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Using Duolingo as a Means of Enhancing (Post) Obligatory Secondary Education Students' Interest in the English Subject

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Abstract.

This research has aimed at studying and analysing the effects of using Duolingo, a mobile phone application, on the youngest and the oldest students of a Spanish high school. Basing the research on the premise that the so called digital natives students would feel much more comfortable and motivated by using a technological device for learning, I have endeavoured to prove that young learners of English would be more eager to learn the language if they are given the chance to use a tool such as Duolingo, since it is a mobile phone application and these students use this type of tools as part of their daily life. After having the students use Duolingo for a couple of weeks at home, they were asked about their experience and it was shown that, unexpectedly, the older students had actually enjoyed Duolingo as much as the younger ones, although the application proved to be more useful for the students of the first year of Compulsory Secondary Education, since the level that Duolingo offered was not sufficient for students of Post Obligatory Secondary Education. However, both groups showed interest in incorporating Duolingo as part of their English learning process.

Key words: *Duolingo*, ICT, Education, Application, Teaching

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1. Introduction

1.1 Justification for choosing this topic.

New technologies, especially the Internet, have a tremendous potential to reshape the way in which education is dealt with in schools and high schools. It is widely acknowledged that the educational system is hardly keeping up with the frenetic technological and scientific changes, deeming it as anachronic and old-fashioned. While it is true that many high schools in Spain are following the traditional system of a teacher-centred and book-centred lesson, it is undeniable that some efforts have been made to modernize the system, although there is, certainly, still a lot to be done.

This gap in the current educational system is the reason why I have chosen to deal with the topic of new technology-based devices and how to introduce them in a class, more specifically using *Duolingo* as part of the English subject, or as part of the syllabus. Although *Duolingo* might be considered a mere tool for basic language contact, I believe it can be highly motivating for learners, since they are much more confident using electronic devices than any other type of resources, like a book.

As previously said, even though *Duolingo* can be considered an educational tool, it undoubtedly falls into the category of gamification. The Cambridge Dictionary defines gamification as: “the practice of making activities more like games in order to make them more interesting or enjoyable”. Applied to the educational field, the implications of gamification are very simple and, as Arnold (2014) puts it: “[t]he primary value provided by gamification is heightened, voluntary and enjoyable engagement” (Arnold, 2014, 33). This concept (engagement) is probably the most important one, and at the same time the least practiced in the educational context. The reason why *Duolingo* can make students become more engaged with what they are doing is because the application behaves as a game rather than as a plain device for learning. For instance, the users win experience points, virtual money or gems at the end of each unit. Furthermore, there is also a ranking, allowing users to monitor their own improvement and at the same time become competitive. These characteristics make it an interesting tool for young learners of English, since at

that age, if sold properly, they can see it as a plain game and as a competition between them, which would definitely engage them in the learning process much more than with a traditional methodology. Arnold (2014) claims that if gamification is put into practice in the educational system “the opportunities for experimental, self-paced and lifelong learning expand exponentially. Learners are hooked by fun and then rewarded with knowledge and skill (Arnold 2014, 33)”. It is important to comment on the idea of the reward. Often times, young learners need a reason behind the process of learning, they need to know why they are learning this or that since “[s]chool is inherently boring and frustrating. We require students to come, then try to teach them stuff that they don’t see a need for and don’t find meaningful” (Brophy 2010, 1). The interesting part of using *Duolingo* here is that they have a goal; they will most-likely be eager to gain experience points in order to rise to higher positions and “out play” their classmates. The victory becomes their motivation.

There is another important reason why I consider that *Duolingo* deserves to be examined as a learning tool inside (and outside) the class. The fact that it is a mobile phone application makes it extremely comfortable not only to be used in class (which might be slightly problematic if the students are not focused on using their phone for the aforementioned purpose of learning through *Duolingo*, because it might be hard for the teacher to control every students’ phone) but it can also serve as homework for them. Given the unpopularity of homework among students (and a lot of times, among teachers as well), it may prove effective to substitute some book exercises by some minutes of *Duolingo*. This point takes us to one of the greatest aspects of this tool; the user can choose whether he wants to take a five-minute lesson every day or a twenty-minute lesson, depending on their motivation and their eagerness to learn. Thus, by selecting how much time they want to “play”, even the lazier students can spare some time for learning English purposes.

1.2 Objectives.

The aim of this research is to investigate the effects that using the App “Duolingo” have on students of a Highschool from Mallorca. With the premise that using a mobile phone App will motivate young students to learn English, mainly due to

the fact that *Duolingo* has the characteristics of a game and not of a tool for learning, I have endeavoured to prove that using such a familiar tool for the so-called Digital Natives will have positive outcomes for their motivation and their eagerness to work.

I have also ventured to demonstrate that using this tool for learning English can make students feel more comfortable when dealing with a foreign language since they would not have the pressure that they usually have when learning it in class. On the contrary, due to the game-like aspect of the App, students will enjoy it while learning at the same time; furthermore, they will become competitive in order to gain more experience points.

2. Literature Review

2.1 Theoretical background

Although the educational system does not seem to keep up with the everlasting and frenetic changes that our society is constantly going through, it has arguably changed in some respects, particularly in the field of the available resources that students and teachers have for teaching and learning. The new precepts on the educational field, often based on pedagogical theories from various authors, such as Piaget and Vygotsky, claim that we no longer need the figure of the teacher as someone who transmits knowledge and information, but that he should rather guide the learning process of the students, by providing them with resources and teaching them how to study and not what to study. As Fosnot puts it: “rather than behaviours or skills as the goals of instruction, *cognitive development* and *deep understanding* are the foci; rather than stages being the result of maturation, they are understood as *constructions of active learner reorganization*” (Fosnot 2005, 9). In other words, the student has to improve through experience and investigation and the classes should be based on the students’ process of learning. This constructivist view of education tries to fight against the more traditional *Behaviourist* theory in which:

educators spend their time developing a sequenced, well-structured curriculum and determining how they will assess, motivate, reinforce, and evaluate the learner. The learner is simply tested to see where he or she falls on the curriculum continuum and then expected

to progress in a linear, quantitative fashion as long as clear communication and appropriate motivation, practice, and reinforcement are provided (Fosnot 2005, 9).

In broad terms, *Constructivism* is a student-based approach while *Behaviourism* is a teacher-based approach. Although there is still an ongoing argument regarding which theory is more helpful in the process of learning, there is evidence that nowadays the constructivist view is gaining ground. Jones (2002) claims that the main reason is the fact that "[a]fter years of implementation, behaviourism fell short of producing positive effects within the complex context of the classroom and left teachers feeling short-changed and cheated by a system that placed the guilt for students' failure to learn in their hands" (Brader-Araje 2002, 1).

2.2 Constructivism, technology and games

When applying the constructivist approach to a teaching context the main idea is that it is the student who is in charge of building up their own knowledge and the teacher has to guide them and provide them with help in the process. As Lincoln & Strommen put it:

Rather than simply absorbing ideas spoken at them by teachers, or somehow internalizing them through endless, repeated rote practice, constructivism posits that children actually invent their ideas. They assimilate new information to simple, pre-existing notions, and modify their understanding in light of new data (Lincoln and Strommer 1992, 468).

