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GAME-BASED LEARNING IN DISRUPTIVE CLASSROOMS TO PROMOTE EDUCATIONAL EQUITY

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0. ABSTRACT

This Master's dissertation consists of the analysis of the results of the implementation of the Game-based learning methodology in English language teaching developed in a disruptive class in the third year of ESO (Compulsory Secondary Education) in the diversification modality. This study is also based on the application of positive reinforcement and various resources and classroom management techniques to avoid disruption. The purpose of this work is to propose appropriate recommendations for the proper functioning of classes with students with motivation to learn English, to work and not to drop out of their studies. Considering the application of this methodology in the school, the effects that could result would be adequate to achieve a reduction of disruption in the classroom, an improvement of the working atmosphere in class and better results to obtain a successful intercultural communication and a desire to continue learning English as a first foreign language on the part of the students.

Keywords: Game-based learning, disruption, classroom management, positive reinforcement, motivation.

RESUMEN

Este trabajo fin de máster consiste en el análisis de los resultados de la aplicación de la metodología de Aprendizaje Basado en Juegos en la enseñanza de la lengua inglesa desarrollada en una clase disruptiva de tercer curso de ESO (Educación Secundaria Obligatoria) en la modalidad de diversificación. Este estudio también se basa en la aplicación del refuerzo positivo y de diversos recursos y técnicas de gestión del aula para evitar la disrupción. La finalidad de este trabajo es proponer recomendaciones adecuadas para el buen funcionamiento de las clases con alumnos con motivación para aprender inglés, trabajar y no abandonar los estudios. Considerando la aplicación de esta metodología en la escuela, los efectos que podrían derivarse serían adecuados para conseguir una reducción de la disrupción en el aula, una mejora del clima de trabajo en clase y mejores resultados para obtener una comunicación intercultural exitosa y un deseo de continuar aprendiendo inglés como primera lengua extranjera por parte del alumnado.

Palabras clave: Aprendizaje Basado en Juegos, disrupción, gestión del aula, refuerzo positivo, motivación.

1. INTRODUCTION

The importance of researching the application of innovative game-based learning methodologies in disruptive classrooms with challenging behaviours hampering learning new concepts is a crucial issue in education. The socio-economic differences of students play an important role in disruption and academic performance. In this paper, we examine the relevance of carrying out research in this methodology in detail, focusing on three key aspects.

Firstly, motivation and engagement thanks to the interactivity of game-based learning should be highlighted. Disruptiveness generally appears with interruptions or inattention, nevertheless, the language barrier in an English lesson makes it easier for a student of this profile to get lost along with the apparition of boredom or frustration provoking a disruptive outburst distracting the rest of their classmates. In disruptive classroom there are common factors that worsen this situation, such as lack of interest. Regarding stress, Kralovec and Buell (2000) stated that homework causes that feeling as long as it is considered as something useless. Therefore, this methodology could change the scope into making the activities look like something interesting for the students with behavioural challenges.

A second aspect to be considered is that the economic background of the students can be noticeable due to the lack of parental presence or extra support when it comes to reinforcement after the school hours. This gap plays havoc with self-esteem and frustration of students preventing them from being able to focus properly and leading to disruption. Game-based learning allows a greater parity for reaching the full potential of a student because of the flexibility and gradability when an activity is being tailored so as to promote equality and represent, according to Coll (2010), the real world.

Thirdly, students need to be prepared for real life situations, be it for a professional or an academic purpose or be it for their personal lives. For that reason, soft skills like working in groups, being resolute or making decisions could be perfectly fostered during game-based learning because of the cooperation, discussions or even the fast pace that is constantly being practiced.

In the context of socio-economic differences among students, this can influence the level of disruption. Nevertheless, game-based learning research can help identify effective strategies to address these disparities. For instance, it can explore how to adapt games to be accessible in resource-constrained settings, design culturally sensitive and effective game-based learning strategies, and understand how different groups of learners respond to reward and motivation systems in educational games. In disadvantaged families there exists a worsened lack of support at home on the subject of homework (Kralovec & Buell, 2000), for example, families do not

have the means to pay for extra support to compensate for this lack of time due to work or additional problems such as illness or death of a parent.

In short, researching the application of innovative game-based learning methodologies in disruptive classrooms is critical to promoting educational equity and improving the engagement and achievement of all students. By understanding how game-based learning can be effectively adapted to diverse contexts, we can move towards a more inclusive and effective education system. Therefore, methodological plurality can be given coherently as long as we focus on what is best for the pupil and to achieve an inclusive classroom (Tribó, 2008). Research in this area is essential to inform and have far-reaching effects on educational practices and provide equitable learning opportunities for all students, regardless of their socio-economic background.

2. OBJECTIVES

Teaching English in disruptive classrooms represents a significant challenge for educators, administrators and students alike. In this context, a question needs posing: "Could game-based learning achieve better results in a disruptive classroom?". This paper will apply this question to English language lessons in secondary education and it will be tested when conducting a comprehensive analysis by teaching vocabulary and grammar, although the four communicative skills (listening, reading, speaking and writing) will be practiced at the same time.

The ultimate aim of this paper is to prove whether it exists a relationship between the results of a better academic performance and a plummeting of the disruption in a class if an innovative methodology such as game-based learning is applied and tailored for the needs of the students in secondary schools. Albeit applying this methodology effectively is the main aim of this paper, various specific research objectives will be observed and then checked at the end of this research:

- Firstly, the specific characteristics of this secondary education class will be analysed so as to measure the level of disruption, the reasons underneath it and its academic performance to adapt the methodology of game-based learning and its activities to it.
- Second, the academic performance of the students observed during this research will be constantly observed and registered with the purpose of measuring the impact of game-based learning in a heterogenous class such as the one being studied.
- Thirdly, motivation and engagement are two pivotal words for this paper and key for the impact and functioning of this methodology in disruptive classrooms.
- Lastly, a hefty dilemma in every classroom is facing the task of how to cater to student diversity due to the fact that diverse situations are found in tandem with the specific problem of English as a subject since students have different needs and proficiency levels.

To conclude, this paper will highlight the need of a deeper understanding between disruptive classes and innovative methodologies that may help to reduce the problems of classroom management. A perfect guideline sought to eradicate and solve all the challenges does not exist due to the fact that teachers must adapt themselves to the characteristics of their students. Be that as it may, these objectives will demonstrate which is the relationship game-based learning and performance in disruptive English classrooms by applying the solutions, recommendations and strategies appearing in this research to improve effectively the ambience of a classroom.

3. THEORETICAL FRAMEWORK

With the purpose of tackling the theoretical framework, different aspects must be analysed. This section will include the throughout description of game-based methodology comparing its advantages and disadvantages when it is applied to a classroom and to teenagers. Moreover, diverse studies related to the effect of positive reinforcement when applied as a reward in game-based learning and its consequences in disruptions are to be carefully explained in the following subsections.

3.1. Game-based learning

According to Grace (2019), game-based learning can be understood as a methodology that seeks acquiring concepts and skills using a game in an educational context, be it digital or be it non-digital. The duration of the students' attention span is decreasing and poses a challenge for the educators all around the globe. The constant stimuli, notifications and instant "rewards" reduce the focus and exert negative influence on the quality of the study habits of students (Ricou, 2019). This is where gamification can play a crucial role. The game-based learning approach presents advantages and challenges that educators must carefully consider when deciding to implement in the classroom.

3.1.1. Advantages of game-based learning

The advantages of game-based learning are obvious. This approach provides the opportunity to significantly increase student involvement, critical thinking, problem solving and collaboration skills due to the inner characteristics of a game. Games are inherently compelling and therefore capture students' attention and interest in the material being studied. By incorporating game elements into the learning process, gamification can provide an additional stimulus that motivates students to actively participate and keep their attention on educational tasks. Gamification offers rewards, challenges and clear objectives that attract learners and keep them engaged arousing their curiosity. Therefore, games are increasingly being used to that a teacher needs to guide his or her students because they have been shown to be effective in several studies (Dicheva et al., 2015) along with challenging tasks that may require creativity or group work to be solved. It can be especially beneficial in environments where attention spans are short, such as classrooms with disruptive behaviours, as it transforms learning into a more engaging and dynamic experience by tailoring the learning environment to the preferences and needs of the learners (Pinter et al., 2020).

Additionally, games typically involve multiple levels of challenge, which can help students progress at their own pace and feel a sense of accomplishment as they move through the levels. This can help students feel more invested in the learning process, and can lead to increased

retention of material. Moreover, due to classes being an opportunity to develop and confirm skills necessary for their success in their courses and in their careers after graduation, absenteeism is reduced, as it could be shown by the data studied by Pinter et al. (2020). In addition to these benefits, game-based learning exhibits greater accessibility and inclusivity, accommodating diverse learning styles, abilities, and disabilities. By making learning more relevant and relatable to students' everyday experiences, games and simulations increase the overall effectiveness of the educational experience. Moreover, the flexibility of game-based learning allows customization to individual student needs and learning paces, promoting a more personalized learning journey.

This methodology can be customized to fit the needs of individual students. According to the classification of teacher types by (Latorre & Teruel, 2009) with regard to the suitability of the typology for disruptive behaviour, it is stated that teachers with better classroom organisation and those who are somewhat flexible with the classroom climate are those who are more successful with regard to behaviour. Teachers can select games and simulations that are tailored to the needs and interests of their students, and can use these tools to personalize the learning experience. Therefore, it is essential to conduct a thorough evaluation before integrating a game into the curriculum in case it is not appealing for the students.

