

# War Video Games: Edu-communicative Platforms to Develop Critical Thinking against War?

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War video games recreate war situations with great realism, favoring the immersion of users and making them participants of the sufferings derived from war. While some of them help the players to understand the war, appealing to the hyper-realistic simulation, others are entertainment artifacts that banalize it. This research seeks to determine the edu-communicative potential of war video games, understood as the ability to drive critical thinking towards war. To do this, we adopt a qualitative methodology based on the study of 10 cases, using the WarVG-A (War video game evaluation) instrument to perform the content analysis, based on six dimensions (cognitive, personal-attitudinal, ethical, logical, argumentative, and expressive-communicative) with different indicators and categories. The results of the analysis indicate that these primary games terrorist tactics and historical adaptation, addressing war from a critical approach. Most evidence ethical dilemmas such as child soldiers, the economics of war (arms sales and conflict perpetuation). Economic and geo-political interests are the engines that drive wars, considered inevitable to defend themselves. The stereotypes that abound are gender and ethnic warmongers represented by photorealistic and cinematographic aesthetics. Only four of the selected playful artifacts can identify tools capable of driving critical thinking, inviting players to reflect on war from a more realistic position and emotionally involving them. However, the explicit representation of violence limits its use in school contexts.

CCS Concepts: • **Software and its engineering** → **Interactive games**;

Additional Key Words and Phrases: War video games, Critical thinking, Assessment, Edu-communication

## ACM Reference format:

M. Esther Del-Moral and Christian Rodríguez-gonzález. 2020. War Video Games: Edu-communicative Platforms to Develop Critical Thinking against War? *J. Comput. Cult. Herit.* 13, 4, Article 33 (December 2020), 13 pages.  
<https://doi.org/10.1145/3404196>

## 1 INTRODUCTION

For decades, the opinions found between the creators and producers of war video games and researchers in the fields of psychology, anthropology, philosophy, and education have generated numerous studies questioning the trivialization of war and the scourges that affect criticizing this billion-dollar business [Cornell and Allen 2002].

Initially these video games constituted a training platform for the army, specifically in the United States [Macedonia 2002; Mead 2013], and over time they have been settling in the digital leisure culture of the youngest.

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1556-4673/2020/12-ART33 \$15.00

<https://doi.org/10.1145/3404196>

The defenders of these warlike artifacts underline the playful component, without assessing the ethical connotations of the narrative, and minimize the effect on the player, because they consider it fiction [Holdijk 2016].

However, the detractors underline the negative influence that these video games can have, especially on the minors, by showing the war as a simplistic representation whose objective is just to annihilate the enemy to win, and to consider it a dispossessed practice of the sense of ethics [Dyer-Witthford and De Peuter 2009]. They criticize that they reduce and caricature the human suffering derived from the struggles for power, framed in stages endowed with special effects with great realism, which make them epic contests. In addition, there is another critical sector that emphasizes the influence of these war games on the militarization of popular culture and the configuration of current geopolitics [Power 2007].

Some authors consider that these games can be suitable instruments for knowing history, recreating events, battles, and real events with past characters [Del Corno 2002], as well as reflecting on the relevance of historical decisions and their consequences in our days [Kapell and Elliott 2013; Sabin 2012]. Other analysts question the represented reality of war as something artificial and hyper realistic, an object of manipulation [Kingssepp 2007]. And the most critical consider that these playful formats are not neutral containers—they have a political slant [Machin and Suleiman 2006]—and they even call them propaganda vehicles [Ottosen 2009, 2017].

However, the present study aims to demonstrate whether some war video games can be considered ed-communicating platforms, if they can provoke a serious reflection towards war and encourage critical thinking. To do this, the analysis is focused on a selection of video games that move away from the war game stereotype, avoiding identifying the player with a mere exterminator of objectives. It is worth highlighting those who not only contribute to show the less visible aspects of the war and give voice to the victims—often silenced—also stimulate the emotional involvement of the players and the development of critical thinking.

## 2 PLAY WAR

The theme of war in video games has been very recurrent: many recreate war situations and invite players to perform combat maneuvers, to complete missions on the battlefield as if it were a real military intervention. Their degree of realism caused some governments to use them as effective and safe tools for training their armies, as happened in 1996 in the United States, by adapting the video game *Doom II* [1996]. Sabin (2012) recognizes the connection between war, game, and simulation and explains how these recreational scenarios become war simulators of the first magnitude, taking advantage of their enormous immersive capacity and emulating war strategies to end enemies by minimizing losses.

