

**Promoting Critical Digital Literacies through Life is Strange Video Game to  
Address Bullying in the EFL Classroom**  
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## Abstract

This youth participatory action research (YPAR) aimed at assessing the impact of the video game *Life is Strange* in promoting critical digital literacies to address bullying among sixth graders. A group of 22 sixth-grade students were selected to interact with the video game in order to explore bullying scenarios. Participants completed a problem tree to draw a parallel between the video game and real-life situations. Later, they took part in a focus group to reflect on the understandings obtained through the exploration of the video game. The data analysis revealed that the pedagogical intervention around the video game enabled students to analyze causes, manifestations, and possible responses to bullying in both digital and real-life contexts. Additionally, students demonstrated criticality and ethical awareness concerning real-world issues such as bullying. Researchers conclude that video games may be useful pedagogical tools for developing critical digital literacies in the EFL classroom, as long as there is an active mediation from the part of the teacher through a well-planned pedagogical intervention.

**Key words:** Video games, Critical Digital Literacies, Bullying, *Life is Strange*, Youth Participatory Action Research.

### **Degree Requirement**

This action research project is submitted as a requirement to graduate from the Bachelor's Degree in English Teaching (Licenciatura en Lenguas Extranjeras con Énfasis en Inglés) at the School of Humanities and Education, Universidad Católica Luis Amigó, in Medellín, Colombia.

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## 1. Introduction

### 1.1. Statement of the Problem

With the integration of technology, education has changed over the years. The learners that educational institutions face nowadays are very different from the ones before. Students of the contemporary era require innovating strategies that address learning and adapt to their needs. In English teaching, many teachers use traditional practices such as quizzes, charts, repetition, and memorization exercises. Nonetheless, the process of changing educational paradigms can be challenging due to the resistance to change and the persistence of traditional teaching methods. However, it is essential to embrace new educational approaches to meet students' evolving needs and 21<sup>st</sup> century demands (OECD Publishing, 2019 cited in Eslit, 2023). This lack of adaptation can lead to a less participative classroom in which students keep getting constantly distracted from the class and keep creating negative ideas regarding the English language.

Another recurrent challenge in many schools is the need to strengthen criticality in students. In the 6th article, the General Education Law 115 establishes the development of critical, reflective, and analytical capacity to strengthen national scientific and technological progress, cultural improvement, quality of life, and participation in the search for alternative solutions to the problems (Congress of Colombia, 1994). However, in many schools, students fail to provide arguments, reasons, and reflections about topics developed during class because teaching is still focused on absorbing concrete knowledge, applying rules, and repeating mechanics. These activities do not provide opportunity to question, analyze, or reflect critically; making students passive agents in their learning processes. Furthermore, teachers fail to address social issues that connect students with their immediate reality. For instance, bullying is still a very big problem in Colombian schools. This is why we wanted to incorporate video games, bullying, and critical digital literacies (CDL) in order to address the issues mentioned above.

The relevance of our research project resides in the implementation of a video game named "Life is Strange" which shows bullying situations. The video game was used not only as a class strategy but also as a tool that bridges students' interest in technology and their need to learn English from a socio-critical perspective that aids them to develop critical literacies in the EFL classroom. Therefore, the purpose of this research is to contribute to further research in which teachers find insights to

implement video games as pedagogical tools whenever they need to promote CDL and address social issues.

## **1.2. Literature Review**

Researchers have recognized the potential of video games, gamification and game-based learning within educational contexts, referring to them as means to understand content, increase student engagement, and develop creativity, innovation, and social competence (Pineda-Martinez et al., 2023). Specifically in EFL, research has shown how video games improve students' vocabulary acquisition (Assia, 2023; Bin-Hady, 2023; Camacho & Ovalle, 2019; Ebrahimzadeh, 2017; Grillo, 2020; Naranjo-Couoh et al., 2023), intercultural communicative competence (González Osorio et al. 2020; Toufik & Sarnou, 2021), speaking skills (Benzetta, 2022; Khawaji, 2023), student motivation (Ebrahimzadeh & Alavi, 2017 ; Pulido, 2023 ), socialization, group work, the creation of values, and critical thinking processes (Mora & Lopera, 2001).

Similarly, video games, by offering an immersive and interactive narrative with real-world scenarios, lead researchers to study their capacity to represent social problems such as environmental awareness (Larreina-Morales & Gunella, 2023), gender discrimination (Calvo-Morata & Fernández-Manjón, 2023), armed conflict (Torres-Barreto et al., 2024), and race bias (Gutierrez et al., 2014).

Hence, our study intends to contribute to the methodological and contextual gap that is present in research about video games since most of them use questionnaires, interviews, or checklists while ours has used an interactive technique along with a focus group. Besides, although video games have been incorporated in the EFL, most part of the research has been conducted in this field in certain regions of Europe, Africa, Asia, North America, and Latin America.

Furthermore, at a regional level, specifically in Medellin, games and CDL have started to be investigated. However, there is still a need to research deeper in this field. On the other hand, even though there is research that addresses social issues, few of them are conducted to address bullying, and this is why projects like ours are important to the academic community, knowing that bullying is still a recurrent issue in schools all around the world.

## **1.3. Conceptual Framework**

### **1.3.1. Video games**

One of our main categories is video games. It refers to a digital entertainment software that mainly helps users to have fun. However, different types of video games

have been created to satisfy customers' expectations, so videogames' purposes are varied and constantly changing. In order to accomplish purposes such as ours, a good video game must be chosen for its story and its underlying messages, such as bullying, power dynamics, abuse, discrimination, etc. These two main characteristics in video games are needed to make a good pedagogical intervention.

Video games can be seen as simulators of reality which carry implicit in their design, rules, mechanics, narratives, all the evils/adventures of present reality, and contribute greatly to “reordering”, putting in order the complexity of the world that surrounds us from a playful sense (Moreno Cantano & Vanegas Ramos, 2020, p.4).

On the other hand, video games play a big role in educational contexts since they help to develop necessary skills such as critical thinking, problem solving, and decision making. These skills prepare students to face complex real-life situations. According to Ashinoff (2014) video games have the capacity to influence several skills and abilities that are paramount to the learning process (p. 2).

