no clues. Pupils could answer according to their eating habits, their personal experiences and habits or they could use their creativity, in order to present an unusual snack.
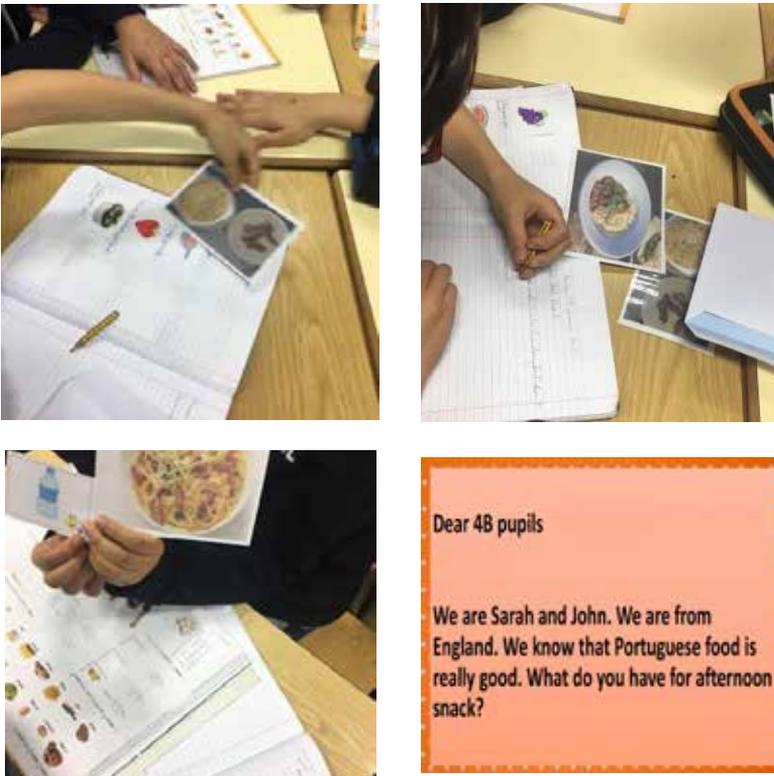
Picture 4. Story Writing Activities

During the story telling, some deliberate questions were asked, not only for keeping pupils' attention, but also to help them with some unknown vocabulary, such as brussels sprouts or carrots, for example.

This story presented different typical meals from four different countries and some of them could cause strangeness to the class, for example the traditional Madagascan breakfast presented was *Vary Sosoa and Kitoza*, which is a kind of rice and meat soup. In Portugal, it is not common to eat soup or meat for breakfast, so pupils could find it strange or unusual. For this reason, we believe that through story telling these differences can be presented in a less formal way, in order to promote positive attitudes, such as respect and acceptance towards other cultures (Dujmović, 2006).

The story ended with a challenge: pupils had to make their own food project by working in groups. They had to choose a country and they also had to decide who was going to search for a traditional main course, a typical drink, desserts and fruits. The research should be done at home, as homework, with pupils' parents help (if possible) and they could bring pictures, small texts and other kind of information that they would find relevant to the topic. It was expected that the final results would be presented in the following session. This was a "flipped classroom" approach activity, which allowed pupils to take decisions, share responsibility for their learning in order to engage them in the process.

In order to assess pupils' story comprehension and understanding, they answered to a *Pickers* questionnaire. *Plickers* is a digital platform which helps teachers to collect formative assessment data in real time. Each group answered to multiple choice questions related to the story that were projected through the interactive whiteboard by placing the given platform's card according to the answer's letter. Then, the cards' position was detected by the teacher's cell phone and the groups' names and answers were projected on the whiteboard, in order to provide them instant feedback (see Picture 5).

All pupils had the chance to participate and to get engaged within the learning process. This activity also involved discussion among elements of the different groups with the aim of finding out the correct answer according to the given options.

Different reactions and emotions were awakened when groups' names were projected on the whiteboard, revealing who answered correctly to the questions and who didn't. Initially, the teacher chose to show the evolutionary general graph, but due to the request of some pupils, the teacher revealed groups' evolution, leading us to the conclusion that competition among them was enhanced once again. We

could also observe the unfriendly attitudes of some students towards the defeat of other groups.

Picture 5. *Plickers* comprehension questionnaire

In the third session, pupils organized the information they searched in order to make a poster. They won a star for doing their homework and another for accomplishing the task. Both were stuck on the leaderboard. Each group had twenty minutes to make their poster (picture 6). Then, they did a "show and tell" activity in order to share their projects with the class, by using the language structures with which they felt more comfortable.

Picture 6. "The Food Project"

As following, pupils did a consolidation worksheet (see Picture 7) and a self-assessment worksheet (see Picture 8), in order to help the teacher know pupils' opinions and feelings about the activities that were carried out during the three sessions, where they answered by: a) drawing/ writing their opinions about the sessions; b) expressing feelings about accomplishing the lessons' aims and giving examples of what they have learnt; c) writing/ drawing a picnic food list.