### 2.1 Emotional Involvement of the Player: from Spectator to Executor

Often, video games show war from a cold and stereotyped point of view facing good and bad, ignoring the oppressive vision of war conflicts and the pain of so many innocents [Jenkins 2013]. *Full Spectrum Warrior* recreates a war devoid of suffering; there are no mutilations or posttraumatic stress disorders, with deserted streets and empty houses, with barely civilians, where enemies die instantly when beaten, banalizing death. Air and artillery attacks do not spoil family parties; collateral damage is not shown. War is peace, there are no moral dilemmas [Dyer-Witthford and De Peuter 2009], and it is shown as a spectacle that is pleased with destruction, offering pain and death for contemplation, without emotionally involving the player.

A strategy used by conventional shooters is to offer the first-person game mode to favor the immersion of the player, which implies a direct identification of the player with the warlike device, where the soldier's body is a complement of the weapon, becoming a device to kill indiscriminately, where the player does not consider the reason why he executes his rivals, he simply follows the dynamics of the game, causing deaths in his path [Phillips 2018]. The player feels motivated to move forward in the story presented to achieve the goals thoughtlessly, immersed in the alienating gear of a playful nature.

However, other video games choose to approach the war from different perspectives, deepening the narrative, humanizing the characters, and favoring the player's empathy with them, be they soldiers, civilian victims, or

refugees [Arsenault 2009]. There is an interest in transmitting deeper stories, by providing them with a more reflective content that encourages the critical spirit of the players, making them question the causes and consequences of war conflicts, moving away from the shallow entertainment of the shooters [Sicart 2009]. Such is the case of *Call of Duty: Modern Warfare 2* (2009), which puts them in front of situations that starkly show the suffering of the victims, as executors of the massacre or impassive witnesses, provoking an empathic relationship with the characters, which invites them to reflect on their own actions.

## 2.2 Assignment of Roles: The Good and the Bad

Frequently, Western video game producers show a slanted view of the war, aligning with the postulates of the United States of America or the side of the allied countries, whether it is World War II [Ramsay 2015]. Most war video games identify the good guys with citizens of modern, democratic, and peaceful Western societies and skip the barbarities they consent to in promoting war conflicts, causing the player not to question the reasons that lead him to eliminate the enemies, so only encouraging his status as a hero who watches over global justice.

Meanwhile, the enemy side is usually made up of characters from Middle Eastern, uncivilized, totalitarian, and violent countries [Šisler 2008]. They are assigned the status of villains who want to break the order and stability of the world system. In this way, the existing dichotomy is observed when presenting the eternal opposing enemy forces that make up the military conflicts. The game shows the hegemony to the western side to safeguard their economic and social interests worldwide, demonizing the societies of the Middle East, which is reflected in the same aesthetic without identity [Saber and Webber 2017].

Likewise, Robinson and Schulke [2016] confirm the stereotyped representation of Middle Eastern societies in war video games and influence the abuse of the use of terrorism as a source of entertainment, which only shows what Western societies want. They consider that many of these video games are not only scenarios where a playful narrative is developed, but they constitute key tools to reinforce the polarized views of the current geopolitical landscape.

## 3 RETHINK THE WAR

In most successful video games, war is presented as fair, and the consequences of conflict in the real world are not evident [Berents and Keogh 2014]. Therefore, it is necessary to show silenced aspects such as physical and psychological effects on soldiers, the drama of refugees, the management of humanitarian aid to alleviate the needs of civilians, and so on [Polman 2010], and, with it, Give visibility to the victims of the war. Undoubtedly, video games can serve not only to show and recreate international conflicts, but to learn from the mistakes made in historical disputes, analyze the aftermath that wars have left in humanity, and prevent situations that can lead to them, that is, to promote critical thinking.