Another benefit of game-based learning is that it can foster active collaboration and teamwork among students to apply their knowledge in an interactive way. Many games require players to work together to achieve a common goal, which can help students develop important social skills not only in the academic environment but also in future workplaces. This results in better retention of information compared to traditional teaching methods. Adipat et al. (2021) advised that game-based learning should not have a negative effect on how students perceive winning or losing and to avoid a confusing reaction, it is pivotal that teachers are aware of the students' reaction to help them obtain mature responses.

According to Schaaf and Mohan (2016), game-based learning outperforms traditional paper-and-pencil tests by providing more meaningful, accurate, objective and detailed feedback of the students' progress. Educators can measure student performance in a way that better aligns with learning objectives. Additionally, the interactive nature of games allows students to engage with the material in a hands-on manner, which can lead to deeper understanding and better retention of material.

3.1.2. Disadvantages of game-based learning

Notwithstanding these advantages, game-based learning also presents challenges and disadvantages that educators should not overlook. The cost of developing or purchasing

educational games and simulations can be prohibitive for some schools or teachers. Thus, one of the main challenges lies in the cost associated with developing or acquiring educational games and simulations. Some educational games can be expensive, limiting access to these valuable resources. According to Adipat et al. (2021), this highlights the importance of finding cost-effective and accessible solutions for incorporating gamification in the classroom. Technological limitations can also hinder the implementation of game-based learning. Not all students or schools have the necessary hardware or software. This raises issues of digital literacy and equity in the classroom. Lack of access to technology can limit the effectiveness of gamification. Financially poorer students may not have access to technological equipment that students at wealthier institutions can afford, which can lead to a digital divide. Thus, students from different institutions may develop different technological skills. Poorer schools, such as those in developing nations, may not have the capability to prepare students for technology-related jobs in the future. Despite being in the same class, students may experience this digital divide.

Game-based learning may also not be suitable for all subjects. Disciplines that require a strong emphasis on factual accuracy may find limitations in this approach. Therefore, educators should identify areas where game-based learning can have the most significant impact and complement it with other teaching methods where necessary. Balancing different pedagogical approaches ensures a well-rounded learning experience. In practice, game-based learning can take many forms. According to Yang, Quadir, & Chen (2016), due to various theories of language acquisition, language learning is considered one of the most promising subjects among many others, since it offers a variety of assumed benefits, including immersion in the language learning environment, lowered anxiety (Yang, Lin, & Chen, 2018) and other affective barriers to language acquisition, and an increased use of the target language in games. Some examples include using video games in the classroom, creating educational games, or using game-based simulations to teach complex subjects. Teachers can also use games as a way to assess student learning, by giving students tasks to complete in a game, and then using the results to gauge student understanding.

In addition, one of the most important challenges that educators must address is the potential for games to become addictive. Students can become distracted from the educational purpose of the game and, in some cases, develop an addiction to screens and video games. As Campanella et al. (2015) stated “the use of the Internet begins to be considered pathological when most of a person’s time and energies are spent in the Internet use or related activities, and provokes personal, relational, emotional, familial, or school maladjustment with adverse

consequences to psychological, social and/or work functioning aspects”. This underlines the importance of setting appropriate time limits and maintaining focus on learning objectives. To optimize the advantages of game-based learning and mitigate its potential limitations, educators can adopt a range of effective strategies. Balancing engagement and addiction is a key aspect of using game-based learning effectively. While games can be highly engaging, moderation is essential. Teachers can establish specific time limits and ensure that the focus remains on achieving learning objectives rather than solely on winning or completing the game.

Finally, this approach fosters a healthy balance between educational benefits and potential distractions. Even in game-based learning environments, teachers play a pivotal role in facilitating discussions, providing constructive feedback, and guiding students along their learning paths. Encouraging meaningful interactions between students and teachers fosters personalized support and a sense of community within the learning environment. The teacher's involvement is essential in maximizing the educational benefits of game-based learning. By attentively considering these factors, educators can harness the full potential of game-based learning while proactively addressing any potential limitations. This approach fosters a dynamic and effective learning experience. According to Spitz (2011), game-based learning involves connecting and engaging with audiences creating value for your users by providing them with a memorable journey within the game environment. Students can gain a better understanding of the world through role-playing games or real-world issues and raise awareness about them as part of the game meanwhile they provide students a safe place to fail.

3.1.3. Positive reinforcement applied to game-based learning

Schools are one of the places where students spend most of their time, so it is our duty to shape and work on these attitudes. With apply game-based learning we could shape the perception towards motivation due to the fact that, according to García Bacete and Doménech Betoret (1997), although we cannot control what happens in our students' personal lives, we can influence the classroom to change the attitudes, perceptions, expectations and representations that the students have of themselves, of the task to be performed, and of the goals they intend to achieve.

Thus, an aspect that should be taken into consideration is the feedback we give to the students when we address disruptive behaviour in the secondary English classroom. This is a crucial issue in improving the learning environment. To achieve this, it is essential to understand the underlying causes and the strategies that can be applied in game-based learning. Should positive reinforcement be applied to game-based learning, students could receive praise and rewards for appropriate behaviour while playing and working and students can develop important social

skills, such as empathy, respect for others and cooperation. Were we to achieve good classroom management creating a climate of respect for the players, work and trust to make mistakes and learn while having fun, we would make a difference in the perception of the pupils' education and in the creation of a safe atmosphere despite what happens in their personal lives.

Thus, a continuous positive reinforcement (Skinner, 1974) could involve rewarding or praising desired behaviour increase students' motivation to participate and put effort into academic tasks in game-based learning. When they feel valued and recognised, they are more likely to actively engage in learning. Therefore, teachers should be encouraged to ensure students' self-esteem and motivation to have far-reaching effects. In addition, corrections can be made as a group after each round of the game or after the game itself rather than continuously on an individual basis so as not to coerce student participation and to ensure a positive atmosphere in our classroom.

At the other end of the scale, there are many teachers who unconsciously benefit groups that were already privileged by school level or personal context (Feito, 2010). Therefore, if we want a significant change, the focus of our attention when we apply positive reinforcement as a consequence of game-based learning methodology should be on the most disadvantaged, as we are their only option to change the course of their future towards social ascent by offering them equal opportunities and rewarding effort, according to Matòri (2013). Positive reinforcement creates a more positive and encouraging classroom environment. Students feel appreciated and respected, which can contribute to a more harmonious and collaborative classroom climate for the games.

According to Olías (n.d.), based on Vaello (2005), an effective approach to changing students' attitudes starts with observation of individuals and daily work. This daily work involves the implementation of positive reinforcement, where positive group work and effort is valued. In this dissertation, the methodology applied was perceived as a reward for the students to enjoy game-based learning instead of traditional lessons. The time spent criticising what has not been worked on is reduced, which avoids encouraging negative behaviour by not paying attention to it. This is achieved by positively reinforcing the self-esteem of the positive groups and giving them an active role in their learning.

Furthermore, the types of rewards and its results are still being studied. As an illustration, Carmen Soo and Julia Lee's paper (2022) on DGBL (Digital Game-Based Learning) proves that individuals' learning processes are heavily influenced by rewards. Additionally, rewards promote learner engagement, motivate learners, enhance knowledge retention, and enhance memory consolidation, apart from the positive emotions they experience when they receive

rewards. It has also been found that learners are motivated to reach the top level of their scores when they see their points on the scoreboard (Alhebshi & Halabi, 2020). Additionally, Bai, Hew, & Huang (2020) noted that rewards in DGBL can help learners feel acknowledged since they like to be appreciated.

The application of positive and negative reinforcement in education is an important area that has been widely studied and applied in a variety of educational situations. Both approaches can be effective tools in game-based learning used in tandem for teaching students about engagement with the positive one and about the consequences of their actions with the negative reinforcement. Their effectiveness relies on the characteristics of the situation.

3.2. Disruption

According to Ortiz (2009) disruption can be related to the actions that interfere with the students' education, well-being and safety and with the correct functioning of the institution itself, for instance, on the issue of bullying or any other action against the rules agreed for the school year. Boredom in the classroom stands out as a significant factor contributing to disruptive behaviour. This is also relevant when it comes to a lack of English proficiency. Bored students who are struggling may show their frustration with a disruptive response and there is where game-based learning plays a significant role. Monotonous and uninspiring lessons can lead to disinterest and disengagement on the part of students, which often manifests itself in disruptive behaviours such as distractions or inattention. It is important for educators to use varied pedagogical approaches and engaging resources to keep students engaged.

A disruptive behaviour may provoke punishments, reports or the expulsion from the high school, elements that must be clearly stated at the beginning of the school year if we want coherent responses and clear consequences for misconducts. The complexity of the causes of disruptive behaviour in the English classroom can be due to multiple factors related to student motivation, classroom management and barriers to learning; aspects to be changed in this study when game-based learning is applied and their view on the subject changed. The collaboration of teachers, specialists and families is essential to address this problem and create a positive learning environment. Several studies have shown the efficacy of support and understanding between the teachers when disruption wants to be reduced along with family's involvement (Díaz-Aguado, M. J., Martínez, R., & Martín, J., 2010).

According to Penalva, Hernández & Guerrero (2013), one of the factors for achieving educational quality is to achieve effective schools with an appropriate role for teachers in classroom management. On the other hand, Creemers (1994) adds to effectiveness a series of factors, such as motivation, background, aptitudes, time for tasks, organisation, rules and

agreements, clarity of goals and content, grouping according to abilities, teacher behaviour, etc. All of these factors can be clearly observed when the rules of a game and its functioning is explained in game-based methodology with traditional teaching is disguised as a motivational activity.