In other words, students should be given the means to construct their own knowledge, rather than just memorizing information given by the teacher, which is the basis of the behaviourist approach. The article claims that although children have been raised in a society where information is present everywhere in an interactive way and they can access that information with a sole click, the educational system has failed to adapt properly to this era of information. As a consequence, students are oftentimes taught with methods that were already used 100 years ago

and “[t]he result is an estrangement of the schools from society, and from the children who live in it” (Lincoln and Strommer 1992, 467). The word *estrangement* here is essential to understand the problem that digital natives might have at school. Since they are used to using interactive technology for everything at home and outside the school in general, the fact that in a class they have the figure of a teacher who shares knowledge and information by making students memorize it will definitely not engage them with the lesson, since “school strikes them as rigid, uninteresting, and ultimately, alienating” (Lincoln and Strommer 1992, 467). They go on to argue that the main reason why a constructivist approach could improve this situation can be found in two particular premises of the constructivist theory: **play** and **experimentation**. The importance of playing, they claim, lies in the fact that when children play they have to mix ideas and think about the possible consequences of doing this or that action, thus turning the process of playing into a process of learning and reflecting on what they do. Very much the same happens with experimentation; they receive feedback according to what they do, even though they might not know why they choose to do this or that action (Lincoln and Strommer 1992, 468). Because of that, it is undeniable that including technological devices (in this case an application such as *Duolingo*) might help students feel less alienated in their learning process since using an interactive device in school to learn in the same way they use it at home to play, might engage them more in their lessons. Furthermore, *Duolingo* is also useful from the constructivist point of view in the sense that students are at the same time playing and experimenting; if they do the exercises properly they get points and they go up a level, which is a basic characteristic of games, and on the other side they experiment since even if they do not know how to do an exercise, if they make mistakes the application will correct them and it will also explain why it is wrong and how to correct it, which can be a very efficient way of learning for them. Arnold (2014) claims that “[i]n a game setting feedback is almost always immediate, targeted and designed to

enable the player to alter their approach for better, more desirable results” (Arnold 2014, 37).

2.3 Motivation

The concept of motivation is one of the most important aspects when dealing with young students and at the same time the most difficult one to manage in class. The relevance of this concept can be seen in the words of Muntean (2011), who states that even if a student has the skill and the capacity to do something, they will not do it if they do not have any motivation to do so. She goes on to say that, on the other hand, if there is a motivation “or he is conscious that he might get a low grade, the motivation, either positive or negative, will determine him to solve the problem” (Muntean 2011, 324). It is undeniable, then, that motivation must be taken into consideration when dealing with young learners. In this sense, *Duolingo* may prove to be a great tool since it is all about getting experience points and rewards, which becomes the main motivation for the users, who at the same time have to do the exercises correctly in order to receive more points and thus escalate positions in the ranking. By using it in class, students will become competitive among themselves and their motivation will increase even more. When talking about motivation, it must be taken into account that there are two types. The first one is called *intrinsic motivation*, and it has to do with “the individual’s desire to perform the task for its own sake” (Bénabou and Tirole 2003, 490). The second type, called *extrinsic motivation*, is about “contingent rewards” (Bénabou and Tirole 2003, 490). Kapp (2013) gives particular examples of how extrinsic motivation is applied or used: for example, compensating the user in accordance to how well they have done or performed the activity, motivating students to do an activity that they do not really find appealing or to enhance the feeling of freedom, so that students do not feel pressured to do everything correctly but if they do they gain especial rewards (Kapp 2013, 12).

Ideally, our students should have their own intrinsic motivation to learn and study, however, it is undeniable that many times that is not the

case. Then, if it is not possible to motivate students intrinsically, the question is what to do to motivate them extrinsically. In his article about technology, Fogg (2002) talks about an experiment that he carried out to prove if a computer praising its users can influence their attitudes and behaviours. The results were that people felt more motivated, even if the praise was not offered sincerely. “In essence, after people received computer praise—sincere or not—they responded significantly more positively than did people who received no evaluation” (Fogg 2002, 104).

The concept of *praise* as a means of motivating has especial relevance in *Duolingo*. Not only does it praise users when they have done something correctly, but it also reminds them how many points they need to obtain in order to finish their daily goal. Furthermore, it also warns them against skipping their daily goal since they would lose experience points, which further motivates users to keep using it.

2.4 Principle of Attractiveness.

Applied to computer technology, the *Principle of Attractiveness* refers to the fact that technology that is attractive to their users will motivate and persuade them more than if it does not appeal to them. In his article, Fogg claims that “[i]f an interface, device, or onscreen character is physically attractive [...] it may benefit from the halo effect: users may assume the product is also intelligent, capable, reliable, and credible” (Fogg 2002, 93).

Applied to the particular case of *Duolingo*, it is undoubtable that the interface will appeal young learners since it is really gaudy (warm colors throughout) and the activities are also full of colors and drawings or pictures in order to keep the user’s attention. The relevance of this aspect lies on the fact that students, especially the young ones, need to feel that they are not in a formal atmosphere. That is, they need to feel that they are actually playing (evidently, they will learn at the same time) and not just doing some English exercises.

In another article, Fogg talks about the concept of *persuasive technology*, which refers to “a computing system, device, or application intentionally designed to change a person’s attitudes or behaviour in a predetermined way” (Fogg 27, 1999). Taken to the example of our interest, *Duolingo* could be considered an instance of persuasive technology, since it uses aspects of something that most people like (games), but it is used for something totally different, that is, learning a language.

3- Status Quo

3.1 What is Duolingo?

Duolingo is a website and a mobile phone application aimed at learning languages for free. Although there are several languages that can be learnt, the most developed one is English and it is also the language that has the most learners.

When using *Duolingo* for the first time, the user can take an exam in order to know his or her level of English since *Duolingo* can adapt the exercises to the level of the user. This aspect is very important since people with previous knowledge of English do not need to start all over with the basics of the language, which might be a bit frustrating for users with an advanced level.

The main methodology used in *Duolingo* is very simple: users are given pieces of text that they have to complete with the correct word or words. An interesting aspect of this tool is that if a user does not know how to answer or to complete a sentence, there is a forum where everyone can post their doubts and these doubts will be answered by the community. Evidently, there is also the option of being corrected by the very App. Every time a user answers or completes an exercise, the explanation of why the answer is correct or incorrect appears at the bottom of the page. For speakers of Spanish, the translation can also be found. Furthermore, for the more advanced levels, there is the possibility of discussing an answer in the forum if one does not agree with the answer that Duolingo provided.

Furthermore, the users can also report an exercise if they consider that there is a mistake in the correction.

Another interesting aspect of *Duolingo* is that, when dealing with vocabulary, the word is at the same time written and pronounced by the application. This characteristic is highly useful, especially for users with a low level of English. The word can be listened to as many times as the user desires.

When using *Duolingo*, the user has to complete different lessons, starting from the most basic items of the language to the most complex ones. When a lesson is completed, the player receives some incentives and rewards in order to continue. Also, if the user wants to revise what they have learnt in that particular lesson, they have the option of reviewing all the exercises that they have done or doing them again in order to increase their punctuation if they so desire. In addition to that, in the user's profile, *Duolingo* stores all the vocabulary items that they have learnt throughout their lessons. What is more, it shows the grammatical category of the word, its importance in the English vocabulary (that is, if it is a high-frequency word or a low frequency-word) and the user can also see the last time they have used or practiced that word. If the vocabulary item is considered essential in the English language and the user does not use it for some time, they can retake some exercises about that word.

At the end of a lesson, the user also receives ingots, which can be used to buy the so-called *enhancers* in the virtual shop. These enhancers have different functions. For instance, since the user might lose experience points if they do not take their daily lesson, if they do not want to lose the points but for some reason they cannot take the lesson one day, they can use ingots to buy a "Streak Protector" which will prevent them from losing experience points even if they skip the lesson.