Picture 7. Consolidation worksheet
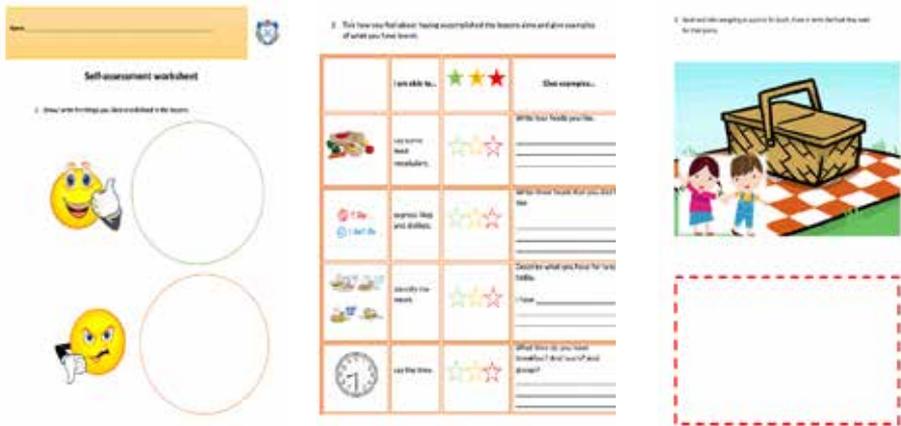
Picture 8. Self-assessment worksheet

From Input to Output Through Gamification in Primary English Teaching

This session ended with the stars counting, in order to know the winners and to reward them (picture 9).

Picture 9. Leaderboard

Pupils' emotions were varied. The winners were happy and eager to know what their reward was, whilst some pupils were sad and upset for considering the punctuation system unfair. Although it is important to point out that, in the questionnaire, only 33% of the pupils stated that if they lost a game, they would play it again in order to win and 0% of pupils reported being sad or upset about losing in a game, while the majority preferred the activities participation to the victory. As we were able to observe, their attitudes and behaviours did not entirely match with their questionnaire answers.

After analysis of the self-assessment worksheet, we could check that the great majority of the pupils preferred to work in groups. They preferred, in general, to accomplish these unit plan activities, focusing on the story telling and on the school project's activities. They also mentioned to like working in groups. We could notice that most of the pupils reached the proposed objectives: a) to identify food; b) to express preferences ("I like chips, rice, meat, apple, spaghetti, cake, cereal, soup, I do not like chocolate"); c) to identify meals. When they were asked about what they didn't like in the sessions, five pupils referred the competition among groups and the punctuation system, considering both unfair; four pupils stated that they

didn't like the "noise" that arose during the accomplishment of the activities; two pupils mentioned the exercises; and the other pupils didn't answer.

Pupils seemed to be motivated and engaged during the tasks completion and their participation was also stimulated. They worked in groups and their decisions and choices were made together, so the relatedness need was achieved (Ryan & Deci, 2000). Consequently, they were able to know and to respect different opinions which were as much important and valid as theirs, as it should happen in real life.

Conclusions

We believe that the most effective gamification experiences include elements such as curiosity, the permission to fail, the instant feedback, collaboration among players, the presentation of new contents through stories and contextualized challenges and to promote discoveries (Foncubierta & Rodriguez, 2015). We believe that when the teaching process is combined with game elements, it encourages the learning of a new topic and keeps pupils' motivation to continue and to move on to the next level. Some skills, such as the solving-problem skill, persistence and creativity are also recognized, developed and encouraged (idem).

In order to answer to our project's first question, we could ascertain that gamified activities influence pupils' behaviour, increase their both intrinsic and extrinsic motivation as well as their engagement (Star, 2015). Pupils are driven by achievement of stars and by the victory. The competition was marked, arousing pupils' emotions.

Regarding our second question, after analyzing *Metas Curriculares* for Primary English Teaching document and observing the unit plans that we carried out, we can conclude that this legal document presents only the topics that should be addressed and taught in the respective schooling years. So, it is up to the teacher to decide where and how to proceed (Bento et al., 2014). Therefore, we can conclude that Gamification Pedagogy activities can be based on these document contents and created resources, either analogue or digital, since it is possible to draw up strategies, to plan lessons, to structure evaluation elements and to predict pupils' attitudes.

With the purpose of answering to the third question, we have found that gamified activities provoke several emotions, such as euphoria and joy, when the task is accomplished, and the reward is won. However, sadness and disappointment reactions related to competition and to the game elements, as well as leaderboard and stars achievements were also verified.

In general, with the appliance of Gamified Pedagogy in the classroom context, we found that the activities' rhythm and cadence were less formal, making the learning process more spontaneous. This pedagogy also explores other skills, such as: learning to listen and to respect different opinions, respecting and accepting others' victories and achievements and preparing pupils to real life challenges.