The book *Letter to a teacher* describes the school as a hospital that only cures the healthy and sends away the sick (Solé, 1982). The "bad" pupils should be considered as the normal type of pupils, since the pupil who does not put-up resistance to teaching and is motivated to study does not need so much help. On the contrary, the one who needs it is the pupil who comes from another context where he/she is not educated in this way to be receptive to the educational system. As analysed by Paz Rodríguez (2013), the author Tagore claimed that a forest would be very gloomy if only the better singing birds would sing.

Vaello's (2005) recommendations include establishing limits and rules of coexistence from the beginning of the school year, developing a trusting relationship with students, knowing their circumstances and perceptions, and giving responsibility for maintaining order to disruptive students. Tutoring to solve and prevent problems, sponsorship of problem students and highlighting the collective interests of the class to foster a collaborative environment are also suggested. Therefore, the collective collaboration to obtain a good behaviour can guarantee the development of games during the lesson.

After a thorough analysis and interpretation of data, Shrestha (2010) obtained several underlying reasons for disruptive behaviours occurring in English classes. These races of disruptive behaviour represent an issue that involves multiple factors and dimensions, which is fundamental to understanding and adequately addressing this issue in the educational environment.

One of the key factors that emerged from the analysis is the students' desire for attention. A key aspect got classroom management strategies. This desire to stand out from their peers and teachers can lead to disruptive behaviour as a way of attracting attention. Students may resort to inappropriate or distracting behaviours in search of recognition or to satisfy an unmet emotional need.

Teachers' lack of knowledge of child psychology is another aspect identified in the research. Teachers who do not understand the emotional and cognitive needs of their students may find it difficult to address and prevent disruptive behaviour. Teacher training and professional development in this area is crucial to have far-reaching effects on classroom management. Nevertheless, teachers with a standard knowledge of psychology can significantly improve the

disruption by applying game-based learning methodology for classroom management tools (Soo & Lee, 2022).

In addition, the influence of postmodern technologies was recognised as a contributing factor to disruptive behaviours. Electronic devices, social media and other forms of digital entertainment can distract students and make it difficult for them to concentrate on English lessons. Integrating technology effectively into the classroom and promoting a healthy balance between screen time and educational activities are necessary approaches as explained by Carmen Soo and Julia Lee's paper (2022) in which digital game-based learning is fostered positively.

Lack of supervision by school principals was also mentioned as a factor that may contribute to disruptive behaviour. The absence of effective school leadership, cooperation and clear disciplinary measures can lead to a disorderly school environment. The development of mentoring programmes can be effective strategies to counteract this problem. Moreover, the promotion of positive friendship initiatives reduces negative behaviours coming from aspects such as peer pressure or social acceptance, aspect easily to approach with the collaborative games of this methodology.

The age factor was highlighted as a cause of disruptive behaviour in the classroom. Developmental differences between students at different ages can lead to conflict and classroom management difficulties. Therefore, game-based learning allows adapting pedagogical and classroom management strategies to the specific needs of age groups is crucial to address this challenge.

Lack of parental education and awareness was also identified as a contributing factor to disruptive behaviour. Parents who are unfamiliar with their children's educational needs or who are not actively involved in their children's education can hinder educators' efforts to maintain a positive learning environment. The communication gap between parents and children is another significant concern. When effective communication is not established between parents and students, problems can arise.

Teachers need to be vigilant in order to prevent problems and maintain an appropriate learning environment, therefore classroom management is a key challenge for teachers, especially for beginning teachers, according to Pineda and Frodden (2008). Lack of student motivation can lead to some minor discipline problems, as highlighted by Kyriacou (2000) and it is described as one of the main reasons to provoke stress to teachers because of students' slow pace on purpose or students that "lack initiative to do anything other than what they are explicitly told to do, will take every opportunity to engage in social conversation, and will be quite happy to

hand in incomplete and unfinished work." This type of situation can lead to a teacher being constantly alert and vigilant to prevent pupils from misbehaving with some classes in the first place. That makes the teacher feel that they can never relax with a constant state of alertness to detect any sign of a problem that could lead to serious consequences (Kyriacou, 2000). This constant stress could lead to the widespread professional burnout described by Maslach (1993). Finally, Sharma (2006) argues that English lessons can be noisier due to the nature of some of the activities and group organization, but it also affects teachers of all subjects. Game-based learning could reduce this burnout by diminishing this constant disruption and transforming the classroom atmosphere into a relaxing place to teach students and motivate them into continuing learning.

Arends (2001) also provides some possible causes of disruptive behaviour, including boredom and trying to escape from the irrelevancy of high schools, psychological and emotional problems, the feeling of imprisonment and authoritarian dispositions and, finally, the growing-up process provoking rebelliousness and attention seeking. Lack of student interest or motivation can lead to disruptive behaviour in the classroom. This feeling of imprisonment can disappear once game-based learning is settled in a class, changing this negative perspective into motivation. Teaching a foreign language involves particular challenges. Authors Ceballos, Dávila, Espinoza and Ramírez (2014) highlight the importance of creating a respectful and tolerant learning environment for effective language learning because "learning English contributes to understanding and appreciating one's own language and culture and to the development of cognitive skills".

4. CONTEXT

4.1. High school description

The Instituto de Educación Secundaria (I.E.S.) Villa de Mijas is located on the outskirts of Mijas, in the neighbourhood of Santa Ana, and receives students mainly from Mijas, as well as from surrounding areas such as Osunillas and Valtocado. It also attracts students from Fuengirola and Las Lagunas. The context in which the school is located influences coexistence in three main ways:

- **Tourist Character of Mijas:** Mijas is a tourist municipality, which means that the resident foreign population, many of whom have school-age children, is constantly increasing. This can lead to the intermittent incorporation of foreign students throughout the year, which requires constant reorganisation of groups and can increase the ratio. However, this multicultural environment provides opportunities for enrichment through interaction between different cultures.
- **Changes in Family Structure:** Society has experienced significant changes in family structure, including an increase in the number of separated or divorced parents. This can have consequences in the lives of students, such as changes in the home, lack of routines, coordination between parents, among others. The school is faced with the need to address this new issue.
- **Extended working hours:** The increase in families where both parents work has led to many students spending time alone and unsupervised for long periods of time. While this change promotes gender equality, it also poses challenges in terms of the lack of behavioural patterns and schedules for these students.

In terms of coexistence, it is mentioned that, although there are few acts of violence, indiscipline and disruptive behaviours are more frequent, including questioning teachers' authority and disrespect. Most of these behaviours are attributed to students' lack of motivation. Therefore, the need to implement preventive measures that address both existing problems and possible more serious situations in the future is emphasised.

4.2. Class description

In a class of 15 students from challenging backgrounds, there is a diversity of personal and social circumstances that require careful and sympathetic attention from the educator. The students belong to the 3rd year of ESO, but in the so-called "diversification" variant, in which different subjects are combined into several blocks and assessed together. In my area, I was a History and Geography, English language and Spanish language teacher 9 hours a week for 14-

16 years old students. The reality is that these students were prevented from a normal childhood due to the following challenges:

- A limited access to financial resources that provoked that some of them could not afford even to buy clothes, school materials or enjoy their leisure time practising different activities.
- A background surrounded by abuse or traumatic experiences which impedes students from prioritising a focus on their studies.
- Orphanhood and, as a consequence, a lack of support from their families that is supposed to be pivotal for this age.
- Gaps in learning and engagement due to frequent absenteeism from at least 6 students.
- Two cases of dyslexia causing difficulties and a need for help for reading and writing.
- Absence of Home Care due to alcoholism, divorce, complicated family situations or parents/guardians continuously working in order to be able to afford the bare minimum basic needs. This affects self-esteem, focus and study habits. This may manifest itself in lack of attendance at school meetings, lack of response to school communications, and lack of homework support at home.
- A situation where 8 out of 15 students are immigrants or come from immigrant families from Cuba, the UK, Morocco and Colombia. This can lead to additional challenges related to language, cultural adaptation and integration into society.
- Discipline or behavioural guidelines at home may be virtually non-existent. Students may lack structure in their daily lives, making it difficult to build study habits and understand the rules of classroom behaviour.

5. METHODOLOGY

This section of the dissertation will describe how this research was carried out and adapted to the circumstances of this class to achieve meaningful results. Therefore, the approach of applying game-based learning to a disruptive class to see its progress in grammar and vocabulary is developed while considering aspects such as attention to diversity, the timing, grouping, space and the type of activities and resources available to obtain effective results.

5.1. Attention to diversity in the classroom

This methodology could help teachers facing the problematic of catering for diversity owing that it offers the possibility of adapting its resources to different rhythms and levels simultaneously. As a result, this paper will reflex the opportunity of contributing to a more inclusive and equitable classroom environment where specifically dyslexia can be highlighted with adaptations in the activities and exams.

The following are examples of how I addressed diversity and disruption in my English class with two students with dyslexia, four native English speakers, one B2 and ten A1 students, and how these differences may influence the dynamics of the class. All the lack of interest, boredom, insecurity would lead to more disruptive reactions.