### 3.1 War Video Games: Platforms for Edu-communication?

Berents and Keogh [2014] criticize that war video games are a powerful cultural force, which silences and marginalizes the voices of those who live in the middle of a conflict by erasing their presence from those playful contexts that claim to represent modern warfare with all its complexities and virtual. The war becomes distant and virtual, death is banalized and pain is skipped, the subjects are reduced to pixels that do not represent real people, where the player should only worry about overcoming the proposed missions without paying attention to the victims.

In this way, without the intention of provide extreme drama to these video games, you must ask yourself, for example: Where are the women, children, and the elderly? That is, the most vulnerable victims, and why are they not represented on the battlefields? This leads to raise other questions: Is it due to the need to silence and minimize the true impact that wars have on reality, so as not to generate debates or uncomfortable reflections that break into our leisure space, appealing to our conscience?

However, Rookwood and Palmer [2011] wonder if some war video games could contribute to promoting the culture of peace, and to what extent these digital leisure products could be exploited in schools to provoke a rigorous reflection on the war by analyzing all its implications. In this sense, Robinson [2012, 2016] points out the existence of video games that allow us to adopt a critical stance against war and militarism, becoming potential vehicles to promote critical thinking and political activism.

Obviously, these video games are elements widely accepted by the youth audience, to which they devote much of their time [Muros Aragón and Bustos 2013]. This has moved some teachers to take advantage of their motivating force to integrate them into educational experiences in the classroom for different purposes, such as knowing the art of war through digital combat [Harper 2010], explaining World Wars [Watson Mong and Harris 2011], wondering if they could have been avoided [Cuenca and Martín 2010], and analyze the Cold War in the Metal Gear saga [Kapell and Elliott 2013].

### 3.2 Learn “with” war: Development of Critical Thinking

While many war video games promote violence as entertainment without deepening the theme or providing a narrative that justifies the use of weapons to achieve an end, whether legitimate or not, others try to talk about the need to promote a culture of peace and understanding between peoples. Thus, the research by Alhabash and Wise [2015] managed to change the stereotyped—reductionist and simplistic—view that high school students had about historically confronted cultures such as Palestine and Israel; after using the Peacemaker video game, they should adopt the role of the opposite. With this they learned that the ignorance of the other and their denial can contribute to activate many warlike conflicts.

Games such as *This War of Mine* or *Papers, Please!*—cataloged as edutainment—advocate a different vision of war, employ the horrors, the misery derived from war conflicts and the cruelty of totalitarian states as a tool for the player to empathize with the real victims. Similarly, educational video games such as *Contra Viento y Marea* (<http://www.contravientoymarea.org/>)—created by UNHCR (2007)—propose the player adopt the role of the victim, suffering the same situations of injustice and degradation that people who try to flee from countries where human rights are not respected and invite to reflect on the scourges of war and remove consciences from human pain.

However, it is questionable whether war video games can be valid instruments to promote critical thinking in the face of war. According to Robert Ennis [1985], critical thinking constitutes a cognitive process that allows subjects to rationally explain certain facts or events, *identifying their nature and their ethical connotations*. In this case, it should be studied to what extent war video games can contribute to enhance the reflective capacity of users to:

- (a) Analyze the nature of the war shown by video games, that is, know the treatment and the approaches that prevail; discriminate the types of violence represented; verify the degree of empathy that they promote with the victims, together with the emotions they raise.
- (b) And evaluate from an ethical *perspective*, the executions and interactions in these recreational contexts, and the opportunity they offer to recognize the triggers, consequences, and social repercussion of war conflicts; discriminate aspects related to the economy of war (arms sales, political interests, perpetuation of conflicts...); identify aftermath in silenced victims; propose other solutions that could avoid war fighting; and so on.

These video games recreate war stages with great resemblance, stimulating the immersion of the users and making them participate—in the first person—in the sufferings derived from it. They offer the opportunity to understand the war by immersing themselves in it, and even participating in it, appealing to the hyper-realistic simulation that many of them present. According to Morwood [2014], some video games can make users oppose war conflicts by experiencing their horrors virtually. In addition, they can promote reflection and critical thinking

about ethical aspects related to war, such as the dehumanization of conflicts, the violation of human rights, conscientious objection, and so on.

These recreational devices can become promoters of knowledge, sharing values, and generators of attitudes and diffusers of cultural heritage [Andreoli et al. 2018]. Some offer behavioral patterns associated with representations of the world, war, conflict, and so on [Boukhelifa et al. 2018], which can become reference models, especially for the youngest. Specifically, this study seeks to determine the *edu-communicative potential* of war video games, understood as the ability to boost critical thinking and emotional involvement of players.