### **1.3.2. Critical Digital Literacy**

Critical digital literacy is a term that refers to the capacity to analyze, question, and understand the digital world in a deeper manner. It encompasses the knowledge about how to use digital tools as well as the capacity to understand the hidden messages that can be found through online spaces. In other words, “critical digital literacy refers to processes of naming and renaming the world, seeing its patterns, designs and complexities, and developing the capacity to redesign and reshape it” (Luke, 2014, p.11).

Similarly, digital resources and social media have an impact on the way people comprehend reality and interact with it. These platforms have created a space that impacts the way in which people perceive themselves, leading to challenges with self-concept, body image, and self-esteem which can be shaped by the way they relate to others online (Meilinda et al., 2020). On the other hand, according to Darvin (2017)

Critical digital literacy examines how the operation of power within digital contexts shapes knowledge, identities, social relations, and formations in ways that privilege some and marginalize others. It equips learners with the tools to examine the linguistic and nonlinguistic features of digital media, to identify their embedded biases and assumptions, in order to access the truth (p.2)

### **1.3.3. Bullying**

Bullying has been widely explored, and it is still one of the major issues in school contexts. It is an abusive behavior used to oppress others through physical, verbal or psychological violence. According to Mbah Mbah (2020) “Bullying is an action of intentionally harming someone else in different ways such as verbally, psychologically, or physically. Bullying is usually repeated over time, and it involves an abusive balance of power” (p.14). Furthermore, there are other ways in which bullying may occur. One of them is cyber bullying which is even more relevant for this research since it is the one covered in the video game. As Olufunso et al (2023) mentioned,

Cyber bullying is a way of bullying that takes place online through digital devices such as cell phones, computers, and tablets. Cyber bullying may occur through text and apps, social media, forums, or gaming. These are settings in which people can view, participate in, or share content (p.2).

### **1.4. Research Question**

How can teachers use the video game 'Life is Strange' to promote the development of sixth graders' critical digital literacy to address bullying within the EFL classroom in a private school?

### **1.5. Objectives**

#### **1.5.1. General Objective**

To assess the impact of the video game 'Life is Strange' in promoting critical digital literacy to address bullying among sixth graders within the EFL classroom in a private school.

#### **1.5.2. Specific Objectives**

- To explore how students respond to bullying as portrayed in the video game "Life is Strange".
- To describe how students critically analyze bullying in real life situations.
- To analyze the effectiveness of the video game “Life is Strange” in promoting digital critical literacy.

## **2. Method**

### **2.1. Research Methodology**

This study was conducted under the socio-critical paradigm since our research focuses on promoting bullying prevention and making students more aware of the width of this problem, so they can critically reflect about their decisions and actions in both the classroom and other social contexts. With this, students may become active agents that transform their reality.

According to Orozco Alvarado (2016) “the Socio-Critical paradigm aims to promote social transformations, providing answers to specific problems present within communities, but with the participation of their members.” (p. 6). Another important consideration is that this research belongs to the literacies field. Márquez Sánchez (2023) defines literacies “as a means of identification, comprehension, interpretation, creation and communication within an increasingly globalized world, based on texts, information and rapid communication.” (p.14).

Additionally, through a youth participatory action research (YPAR) method, researchers not only intended to make a change in young people's perception about bullying but also to encourage them to think and reflect critically about this problem, so they can suggest ideas and solutions for improving coexistence in the classroom and addressing power abuse or inequalities in their communities. According to Caraballo et al. (2017) “YPAR places youth and their communities alongside practitioners, scholars, and researchers as knowledge producers and change agents for social justice “(p.2).

### **2.2. Context**

The private school where the study was conducted is located in Robledo, Medellín. Its semi-rural setting provides a peaceful and conducive environment for learning. The community is made up of families from upper-middle socioeconomic strata. The school offers bilingual, trilingual, and basic modalities and has modern facilities and advanced technological resources that support the teaching and learning process. Each classroom is equipped with a television, computers, air conditioning, and internet access, ensuring an optimal environment for learning English and using digital tools.

One of the purposes of the school's Institutional Educational Project (PEI) is to provide tools for students to navigate the digital world and develop competently on it. Through PEI, critical thinking, and problem-solving are promoted, using media and new

technologies to improve the quality of life and understanding of the world and developing critical and informed technology users.

Besides, the school methodology focuses on developing competences through meaningful learning experiences. Interpretive, argumentative, and proactive skills (suggesting hypotheses, proposing solutions, making decisions or taking action to face different events or social conflicts) should be addressed through strategies such as project work, problem-solving, and teaching for understanding. The frequency of English classes is distributed like this: 5 weekly classes with a total of 8 hours. Besides, 4 of the hours are designated to conversation clubs and 1 hour to English reading clubs.

On the other hand, the researcher-participant relationship was marked by previous connections because one of the researchers of this study was the participant students' English teacher. This dual role meant that the participants did not see him as an external researcher but as their regular teacher, which facilitated trust and familiarity. Also, the researcher's relationship with the institution played a key role because, being part of the teaching staff, he had more direct access to the school environment. This facilitated the implementation of the intervention and the collection of data within the institutional context

### **2.3. Participants and Sampling**

The pedagogical intervention was conducted with two sixth-grade groups that summed a total of 38 students ranging in age from 11 to 13. The groups were made of boys and girls, from Venezuela and Colombia, enrolled in secondary education. The participants' English proficiency levels ranged from A2 to B1, according to the Common European Framework of Reference for Languages (CEFR). In addition, students belong to an upper-medium socioeconomic strata, so they have access to various technological resources such as cell phones, tablets, computers and video game consoles. This allows them to interact with video games on a regular basis, facilitating their exposure to different digital experiences. Initially, both groups were selected for pedagogical intervention to ensure equity and equality in the learning process. However, due to the extracurricular activities and the loss of English class hours in one of the sixth-grade courses, it was decided to collect data only in one of them. Therefore, although both groups received the intervention, data was collected only from 22 participants belonging to the second group.