- Initial assessment: Firstly, I conducted an initial assessment to understand the English level of each student in my class. This would help me adapt my approach and resources to meet their individual needs during the school year.
- Adapting materials: For students with dyslexia, I adapted materials and texts to make them more accessible. I used readable fonts and, where necessary, provided printed versions of texts. Lack of adaptation could lead to frustration and lack of participation and, consequently, disruption.
- Differentiation: I planned lessons that included differentiated activities. A1 learners would receive simpler activities, while the B2 learner would have additional challenges. This would keep everyone engaged and prevent some from feeling overwhelmed or bored provoking conflicts.
- Individualised support: For students with dyslexia, I provided individualised support. This could include extra time to complete written assignments, the use of read-aloud tools and specific feedback to improve their writing.
- Flexible grouping: I organised students into flexible groups according to their level of proficiency. This would ensure that A1 students work together on tailored activities, while B2

students may face more advanced challenges. If grouping is not adjusted, students may feel alienated or insecure trying to get attention in a disruptive way.

- Technological resources: I used technological tools to tailor learning to individual needs. This would include apps and online programmes that offer read-aloud options and interactive exercises. Lack of access to technology could leave some students behind.
- Modifications to assessments: I would adapt assessments to make them fair and accessible. Lack of adaptation could lead to unfair results and demotivation.
- Support for native English speakers: For native English speakers, this provided opportunities for them to act as mentors and participate in advanced activities. This would prevent them from feeling disinterested or neglected.
- Communicative approach: I encouraged a communicative approach in the classroom, where effective communication in English is valued over perfect grammar. This would help A1 students to feel more confident in speaking. Lack of a communicative approach could lead to anxiety and lack of participation.
- Open communication: I would maintain open communication with students and their parents/guardians to understand their needs. This would ensure that all students feel heard and supported. At the other end of the scale, it was virtually impossible to communicate with their guardians.
- Flexibility and patience: I used flexibility and patience with all students. Everyone has their own pace of learning, and this could influence the dynamics of the class. Patience is key to maintaining a positive environment.

By addressing these differences and needs, I could create an inclusive environment where each student feels valued and supported. If these differences are not addressed, the class may become disorganised, with unmotivated students and a lack of effective participation. Adaptation and individualised attention are essential to maintain harmony in the classroom.

5.2. Approach

According to Esteve's (2010) third criterion, many students do not understand why they should study a First Foreign Language if their mother tongue is a different one. It is our job to open their eyes to the obvious opposite, as English is indispensable as a vehicular language in our society, which is increasingly connected and under the effects of globalisation. It helps students to develop their communicative competence in order to cope in all kinds of situations that may arise in their lives, and by this we are not only referring to the work or academic environment, but it is also very likely that they will need it for their social life.

Likewise, their knowledge will provide them with a wide range of possibilities such as mobility to other countries and if we do not motivate them to opt for these options, we will not be giving our students the best opportunities. This subject also aims to ensure that these relationships are made with tolerance and respect, in order to avoid cases of xenophobia or discrimination or lack of critical thinking to create a better and fairer society. To achieve all these aspects, we work with the students on the four language skills, nevertheless, in this paper we are going to focus on vocabulary and grammar results when applying game elements to the educational field to check whether this methodology should continue to be used with students or whether it is not effective enough.

Hence, game-based learning was chosen to generate a better classroom climate and a management more focused on student motivation. By way of illustration, some collaborative game-based dynamics to be explained in the following sections will make possible a positive working climate that will be supported by heterogeneous grouping, sharing of responsibilities based on work roles, active participation, attention to different paces, etc. Also noteworthy is the importance of Bloom's Taxonomy (Anderson & Krathwohl, 2001), with which the learner can learn more conveniently by presenting the different lower and higher order thinking skills (LOTS and HOTS) in order of difficulty in a stepwise fashion. As aforementioned, this is implied in the different levels offered by game-based learning. Should students become interested in the subject, the positive results will be reflected upon this research. Game elements will be implemented in an interactive way in a plethora of activities displayed in diverse ways. A healthy competitive environment will be fostered to seek to improve and boost determination among the students.

The relationship between student and teacher plays a crucial role in reducing conflict in the classroom. Establishing a relationship based on respect, affection, rights and duties is fundamental to creating a positive learning environment. To achieve this while implementing something as interactive and compelling as game-based learning, it is recommended to offer help, accessibility and understanding of students' emotions, get to know the students and their circumstances, ask them about their vision of a good teacher, give responsibility for maintaining order to disruptive students, tutoring and mentoring, and highlight the collective interests of the class.

Finally, during game-based learning Vaello's (2007) considerations were applied. He stresses the importance of capturing and maintaining students' attention in the classroom. To achieve this, she suggests starting classes on time, not starting until everyone's attention has been captured, drawing attention by using names, neutralising distracters, activating students' prior

knowledge, and controlling and teaching the rules. In addition, it is recommended to maintain attention by planning varied and functional activities, reinforcing positive behaviour, firmness in the face of disruptions, breaks with informal activities and recognition of students' effort.

Teaching vocabulary and grammar through game-based learning in English can show an improvement in performance. First, I selected specific digital platforms and resources designed for game-based learning in English language teaching. These tools often offer interactive activities, challenges and rewards that make learning more fun and engaging for students. A second aspect to be considered is that I created games and activities that are tailored to the learning needs of your students. These activities focused on practising English vocabulary and grammar in a playful and stimulating way. Games could include crosswords, word games, writing speed competitions, among others.

Furthermore, I introduced elements of competition into my activities, which encouraged students' active participation in game-based learning. I offered rewards, such as points, badges, playing English games in the playground, listening to music while doing homework or virtual prizes, to motivate them to work hard and improve their results. I used digital tools too to track the progress of each student. This allowed me to assess their performance and provide personalised immediate feedback, which is essential for individualised learning and improve quickly. Game-based learning encourages active and participatory learning, as learners are involved in interactive rather than passive activities that allows tracking each student's progress to tailor activities and challenges to their individual needs.

As aforementioned, multiple activities and games will be implemented during this research that are to be fully described in this paper. Therefore, it will be ensured that the approaches, practices and strategies are the most effective. Moreover, the different choices will be tested and approved beforehand carefully, however they will be discarded if they are not working properly or if they are not attractive enough to engage these students to produce a positive outcome. Nevertheless, this does not only refer to grades, but also to the accomplishment of tasks and the work behind it on the grounds of a disruptive class that is not used to even finishing exercises because of the lack of control, responsibility and consequences derived from their personal lives.

Drawing things to a close, the effectiveness of this methodology must be measured by collecting concrete evidence with qualitative and quantitative data. As a result, disruptiveness, academic performance, participation, engagement and the completion of tasks and exams will be observed during the school year and compared at the beginning and at the end of the school year with the intention of checking the usefulness of the methodology applied for 10 months.

5.3. Classroom space and grouping

For these 15 pupils we have our own class in which they are always present when they take a "diversification" subject and in particular they were there for 9 hours a week. The distribution of the students is in pairs or trios according to their level of disruption and academic and emotional support. Group work, although beneficial, can present challenges in the delivery of sessions, especially in classrooms with disruptive behaviour. To address these challenges, it is essential that the teacher promotes appropriate relationships and works on the development of the key competence related to coexistence.

5.4. Timing

This approach was implemented throughout the academic year 2022/2023 in the whole language domain with English, Spanish and Geography and History in 60-minute lessons, although in this paper we focus mainly on the progress of the English results.

5.5 Activities, materials and resources

Here is a list and description of the materials and resources and how they were used during the academic year. They were chosen to take into account the work of the Theory of Multiple Intelligences (Gardner & Hatch, 1989) which are enhanced to a greater or lesser extent to solve a problem and which assumes that each student learns and understands the world differently (Barrios Espinosa, 2002):

- Exams:
 - Kahoot: It is an online gaming platform used to create interactive quizzes and tests that was adapted for the vocabulary and grammar learning through the use of its classical mode or the new ones that add an extra game-based learning basis with competitions against monsters or against teams.
 - Quiz: Although it is similar to Kahoot and it can be played like that, it has different modes that gives the impression of a more serious test. It can also be adapted for a paper-based mode with QR scanners in case the electronic devices are limited for the high school.
 - Traditional tests: A variety of tests were developed during the school year, including multiple choice ones.
- Projects:
 - Canva: This user-friendly webpage and app allows the creation of different projects applying the knowledge that the students have learnt. Some of the oral presentations included posters or infographics.
 - Genially: This interactive webpage is useful for the creation of presentations or even for the creation of games to check the understanding of different topics.

- Grammar and vocabulary exercises:
 - Photocopies: Grammar and vocabulary exercises with different aims to check the students' performance.
 - LiveWorksheets This webpage gives immediate corrections to the students about different activities that are normally similar to the traditional photocopies with grammar and vocabulary exercises. The only different is the interactivity and the attractive format in comparison with the old-fashioned worksheets.
- Games:
 - Uno Cards: This famous game can be shaped into different versions. In this case, it was adapted to practice the past tense, specifically practising the irregular verbs and sentence construction.
 - Ice-cream game: In a similar fashion to Uno Cards, irregular verbs can also be practiced by building an ice-cream with three parts: infinitive, past simple and participle. This cooperative game may be disruptive taking into account the competitiveness that can be developed between the different teams. Be that as it may, it is an engaging activity that helps the students to learn all the verbs by heart.
 - The Werewolf: This cooperative game consists of different roles, such as the villagers as the innocent players or the werewolves as the evil characters. To survive, the students must trick their classmates and show communicative abilities to convince everybody about their innocence. This speaking activity allow students to practice how to state their opinion with the vocabulary they have practised and mastered before.
 - Never Have I Ever...: A game that can appear in films and tv series related to alcohol consumption, but that can be easily adapted to an educational game to practise grammar and, specifically, present perfect and participles.
 - Who is Most Likely to...? This game is extremely useful to get to know the personality of all of our students by telling past experiences or characteristics that teachers cannot see on a daily basis. With it they express their opinions and tell anecdotes practising all types of grammar structures and vocabulary.
 - Tarot Cards: Collaborative game to practice the vocabulary and future tenses.
 - Storytelling Dice: Both the traditional and the Halloween version are useful to create stories based on the pictures or drawings shown on the dices. This helps dubious students who claim that they have no imagination to start a story.
 - Edpuzzle: This webpage and app allows the teacher to adapt any YouTube video and to turn it into a quiz embedded in the video.