With *Duolingo*, the users can follow their own progress through some graphics that appear on the user's profile. These graphics are highly useful since, apart from showing the progress and the productivity of the user, they also show how the lessons went and what did the user find more

troublesome. Thus, they can dedicate more time to working on the aspects that are more difficult for them. This characteristic is especially important when trying to make students learn with *Duolingo*, since the teacher can check the graphics at the end of each lesson in order to analyze the weaknesses and the strengths of their students. This way, they can devote more time in class to help students with the aspects of the language that they do not control. Furthermore, the users have the possibility to compare their progress with the progress of other players. This is an extremely relevant aspect when using *Duolingo* with students. Since young people are usually competitive, some of them will be motivated to use the application in order to have more points than their friends or their classmates. Evidently, competitiveness in class is oftentimes regarded as negative. However, the importance here is to motivate young students to learn English, so in this sense competitiveness can be considered a positive aspect since the better they do their activities, the more points they will get, thus they will learn more. Obviously, the graphics and the progress of each user is not of public domain. It works like a social network; the user can invite someone to follow them and they can be invited to follow somebody as well. If both users accept, then they can see each other's activity, including their progress.

What is interesting about the possibility of following someone else's improvement is that students can even help each other if needed and they can discuss possible answers and mistakes. Ideally, students would even start to see the language as a means of socializing (at the end of the day, *Duolingo* works like a social network in many aspects) since they can also follow people from other countries with whom they would have to communicate in English if they wanted to.

3.1.1 Duolingo Bots.

A couple of years ago, *Duolingo* implemented the possibility for its users to have conversations with fictitious characters. These characters are divided according to their profession and they work following the principle of artificial intelligence. Each character will talk about different topics and will introduce the user to different contexts according to their profession. The aim of

Duolingo Bots is therefore to introduce the user to real-life contexts and situations where they would have to use English. For young students, having the possibility of putting into practice their knowledge might be a great opportunity, and they would not have the anxiety and fear that they have when using English in class. If at some points a user does not know how to go on with the conversation, *Duolingo* will offer them some possible answers and they will have to choose one of them in order to continue with the conversation. Undoubtedly, this is a great tool for students of English, since they frequently only learn the academic aspect of the English language, but they do not have the possibility of using it in real contexts and situation.

3.1.2 Duolingo for Schools

Duolingo for Schools is a platform created for helping teachers follow the progress of their students. It works like a control panel in which the teacher can see the improvements and the needs and weaknesses of their students. In their profile, the teacher can see the activity of their students, how much progress they have made, how much time they spent doing exercises and so on. If the teacher wants to motivate the students to do more exercises, they can challenge them and then give them points if they have reached the expectations of the teacher or if they had done a good job.

Duolingo for Schools also provides three different types of didactic units, depending on the level of the users; first of all, there is a basic unit for beginners without any type of previous knowledge of English; then there are also intermediate units, for students with a low level of English but with a base; and lastly, the advanced units, aimed at students who have a good level of English and are fluent. This characteristic is extremely useful if we want to design tasks for our students according to their level. It is a very easy and rapid way of adapting the activities to the needs and requirements of our class.

4. Duolingo and the concept of Gamification

The concept of *Gamification* is defined by Kapp (2012) as follows: “Gamification is using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning and solve problems” (Kapp 2012, 11). Probably, one of the most important concepts here is that of motivation. The reason is very simple; many times, it is difficult for students to engage with the activities that they do in class, whether because the teacher uses traditional methodologies that involve little or no interaction or because they find the topic boring. Deterding states that

video games are designed with the primary purpose of entertainment, and since they can demonstrably motivate users to engage with them with unparalleled intensity and duration, game elements should be able to make other, non-game products and services more enjoyable and engaging as well (Deterding *et al.* 2011, 2).

Evidently, there is a big difference between playing a real video-game and using an educational tool such as *Duolingo*. However, the important aspect here is not the very act of playing, but the characteristics that gamification has, which, as Deterding *et al.* explain, if properly applied to the educational field, they can increase students’ motivation and eagerness to learn. Kapp (2012) exposes that “[f]or individuals to be motivated, the challenge must not be too hard or too simple” (Kapp 2012, 12). Since *Duolingo* gives the user the possibility to take an exam in order to adapt the activities to their level of English, the customer will keep challenged and motivated.

In his article, Kapp (2012) states that one of the most important aspects of gamification is the fact that it is game-based, which means that “[t]he goal is to create a system in which learners, players, [...] engage in an abstract challenge, defined by rules, interactivity, and feedback that results in a quantifiable outcome ideally eliciting an emotional reaction” (Kapp 2012, 11). In the case of *Duolingo*, the challenge (apart from learning English) is to complete the tasks on a daily basis and to gain experience

points and other types of awards. Furthermore, there is also the competition with the other users for a position in the ranking.

Another crucial aspect of gamification for the author is the mechanics involved in this methodology. Kapp explains that games usually “include levels, earning badges, points systems, scores, time constraints” (2012, 11). All these features can be found in *Duolingo*; users get experience points when they complete the activities, they earn badges and ingots (see section 3.1) and they participate in a ranking based on their score. In his article about different studies that dealt with common elements in gamification, Lister claims that “[t]he majority of studies found that points provided instant feedback that students found motivating” (Lister 7,2015). However, Mekler warns: “[c]aution is advised though, as research on motivation suggests that rewarding points may undermine participants’ interest in the task (i.e., its meaningfulness) and hence impair intrinsic motivation and performance” (Mekler 2013, 1141). That means that students might become interested in the activity solely because of the points and not because they are interested in learning anything. On the other side, Haaranen (2014) talked in his article on gamification and badges about a course from the University of Florida implemented badges in its online activities and they noted that “half of the students said they were motivated to get a badge if they noticed that one of their friends had achieved it” (Haaranen 2014, 2). Evidently, in a university course it is rather normal that only half of the students felt motivated because of a badge. However, for younger students using *Duolingo*, this aspect can be highly motivating for them. Finally, O’Donovan claims that when using gamification to learn “[t]he users must be able to clearly see and track their progress toward long and short term goals, in search of the final goal. This gives the product meaning” (O’Donovan 2013, 244). *Duolingo* excels at this point since it provides a list of the words that the users have learnt by doing the activities and it gives them experience points. Furthermore, it also shows them the percentage of language acquisition that they achieved.

Evidently, there are no time constraints when doing the activities since *Duolingo* is a tool for learning and users need to think carefully before

answering. In the end, even though it has the shape of a game, its final purpose is that users learn a language.

5. Didactic proposal.

5.1 Method

As mentioned above, the main aim of this research study is to analyse the suitability of *Duolingo* as a means of enhancing students' motivation towards learning English by making them use the application for a period of time and then eliciting the impact that *Duolingo* had in their learning process through a questionnaire and an interview. Before the study starts, the participants will take a short test in order to compare their results with the results of the test that they will take after the study.

The main reason behind this study is the need for new methodologies in order to adapt to the requirements of a generation of students that are digital natives. Furthermore, it is important to take advantage of the possibilities that the Internet can offer and bring them to the field of education. By doing that, the system adapts to the needs of the students and not vice versa.

In order to carry out this study, the participants were asked to use *Duolingo* for 10 or 15 minutes every day for two weeks. Considering the fact that some of the participants were really young, it was expected that some problems could come up, since they had to use *Duolingo* at home, which meant that at the end it was the parents who decided if the participants could take part in the study or not. Thankfully, everyone participated at the end.

5.1.1 Participants and setting

In order to select the participants, since the first group was made up of young students, (between thirteen and fourteen years old) they were first of all explained that a research study was about to be carried out with them and they were asked if they wanted to participate in that research. The assumption was that at least half of the class would be willing to participate since the idea could interest them because it was not something that they would usually do. However, at the end it was decided that only five

participants of each group would take part in the study, since it proved to be too difficult to control that half of the class was using the application. The researcher introduced Duolingo to the students in class and gave them some guidance on how to use it, with the intention of awakening their interest in the tool.

With regards to the second group, which was made of students from the second year of Post-Obligatory Secondary Education (between seventeen and eighteen years old), they were asked to take part in the research, but they were asked to use Duolingo to practice the unit that they were studying at that time in class. This way, they did not feel that they were making an effort or that they were wasting their time, since they were practicing something that they needed for the lessons.