The sampling selected was homogeneous because it allowed to select participants with similar characteristics, such as age, educational level, and school context. This was a key element to the design of the focus group by bringing together

students with similar profiles, ensuring that participants understood each other better and expressed their ideas in a more aligned way, and this facilitated the collection of clear and useful data for analysis. Shaheen et al. (2019) state that “focus group interviews concentrate on homogeneous groups and conduct open-ended interviews. Sampling in focus groups involved bringing individuals from similar contexts to participate in a group interview” (p. 31).

To ensure compliance with ethical standards, we requested permission from the school to carry out the research. The permission granted by the institution had the objectives, methodology and ethical considerations of the study for the institution to approve the project. This allowed the implementation of the intervention on the condition of maintaining confidentiality and the exclusive use of the data for research purposes. However, the students were underage, so we obtained the students' parents or legal guardians permit with an informed consent. They signed the document, authorizing their children's participation in the study and guaranteeing its voluntariness and respect for ethical principles throughout the process.

#### **2.4. Pedagogical Intervention**

The pedagogical intervention was developed in four class sessions. In the first session, participants discussed previous experiences with video games, and the importance and benefits that students attribute to them. In addition, their experiences and observations about bullying were explored in two contexts: inside and outside the school allowing the first approach to this subject.

In the second session, the video game “Life is Strange” was introduced. The students played through a TV with the PlayStation console for about 2 hours. They were organized into teams that took turns playing. While one team played, the others had to remain silent and attentive to be immersed with the story and the decisions made. At the end, each group wrote a reflective text answering the question: "In the video game, Maxine Caulfield sometimes has to choose between helping others or herself. How can we balance our needs with those of the community?"

In the third session, the interactive technique of the Problem Tree was carried out. Initially, the technique was explained and then the students were organized into groups of 3 to 4 people. They answered a series of questions about the video game and connected it to real-life experiences. Based on their answers, a space for dialogue was generated in which each group shared their ideas or conclusions.

In the fourth session, the teacher led a reflective discussion, posing questions to each group to deepen their answers and encourage critical reflection. The questions were:

How do bullying situations in the video game relate to your own personal lives and experiences?

Can you remember any example in which you have been bullies, victims or observers of bullying?

How does bullying influence the way we feel in video game and real-life scenarios?

What decisions did you make in each of the situations and what consequences did they have?

From the video game and your own experiences, do you think you will begin to participate in the prevention of bullying directly or indirectly?

How do you think the application of these video games can positively influence interpersonal relationships and the educational community?

## **2.5. Data Collection**

### **2.5.1. Interactive Technique: Problem Tree**

The problem tree interactive technique was developed over a period of two weeks with a duration of 3 hours, and it was divided into two dimensions: one focused on the video game and the other on real life. As described by Veselý (2008), a problem tree is a universal heuristic used to identify, prioritize, and visualize problems, presenting a framework of problem causes and effects. (p. 70) This technique was developed following the stages of setting, reflection, expression, interpretation, analysis, and evaluation (Abad, 2024). In the first week, the meaning of each part of the tree was explained: the roots corresponded to the context of the city; the trunk symbolized the school context; the branches represented the specific situations of both the video game and real life; the leaves reflected problem-solving; the fruits represented decision-making and its consequences; and the flowers evidenced strategies for bullying prevention. (Appendix 1). Then, groups of 3 to 4 people were formed to dialogue and write their answers in a Padlet (Version 215.8.0), and they had a week to respond to the questions. Subsequently, in the second week, the answers were shared in groups to encourage collective reflection. Finally, a discussion was held to interpret the findings, followed by an analysis of the data and an evaluation of the process to ensure democratic validity (Burns, 1999).

### **2.5.2. Focus Group**

In this study, the focus group consisted of a series of discussions guided by 9 open-ended questions along with final comments from participants and researchers

related to video games, critical digital literacy, and bullying. (Appendix 2). Through these discussions, participants had the opportunity to express their perceptions, opinions and experiences. Cortés (2008) defines focus group as “a technique that focuses on the plurality of responses obtained from a group of people. It is defined as a qualitative research technique whose objective is to obtain data through the perceptions, feelings, attitudes, and opinions of groups of people.” (p. 36). Further on, the participants were organized in groups of 3 to 4 people to respond more punctually the questions in a Padlet (Version 215.8.0). This technique lasted 2 weeks, and the time was 2 hours for each week. This allowed data collection for the objective of analyzing the effectiveness of the video game "Life is Strange" in promoting critical digital literacy and a deeper understanding of bullying.

**Table 1**

***Action Plan***

<b>Specific Objectives</b>	<b>Date</b>	<b>Hours</b>	<b>Techniques</b>
To explore how students respond to bullying as portrayed in the video game "Life is Strange"	25/08/2024 To 06/09/2024	3 hours each week	Interactive Technique. Problem Tree
To describe how students critically analyze bullying in real life situations.	25/08/2024 To 06/09/2024	3 hours each week	Interactive Technique. Problem Tree
To analyze the effectiveness of the video game "Life is Strange" in promoting digital critical literacy and a deeper understanding of bullying.	11/11/2024 To 20/11/2024	2 hours each week	Focus Group

## **2.6. Data Analysis**

For data analysis, we developed a six-step plan inspired by the models of Taylor-Powell and Renner (2003), Savin-Baden and Major (2013), and Saldaña (2013). This plan details the actions we followed to analyze the information obtained through the interactive technique and the focus group. During this process, new categories emerged and were incorporated into the category tree, which allowed a deeper understanding of the topics addressed in the study. The resulting structure was

organized into two main axes: Analysis of Bullying in video games and in real life and Critical Digital Literacy. Figure 1 presents the structure of these categories.

In the first step, characterizing, we familiarized ourselves with the data collected through the interactive technique problem tree and focus group. By using Padlet, we guaranteed easier access and clearer information, allowing us to re-read the data as many times as needed to fully understand it.

The second step, cutting, we segmented the data into chunks of meaningful information. Additionally, the chunks of segmented data were recorded in an Excel document for further organization and analysis.

In the third step, coding, we assigned labels to each piece of relevant data. Initially, we used in vivo coding. Later, we applied analytical coding, where we created codes based on our interpretation of the data. Then, we reviewed and refined the initial codes, adjusting them to correct any that might be too broad, vague, or repetitive.