- Guess Who I Am: With a post-it on their foreheads, students must guess the person or character they have been assigned to by making questions to their classmates.
- Taboo: In the version that was practised, it included definitions without saying the key/taboo words, definitions using just 15 synonyms, drawing and mimics. All the categories were compelling and showed the students the necessity of being able of expressing oneself or of having a basic vocabulary.
- The Bomb: An interactive practice of the new concepts acquired during the lessons where students need to automatize the vocabulary and grammar so as to be fast enough to win the game.
- Races on the Board: Students are divided into two teams that have to prove their spelling, vocabulary and grammar control writing on the board without mistakes and faster than their classmates.
- Interviews: Students carry out a role-play for different purposes with the purpose of showing the usefulness of the English language for their careers.
- Webpages with Games:
 - Wordwall: Offers a variety of interactive games and activities for learning English vocabulary.
 - Genially: As aforementioned, it enables checking our knowledge with games such as quizzes.
 - Lyricstraining: This modern karaoke allows the practice of grammar, vocabulary and spelling through listening with famous songs filling the gaps
 - Seterra: With this webpage, students can learn Geography with interactive games in which different types of maps can be chosen in different languages.
 - YouTube: In order to practice the vocabulary acquired during the different units, the students could follow the steps of various video tutorials about crafts in English

All these elements prevent the lessons from being monotonous and engage the students showing them a purpose to apply the knowledge learnt previously in practical and motivating activities.

6. RESULTS

Regarding the results, different aspects are to be compared between the beginning of the school year in October taking into account the initial evaluation and observation and between the ending of the school year in June after having assessed every criterion and observed their behaviour for 10 months. The main comparison is going to be focused on the disruption and progress in the English language regarding vocabulary and grammar, although I was their teacher 9 hours a week because of the linguistic area includes Spanish and History and Geography.

Furthermore, the completion of all the aforementioned objectives is going to be carefully studied. First of all, the first objective led this paper to analyse the specific situation of the students considered for this case of study. Both their personal and academic situation affected the disruption, nevertheless, it is worth noting that there was a higher level of disruption in the English lessons in comparison with History and Geography or the Spanish lessons due to the feeling of frustration originated in their low level of English. They were continuously asking to have the English lessons in Spanish and they were continuously avoiding saying a word in English. What it started as an impossible task, it turned out to be a rewarding experience after applying all the techniques explained in this paper. Factors such as constant interruptions and complaints, lack of energy, rudeness, bullying, absenteeism, not finishing the task, standing up, shouting or aggression were dramatically reduced if the following graphics are to be compared. Be that as it may, these attitudes were not completely eradicated.

October:

Disruptive behaviour
15 respuestas

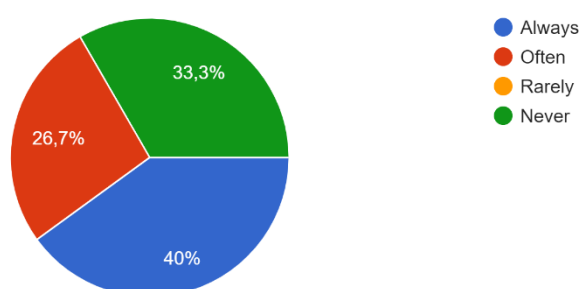


Figure 1 Disruptive behaviour (October)

June:

Disruptive behaviour
15 respuestas

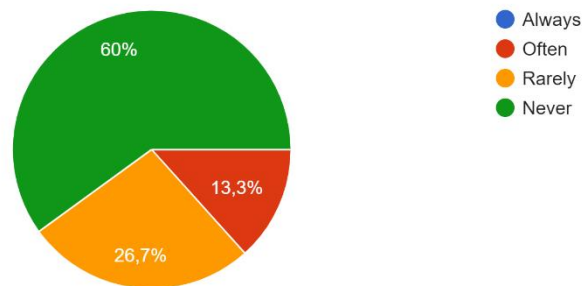


Figure 2 Disruptive behaviour (June)

At the beginning of the school year, it can be appreciated that only a 33,3% of the students had a good and positive behaviour. The other 66,7% of the students presented an intense disruptive behaviour that made teaching an impossible task. Moreover, this disruptiveness lasted longer and was repeated more times during the lesson in October if we compared it to the rest of the school year. The 40% of disruption provoked a constant interruption and distraction (Kyriacou, 2000). On top of this, negative reinforcement was useless due to the lack of consistency and coherence in the discipline rules of the high school. Students were willing to receive “punishments” because they felt that they had no consequences or power as it was stated by Shrestha (2010).

This change started when I incorporated game-based learning into my curriculum. The first two weeks of September I applied traditional methodology with the aim of being stricter for facing this disruption, however I obtained no results. At the other end of the spectrum, grammar and vocabulary started to be more engaging once the concept was introduced in an interactive and attractive way. As it was aforementioned, Vaello (2005) described how this kind of engagement was pivotal for learning. This can be observed in the following graphic where participation at the beginning and at the end of the school year can be compared.

The use of electronic devices and technology supposes a great difference for teenagers. They perceive paper as “old” and “boring” and all the applications, webpages and games were seen as an innovation and aroused their curiosity, as it was ensured by Soo and Lee’s paper (2022). Moreover, one advantage that must be emphasized from technology is the possibility of giving immediate feedback so that they can correct their mistakes and avoid them and also the possibility of being adapted to various levels. This allowed some of them to make small

progress instead of being left behind without understanding the lesson, as Creemers (1994) highlighted regarding the factor that could affect disruption. On the other hand, it allowed more advanced students to keep learning and improving with additional challenges without provoking the boredom that sometimes leads to dropping studies according to Pinter et al. (2020) statements. Moreover, dyslexic students also improved their results.

As the school year progressed, their attitudes toward learning were significantly changing. Apart from their progress in the different subjects, one could perceive a better atmosphere and relationship between them following Dicheva et al. (2015) research. The 15 students had different personalities and backgrounds that made an initial cohesion impossible to obtain. The participation and group work improved and the insults and constant tension that could make someone believe that a fight was about to happen plummeted.

October:

Collaboration in class or with exercises
15 respuestas

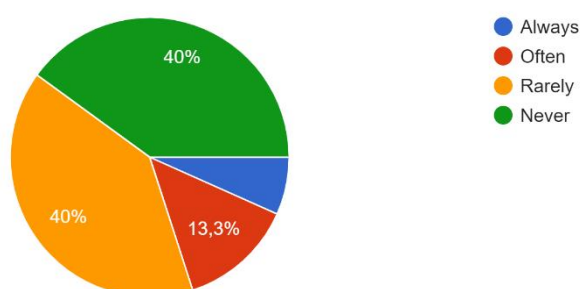


Figure 3 Collaboration in class or with exercises (October)

Collaboration with games
15 respuestas

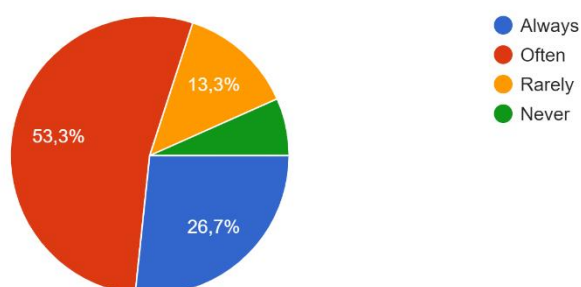


Figure 4 Collaboration with games (October)

June:

Collaboration in class or with exercises

15 respuestas

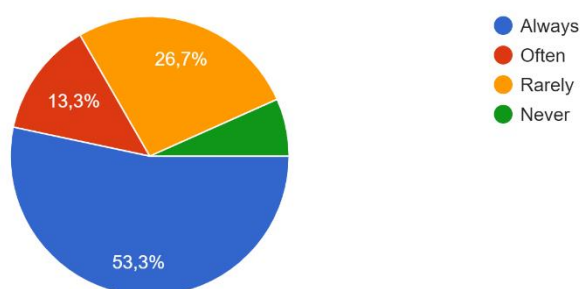


Figure 5 Collaboration in class or with exercises (June)

Collaboration with games

15 respuestas

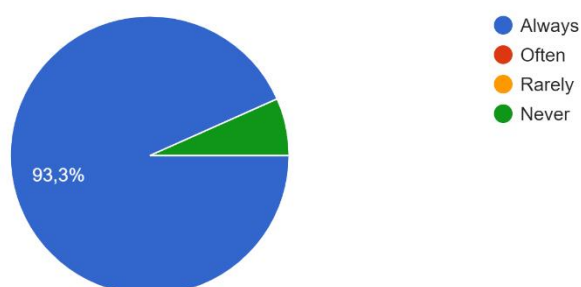


Figure 6 Collaboration with games (June)

Moving to other objectives, the lack of effort changed when game-based learning was applied. They refused doing the physical worksheets, writing, participating or doing their homework during the lessons because their self-esteem and self-worth was questioned because of the feeling of not being “good enough” to fulfil the task or thinking that their classmates could laugh at them. Nevertheless, in accordance with Soo and Lee’s (2022) study, when I asked them to do the exact same exercises with a computer or different exercises shaped or hidden as a game, they were willing to do them and obtained positive results.