## 4 METHODOLOGY: CASE STUDY

This research adopts a qualitative methodology based in the case studies of George and Bennett [2005], carrying out a qualitative analysis of a selection of war video games ( $N = 10$ ). The objective is focused on assessing their *edu-communicative potential*, identified through their ability to promote critical thinking and involvement emotional of the players. Specifically, the (R)esearchers with complementary profiles have carried out the evaluation: R1: Expert in research methods and design of evaluation instruments and R2: Researcher and video game expert.

The evaluation was realized after designing and ad hoc instrument—War Video Games Assessment (WarVG-A)—and validated by the Delphi method [Gordon 1994]. The instrument consists of six dimensions associated with critical thinking: *cognitive*, *personal-attitudinal*, *logical*, *argumentative*, *expressive-communicative*. In the same way, each dimension is defined based on indicators inferred from the theoretical criteria of experts in the development of critical thinking [Paul and Elder 2007], ethical values of video games [Del Moral Villalustre Yuste and Esnaola 2012], and the degrees of empathy defined by the categories of Engelhardt, Bartholow, Kerr, and Bushman [2011].

### 4.1 Study Process

The research included the following phases:

Phase I: Cases selection (one month)

- (a) *Search for commercial war video games* and identification of websites specializing in video games (IGN: <https://www.ign.com/>; GameSpot: <https://www.gamespot.com/>; and Kotaku: <https://kotaku.com/>). And one of the most used criticism portal of video games ranking (Metacritic: <https://www.metacritic.com/game>). The first selection criterion adopted was video games with large number of sales, extensive gamer communities, and designed in the current period (2008–2018). The initial pool was 30 commercial video games.
- (b) *New selection of war video games with edu-communicative potential* following these criteria: (1) show the least visible aspects of war; (2) offer the experiences of the survivors, moral dilemmas, and war economy; and (3) allow to play in campaign mode. The final pool was 10 war video games.

Phase II: Design of the evaluation instrument (six months)

- (a) Search for studies about indicators to measure critical thinking, adapting them to the evaluation of war video games.
- (b) Identification of dimensions and analysis indicators and design of the WarVG-A pilot version.
- (c) Expert validation: Delphi method, identifying and correcting the aspects mentioned by the experts to obtain the final version of WarVG-A.

Phase III: Games evaluation process (three months)

- (a) Analytical game sessions, attending to the analysis dimensions established in the evaluation instrument about critical thinking.
- (b) Collection of information about the 10 cases of study through analysis sheets.
- (c) Evaluate the opportunities to promote the critical thinking of these war video games.



Phase IV: Analysis of results (one month)

- (a) Compiled data from the evaluation sheets of each game.
- (b) Comparison of results between video games.
- (c) Final analysis.

## 4.2 Identification of Study Cases

These are 10 war video games finally selected. Below is the name, company (year), type of game, and age, according to Pan European Game Information [PEGI 2003]:

- ID1: *Call of Duty Modern Warfare 2*. Activision (2009). Action (+18)
- ID2: *Call of Duty World at War II*. Activision (2017). Action (+18)
- ID3: *Battlefield 1*. Electronic Arts (2016). Action (+18)
- ID4: *This War of Mine*. Deep Silver (2014). Survival strategy (+18)
- ID5: *Valiant Hearts: The Great War*. Ubisoft (2014). Graphic adventure (+12)
- ID6: *Spec Ops: The Line*. Yager Development (2012). Action (+18)
- ID7: *Metal Gear Solid 4: Guns of Patriots*. Konami (2008). Action (+18)
- ID8: *Army of Two*. Electronic Arts (2008). Action (+18)
- ID9: *Tom Clancy's: The Division*. Ubisoft (2016). Action (+18)
- ID10: *Alpha Protocol*. Obsidian Entertainment (2010). Action (+18)

## 4.3 Instrument

The WarVG-A instrument—created to assess the edu-communicative potential of war video games—includes the six dimensions to be properly defined to evaluate the selected games, adapting and extrapolating some of the theoretical indicators that define critical thinking. The analysis dimensions are:

- (I) *Cognitive dimension (CD)*, composed of the following indicators:
  - *Treatment of war*: determining whether it is a simulation of real conflicts, a historical adaptation, terrorist tactics, or if it is science-fiction.
  - *Approach* from which war conflicts are contemplated: (a) Critical: question the war; (b) Reflective: invites awareness; or (c) Playful: mere entertainment.
- (II) *Personal-attitudinal dimension (PAD)*
  - *Degree of empathy promoted*, following the categories of Engelhardt, Bartholow, Kerr, and Bushman [2011], measures through the ability to: (a) recognize the feelings of the others; (b) foment the solidarity with the victims; (c) concern for and defense of the victims. Each category valued with a Likert scale (0=nothing, 1=little, 2= enough, 3=a lot).
  - *Type of emotions provoked* (emotional involvement of the player):
    - Active negatives: hate, revenge, cruelty.
    - Passive refusals: fear, sadness, anguish, helplessness.
    - Neutral: indifference, banalization, triviality.
    - Positive: hope, solidarity, compassion.
- (III) *Ethical Dimension (ED)*
  - Transmitted values: empathy, solidarity, and so on.
  - Counter values: cruelty, indifference, and so on.
  - Stereotypes: gender warmonger or distribution of roles: male soldiers and female nurses or collaborators [Sjoberg and Via 2010]; racial or visual representation of collectives (Arabs with turbans, tall and blond Germans, most North American Caucasian soldiers, etc.) [Burgess, Dill, Stermer, Burgess and Brown 2011]; cultural, identifying Muslims as terrorists [Šisler 2008], Russians as a threat to world order (they drink vodka, have marked accents when speaking other languages, etc.).

- Moral dilemmas derived from war addressed: child soldiers, arms race as a business, the end justifies the means, collateral victims, and so on.
- (IV) *Logical dimension* (LD)
  - Reflection of the positions of the different opposing sides.
  - Background and motivations of the conflict evidenced: economic and/or geopolitical interests, revenge, enjoyment with destruction, and so on.
- (V) *Argumentative dimension* (AD)
  - Ideological discourse inserted in the playful design of the video game: war necessary to maintain status, inevitable war to defend itself, or undesirable war.
  - Justification of the war interventions (verbalizing orders or contextualizing the story or both forms) through videos that place the player in the events, phrases, in-game documents, and so on.
  - Characters as resources to support arguments about war (professional soldier, surviving victims, civilians forced to go to war, nurses who heal injured, indoctrinated child-soldiers, etc.).
- (VI) *Expressive-communicative dimension* (ECD)
  - Audiovisual representation of the war: photorealistic, cinematographic, cartoon or comic aesthetics.
  - Game perspective: First, third person and lateral vision of the omniscient character.
  - Ways of expression of the players:
    - Acting freely.
    - Making timely decisions.
    - Executing scripted orders.

## 5 RESULTS

Below is the analysis of the selected cases with the instrument WarVG-A, considering the dimensions that define their ability to promote critical thinking and, therefore, their edu-communicative potential. Table 1 shows the qualitative assessments of each video game regarding: (a) *the cognitive dimension*, referred to the treatment and approach of war; (b) *the persona-attitudinal dimension*, analyzing the degree of empathy promoted based on the possibility of recognizing feelings of the others, boost the solidarity with the victims and raise the concern for and the defense of the victims; and (c) *ethical dimension*, identifying values, counter values, and stereotypes transmitted by the video game.

Table 2 shows the qualitative assessments of each video game regarding: (a) *the logical dimension*, identifying the presentation of the different positions of the opposing sides and the reasons of the conflict; (b) *the argumentative dimension*, analyzing the ideological discourse, the justification of the war interventions and the characters related to the war; (c) *the expressive-communicative dimension*, exposing the different visual representation, the game perspective, and the player degrees of freedom.