The fourth step, categorizing, we grouped similarly coded data into broader categories (video games, critical digital literacy and bullying). Within each broad category, we identified and defined subcategories that represent more specific aspects or details.

In the fifth step, converting, we drew patterns, connections, and relationships within and between categories, as well as assess the relevance of the information.

Finally, in the sixth step, creating, we made a list of the key aspects of our findings. Then, we presented these findings in tables.

**Table 2.**

***Category Structure for Analysis of Bullying***

<b>Categories</b>	<b>In the video game</b>	<b>In real life</b>
<b>Causes</b>	<ul style="list-style-type: none"> <li>● Environmental contamination</li> <li>● Social degradation</li> </ul>	<ul style="list-style-type: none"> <li>● Drug problems</li> <li>● Social structures</li> </ul>
<b>Manifestations</b>	<ul style="list-style-type: none"> <li>● Drug abuse</li> <li>● Psychological</li> <li>● Physical</li> <li>● Gender-based</li> </ul>	<ul style="list-style-type: none"> <li>● Psychological problems</li> <li>● Physical abuse</li> </ul>
<b>Possible Responses</b>	<ul style="list-style-type: none"> <li>● Anticipatory Communication</li> <li>● Emotional support</li> </ul>	<ul style="list-style-type: none"> <li>● Proactive communication</li> <li>● Healthy environment construction</li> <li>● Emotional help</li> <li>● Intervention</li> </ul>

**Table 3.**  
**Category Structure for Critical Digital Literacy**

<b><i>Criticality</i></b>	<ul style="list-style-type: none"> <li>● Decision- making analysis</li> <li>● Perception shift</li> <li>● Consequence's awareness</li> </ul>
<b><i>Ethical considerations</i></b>	<ul style="list-style-type: none"> <li>● Online responsibility</li> <li>● Personal and social wellbeing</li> </ul>

## 2.7. Methodological Integrity

To ensure the trustworthiness of the study, we implemented three key strategies based on Shenton (2004):

**Triangulation of researchers.** Each team member analyzed the data individually before contrasting the findings together. This made it possible to identify coincidences, differences and possible biases, ensuring a more accurate interpretation.

**Frequent debriefing sessions with the director.** We held regular meetings with our advisor to discuss progress, receive feedback, and consider different perspectives. These sessions helped us detect potential errors, evaluate alternatives, and improve our approach. In addition, sessions were key to minimizing bias in the interpretation of the data and ensuring that our conclusions were more accurate and substantiated.

**Members checking.** During and at the end of the data collection process, we asked participants to verify the accuracy of our interpretations and transcripts. They confirmed whether their words really reflected what they wanted to express, which allowed them to correct possible misunderstandings and strengthen the credibility of the analysis.

## 3. Results

The results obtained through the data collection process were organized and analyzed according to the objectives of the research project. Students explored and analyzed the causes, manifestations, and possible responses to bullying both in the video game *Life is Strange* and in real life. In this process, students developed critical digital literacies by applying critical thinking and addressing ethical considerations related to the bullying situations presented.

### 3.1. Exploration of Bullying in the Video Game *Life is Strange*: Causes, Manifestations, and Possible Responses.

The data showed the causes of bullying that participants identified through the video game *Life is Strange*. These causes include environmental contamination, social degradation, and drug abuse, in which elements such as trash, noise, class division, inequality, and drug selling stood out. Some students mentioned:

- **G2:** "The environment is a mix of many issues, such as noise and environmental pollution." (IT)<sup>1</sup>
- **G5:** "The school is big, and there is a lot of bullying; the hallways are dirty." (IT)
- **G3:** "It's clear that everything is divided like in a pyramid of social classes." (IT)
- **G6:** "It's a lonely place, uncomfortable and dangerous situations are experienced, and there are many ill-intentioned people with unequal privileges." (IT)
- **G4:** "It feels like the environment of a small town in the United States, where people sell drugs to high school students in Arcadia Bay to make money." (IT)

The participants also explored the psychological, physical, and gender-based manifestations of bullying in the video game. On a psychological level, students highlighted a stressful and disorderly environment that generates mental distress. On a physical level, they identified aggression, violence, and the use of illegal weapons. Regarding gender-based aspects, it was noted that both men and women face risks, but that women feel more vulnerable. Students commented:

- **G4:** "It's a U.S. setting that tries to replicate an environment of stress and disorder, which causes students to feel or go crazy due to the stress they carry." (IT)
- **G1:** "It's very heavy, full of aggressive or violent people." (IT)
- **G6:** "Use of knives or illegal weapons." (IT)
- **G2:** "There are moments when it can be a bit dangerous, especially for women (it also happens to men, but it's more evident for women because we are seen as 'weak')." (IT)

Students also proposed possible responses to bullying in the video game such as anticipatory communication and emotional support. Participants suggested that talking to an older adult would help address the situation. They also highlighted the

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<sup>1</sup> All excerpts were translated from Spanish for publication purposes.

importance of providing emotional support to victims, especially during difficult times. The following excerpts reflect these ideas:

- **G5:** "Alert teachers or a parent in time." (IT)
- **G2:** "Provided emotional support to Kate from the beginning and acted directly on the rooftop by offering her genuine support." (IT)

### **3.2. Analysis of Bullying in Real Life: Causes, Manifestations, and Possible Responses.**

The data revealed the causes of bullying that participants highlighted in real life. These causes were drug problems and social structures. Students mentioned the presence of illicit substances and their early use, as well as social inequality and disputes to control territory. The following excerpts illustrate each of these aspects:

- **G4:** "Colombia is a place where a lot of illicit substances are consumed." (IT)
- **G1:** "I feel it's a bit heavy, not just in the city but also at school. Everyone is very rude and violent, and people aged 12–13 and up love drinking and doing drugs." (IT)
- **G6:** "Social status is damaging society." (IT)
- **G3:** "There are places with bad people who take over and turn them into dangerous areas." (IT)

In addition, participants analyzed various ways in which bullying manifests in real life, including psychological problems and physical abuse. Students highlighted that bullying can lead to physical harm, anxiety and depression. Here are some of the quotes that include how they see these manifestations:

- **G3:** "Anxiety is a problem caused by harassment or bullying, which leads to depression and also to disorders." (IT)
- **G1:** "Some people are rude, offensive, and selfish because they lack good judgment; they physically hurt others and start fights every day." (IT)

Regarding possible responses to bullying in real life, participants suggested different strategies to address this problem, including proactive communication, healthy environment construction, emotional support, and intervention. They emphasized the importance of alerting authorities, teachers, or family members in a timely manner;

making school a safe place for everyone and providing support and intervening when bullying is witnessed. Some students stated:

- **G5:** "Tell a teacher or parent before something worse happens." (IT)
- **G2:** "I think to solve problems, the authorities should be called to stop these situations, and also talk to the teachers." (IT)
- **G3:** "Be very selective with friendships, be responsible, obedient, and create a healthy and safe environment through my behavior and attitude." (IT)
- **G1:** "Provide emotional support to the person." (IT)
- **G6:** "Intervene when we see a situation, especially if I see that it's repetitive." (IT)

### **3.3. Development of Critical Digital Literacies: Application of Criticality and Ethical Considerations for Bullying.**

The data showed that developing critical digital literacies involved the participants' application of criticality, especially in three key areas: decision-making analysis, consequences awareness, and perception shift. They analyzed the different decisions they made in the video game, recognized that each choice could have significant effects, and began to understand bullying from new perspectives. Participants mentioned:

- **SG3:** "Talking to Kate on the rooftop was the hardest part because every word we said could change the situation, if we made the right decision, we helped her, but if we failed, we could lose her." (FG)
- **SG2:** "We didn't think our decisions would be so important, but then we saw that if we didn't help the characters, things got worse, and now we know that everything you do has consequences." (FG)
- **SG6:** "We thought bullying was only when someone laughed at you or pushed you, but now we know that sometimes bullying is more subtle and can happen through rumors or things people say about you on social media." (FG)

The data also showed that participants considered ethical issues, especially those related to online responsibility and personal and social well-being. They mentioned the importance of thinking before posting, being careful about what they share, not hurting others, and recognizing how social media affects people's lives. Additionally, they highlighted the need to take care of their own well-being while supporting those around them. The students remarked:

- **SG4:** "Now we know that we have the responsibility not to share things that might hurt others, like we saw in the game, so we should always think before posting anything." (FG)
- **SG2:** "In Life is Strange, we saw how social media can affect people's lives, so we understand that we have to be responsible when sharing anything online." (FG)
- **SG6:** "The important thing is knowing that there are times when it's best to act for the good of others, but we also have to take care of ourselves to avoid getting hurt." (FG)
- **SG1:** "It's good to have a balance between helping others and taking care of our own well-being." (FG)

## 4. Discussion

### 4.1. Interpretations and Implications

In line with previous research, our study shows that video games can be a potential tool for the development of skills in educational contexts, more specifically in the EFL. In our particular case, the video game was crucially useful to promote critical digital literacies (Mora & Lopera, 2001). Furthermore, the video game is not only an element of entertainment but also a powerful simulation of real-life problems that require the attention of the academic community (Moreno Cantano & Vanegas Ramos, 2020). The video game analysis makes students more critical, reflective, and conscious about social issues, helping them to develop critical digital literacies as well as the understanding of bullying.

Video games can become true pedagogical tools, yet integrating them requires the active role of the teacher to transform the gaming experience into a learning opportunity. Teachers must guide students with thought-provoking questions, promote discussions, and design activities that connect with the game's themes and real-life experiences in order to encourage reflection and critical analysis. According to R uth (2021) "The efficacy of games for learning depends largely upon teachers' capacity to leverage games effectively as learning tools and on students' willingness to engage in game play and other pedagogical activities—such as dialogic interactions for meaning making" (p.5).

On the other hand, bullying is a social problem that cannot be addressed individually. Therefore, the interactive technique of problem tree and focus groups were fundamental in addressing this problem, as they allow spaces for dialogue and reflection where students can share diverse perspectives, experiences, and emotions.

Through this collective interaction, students' critical literacies and the search for meaningful solutions based on consensus are fostered. This demonstrates that understanding and addressing bullying requires collaborative work and the active participation of all members (Irianto et al., 2024).

#### **4.2. Limitations and Suggestions for Future Research**

During the course of this research project, several limitations arose. One of the main ones was the limited time for data collection due to the institutional and extracurricular activities scheduled for the students' closing of the school year. This caused the teacher-researcher to attend these events as part of his teaching duties, putting data collection on hold and delaying the planned schedule. Consequently, it was necessary to request additional time by teaching other subjects to ensure the continuity of the study. However, the students were already tired and distracted, which affected their willingness to answer the questions on the instruments. Another limitation was the coordination of the research team due to individual commitments and work and academic responsibilities. Added to this was the stress, fatigue, overload, and emotional pressure caused by the research process, which made it difficult to coordinate tasks and hold more regular meetings.

On the other hand, for future research it is suggested to implement video games that have narratives that address real-life topics or social problems relevant to students and relate to their context. Teachers should select videogames that shows situations that students can experience or recognize in their daily lives so that they can make connections, generate deep reflections and propose effective solutions that work in both contexts. Likewise, R uth (2021) states that "teaching with video games includes several pedagogical activities whereby teachers can support student learning" (p. 4). These video games should be complemented with reflective and collaborative pedagogical activities. For example, debates, interactive techniques, discussion groups, role-playing, or case analysis can support the learning process and collectively build knowledge.

Finally, it is recommended that teachers implement video games based on the contexts, ages, and grade levels of the students. If sensitive topics will be addressed with minors, it is important to obtain signed consent from parents and the educational institution, as it is necessary to address issues that are social problems in schools, such as bullying, which affects students of varying ages. Furthermore, it is important to explore how the development of critical digital literacy and bullying awareness varies across educational levels through the implementation of video games.