By the same token, one of the objectives was met once they tried different games and perceived the activities as “having fun” or “doing nothing” (Bai, Hew, & Huang, 2020) when the reality was that they were doing the same traditional exercises with a different format. According to Tedesco (2011), parents' educational level, language level and their appreciation of the importance of the education system directly affect school success, demonstrating the importance of aiming for social equity in the education system. Thus, in this research some of the absenteeism was reduced because of the idea of having fun and the rewards, as asserted by

Skinner's (1974) studies. For instance, were they to show good behaviour, I would promise them to do one of their favourite games that week with the purpose of preventing them from skipping my lesson that day. This was a game-changer in comparison to negative reinforcement. Behaviour would significantly change and would have far-reaching effects if they had in mind that there would be positive consequences, once again following Skinner's (1974) affirmations. In this paper, the positive results can be easily observed by taking into account the change of attitude towards exams. For these students, sitting in front of an exam for a whole lesson and behaving correctly was something unimaginable at the beginning of the school year. Nevertheless, with game-based learning techniques for designing the same exams, the results changed, as it was foreseen in accordance with Soo & Lee's research (2022). The marks are not even being considered here, although there was a clear improvement. What it is being considered here is the fact of just finishing the exam.

October results:

Completing traditional exams
15 respuestas

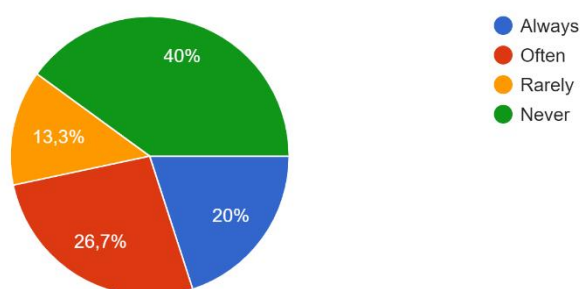


Figure 7 Completing traditional exams (October)

Completing digital and game-based exams
15 respuestas

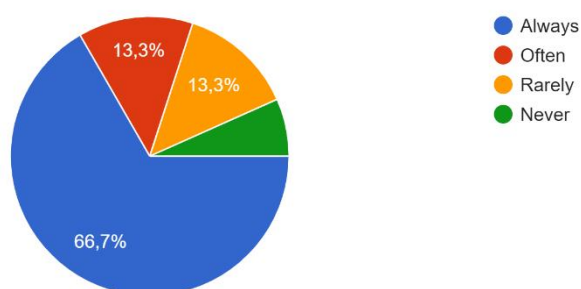


Figure 8 Completing digital and game-based exams (October)

June results:

Completing traditional exams

15 respuestas

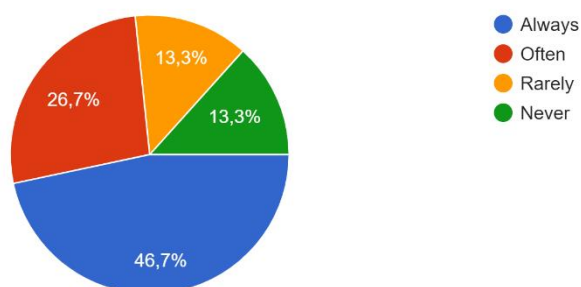


Figure 9 Completing traditional exams (June)

Completing digital and game-based exams

15 respuestas

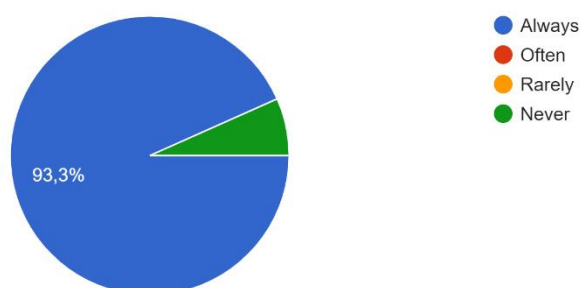


Figure 10 Completing digital and game-based exams (June)

Regarding these graphics, this pie chart hints that quite a relevant aspect to be compared could be the difference between the traditional exams of October in contrast with the digital and game-based exams of June. Just a 20% of the students would finish a traditional exam in October facing a 93,3% of the students at the end of the school year, although the change was already noticeable in October when changing. It must be considered that the percentage left corresponds to the only student that presented a severe case of absenteeism not coming once to high school during the whole school year. One shocking evidence from this paper is that the improvement was such that the results also improved for the traditional methodology. Be that as it may, the changes are slight and subtle if compared with the innovative methodology implemented.

Having analysed Bai, Hew, & Huang (2020) the fact of doing every exercise to finish the exam does make an impact on their self-esteem and confidence. For most of them, their self-perception was negative with comments such as “I am not intelligent” after a traditional exam. Notwithstanding, this attitude changed step by step and it even improved their behaviour toward

the traditional approaches. Although they were more reluctant to them than to the digital and game-based activities and exams, as it was aforementioned with Soo & Lee's (2022) research, they obtained better results.

An interesting aspect of my approach was the comparison of the results of paper-based and computer-based exercises when they were exactly the same exercises. This helped to identify whether game-based learning had a positive impact on student performance compared to traditional practices, as Schaaf and Mohan delved into (2016). As I have observed, game-based learning and an appealing format can lead to a significant improvement in learning outcomes, as reflected in the differences between paper-based and computer-based exercises, as well as in written and digital exams. These same worksheets and website exercises worked better in exams made from the Kahoot or Quizziz websites than with traditional exams. In addition, these websites included games that made them motivated to finish the test and did not result in disruptive behaviour by disturbing their peers so that they would not finish the test either.

October results:

Completing traditional photocopies or exercises
15 respuestas

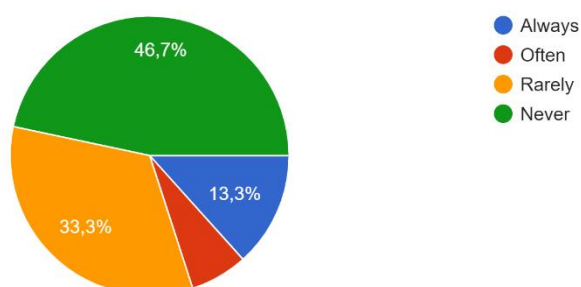


Figure 11 Completing traditional photocopies or exercises (October)

Completing digital and game-based worksheets or exercises
15 respuestas

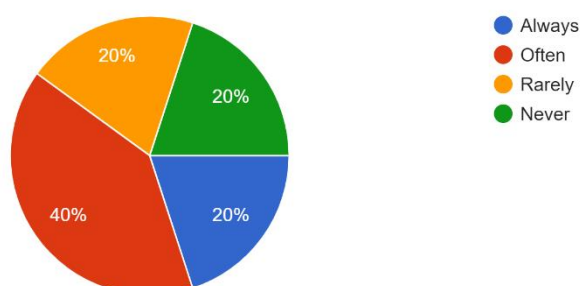


Figure 12 Completing digital and game-based worksheets or exercises (October)

June results:

Completing traditional photocopies or exercises

15 respuestas

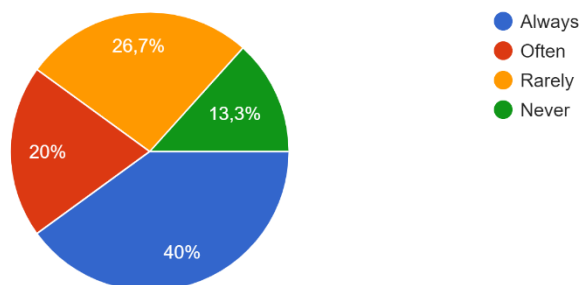


Figure 13 Completing traditional photocopies or exercises (June)

Completing digital and game-based worksheets or exercises

15 respuestas

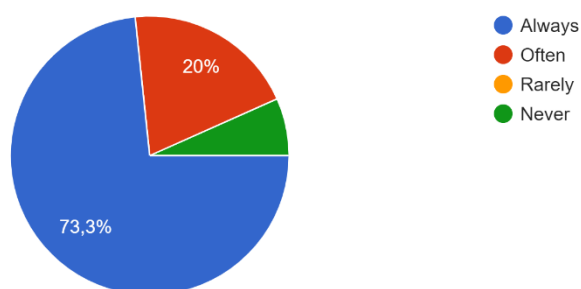


Figure 14 Completing digital and game-based worksheets or exercises (June)

This pie chart proves evidence that one of the major components is how we present the activities to the students rather than the content of the exercises. Just a 13,3% of the students would complete their tasks in October when they were presented traditionally. The 73,3% of the students always finishing their tasks if they are interactive in June sheds some light on the reality that we are facing in our classrooms (Schaaf and Mohan, 2016). It is paramount that we recognize the changing of our society and how these teenagers are being raised. It is necessary to turn the spotlight on the fact that they were even motivated when doing grammar and vocabulary exercises and they were completely focused on them and willing to finishing all the exercises. I would give positive points to the most advanced students doing the homework and it was of the utmost importance for them getting some recognition proving that they were not receiving enough at home.