The first group used Duolingo at home for 2 weeks. They were asked to choose the option of using Duolingo for ten or fifteen minutes per day. In order to make sure that the participants actually used Duolingo and that the result were trustworthy, the tool should have been used in class. This way, the researcher would have been able to observe them. Unfortunately, due to lack of time and issues related to the age of the participants (some of them did not have a phone or a laptop or they were banned in class) at the end the decision was that participants had to use Duolingo at home.

The other group was asked to use Duolingo at home as well. However, due to time constraints issues (they were preparing the university entry exams) they were asked to use Duolingo for two weeks but only for five minutes a day.

Although there was an important age difference between the two groups of participants, the questionnaire was the same for both of them.

5.1.2 Questionnaire

1-From one to five, where one means completely useless and five very useful, what mark would you give to *Duolingo* regarding its utility as a means of learning English or helping you improve the level that you already had.

2-From one to five, where 1 means not recommended at all and 5 very recommended, how much would you recommend *Duolingo* to a classmate that is having difficulties with the English subject?

3-From one to five, how much motivation did you have to learn English before using *Duolingo*?

4-From one to five, how much motivation do you have to learn English after using *Duolingo*?

5- From one to five, where one means very easy and 5 extremely difficult, did you find *Duolingo* easy to use? If there is anything you found especially difficult, please explain.

6-From one to five, where one means never again and five very soon, what is the possibility that you will use *Duolingo* again, even if nobody asks you to?

7-From one to five, where one means not at all and five a lot, how much would you like to use *Duolingo* in your English classes?

8-From one to five, where one means not at all and five a lot, how much would you prefer to use *Duolingo* at home instead of doing homework?

9-Explain very briefly the aspect that you enjoyed the most about *Duolingo* and the aspect that you think needs improvement.

10-From one to five, where one means not satisfied at all and five very satisfied, how satisfying did you find *Duolingo* as a means of learning English and at the same time having a good time?

5.1.3 Interview

Considering the fact that the questionnaires provided little possibility for explaining their choices in detail, interviewees had a short (and informal) interview with the researcher in order to give them the possibility to justify their choices on the questionnaire in more detail. This way, the interviewees were able to talk about *Duolingo* from a more personal perspective and the researcher was able to discuss the results more precisely.

6. Results

First of all, it must be said that during the period of time in which the participants had to use *Duolingo* in order to provide feedback about the tool, some changes were made with regards to the number of participants and how to select them. Although at the beginning the plan was that at least 7 or 8 participants of each level should participate, at the end the criterion that was used in order to select the participants changed; firstly, only 5 students per group were selected and their selection was based on their level. That is, the participants were selected according to their level of English; from the ones with more difficulties to the ones that had more control over the language. Evidently, the decision was made taking into account their marks from the previous semester.

The results will be looked into by analysing the answers of the participants regarding their opinion about *Duolingo* after using it for a couple of weeks. However, since the participants were chosen according to their level, the answers will be analysed taking into consideration the level of the participant that answered the questions. This way, the researcher will be able to argue the usefulness of *Duolingo* in relation with the level of English of the user. In order to do that, when talking about the answers, numbers from (1) to (5) will be used; number one will be the participant with a lower level of English and five the participant with a higher level of English. Furthermore, every question of the questionnaire will have ten different answers; five from the Obligatory Secondary School participants and five from the older participants (Post-Obligatory Secondary School). Also, the discussion will be done in different paragraphs so as not to mix the results from the younger participants with the results with the older ones, since the answers and the reasoning behind those answers will be completely different because of the difference in the maturity of the two groups of participants. In the discussion, the older participants will be referred to as Group 1 and the younger participants as Group 2.

-Question 1. Group 1.

Participants.	Mark given to the question
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5	3/5
4	3/5
3	3/5
2	4/5
1	4/5

Participant 5 argued that *Duolingo* allowed him to practice English (later he said that he started learning French as well) in a pleasant and entertaining way that tried to imitate a game-like format when it comes to levels and punctuation. On the other side, the main problem that he saw to *Duolingo* is that at some point it became very repetitive for him. Here, it must be taken into account that his level of English was already high in comparison to other students. That is why he also argued that *Duolingo* needed to increase the difficulty of some activities in order to avoid its monotony. Participant 4 shared a similar opinion and he claimed that *Duolingo* is a valid way of learning English and it actually fulfils its function. On the other side, he argued that once the user achieves an acceptable level of English *Duolingo* does not really help you acquire more knowledge, but it only prevents you from forgetting what you had already learnt. He further claimed that for him that was not a problem because in his opinion a user cannot expect to become proficient in English only by using *Duolingo* because some other type of insight into the language is needed. In general terms, he believed that *Duolingo* is indeed useful.

Participant 3, in line with the view of the previous participants argued that, in her opinion, *Duolingo* was aimed at people who wanted to start learning English, that is, if they have a really basic level, because at some point the user can get blocked and feel that no progress is being made. For her, *Duolingo* is a great way of starting to learn English, because it is really dynamic, and it can motivate the users, but when they already have a decent or a good level of English, they may lose interest in using the tool.

Lastly, participant 1 and 2 gave a more positive feedback regarding *Duolingo*. Participant 2 was very specific about the positive aspects of

Duolingo. She claimed that is really useful to learn new vocabulary because of the option that allows the users to revise the vocabulary that they had learnt in the lesson. Furthermore, she added that she found really useful the fact that *Duolingo* shows how important a word is in the English vocabulary. That is, how important it is to learn that word because of how much it is used. In addition to that, she also added that she particularly like the fact that *Duolingo* allowed her to practice listening and writing, which are skills that she needed to improve. By her answers, it seems that the lower the English level of the user is, the more useful they find it. Lastly, participant 1 also stated that it can be really useful to strengthen and practice the knowledge that the users already have, and he also liked the fact that the list of topics that *Duolingo* provides are very similar to the topics that they have in their English book.

Question 1. Group 2.

Participants.	Mark given to the question
5	5/5
4	4/5
3	5/5
2	5/5
1	4/5

Participant 5 claimed that *Duolingo* was really useful to practice English and the thing that she liked the most was the fact that the users can change the amount of time that they want to use it from “normal” to “relaxed” depending on how much time they have. She especially enjoyed the fact that she had to use it daily so as not to lose her winning streak, which motivated her.

Participant 4 explained that he thought it would be more difficult to use but at the end it proved to be really easy. He added that at first, he thought the level would be too easy (he had a decent level of English) and he got a bit bored but when the level increased he found it more challenging

and enjoyable. He also claimed that he had been writing down the new words that he learnt by using *Duolingo*.

Participant 3 commented that *Duolingo* helped him gain confidence because he considered that his level of English was really low and by using *Duolingo* every day for two weeks he learnt a lot of new vocabulary in context, which in his opinion is really important because instead of memorizing a word, he remembers in which context he had used it and this way it is easier for him to learn vocabulary. Similarly, participant 2 argued that she found it easy to use and very useful to revise the vocabulary and the grammar that she had learnt in class.

Lastly, participant 5 claimed that he did not give *Duolingo* a five because, although he considered it very useful to practice the topics that he studied in class, it became too repetitive after a while. He explained that he enjoyed it for maximum 10 minutes a day because after that time he became bored.

-Question 2. Group 1

Participants.	Mark given to the question
5	5/5
4	4/5
3	3/5
2	5/5
1	4/5

Participant 5 claimed that he would definitely recommend *Duolingo* to a classmate that was having difficulties with English. The main reason, he argued, is the fact that if the users do not want to lose their streak, they have to use *Duolingo* daily, which eventually helps them assimilate the knowledge that they have been acquiring throughout the lessons. He further argued that by being able to see the progress that users have made during a day, their eagerness to learn even more increases and it keeps them motivated. Similarly, participant 4 provided an answer akin to the previous

participant, although he provided a lower mark (four out of five points). He explained that if a person needs to practice English every day because they are having problems with the subject, *Duolingo* may prove really useful since it allows the users to revise and redo a topic as many times as needed, until they have understood the grammar point or learnt the vocabulary properly.