### **4.3. Conclusions and recommendations**

Life is Strange offered meaningful opportunities for students to develop critical digital literacies by reflecting on their choices and the consequences of their decisions. They shifted their view on bullying and considered the ethical impact of sharing content online and practicing respectful digital behavior. Additionally, students became more aware of how their actions affect both themselves and others in digital and real-life contexts. In addition, Life is Strange provided a platform for discussing and reflecting on social issues like bullying. Students explored causes, manifestations, and possible responses of bullying in both contexts, gaining valuable insights to understand and address this issue. The video game also enabled students to connect digital experiences with real-life situations, allowing them to draw a parallel between the challenges faced in the video game and those encountered in their personal lives.

Teachers can enrich their teaching practices by integrating video games into their lesson plans with clear educational purposes and pedagogical sense. In doing so, video games cease to be viewed solely as entertainment, but as vehicles for developing essential 21st-century skills such as critical thinking, problem-solving, decision-making, collaboration, and digital competence. Furthermore, it is essential that the curriculum reflect students' realities, integrating real-life topics and social issues that directly impact their lives. This allows students to connect their learning with their personal experiences and social context, facilitating an active, meaningful, and contextualized learning process.

# Appendix 1. Interactive Technique - Problem Tree

**OBJETIVOS**

PROYECTO: Digitalización en EFL. An exploration of "Life is Strange" videogame to promote critical digital literacy to address bullying.

INVESTIGADORES: Jonathan Orjales, Nicolás López, Elizabeth Moreno, Felipe Ocampo y Laura Uribe.

TUTOR: José Vicente Abad.

UNIDAD PARTICIPANTE: Colegio Ferris Bique.

**PRESENTACIÓN**

Se diseñó la técnica interactiva digital Árbol de Problemas sobre el juego "Life is Strange". Esta técnica, que busca promover la identificación de gran crítica y abordar el bullying, se implementará en seis etapas a lo largo de dos semanas con sesiones de tres horas cada una. Los participantes reflexionarán y analizarán sobre cómo el juego trata el bullying y su relación con situaciones reales. Se utilizará el árbol para registrar y organizar sus respuestas, facilitando la discusión y el análisis, y permitiendo una comprensión más profunda del tema.

**PARTES DEL ÁRBOL**

**ESCUARRO 1**  
ESCUARRO 2  
ESCUARRO 3  
ESCUARRO 4

**DECISIONES Y CONSECUENCIAS**

**VIDEJUEGO**

**VIDA REAL**

**PARTES DEL ÁRBOL**

**DECISIONES Y CONSECUENCIAS**

**LIFE IS STRANGE**

## Appendix 2. Protocol for Focus Group

### Promoting Critical Digital Literacies Through an Exploration of “Life is Strange” Video Game to Address Bullying in the EFL Classroom.

**Investigadores:** Jonathan Andrés Grajales Peláez, Nicolás López Granda, Elizabeth Moreno Valencia, Andrés Felipe Ocampo Arroyave, Laura Uribe Gómez.

**Institución:** Universidad Católica Luis Amigó

#### Apertura:

Buenos días alumnos de sexto grado. El objetivo principal de esta investigación es evaluar el impacto del videojuego “Life is Strange” en la promoción de una la literacidad crítico-digital y una comprensión más profunda del acoso escolar. Para que todos tengamos una experiencia constructiva y respetuosa durante el grupo focal, vamos a establecer unas reglas básicas:

1. Mostrar respeto hacia los demás y sus opiniones.
2. Participar de manera activa.
3. Mantener la información dentro de los mismos participantes.
4. Llegar puntualmente a la clase para no interrumpir la realización del grupo focal.

#### Preguntas:

<b>Análisis del Videojuego</b>	Hubo alguna decisión dentro del juego que te resultó difícil de tomar ¿Por qué?
	¿Qué pensaste sobre las consecuencias de las decisiones difíciles que tomaste?
	¿Qué descubriste sobre ciertas situaciones sociales a través del análisis del juego?
<b>Promoción de Literacidad crítico digital</b>	¿De qué manera el juego Life is Stange te hizo pensar sobre lo que publicamos o compartimos en internet?
	¿Cómo decides cuándo es necesario priorizar el bienestar de los demás sobre el tuyo o viceversa?
	¿Qué relaciones encontraste entre las situaciones de bullying del videojuego Life is Strange y las situaciones que vives en tu vida real?
<b>Entendimiento del Bullying</b>	A partir de las consecuencias de tus decisiones en el juego ¿Qué acciones específicas tomarías en tu vida si experimentarás y presenciarias una situación de bullying?
	¿Qué principales diferencias existen entre la forma en que solías percibir el acoso y la forma en que lo haces ahora?
	¿Qué valores o habilidades crees que podrías aplicar para prevenir el bullying?

#### Comentarios Finales del Participante

No dude en compartir cualquier comentario, reflexión o sugerencia adicional que pueda tener antes de concluir el grupo focal

#### Comentarios Finales del Investigador

Este espacio está designado para que el investigador proporcione comentarios u observaciones finales basados en la discusión y los conocimientos recopilados durante el grupo focal.

**Cierre:** Muchas gracias a todos por su participación y sus valiosas ideas. Esto concluye nuestra sesión. ¡Que tengan un excelente día!