A relevant factor for these students is the simple fact of doing, handing in or not losing homework and materials as it has been previously explained. Sending homework home was not

feasible, as these pupils do not have control in the evenings or positive environments and means to work at home. Therefore, it could be clearly observed that they do not produce positive results. One should be aware that they are discriminatory as they target an outdated family type that is being replaced by single-parent families or families in which both parents work and cannot devote as much time to helping their children with homework (Dudley-Marling, 2003).
October results:

Homework completion
15 respuestas

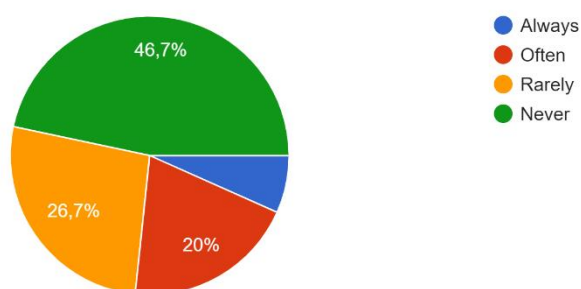


Figure 15 Homework completion (October)

June results:

Homework completion
15 respuestas

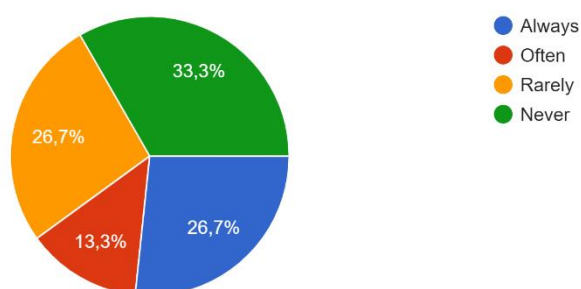


Figure 16 Homework completion (June)

Although the results improved in tandem with the engagement, it was not a common practice during my lessons because it increased the gap between the different students with more or less support at home because of the factor explained by Shrestha (2010). There was still a 33,3% of the students that would not do any of the homework at home and another 26,7% that was not constant about it. As a teacher, one cannot rely on continuing activities if more than the half of the students cannot follow your lesson. If I gave them photocopies, they did not want to do

them, serious disruptive behaviour appeared, they refused to work and we could not continue with them the next day because they lost them (unless they were kept in the classroom locker for the next day). I have done the same exercises or identical worksheets on the LiveWorksheet website and the results improved.

On the other hand, oral assignments were not done at the beginning and not handed in if they were sent in the traditional way. Albeit this beginning, throughout the term they presented every presentation and they would achieve an "A" if there was an interactive question game while the presentations were being made with positive reinforcement such as a mark increase, as Skinner claimed in his previous studies (1974).

October:

Participation in oral presentations
15 respuestas

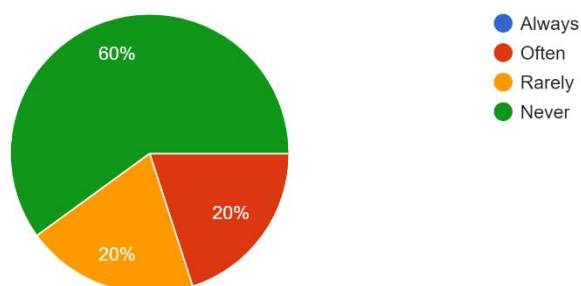


Figure 17 Participation in oral presentations (October)

Participation in oral presentations after games and positive reinforcement
15 respuestas

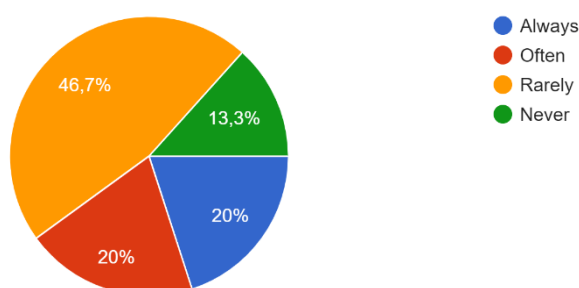


Figure 18 Participation in oral presentations after games and positive reinforcement (October)

June:

Participation in oral presentations

15 respuestas

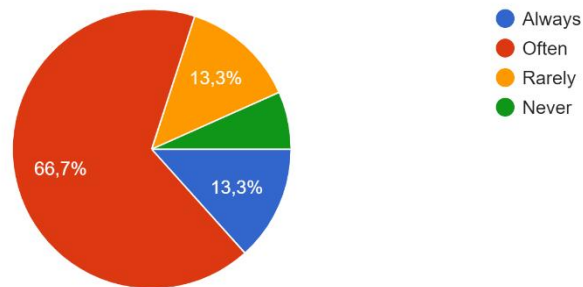


Figure 19 Participation in oral presentations (June)

Participation in oral presentations after games and positive reinforcement

15 respuestas

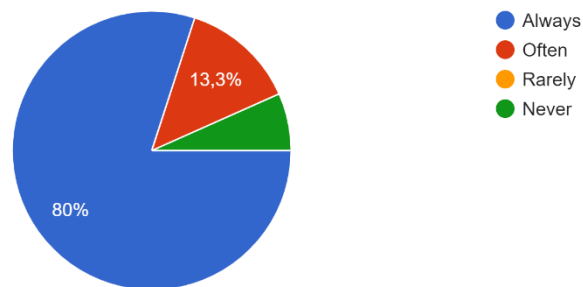


Figure 20 Participation in oral presentations after games and positive reinforcement (June)

It is paramount to draw special attention to the fact that the participation is allegedly at the very highest level when positive reinforcement and interactivity is added to the equation, as emphasized by Bai, Hew, & Huang's previous research (2020). Many students would refuse to speak in public, create an infographic or presentation at first. Nevertheless, this situation changed once I introduced some quizzes during the presentations of the few students that were willing to present their projects. They would realize that they were able of doing the same project that their classmates had done and many of them would do it later improving it. Once they realised, they were intelligent enough and that they could get good marks they increased the participation from an initial 0% of students always participating or volunteering in October (with a 20% of students that would often participate) to an 80% of students always participating in June.

Regarding the best practices and strategies, there is no perfect formula to reduce disruption when the students have such situations at home. Nevertheless, positive reinforcement combined

with game-based learning was key to obtain better results in this class. Moreover, one of the favourite games was “The Werewolf”, previously explained, due to the fact that we would play it forming a circle on the playground instead of playing it inside the normal classroom playground to practise vocabulary and grammar at some time during the week if behaviour was positive. These kinds of details made a difference in view of conditioning the students to have a good behaviour if they wanted this kind of rewards in accordance with Adipat et al. (2021) . Another reward was listening to a shared playlist created by all of them meanwhile they were doing some exercises. Should the disruptive behaviour appear, the music stops. I would also like to add the daily behaviour count and compliance with rules, which made them change their habits and they even started to copy things from the blackboard into their notebook (which they did not do at the beginning of the year). There was also a day of exchanging gifts and cultural food based on work they had done well on different countries and traditions.

Engaged and committed to the subject
15 respuestas

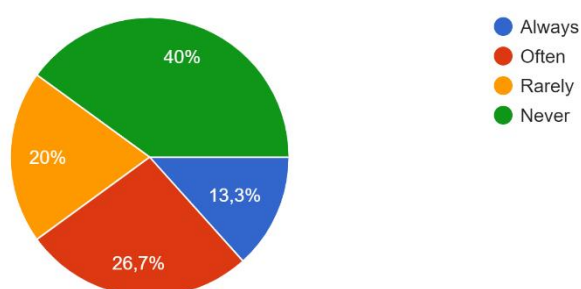


Figure 21 Engaged and committed to the subject (October)

Engaged and committed to the subject
15 respuestas

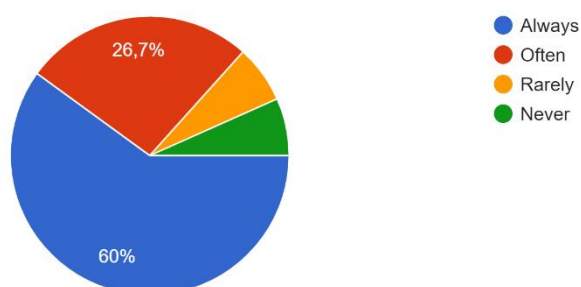


Figure 22 Engaged and committed to the subject (June)

Regarding the classroom atmosphere, it would significantly improve once a game started. The relationship between them was difficult and they had striking differences between them. For

instance, they were almost unable to communicate with two foreign students that were extremely shy. Nevertheless, when they were playing a game, they tried to cheer them up, Adipat et al. described regarding groups (2021), and to cooperate between them to achieve the common goals since their level of English was superior to the Spanish students' level as explained by Creemers (1994). Furthermore, all the diversity was better approached with the different typology of games and their levels. As a matter of fact, the two students with dyslexia obtained better results with the online exams that were similar to games due to the fact that their self-esteem and pressure was diminished because of a presentation different from a traditional exam.

Finally, the data analysis with the purpose of measuring objectively the impact of this methodology on academic performance and behaviour management. Taking into account the graphics, data and results in tandem with all the analysis previously stated, game-based learning was quite a success even when the situation was at odds due to the conflicts and all the miscellanea of problems that these students were facing on a daily basis.