On the other hand, participant 3 argued that although it could be useful for someone who needs to improve their English, the activities provided by *Duolingo* are generally easier than the activities that a student can find in their English book. Furthermore, she added that in *Duolingo* a topic is not as extensive and complete as in an English book and she felt that the application needed to work on the difficulty of its activities.

Participant 2 commented that she would definitely recommend *Duolingo* to a classmate with difficulties with the subject. She argued that the best thing about it is that the user can start from zero. In her experience, being able to start from scratch helped her revise everything that she had learnt during the previous years because she had forgotten a lot of basic things. She added that with *Duolingo* she was able to revise many aspects of the English language that she had trouble with. Lastly, she considered that one of the main reasons why she would recommend *Duolingo* is because when a mistake is made, *Duolingo* corrects it automatically, so the users are able to see where they erred. In addition to that, she also claimed that the forum proved to be extremely useful for her because when she wanted to know more exactly why something worked in a certain way, she could enter the discussion and read the explanations of other users. In line with the previous opinion, participant 1 stated that *Duolingo* is really helpful to revise and brush-up the contents learnt in class. However, he felt that the level of difficulty should be increased in order to be on a par with the level of English that they have to acquire in class.

Group 2. Question 2.

Participants.	Mark given to the question
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5	5/5
4	5/5
3	4/5
2	5/5
1	5/5

Participant 5 argued that he would definitely recommend *Duolingo* to a classmate who needed some practice. However, he felt that *Duolingo* depends a lot on the effort of the user and he believed that *Duolingo* is not a tool with which you can study, but rather a way of keeping in touch with the language even outside the class. Thus, he claimed that he would recommend it but only if that person is ready to use it on a daily basis, because otherwise it would not give any results.

Participant 4 argued that he would recommend it only to certain type of students. He said that if that student has difficulties with the language because he does not try hard enough, he would not recommend *Duolingo* to that student because at the end he would only be interested in getting the experience points, but he would not learn anything. On the other side, he added that if the student finds English difficult, but they have interest in learning, *Duolingo* could help them improve their level. He mentioned that the fact that *Duolingo* corrects the mistakes automatically helps a lot, since the users can learn independently.

Participant 3 claimed that she would recommend it because it is free and easy to use, but she added that she would go to reinforcement classes rather than using *Duolingo* because when she used *Duolingo* she did not learn much since she was focused on gaining experience points and, because of that, sometimes she used the translator instead of trying to answer by herself. Thus, she did not try to learn but to get points.

Participant 2 and 1 shared a similar view: both gave five out of five points and claimed that *Duolingo* had been very useful for them because their level of English was really bad and by practicing a bit every day at the end they learnt a few things. Participant 2 said that he learnt how to use the

personal pronouns correctly thanks to *Duolingo* and participant while participant 1 explained that sometimes he understands what the teacher is explaining now, because he usually has a lot of troubles understanding his explanations.

Group 1. Question 3 and 4.

For these questions, the participants did not really provide a mark, but they talked about their motivation.

First of all, participant 5 exposed that before using *Duolingo* his motivation to learn English was fairly low because he has never been particularly interested in the language, but he needed to pass his exams. He also said that *Duolingo* did not really help with his motivation because at the end the exercises became boring since they were very similar. However, he added that *Duolingo* could actually improve the motivation of the learners if the approach changed a bit. He exposed that more variety was needed in the type of exercises that the user can find in *Duolingo* and he also added that he would be much more motivated to learn English with *Duolingo* if they introduced some practice for official English exams. The main reason behind this opinion is the fact that these students had to do the university entry exams, so they needed to study specific units and topics. In the same way, participant 4 also claimed that he has always had a low motivation towards the English subject in particular and the English language in general because he found it very difficult. Furthermore, since he did not enjoy the subject he did not try to improve either. However, he explained that with *Duolingo* it was different because since it was a mobile phone application he did not feel the pressure that he felt in class, so he enjoyed practicing English with it because he did not have to worry about making mistakes or not knowing something. This lack of pressure is what helped him gain some motivation to learn more English. He went on to say that since *Duolingo* allows the users to see the results of their daily practice and the things that they learnt that day, they feel that they are improving, which again motivates them to practice even more the next day. In addition to that, he also mentioned that *Duolingo* helps the user build more confidence

because they can compare how much correction they needed at the beginning with how much correction they need at the end and the improvement also increases their eagerness to keep using it.

Conversely, participant 3 explained that she had a lot of motivation to learn English since she was a child because she loved the language. She argued that although *Duolingo* was useful, it did not really affect her motivation towards learning English because she was more interested in learning how to communicate (that is, how to speak properly and fluently) rather than the grammar rules. She added, however, that if she had discovered *Duolingo* when she was younger she would have tried to learn the language even faster. Analogously, participant 2 claimed that *Duolingo* did not increase her motivation to learn English because she was also already motivated before using it. However, she affirmed that she would recommend *Duolingo* to her younger sister in an effort to motivate her to learn English in an entertaining way since she was sure it would be useful for younger learners.

Lastly, participant 1 said that *Duolingo* did not increase his motivation at all and that although he believed it could motivate younger learners because of the game-like aspect, for him it was just a way of practicing English.

Group 2. Questions 3 and 4.

Here, since most of the answers are very similar, the results of questions three and four will be dealt with in general rather than in particular.

Regardless of the motivation that the participants had for learning English (some gave five points, others gave two or three), none of them seemed to become more motivated to learn English after using *Duolingo*. Although most of them seemed to enjoy the application, the motivation remained the same after using it. Since the amount of time that they had to use *Duolingo* was rather short, it would not be appropriate to state vehemently that *Duolingo* does not motivate users to learn. Instead, it could

be argued that two weeks of usage proved to be insufficient for the students to gain more motivation towards the English subject.

Group 1. Question 5.

Participants.	Mark given to the question
5	2/5
4	1/5
3	1/5
2	1/5
1	2/5

Participant 5 explained that *Duolingo* is fairly easy to use and there is nothing that he found especially difficult about it. However, he did mention the fact that sometimes he did not know if he could trust the forum where people discuss about the possible answers to a question or a grammar rule. He also added that it would be a good idea to implement some type of interactive explanation of the grammar points, since the application would be much more complete, and it would help the users that are doing more advanced exercises. Participant 4 also find it easy to easy and he claimed that at the beginning it might look a bit confusing because there are so many units to choose from, but they do not really explain the grammar point of each unit or the level of the activities. He also added that the level exam that he took before he started to use it was a bit confusing because he did not know what level he was supposed to have. As an example of the easiness of *Duolingo* he mentioned the fact that his grandmother uses the application daily in order to keep in contact with the English language and she does not have any difficulties.

Participant 3 claimed that *Duolingo* was easy to use but the only thing that she found a bit difficult was the fact that in some exercises she had to translate from Spanish to English and in her opinion these types of exercises do not really help because the level of the *Duolingo* is overall fairly low, but this type of exercises was a bit difficult for her.

Finally, participants 1 and 2 both claimed that *Duolingo* has no complication at all and it would be perfect even for really young students or old people because the only thing that they have to do is to write something or sometimes to say something.

Group 2. Question 5.

Except for participant 3, the rest of participants claimed that they had no problem with *Duolingo* and they found it really easy to use. However, participant 3 explained that he did not want to start from the beginning with the first topic, but he wanted to practice the topic that they were doing in class (sports). He said that he tried to complete that exercises of that unit, but he could not because he had to take the level exam first, but he did not know that, because there was no explanation about it. In this sense, maybe *Duolingo* should have some sort of instructions because even though using it is very simple, doubts may arise.