## References

- Abad Olaya, J. V. (2024). Escritura colaborativa entre maestros formadores y en formación en los semilleros de investigación desde un enfoque en literacidades académicas críticas [Tesis de Doctorado, Universidad Pontificia Bolivariana]. <http://hdl.handle.net/20.500.11912/12150>
- Ashinoff, B. (2014) The potential of video games as a pedagogical tool. *Front Psychol.* 2014 Sep 30;5:1109. doi: 10.3389/fpsyg.2014.01109. PMID: 25324811; PMCID: PMC4179712. doi: [10.3389/fpsyg.2014.01109](https://doi.org/10.3389/fpsyg.2014.01109)
- Assia, L. (2023). *The effects of playing videogames on developing EFL learners' vocabulary: Case of third year MS pupils at Sid Rohou Middle School* (Master's thesis). Kasdi Merbah Ouargla University, Faculty of Letters and Languages, Department of Letters and English Language, Ouargla, Algeria. <https://dspace.univ-ouargla.dz/jspui/bitstream/123456789/34530/1/Lamri%20Assia.pdf>
- Benzetta, A. (2022). *Students' and teachers' perceptions of educational video games in improving students' speaking skill: The case of second year EFL students at Biskra University* (Master's thesis). Mohamed Khider University of Biskra, Faculty of Letters and Languages, Department of English Language, Biskra, Algeria. [http://archives.univ-biskra.dz/bitstream/123456789/21170/1/Benzetta\\_Abdelhamid.pdf](http://archives.univ-biskra.dz/bitstream/123456789/21170/1/Benzetta_Abdelhamid.pdf)
- Bin-Hady, W. (2023). The Role of Games in Enhancing EFL Students' Vocabulary Acquisition. *Journal of the faculty of Education* 1(17):48-58. DOI:[10.60037/edu.v1i17.1178](https://doi.org/10.60037/edu.v1i17.1178)
- Burns, A. (1999). Collaborative Action Research for English Language Teachers. New York: Cambridge University Press.
- Calvo-Morata, A. & Fernández-Manjón. (2023). Serious Games for Social Problems. Learning Technologies and Systems (pp.98-109). DOI:[10.1007/978-3-031-33023-0\\_9](https://doi.org/10.1007/978-3-031-33023-0_9)
- Camacho, G & Ovalle, J. (2019). Video Games: Their Influence on English as a Foreign Language Vocabulary Acquisition. *GiST Education and Learning Research Journal.* 172-192. 10.26817/16925777.707. DOI:[10.26817/16925777.707](https://doi.org/10.26817/16925777.707)
- Caraballo, L., Lozenski, B. D., Lyiscott, J. J., & Morrell, E. (2017). YPAR and Critical Epistemologies: Rethinking Education Research. *Review of Research in Education*, 41(1), 311-336. <https://doi.org/10.3102/0091732X16686948>

- Congress of Colombia. (1994). General Education Law 115: Article 6.  
[https://www.mineducacion.gov.co/1621/articles-85906\\_archivo\\_pdf.pdf](https://www.mineducacion.gov.co/1621/articles-85906_archivo_pdf.pdf)
- Cortés, C. (2008). La técnica del Focus Group para determinar el diseño de experiencias de formación de usuarios.  
[https://ru.iibi.unam.mx/jspui/handle/IIBI\\_UNAM/CL879](https://ru.iibi.unam.mx/jspui/handle/IIBI_UNAM/CL879)
- Ebrahimzadeh, M. (2017). Readers, players, and watchers: EFL students' vocabulary acquisition through digital video games. *English Language Teaching*, 10(2), 1–18. <https://eric.ed.gov/?id=EJ112522>
- Darvin, R. (2017). Language, Ideology, and Critical Digital Literacy. In: Thorne S., May S. (eds) *Language, Education and Technology*. Encyclopedia of Language and Education (3rd ed.). Springer, Cham. DOI:[10.1007/978-3-319-02237-6\\_35](https://doi.org/10.1007/978-3-319-02237-6_35)
- Eslit, E. (2023). 21st Century Teaching: Updates, Challenges, and Best Practices. 10.13140/RG.2.2.21864.65284. DOI:[10.13140/RG.2.2.21864.65284](https://doi.org/10.13140/RG.2.2.21864.65284)
- González Osorio, J, Restrepo Cano, R y Ruiz Victoria, J. (2020). The impact of using video games for the development of the knowledge component of the intercultural communicative competence on students of first semester at the Licenciatura en Bilingüismo con Énfasis en Inglés. Pereira : Universidad Tecnológica de Pereira. Disponible en: <https://hdl.handle.net/11059/12235>
- Gutierrez B, Kaatz A, Chu S, Ramirez D, Samson-Samuel, C, & Carnes M. (2014). "Fair Play": A Videogame Designed to Address Implicit Race Bias Through Active Perspective Taking. *Games Health J*. 2014 Dec;3(6):371-8. Epub 2014 Sep 24. PMID: 26192644; PMCID: PMC4559151. doi: [10.1089/g4h.2013.0071](https://doi.org/10.1089/g4h.2013.0071)
- Grillo, A. (2020). *Video game usage in the acquisition of vocabulary for English as a foreign language* (Trabajo de conclusión de curso). Universidade de Caxias do Sul, Área do Conhecimento de Humanidades, Curso de Licenciatura em Letras Inglês, Caxias do Sul, Brasil. <https://repositorio.uces.br/11338/12186>
- Irianto, B. S., Sutrisno, S., & Suryasaputra, R. (2024). Efforts to Stop Bullying in Schools: Strategies, Challenges, and Solutions. *Equlegum International Law Journal*, 84–90. <https://doi.org/10.61543/equ.v2i3.78>
- Khawaji, A. (2023). An Analysis of the Effect of the Video Games on Speaking Proficiency and Communication Skills in Saudi Arabia: A Systematic Review. *Int J Edu Sci*, 43(1-3): 11-22. DOI: [10.31901/24566322.2023/43.1-3.1284](https://doi.org/10.31901/24566322.2023/43.1-3.1284)
- Larreina-Morales, M & Gunella, C. (2023). Video games for environmental awareness: the accessibility gap. *Universal Access in the Information Society*. 1-13. 10.1007/s10209-023-01026-6. DOI:[10.1007/s10209-023-01026-6](https://doi.org/10.1007/s10209-023-01026-6)