## 6 DISCUSSION

### 6.1 Cognitive Dimension

The selection of war video games offers various treatments of war and with varied approaches. It is observed that five of them identify the war with terrorism or with any of its manifestations, such as kidnappings (ID6), showing the US as a defender of human rights, which safeguards humanity from chemical weapons and nuclear groups of radical groups in the Middle East (ID1, ID8, ID9, and ID10). ID2, ID3, and ID5 opt for the historical adaptation of war battles, recreating World Wars I and II. And only ID4 addresses real conflicts, drawing inspiration from the Sarajevo Site (1992–96) during the Bosnian War, highlighting the horrors of the last war in Europe. It should be noted that the treatment of the war that makes ID6 combines terrorism with science-fiction, involving robots, cyborgs, and characters with super powers in spectacular combats located in the Middle East, where the vested interests are criticized, the economy of war, the profit of private military companies, the use of child-soldiers, and so on.

Table 1. Edu-communicative Potential of War Video Games Analyzed: Cognitive, Personal-attitudinal, and Ethical Dimensions

ID	Cognitive Dimension	Personal-attitudinal Dimension	Ethical Dimension
ID 1	–Terrorist tactics against civilians. –Reflective approach.	–Generates little empathy. –Emotions: revenge and cruelty.	–Counter value: cruelty. –Stereotypes: gender warmonger and cultural. –Question the end justifies the means and collateral victims.
ID 2	–Historical adaptation WWII. –Playful approach.	–Generates no empathy. –Emotions: indifference.	–Counter value: indifference with the victims. –Stereotypes: gender warmonger. –Question mandatory participation in war.
ID 3	–Historical adaptation WWI. –Reflective approach.	–Generates little empathy. –Emotions: sadness.	–Value: empathy with the soldiers. –Stereotypes: gender warmonger. –Question mandatory participation in war and collateral victims.
ID 4	–Real simulation. –Critical approach.	–Generates a lot of empathy. –Emotions: sadness, anguish, helplessness and compassion.	–Value: empathy and solidarity. –No stereotypes. –Question the civilian Survival.
ID 5	–Historical adaptation WWI. –Critical approach.	–Generates a lot of empathy. –Emotions: sadness, anguish, helplessness.	–Value: empathy with civilians, soldiers, etc. –Stereotypes: gender warmonger (female nurses). –Question the collateral victims.
ID 6	–Terrorist tactics: assassination. –Critical approach.	–Generates enough empathy. –Emotions: cruelty, helplessness and anguish.	–Values: empathy versus cruelty. –Stereotypes: cultural. –Question the end justifies the means.
ID 7	–Science-fiction. –Critical approach.	–Generates enough empathy. –Emotions: revenge, fear, anguish, and compassion.	–Values: empathy with child-soldiers. –Stereotypes: sexist, sexualized woman –Question child-soldiers and arms race as a business.
ID 8	–Terrorist tactics against civilians. –Playful approach.	–Generates no empathy. –Emotions: banalization.	–Counter value: indifference with the victims –Stereotypes: gender warmonger and cultural. –No question.
ID 9	–Terrorist tactics: biological warfare. –Playful approach.	–Generates no empathy. –Emotions: banalization.	–Counter value: indifference with destruction. –Stereotypes: cultural. –No question.
ID 10	–Terrorist tactics: weapon traffic. –Reflective approach.	–Generates little empathy. –Emotions: cruelty, revenge.	–Counter value: indifference with the victims. –Stereotypes: cultural. –Question arms race as a business.

Regarding the approach to war, it is found that ID4, ID5, ID6, and ID7 adopt a critical stance. Far from banalizing these conflicts, they demonstrate the scourge they suppose, denouncing the benefits they report to a party and the damages. ID1, ID3, and ID10 advocate a reflexive approach, inviting the player to question himself about military interventions and their protagonists. ID2, ID8, and ID9 present war as mere entertainment, linked to the elimination of targets with shots, lacking ethical questioning.

## 6.2 Personal-attitudinal Dimension

On the one hand, the degree of empathy that these games can arouse towards the victims is measured from their ability to recognize the feelings of the others, to foment the solidarity with the victims and to have concern about the victims [Engelhardt, Bartholow, Kerr, and Bushman 2011], as presented on the instrument. ID4 and ID5 allow to empathize greatly with civilian characters and victims, portraying their perceptions and vital experiences, sparing no details about the suffering. Something similar happens with ID6 and ID7, because they empathize



Table 2. Edu-communicative Potential of War Video Games Analyzed: Logical, Argumentative, and Expressive-communicative Dimensions