Group 1. Question 6.

Participants.	Mark given to the question
5	1/5
4	5/5
3	4/5
2	4/5
1	4/5

Participant 5 explained that *Duolingo* did not really satisfy him because the type of English that the users learn with the application is not the one that interests him. Thus, he felt that probably he would not use it again. However, he also added that if the difficulty of the activities increased and the type of activities changed a bit, he would probably use it in the future in order to keep in contact with the language every once in a while, so as not to forget what he learnt.

On the other side, participant 4 claimed that he was using it on a daily basis. However, he added that he was really interested in learning French

and that is why he was using it every day. Nevertheless, he also said that he would probably keep using it for English as well because he wanted to complete all the activities from all the units that *Duolingo* offers.

Participant 3 claimed that she would probably use it again in the summer because during the holidays period if she does not practice any English at all the following year she forgets everything that she had previously learnt. Again, this opinion emphasizes even more the general opinion that *Duolingo* is a great tool for revising what the student had already learnt in class.

Participant 2 claimed that she would definitely use it every once in a while, since she has some difficulties with the English subject, especially when it comes to grammar. In fact, she admitted that she would probably enjoy *Duolingo* even more if she started using it because she felt like it rather than because she was asked to do it in order to participate in this study. She went on to say that the period when she was asked to use *Duolingo* was a busy one because she had a lot of exams, so when she was using *Duolingo* she could not really enjoy it because she was thinking about what she had to study next.

Finally, participant 1 confirmed that he would continue using it mainly because although the level of the activities is not too high, for him it is enough. He also acknowledged that one of the reasons why he was sure he would use it again is because he has to use the public transport on a daily basis and he claimed that it was a very good way of entertaining himself on the bus while also learning. He explained that the portability was the best characteristic of *Duolingo*, since it allowed the users to use it whenever and wherever they wanted to.

Group 2. Question 6.

Participants.	Mark given to the question
5	5/5
4	4/5
3	2/5

2	2/5
1	3/5

Participant 5 argued that he would continue to use *Duolingo* because it helps him revise everything they do in class and even though the units are not always the same as the units they have in the English book, it is still helpful since he can practice topics with *Duolingo* before seeing them in class and this way it can be easier for him to understand it.

Participant 4 explained that she would keep using it because she and her friend (participant five) sometimes use it together in order to see who gains more experience points and the fact that *Duolingo* is competitive motivates her to further use it. Furthermore, she also admitted that since *Duolingo* reminds its users (through mails or through notifications on the application) that they have to take their daily lessons so as not to lose their winning streak, it also motivates her to keep using to.

On the other side, participant 3 explained that he did not think that he would use it again because he did not really enjoy the type of activities that *Duolingo* provided. He enjoyed the fact that he gained points and experience and that there is a ranking, but he also said that after using it for a while it becomes boring because the exercises are always the same. In line with this opinion, participant 2 confessed that she did not like English as a subject because she finds it too difficult, so she did not want to keep using *Duolingo* for English either. However, she added that she liked the application, but not for English and that maybe she would use it to learn Japanese because she was more interested in that language. However, when asked if she would delete the application from her phone she said that she would not delete it.

Lastly, participant 1 gave three out of five points and explained that she was not particularly interested in using *Duolingo* again, but she liked it, so she felt that she could use it sometimes as a way of entertaining herself. In addition, she also said that she did not know that she could follow her

friends on *Duolingo* and that it could be funny to play with them to see who gets more points.

Group 1. Question 7.

Participants.	Mark given to the question
5	2/5
4	4/5
3	4/5
2	4/5
1	5/5

Participant 5 argued that he did not think that *Duolingo* could substitute an English class or the explanation of a teacher. However, he added that *Duolingo* could be useful in class for the students with more difficulties because the practice is mainly based on repetition so at the end it is inevitable not to learn. The thing that he believed could be really useful in an English class was the *Duolingo* forum. He argued that since pretty much every exercise from *Duolingo* has a debate in the forum because someone doubted and posted it before, it could be helpful to use that forum so that students understand why something works in a certain way or another.

Participant 4, on the other side, gave four out of five points and stated that new technologies should be introduced in the class and *Duolingo* could be very useful for Obligatory Secondary Education students since the list of topics of *Duolingo* mostly adapts to the units that are seen in class. He also felt that since this generation uses the mobile phone for everything, they would feel much more comfortable using an application to learn than a book, so they would be more eager to make an effort and study. However, in his opinion, if *Duolingo* was to be used in a normal class, the application should be slightly improved in terms of difficulty. Along these lines, participant 3 explained that it would be much more entertaining for the students and also more comfortable than using a book. Furthermore, she argued that thanks to the fact that *Duolingo* works with experience points, the class could become much more competitive and use this aspect in a positive way to

enhance their eagerness to learn. The only drawback that she mentioned is that everyone should go at the same pace but usually that is really difficult because every student is different. Furthermore, she also believed that using a mobile phone application might be troublesome (especially with the younger students) since some people would probably use the phone to do things that are not related to learning.

The opinion of participant 2 is also akin to the previous answers; she argued that it would be a good idea to use *Duolingo* to complement the theoretical classes. For her, the ideal way of using it in class would be to use it after a grammar point had been explained in order to practice and check if everyone had understood it. The best part about it, she explained, would be that students could correct themselves (rather, the application would correct them) and they could also use the forum if they had a doubt. She believed that this would make students much more independent in class and the teacher would have more time to help the students that have more difficulties with English.

Finally, participant 1 remarked that he would prefer to use *Duolingo* in class rather than the Workbook. He commented that it is much more comfortable to use the phone than a book to do exercises and this way they would not need to carry so many books in their bags. Furthermore, in line with the opinion of the other participants, he also believed that the fact that *Duolingo* corrects the mistakes and gives an explanation of the answers, added to the forum where people can ask for help, all these aspects would make the students much more independent, both inside and outside the class.

Group 2. Question 7.

Participants.	Mark given to the question
5	3/5
4	3/5
3	5/5
2	3/5

1	5/5
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Participant 5 argued that he did not consider *Duolingo* an application that could substitute the explanations of a teacher. He went on to say that in his opinion *Duolingo* was made to be used at home since the users can become independent learners due to the corrections and also, he pointed out, since they need internet connection to use *Duolingo*, if a student has a doubt they can always use the very internet to find an answer to the question that arouse, but in the class they already have the teacher so the students do not need to be so dependent on the internet. Participant 4 shared a similar view, but he also pointed out that not everyone has a mobile phone and that computers do not work very well, thus not everyone would be able to use *Duolingo* in class and that would be unfair. Participant 2 also agreed with the opinion of participant 4 and 5 and he added that he believed the teacher could give more detailed explanations than *Duolingo*. Furthermore, he said that if they do not understand something in class they can use Spanish or Catalan and this way they could understand. He also assured that many classmates would use the phone to do something else and they would not focus on using Duolingo for the purpose of doing English exercises.

Participant 3, on the other side, gave five out of five points and claimed that she would enjoy English lessons much more if she were able to use *Duolingo*, rather than the books that they use in class. She explained that lessons would be much more entertaining and funny if they were able to follow each other on *Duolingo* and see the punctuation of one another. Furthermore, they could compete to see who wins more experience points and that would make lessons more motivating for them. Finally, she added that it would also be more comfortable for them since she would not need to carry 2 books, but only her mobile phone.

Lastly, participant 1 gave five points and explained that she does not like writing because she makes mistakes but if she could use *Duolingo*, she would not make so many mistakes because the application would correct

them. Thus, she felt that she would learn to write better if she could use *Duolingo* instead of writing on a piece of paper.

Group 1. Question 8.