- Luke, Allan (2014) Defining critical literacy. In Avila, J & Zacher Pandya, J (Eds.)  
Moving critical literacies forward: A new look at praxis across contexts.  
Routledge, United States of America, pp. 19-31.  
<https://eprints.qut.edu.au/54875/26/54875.pdf>
- Márquez Sánchez, J. (2024). Self-directed learning through new literacies: the case of a teacher of English as a foreign language. Universidad de Córdoba.  
<https://repositorio.unicordoba.edu.co/handle/ucordoba/8653>
- Mbah Mbah, R. (2020). The Perceptions of Students about School Bullying and how it Affects Academic Performance In Cameroon. [Master 's thesis, Memorial University of Newfoundland]. School of Graduate Studies. <https://doi.org/10.48336/6KA2-2F62>
- Meilinda, N., Malinda, F., & Aisyah, SM. (2020). Digital Literacy in Digital Teenagers (Socialization of the Use of Social Media for High School Studentes). *Abdimas Mandiri Journal.*, 4 (1). <https://doi.org/10.36982/jam.v4i1.1047>
- Mora, R & Lopera, M. (2001). Games in the classroom: more than just having fun. *Revista HOW.* Medellín, Colombia. [https://scholar.google.es/citations?view\\_op=view\\_citation&hl=es&user=pC3wUfUAAAAJ&citation\\_for\\_view=pC3wUfUAAAAJ:WHdLCjDvYFkC](https://scholar.google.es/citations?view_op=view_citation&hl=es&user=pC3wUfUAAAAJ&citation_for_view=pC3wUfUAAAAJ:WHdLCjDvYFkC)
- Moreno Cantano, A. C., & Venegas Ramos, A. (2020). El videojuego como espejo de la sociedad contemporánea. *Barataria. Revista Castellano-Manchega De Ciencias Sociales*, (29), 1–8. <https://doi.org/10.20932/barataria.v0i29.577>
- Naranjo-Couoh, V., Morales-Caamal, D., Pantoja-Lee, A., & Silva-Colli, O. (2023). The use of video games in vocabulary acquisition: a short narrative review. *Journal of Artificial Intelligence and Computing Applications*, 1(1), 17-25.  
<https://doi.org/10.5281/zenodo.10694852>
- Olufunso, O. Alani, A, Olabisi, O & Ayemowa, M. (2023). AN OVERVIEW OF CYBERBULLYING.  
[https://www.researchgate.net/publication/384107909\\_AN\\_OVERVIEW\\_OF\\_CYBERBULLYING](https://www.researchgate.net/publication/384107909_AN_OVERVIEW_OF_CYBERBULLYING)
- Orozco Alvarado, J. C. (2016). La Investigación Acción como herramienta para la Formación Docente. Experiencia en la Carrera Ciencias Sociales de la Facultad de Ciencias de la Educación de la UNAN-Managua, Nicaragua. *Revista Científica De FAREM-Estelí*, (19), 5–17.  
<https://doi.org/10.5377/farem.v0i19.296>
- Pineda- Martinez, M. Llanos-Ruiz, D. Puente-Torre, P & García-Delgado, M. (2023) Impact of Video Games, Gamification, and Game-Based Learning on

- Sustainability Education in Higher Education. *Sustainability* 2023, 15, 13032.  
<https://www.mdpi.com/2071-1050/15/17/13032>
- Pulido, A. (2023). *Enhancing students' motivation in the EFL classroom through Life is Strange: A digital game-based learning scenario proposal* (MA dissertation).  
 Universitat de Barcelona, Màster de Formació del Professorat de Secundària  
 Obligatòria i Batxillerat, Formació Professional i Ensenyament d'Idiomes,  
 Especialitat en Anglès, Barcelona, España.  
[https://diposit.ub.edu/dspace/bitstream/2445/200580/1/TFM\\_angie-alejandra\\_pulido\\_salcedo.pdf](https://diposit.ub.edu/dspace/bitstream/2445/200580/1/TFM_angie-alejandra_pulido_salcedo.pdf)
- Rüth, M (2022). Learning and teaching with video games: Toward theoretical progress and educational practice. PhD thesis, Universität zu Köln.  
<http://kups.ub.unikoeln.de/id/eprint/52965>
- Saldaña, J (2013). The Coding Manual for Qualitative Researchers Second Edition. SAGE Publications Inc. <https://emotrab.ufba.br/wp-content/uploads/2020/09/Saldana-2013-TheCodingManualforQualitativeResearchers.pdf>
- Savin-Baden, M., & Howell Major, C. (2013). *Qualitative Research: The Essential Guide to Theory and Practice* (1st ed.). Routledge.  
<https://doi.org/10.4324/9781003377986>
- Shaheen, M. Pradhan, S & Ranajee, R. (2019). Sampling in Qualitative Research. In Book: *Qualitative Techniques for Workplace Data Analysis* (pp.25-51).  
[https://www.researchgate.net/publication/345131737\\_Sampling\\_in\\_Qualitative\\_Research](https://www.researchgate.net/publication/345131737_Sampling_in_Qualitative_Research)
- Shenton, A. (2004). Strategies for Ensuring Trustworthiness in Qualitative Research Projects Article in *Education for Information*. DOI:10.3233/EFI-2004-22201
- Taylor-Powell, E., & Renner, M. (2003). *Analyzing Qualitative*. University of Wisconsin-Extension. Program Development and Evaluation  
 Data. [https://www.betterevaluation.org/sites/default/files/analyzing\\_qualitative\\_data.pdf](https://www.betterevaluation.org/sites/default/files/analyzing_qualitative_data.pdf)
- Torres-Barreto, M. Díaz-Vargas, L. & Salcedo-Parada, M. (2024). El rol de los videojuegos educativos en la enseñanza sobre conflictos armados The Role of Educational Video Games in Teaching About Armed Conflicts. *Trilogía Ciencia Tecnología Sociedad*. 16. e3086. 10.22430/21457778.3086.  
 DOI:10.22430/21457778.3086
- Toufik, M & Sarnou, H. (2021). Investigating the Potential of Online Video Games in Enhancing EFL Learners' Communication Skills. *Universal Journal of*

Educational Research. 9. 292-298. 10.13189/ujer.2021.090205.

DOI:[10.13189/ujer.2021.090205](https://doi.org/10.13189/ujer.2021.090205)

Veselý, A. (2008). Problem Tree: A Problem Structuring Heuristic. Central European Journal of Public Policy

2(2). [https://www.researchgate.net/publication/26591584\\_Problem\\_Tree\\_A\\_Problem\\_Structuring\\_Heuristic](https://www.researchgate.net/publication/26591584_Problem_Tree_A_Problem_Structuring_Heuristic)

Wallwisher, Inc. (2024). *Padlet*. (Version 215.8.0). [Mobile App]. Google Play Store.

[https://play.google.com/store/apps/details?id=com.wallwisher.Padlet&hl=es\\_CO](https://play.google.com/store/apps/details?id=com.wallwisher.Padlet&hl=es_CO)