ID	Logical Dimension	Argumentative Dimension	Expressive-communicative Dimension
ID 1	–Show the position of USA. –Motivation: revenge.	–Inevitable war to defend itself. –Verbalizing orders and contextualizing the story. –Professional soldier.	–Photorealistic representation. –Game perspective: first person. –Soldier-player makes timely decisions.
ID 2	–Show the position of the participants of WWII. –Motivation: geopolitical interests.	–Inevitable war to defend itself. –Verbalizing orders and contextualizing the story. –Professional soldier.	–Photorealistic representation. –Game perspective: first person. –Soldier-player executes scripted orders.
ID 3	–Show the position of “The Triple Entente” in WWI. –Motivation: geopolitical interests.	–Inevitable war to defend itself. –Contextualizing the historical intervention. –Civilians forced to go to war and surviving victims.	–Photorealistic representation. –Game perspective: first person. –Soldier-player executes scripted orders.
ID 4	–Only show the position of refugees of war. –Motivation: geopolitical interests.	–Undesirable war: experiences of survivors –Contextualizing the war situation to survive. –Surviving victim.	–Comic aesthetic. –Game perspective: lateral. –Survivor-player acts freely.
ID 5	–Show the position of all sides in WWI. –Motivation: geopolitical interests.	–Inevitable war to defend itself. –Contextualizing the historical intervention. –Professional soldier, civilians forced to go to war and nurses.	–Cartoon aesthetic. –Game perspective: lateral. –Player makes timely decisions.
ID 6	–Show the position of USA soldiers in Middle East. –Motivation: geopolitical interests.	–Inevitable war to defend itself. –Verbalizing orders and contextualizing the story. –Professional soldier.	–Cinematographic representation. –Game perspective: third person. –Soldier-player executes scripted orders.
ID 7	–Show warfare against a terrorist group. –Motivation: economic interests.	–War necessary to maintain status. –Verbalizing orders and contextualizing the story. –Professional soldier, child-soldiers.	–Cinematographic representation. –Game perspective: third person. –Soldier-player makes timely decisions.
ID 9	–Show the position of the victims of a biological attack. –Motivation: enjoyment of destruction.	–Inevitable war to defend itself. –Verbalizing orders. –Professional soldier.	–Photorealistic representation. –Game perspective: third person. –Soldier-player makes timely decisions.
ID 10	–Show USA position against Jihadism. –Motivation: revenge.	–Inevitable war to defend itself. –Verbalizing orders. –Professional soldier.	–Cinematographic representation. –Game perspective: third person. –Soldier-player makes timely decisions.

enough to detail the life of the characters, although they only provide the point of view of the soldiers. On the contrary, ID1 and ID3 offer little empathy when presenting the professional soldier who executes orders to achieve objectives without thinking about the victims or collateral damage. And ID2, ID8, ID9, and ID10 do not cause empathy: The characters are killing machines, with no features of humanity.

On the other hand, the emotions that these games arouse from the behaviors of the characters before the starred war situations are inferred, since the player is subjected to a distressing pressure linked to the oppressive atmosphere of the scenarios and recreated situations. Specifically, the games ID1, ID6, ID7, and ID10 prioritize active negative emotions by encouraging feelings of hatred in the players to act for revenge and cruelty. In ID3

and ID5 passive negative emotions arise when generating in the player responses derived from fear, anguish, sadness, or impotence in situations of extreme desolation. The video games ID3, ID8, and ID9 banalize and trivialize the war phenomenon, offering an indifferent vision. Only ID4 conveys positive emotions, such as hope to resolve conflicts, solidarity, and compassion with the victims of wars.

### 6.3 Ethical Dimension

By identifying the values or counter values, the stereotypes shown, and the criticisms distilled in these video games, it is found that ID3, ID4, ID5, ID6, and ID7 foster empathy and solidarity, humanizing the problem of armed conflicts. ID2, ID8, ID9, and ID10 are indifferent to the recreated war situations. Only ID1 gloats over cruelty, crudely representing the suffering of the victims.

The games ID1, ID2, ID3, ID5, and ID8 show gender warmongering stereotypes where women are not represented or if they do take the role of nurses. In addition, ethnic stereotypes are shown in ID1, ID6, ID8, ID9, and ID10, where the West is good, and the Middle East is the enemy of human rights. ID7 shows sexist stereotypes with hypersexualized women, while in ID4 no stereotypes can be seen.