Participants.	Mark given to the question
5	4/5
4	5/5
3	5/5
2	3/5
1	5/5

Participant 5 argued that it would be a good idea to use *Duolingo* at home instead of doing the normal homework. Firstly, he argued that many people do not do their homework because when they arrive home after so many hours of class, they do not have the motivation nor the time to sit at the table and do it. Also, he argued that many times, even if they do their homework, they do not learn anything because they only care about finishing it as soon as possible and then forget about it. He explained that if he had to use *Duolingo* instead of the Workbook, it would be much easier and comfortable for him, because he could just sit on the sofa and start doing the activities. Or, even better, he could do the homework on his way to school since he has to use the public transport on a daily basis. He went on to say that sometimes they do not even correct the homework that they had to do due to lack of time, so if they were able to use *Duolingo* in class people would be able to correct themselves and in case they had any doubt they could just ask the teacher the following day, but they would not need so much time to correct everything and solve every doubt. On the other side, he admitted that *Duolingo* cannot substitute any type of homework since the activities that it provides are limited and the level is oftentimes below the level required by the syllabus or the teacher.

Similar to the previous opinion, participants 3 and 4 also believed that they would prefer to use *Duolingo* for a while at home rather than doing the average homework. Both explained that using *Duolingo* is much more

entertaining and also more comfortable since they would be able to do them while resting on the sofa or anywhere else. Also, they felt that homework is usually monotonous (mainly fill in the gaps and rewriting mainly) while *Duolingo* offers other type of activities as well. For instance, there are activities where the user has to speak or translate, which helps avoiding the monotony of continually writing. Participant 4 added that it could be more motivating, especially for the students with more difficulties, since they would not need to depend on the explanations of the teacher as they could ask their doubts in the forum or even consult their classmates if they follow each other. Furthermore, participant 3 explained argued that she could compete with her friends to see who gains more experience points and who does better, which again would be more motivating for her and probably for the rest of students as well. On the other hand, she admitted that it would not be possible to practice everything that is taught in the class only by using *Duolingo* because the level, as well as the activities are limited, so at some point the user would stop learning and would only be repeating the same exercises all the time.

Participant 2, contrary to the previous opinions, claimed that *Duolingo* is a good option to practice English at home every once in a while, but she would definitely not substitute the average homework for *Duolingo* since she believes that the homework that they are sent are usually much more related to the syllabus and much more adequate to the level of the classes. However, she argued that for young learners (first and second year of Obligatory Secondary Education mainly) *Duolingo* would be much more useful than homework since they would be much more interested in using a mobile phone application to learn English rather than writing on a piece of paper. Still, she considered that for her level using *Duolingo* as a substitution would be totally inappropriate, although as an extra it would be a good idea because it allows her to practice more skills and not only grammar and writing.

Lastly, participant 1 explained that since many people do not even bother to do their homework due to lack of time and interest, with *Duolingo* they would at least have an incentive since it is much more dynamic and

comfortable to use than normal homework. He affirmed that if the teacher asked them to choose whether they preferred to use *Duolingo* on a daily basis for 5 or 10 minutes or doing normal homework 2 or three times a week, he would definitely choose *Duolingo*.

Group 2. Question 8.

Participants.	Mark given to the question
5	5/5
4	5/5
3	3/5
2	5/5
1	5/5

Participants 4 and 5 both gave similar arguments. Firstly, they argued that they would definitely prefer to use *Duolingo* rather than doing normal homework at home. They explained that *Duolingo* is less time-consuming for them since when they doubt about an activity they can consult the forum or look for an answer on the internet. Furthermore, since *Duolingo* corrects the answers automatically they would not feel the pressure of having to correct the homework in front of his classmates and making a mistake. Participant 5 also pointed out that that *Duolingo* allows participants to practice some pronunciation as well, thanks to the speaking activities that it offers, while with average homework that it is not possible. Participant 4 added that it would be more enjoyable since, for instance, he could compete with his friend (participant five) to see who gains more points. However, he also explained that if he had to study for an exam he would prefer to do the average homework because he would need to practice some specific vocabulary and grammar.

Participant 3 seemed to be the more reticent to using *Duolingo* instead of homework and claimed that although she hates doing homework, she also hates depending on technology to do everything. She claimed that her internet connection is really bad so when she was doing her *Duolingo* exercises it took a long time to change from an activity to another. She

explained that although *Duolingo* is more comfortable to use and faster than doing average homework, the fact that it depends on the internet connection is a big drawback to her. Furthermore, she stated that she loved writing and if she started using only technological devices to write her handwriting would suffer the consequences.

Finally, participants 2 and 1 gave five out of five points and claimed that they prefer to use *Duolingo* because they never have time to do their homework since they do a lot of extracurricular activities and with *Duolingo* they would be able to do their activities while they are being driven to school or when they have a break between classes.

Group 1. Question 9.

Participant 5 explained that one of the best aspects of *Duolingo* is the game-like structure that it has; the fact that the user gains experience points, crowns, ingots and the winning streaks make *Duolingo* an innovative way of learning a language while at the same time the users feel that they are playing a game. He argued that these aspects are the main attraction of the application since he is aware of the limitation that *Duolingo* has, such as the limited variation in the activities, the rather low level of the activities that the user has access to and the fact that it is dependent on the internet connection, which sometimes might be slightly problematic.

Participant 2 and 4 both claimed that the best aspect of *Duolingo* is the amenity, since it is very easy to use, and it can be used everywhere as long as the users have a mobile phone or a computer at their disposal. However, for participant 4 the level of the activities, although it can be too low for some users, it is also a good aspect since the inexperienced learners of English can start with the basic aspects of the language. So, in his opinion the level of *Duolingo* is a positive characteristic for some users, and a negative characteristic for some others (the ones that already have a good level of English). Conversely, participant 4 claimed that the level of the activities the needed to be increased, more challenging and less repetitive.

For participant 3, the aspect that she enjoyed the most is the fact that the users can interact with other players since, she claimed, this aspect makes the application more enjoyable and less boring. She explained that for someone who loves online games, where the player interacts with other players, this characteristic is really helpful so as not to lose interest on the application. On the other side, she mentioned that the main negative aspect that she saw to *Duolingo* is the need to increase the level of the activities in order to make them more difficult and challenging so that the users can test their capacity and increase their eagerness to learn.

Finally, participant 1, apart from sharing the opinion of the other participants, he also mentioned that since he has always had problems with the English subject in particular and the English language in general, *Duolingo* allowed him to feel satisfied with himself because he could answer almost all the questions properly and that made him feel that he was making progress. In accordance with his classmates, he mentioned the monotony and the fact that *Duolingo* requires internet connection as the main drawbacks to it.

Group 2. Question 9.

All the participants of group 2 had a similar opinion on the advantages and disadvantages of *Duolingo*. For instance, all of them enjoyed the fact that they gained experience points after doing the exercises. In addition, all of them mentioned the fact that they could use the application wherever they wanted to and that it was very easy to use in general. Participant 3 indicated that he especially enjoyed the activities where he had to listen to a sentence and then write it down, although, when asked about this activity, participant 2 said that he found it a bit difficult because the accent was not easy to understand. Regardless of the particularities of each participant, in general all of them shared a similar opinion on the more positive and negative aspects of *Duolingo*. However, none of them mentioned the level of the activities, which was one of the most criticised aspects with group 1.

Question 10.

Group 1.	Level of satisfaction / Mark
Participant 5	4/5
Participant 4	3/5
Participant 3	3/5
Participant 2	5/5
Participant 1	3/5
Average	3.6/5

Group 2.	Level of satisfaction / Mark
Participant 5	4/5
Participant 4	5/5
Participant 3	4/5
Participant 2	4/5
Participant 5	4/5
Average	4.2

7. Discussion.

If the results of the research had to be solely based on the punctuation that the participants gave to *Duolingo* as a means of learning English while also having an enjoyable time, it could be said that *Duolingo* proved to be a great tool for learners of English. However, there are many aspects that must be considered before doing such an assertion.