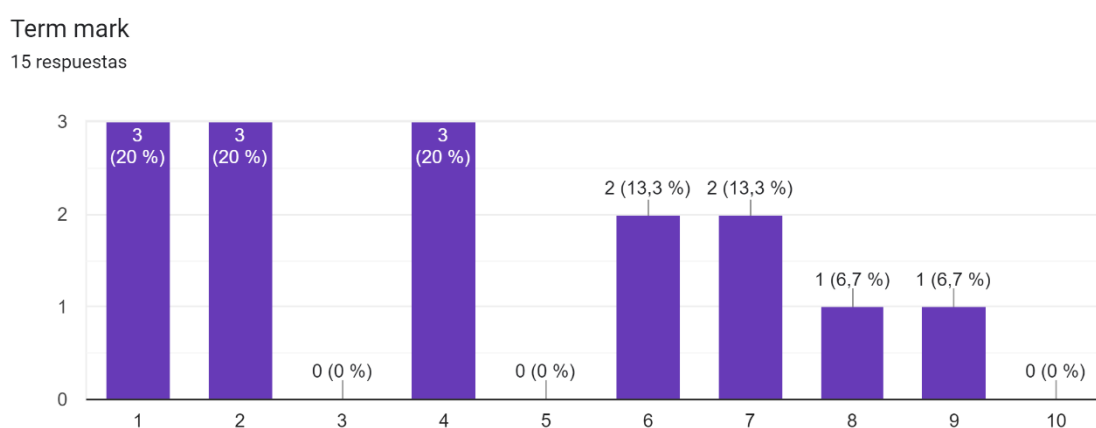


Figure 23 Starting term mark

Term mark

15 respuestas

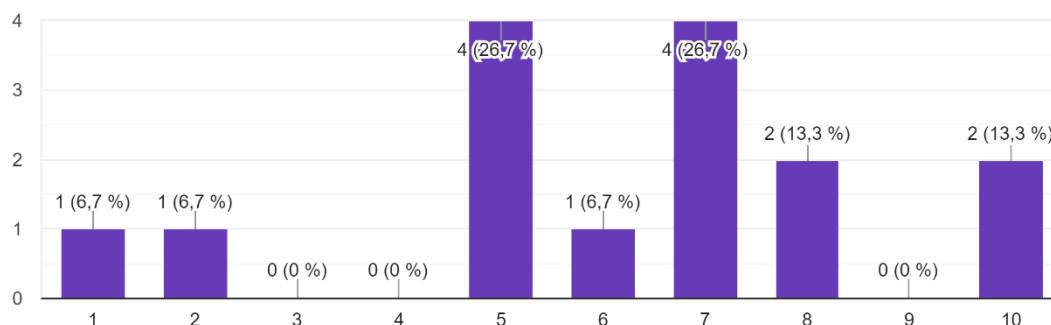


Figure 24 Final term mark

The study of this real situation has proven to be a confirmation of the suppositions stated at the beginning of this paper. The combination of different strategies could help these disruptive students to pass the subject and continue their studies, guaranteeing them a better future than the one that they could have obtained from dropping their studies, following Bai, Hew, & Huang's lines of research (2020). Leaving the high school for starting to work in a precarious job was a constant discussion heard during the school year. Nevertheless, all of them, except for 1 out of 15 that never came to the high school that year, finished the school year. The only student failing the subject changed his attitude dramatically throughout those 10 months, although it was not enough to pass the subject. The other 13 students show a clear improvement in their marks. It can be appreciated a start of 9 failed initial evaluations out of 15 students versus the 2 out of 15 failed terms at the end of the school year. It is worth noting that all of them improved their marks.

All the activities and examples explained during this paper could be adapted to suit more conventional classes or more disruptive classes as it was proven in this study. One cannot forget that teachers must adapt to the new times and that maybe some games that were appealing for my students can be considered "childish", "boring" or "inappropriate" for others if we tried to implement them in the foreseeable future. Notwithstanding, they can be updated or taken as examples to achieve a better climate in our lessons.

7. CONCLUSION

This dissertation summarises a school year study on how an active methodology such as game-based learning can reduce disruption in English lessons of a secondary education class. Classroom disruption can range from inappropriate conversations to general inattention, which can significantly undermine the effectiveness of the learning process. The plummeting of this disruption is achieved by applying interactive games that could help the students' motivation with grammar and vocabulary concepts that normally would not be appealing to them due to the heterogeneous and complex nature of this third year of ESO class. Motivation and engagement only appeared when they stopped perceiving English as an obligation and duty and they started perceiving it as a fun and useful tool for their daily life.

Once the results have been thoroughly analysed and bearing in mind that the aforementioned question was "Could game-based learning achieve better results in a disruptive classroom?", one could conclude that the main objectives have been achieved and there is an obvious affirmative answer to that question.

Teachers can obtain valuable and useful information to raise awareness of specific issues and try to identify such behaviour, investigate its causes and receive support for the inclusion of students in order to avoid prejudice and malpractice in the classroom. Unfortunately, many individuals, not only teachers, express erroneous criticisms that stem from ignorance about issues of this kind, making negative and prejudiced comments. This can happen, most commonly, when a teacher criticises "lazy" students due to falling asleep during a lesson or because of not working properly, be it at home, be it during the lesson. Should teachers ignore the reasons for this behaviour instead of looking for possible solutions, these students' results will be doomed to failure.

Changing students' attitudes in secondary English classrooms can be achieved through the implementation of game-based learning and the establishment of respectful relationships between students and teachers. These strategies can contribute to creating a more positive and effective learning environment, even in environments with disruptive behaviour. The autonomy when it comes to studying a new language can only appear if the student is willing to learn.

All things considered, one can conclude that game-based learning is an effective strategy for teaching English vocabulary and grammar in a disruptive classroom. The combination of games, competition and rewards through positive reinforcement has proven to be highly motivating and beneficial for my students' learning, as reflected in the results observed in the exercises and exams. This creative and modern approach is a valuable example of how game-based learning, be it with new technology or be it with interactive games, can transform the

learning experience in the classroom. Future lines of research could continue carrying out research with a wider range of students and during longer periods of time to confirm if the knowledge acquired through game-based learning is long-lasting and it sets the basis for the scaffolding of more advanced concepts and to confirm if disruption improves in the consecutive school year.

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9. APPENDIX

October												June												
Student	Homework completion	Disruptive behaviour	Completing traditional photocopies or exercises	Completing digital and game-based worksheets or exercises	Completing traditional exams	Completing digital and game-based exams	Collaboration in class or with exercises	Collaboration with games	Participation in oral presentations	Participation in oral presentations after games and positive reinforcement	Engaged and committed to the subject	Term mark	Homework completion	Disruptive behaviour	Completing traditional photocopies or exercises	Completing digital and game-based worksheets or exercises	Completing traditional exams	Completing digital and game-based exams	Collaboration in class or with exercises	Collaboration with games	Participation in oral presentations	Participation in oral presentations after games and positive reinforcement	Engaged and committed to the subject	Term mark
1	Often	Never	Always	Always	Always	Always	Rarely	Often	Often	Always	Always	8	Always	Never	Always	Always	Always	Always	Always	Always	Always	Always	Always	10
2	Never	Never	Never	Never	Never	Never	Never	Never	Never	Never	Never	1	Never	Never	Never	Never	Never	Never	Never	Never	Never	Never	Never	1
3	Rarely	Always	Never	Often	Never	Often	Rarely	Often	Never	Rarely	Rarely	2	Rarely	Often	Rarely	Often	Often	Always	Always	Always	Often	Always	Often	5
4	Always	Never	Always	Always	Always	Always	Always	Always	Rarely	Often	Always	9	Always	Never	Always	Always	Always	Always	Always	Always	Often	Always	Always	10
5	Rarely	Never	Rarely	Often	Often	Always	Rarely	Often	Never	Rarely	Rarely	4	Always	Never	Always	Always	Always	Always	Rarely	Always	Often	Always	Often	5
6	Often	Never	Often	Always	Often	Always	Rarely	Often	Rarely	Often	Often	7	Always	Never	Always	Always	Always	Always	Always	Always	Often	Always	Always	8
7	Rarely	Always	Rarely	Often	Rarely	Always	Rarely	Always	Never	Rarely	Never	4	Often	Rarely	Often	Always	Often	Always	Rarely	Always	Often	Always	Often	7
8	Often	Often	Rarely	Often	Always	Always	Often	Always	Often	Always	Often	6	Often	Never	Often	Always	Always	Always	Always	Always	Often	Always	Always	7
9	Never	Always	Never	Rarely	Never	Always	Never	Often	Never	Never	Never	1	Never	Often	Never	Often	Never	Always	Rarely	Always	Rarely	Often	Rarely	2
10	Never	Often	Rarely	Often	Often	Always	Never	Often	Never	Rarely	Often	6	Rarely	Never	Always	Always	Always	Always	Always	Always	Often	Always	Always	7
11	Never	Always	Never	Rarely	Never	Always	Never	Often	Never	Rarely	Never	2	Never	Rarely	Rarely	Always	Rarely	Always	Often	Always	Often	Always	Always	5
12	Rarely	Often	Rarely	Often	Often	Always	Often	Always	Often	Always	Often	7	Never	Rarely	Often	Always	Often	Always	Always	Always	Often	Always	Always	8
13	Never	Often	Never	Rarely	Rarely	Often	Rarely	Often	Rarely	Often	Rarely	4	Rarely	Never	Always	Always	Always	Always	Always	Always	Always	Always	Always	7
14	Never	Always	Never	Never	Never	Rarely	Never	Rarely	Never	Rarely	Never	2	Never	Rarely	Rarely	Often	Often	Always	Rarely	Always	Rarely	Often	Often	5
15	Never	Always	Never	Never	Never	Rarely	Never	Rarely	Never	Rarely	Never	1	Rarely	Never	Rarely	Always	Rarely	Always	Often	Always	Often	Always	Always	6

Table 1 Data