References

Abreu, C. & Esteves, V. (2016). *Let's Rock 4*. Porto: Porto Editora.

Bento, A. (2012). Investigação quantitativa e qualitativa: Dicotomia ou complementaridade? *Revista JA,* 64(7). pp. 40-43.

Bravo, C., Cravo, A. & Duarte, E. (2014). *Metas Curriculares de Inglês Ensino Básico: 1.º, 2.º e 3.º Ciclos*. Lisboa: Ministério da Educação.

Carmo, H. & Ferreira, M. (1998). *Metodologia da Investigação – Guia para Auto - aprendizagem*. Lisboa. Universidade Aberta.

Coutinho, C., Sousa, A., Dias, A., Bessa, F., Ferreira, M. & Vieira, S. (2009). Investigação ação: Metodologia Preferencial nas Práticas Educativas. *Psicologia, Educação e Cultura*, 13(2), pp. 455-479.

Cruz, M. & Orange, E. (2016). 21st Century Skills in the Teaching of Foreign Languages at Primary and Secondary Schools. *TOJET: The Turkish Online Journal of Educational Technology (Special Issue),* 1(12), pp. 1-12.

Deterding, S., Dixon, D., Khaled, R. & Nacke, L. (2011). From game design elements to gamefulness: Defining gamification. *Proceedings of the 15th International AcademicMindTrek Conference on Envisioning Future Media Environments - MindTrek '11*, 9– 11. https://doi.org/10.1145/2181037.2181040

Domínguez, A., Saenz-de-Navarrete, J., de-Marcos, L., Fernández-Sanz, L., Pagés, C., A. & Martínez-Herráiz, J. (2012). Gamifying learning experiences: Practical implications and outcomes. *Computers & Education*, *63*, pp. 380–392.

Dujmovic, M. (2006). Storytelling as a Method of EFL Teaching. *Methodological Horizons*, 1(1), pp. 75-88.

Estado da Educação 2014. (2014). Lisboa: Conselho Nacional de Educação (CNE).

Fernández-Corbacho, A. (2014). *Aprender una Segunda Lengua desde un Enfoque Comunicativo Experiencial*. Available at https://www.researchgate.net/publication/273204320_Aprender_una_segunda_lengua_desde_un_enfoque_comunicativo_experiencial.

Figueroa, J. (2015). Using Gamification to Enhance Second Language Learning. *Digital Education Review*, 21, pp. 32-54.

Foncubierta, J. & Rodríguez, C. (2015). Didáctica de la gamificación en la clase de español. Available at https://www.edinumen.es/spanish_challenge/gamificacion_didactica.pdf.

Fortunato, M. (2017). *O jogo das atividades gamificadas e das emoções no Ensino do Inglês no 1º Ciclo do Ensino Básico*. Porto: Escola Superior de Educação do Instituto Politécnico do Porto.

Hamari, J., & Koivisto, J. (2013). *Social motivations to use gamification: an empirical study of gamifying exercise*. 21st European Conference on Information Systems Proceedings. Utrecht, Holanda.

Decreto-Lei no. 176/2014. Lisboa: Ministério da Educação.

Mora, C. (2013). Gamificación: lo congitivo, lo emocional y lo social. Available at https://gamificationedufis.wordpress.com/2015/06/09/lo-cognitivo-lo-emocional-y-lo-social/.

Prensky, M. (2001). Digital Natives, Digital Immigrants Part 1. *On the Horizon*, *9*(5), pp. 1– 6. https://doi.org/10.1108/10748120110424816

Richter, G., Raban, D. & Rafaeli, S. (2015). Studying Gamification: The Effect of Rewards and Incentives on Motivation. *Gamification in Education and Business*, 2, pp. 21-46. https://doi.org/10.1007/978-3-319-10208-5_2

Ryan, R. & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *The American Psychologist*, *55*(1), pp. 68–78. https://doi.org/10.1037/0003-066X.55.1.68

Ryan, R. & Deci. E. (2008). Self-determination theory: A macro theory of human motivation, development, and health. *Canadian Psychology/Psychologie Canadienne*, *49*(3), pp. 182– 185. https://doi.org/10.1037/a0012801

Star, K. (2015). *Gamification, Interdependence, and the Moderating Effect of personality on Performance*. Coventry: Institutional Repository for Coventry University.

Superfine, W. (2002). Why use activity-based learning in the young learner classroom? *Educação e Comunicação*, 7, pp. 27-36.

Werbach, K. & Hunter, D. (2012). *For the Win: How Game Thinking Can Revolutionize Your Business*. Philadelphia: Wharton Digital Press.

Yin, R. (2005). *Estudo de Caso. Planejamento e Métodos*. Porto Alegre: Bookman.