First of all, both groups agreed that *Duolingo* proved to be a good tool to revise and keep in contact with the English language at home. If the discussion had to be based solely on the mark that the participants gave to each of the question of the questionnaire, it could be argued that *Duolingo* fulfilled its expected function. However, when analysing the answers that they provided in the informal interview, the results might be slightly open to debate.

In the case of the participants from group one, while it is true that most of them enjoyed the application, and almost all of them claimed that if they could choose between doing homework at home using their workbook or using *Duolingo* they would choose the latter, it is also true that most of them also agreed on the fact that the level is not adequate for their level because at some point the user stops learning. The general opinion was that *Duolingo* needed improvement should it be used as part of the English class, whether as homework or to practice the grammar point or the vocabulary that the students learnt in class.

The question that arises here is whether *Duolingo* has actually worked as a means of helping this group practice English and entertaining themselves at the same time or not. If an answer had to be provided only by looking at the punctuation it could be affirmed that *Duolingo* did work for them. However, as previously said, if the answers had to be taken into account it could also be said that with the current level of difficulty in his activities *Duolingo* is inadequate for users with the same level of English as the participants from group 1. Furthermore, they had to use *Duolingo* only for two weeks, which means that if even for that short period of time the level was not enough for them, if they had to continue using it at the end it would have been a waste of time in terms of knowledge acquisition.

Regarding the results of group 1, which was made up young participants from the first year of Secondary Education, they are easier to analyse compared to the results from group 2. First of all, since they are much younger, and their level of English was rather low, none of them seemed to consider that the level of difficulty of the activities was too low. Because of that, *Duolingo* proved to be much more useful for them than for the first group. One of the participants even claimed that he gained more confidence thanks to *Duolingo* when it comes to English usage.

Overall, it could be said that for this group and level *Duolingo* has proved to be a useful tool for learning English and at the same time having fun. Some of them argued that being able to interact with other players, especially with friends, was a very positive aspect because they could

compete with one another. Furthermore, most of them were of the opinion that they would rather use *Duolingo* in class instead of the workbook and they would also prefer to use *Duolingo* at home instead of doing normal homework.

On the hand, since there was no observation involved in this research due to time constraints, it is difficult to assert how reliable the answers of this group were. Furthermore, further feedback would be needed to argue to what extent *Duolingo* helps students improve their English. However, in order to do that a longer period of experimentation would be needed, since the span of time used for this research has not been enough to carry out such a detailed study of the effects of *Duolingo* in the users.

Finally, the last aspect that must be mentioned about *Duolingo* is that the participants that provided a higher punctuation to the application are the ones that while using it to learn English were also using it to learn other languages that they were interested in. Thus, it could be argued that the fact that they had to use it for English only because they were asked to participate in a research could have had an impact on their opinion and judgement of the application as a means of learning English. Perhaps, if they were given the same questionnaire but they had to answer it taking into account another language that they had started to learn as a hobby with *Duolingo*, the answers would have been different. Further research is needed in order to explain and clarify these little subtleties.

8. Didactic application.

On account of the results of the investigation, it is undeniable that the proposal must be limited, in view of the opinion of the different participants, especially the ones from Post Obligatory Secondary Education. With this group, the adequacy of implementing *Duolingo* as part of the English subject is open to debate. First of all, because most of the participants agreed that the level of the activities proved to be insufficient for them and at some point, they got stuck. Secondly, although most of them enjoyed the application and argued that it entertained them and allowed them to practice English on a daily basis, they argued that it probably would not help them increase their

level. Rather, it would help them practice and revise aspects of the language that they already studied in class.

Because of that, the only way of implementing *Duolingo* or using it as part of the English subject with students who already have a good level of English would be to use it to practice exercises and to revise the aspects that they had previously learnt in class. That is, as homework. Taking into consideration their experience after using it for two weeks, it is undeniable that using it instead of a workbook would be inappropriate for them. However, even though they claimed that the level stops being appropriate at some point, they also claimed that *Duolingo* allowed them to revise what they had previously learnt and that it proved to be useful. Thus, introducing *Duolingo* as an extra for their English lessons could be helpful, especially for the ones that have more difficulties with English and need to keep in contact with the language on a daily basis. Thus, rather than implementing *Duolingo* as a new methodology in class, for these students *Duolingo* could be given as extra help for those who find the subject more difficult and whose level of English is insufficient.

With group 2, the answers of the participants showed that they enjoyed using *Duolingo* and that they did not find any difficulty regarding the level of the activities. This means that *Duolingo* could be a good way of enhancing the eagerness and motivation of the students towards the English subject in a first year of Obligatory Secondary Education class.

The main application that *Duolingo* could have is to become a substitute of the homework. As most of them explained in the interview, they believed that *Duolingo* was much more enjoyable and easy to use than doing homework with a book. Apart from making students more independent because *Duolingo* corrects the mistakes, they would also be able to communicate their doubts to their classmates since *Duolingo* works as any other social media and users can follow their friends. Furthermore, since the exercises give users experience points and other type of rewards, using *Duolingo* would assure that they actually do their homework, since they would actually have an incentive.

Another positive aspect about implementing *Duolingo* as a substitute of the average homework is that the teacher could set a weekly or a monthly goal, which would make students use *Duolingo* on a daily basis in order not to lose their winning streak. That would keep students in contact with the language daily, which would make them more consistent and thus they would learn the language more easily due to the longer period of exposure. Furthermore, using *Duolingo* would be less time consuming than actual homework since students find it very easy to use technological devices and writing with a computer or a mobile phone requires less time than writing with a pen or a pencil. On top of that, if required, the teacher could also follow the students and make sure that they do their activities. Evidently, in order to apply this methodology an agreement would be needed between the teacher and the students. That is, the teacher would not send normal homework, but the students would have to respect the agreement and reach the weekly or monthly aims previously set by the teacher.

Although the results of this study proved that most students would enjoy this methodology, it is undeniable that research on the results of applying this methodology should be done.

9. Conclusion.

After analysing the answers of the participants to the questionnaire, I believe it is difficult to draw an exact conclusion. First of all, with the participants from Post Obligatory Secondary Education it has been proven that the level of *Duolingo* might not be adequate for them since, in their experience, at some point they got stuck and felt that they were not learning because the level was not increasing. Although it was expected that the participants with a lower level of English would find it more useful, there was not a big difference between these students and the ones with a higher level in the results, as it was assumed at the beginning. However, in general terms they did enjoy *Duolingo* and they claimed that it possesses some characteristics that makes it enjoyable while keeping in contact with English, revising and practicing. Thus, it could be argued that *Duolingo* is a good tool for enhancing students' eagerness to practice English, although the level of the

activities needs to be increased should it be used for people who have a decent level of English.

Regarding the group of younger participants from the first year of Compulsory Secondary Education, the results were positive, and they showed enthusiasm towards *Duolingo* and most of them claimed that they would like to use the application as part of the syllabus, especially instead of doing homework. In their case, no one complained about the level of the activities, as with the other group. Furthermore, the game-like aspect proved to be especially attractive to them, since they were interested in gaining points.

Due to time constraints, it has been impossible to study *Duolingo* in more detail, and further research is needed in order to analyse the viability of using the extensions of *Duolingo* such as *Duolingo for Schools* and *Duolingo Bots* in class.

Overall, I certainly believe that new educational tools should be given the chance to be used in order to transgress. While it is true that using a device such as *Duolingo* has some risks to it, it is undeniable that education has to try to implement the new facilities that this highly technological world can offer and adapt them to the educational field. In this way, instead of making young learners adapt to the current system, it is the very education that adapts to the requirements of the digital generation.

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