Regarding the moral dilemmas represented, games ID1 and ID6 question the achievement of legitimate objectives—such as saving innocents—using any means and without regard to the consequences, limiting the role of soldiers to mere executors of higher orders. ID3 and ID5 reflect on collateral victims of war (people, cities, etc.). However, in ID4 the situation of the survivors is shown, showing the hidden face of the war. Games ID7 and ID10 criticize the arms race as a business of the world powers. In addition, ID7 questions the indoctrination of child-soldiers employed as war weapons in war. In ID2 and ID3, the obligation of civilians to participate in armed conflicts in defense of their homeland is criticized. However, ID8 and ID9 do not address moral dilemmas—they simply move forward and kill indiscriminately, giving priority to playful aspects.

### 6.4 Logical Dimension

This dimension analyzes how these games approach the war, if they reflect the positions of the different opposing sides, and if they reveal the background or motivations of the conflicts (economic and/or geopolitical interests, revenge, enjoy destruction, etc.). Specifically, the games ID1, ID6, ID8, and ID10 show the US position in the different armed conflicts, while ID2, ID5, and ID7 reflect the position of both rivals, allowing the player to know all the details of the contest. In contrast, ID3 only shows the position of the allied side in the IGM. Only ID4 and ID9 portray the experiences of the survivors.

In relation to the opportunity presented by these video games to make visible the real motivations and the background of the conflicts, we find that in ID2, ID3, ID4, ID5, ID6, and ID7, wars are gestated by economic or geopolitical interests and imply occupation of strategic territories. Games ID1 and ID10 conceive of war as a response and revenge against the insults of enemies. And, in ID8 and ID9, the motivation that encourages war is enjoyment with destruction.

### 6.5 Argumentative Dimension

The ideological discourse inserted into the playful design of video games, the justification of the interventions, and the characters represented are investigated. In this sense, it is observed that the games ID1, ID2, ID3, ID5, ID6, ID8, and ID9 conceive war as something inevitable to defend themselves, while in ID7 and ID10 it is necessary to maintain the status of the powers. On the contrary, ID4 shows a speech about the experiences of the survivors and contemplates war as something undesirable.

Regarding the justification of the interventions, in ID3, ID4, and ID5, the player is offered the context that generates the conflict, through videos, locutions, in-game documents, and so on. However, in ID8, ID9, and ID10 the player is only given verbal orders to execute his missions without justifying them. The forms are combined in ID1, ID2, ID6, and ID7.

The war argument is based on the roles played by the protagonists, as in ID1, ID2, ID5, ID6, ID7, ID8, ID9, and ID10, professional soldiers are shown in the line of duty. However, ID3 and ID5 games present civilians forced to serve in the war to defend their homeland. ID4 shows victims of a warlike conflict that must survive, ID5 presents nurses in charge of healing the wounded, and ID7 exhibits child-soldiers subjected to war indoctrination.

## 6.6 Expressive-communicative Dimension

Finally, this dimension studies, on the one hand, the format and/or audiovisual aesthetic adopted by each video game to represent war, together with the point of view it offers the player. And on the other hand, the degrees of freedom granted to him to make decisions and act, and so on, are analyzed. Thus, while ID5 opts for the cartoon format and ID4 uses the comic, the games ID1, ID2, ID3, and ID9 adopt a photorealistic aesthetic, favoring more immersion of the player in the action, just as it happens in ID6, ID7, ID8, and ID10 when film aesthetics prevail.

In relation to the perspective used, ID1, ID2, and ID3 propose a game in first person, making the player identify with the protagonist, favoring immersion. Meanwhile, the games ID6, ID7, ID8, ID9, and ID10 invite to play in third person, placing the protagonist in the center of the action. For its part, ID4 and ID5 use a lateral perspective, providing a broader view of all the elements on the screen as a film story.

Eventually, in relation to the degree of freedom granted to players, it is found that the games ID1, ID2, ID5, ID6, ID7, ID9, and ID10 allow the user to make decisions only at specific times, either by selecting a specific dialogue or action. However, the ID4 and ID10 games allow the player to act freely, selecting the dialogues and the actions to be performed. However, ID3 and ID8 are based on the execution of fully scheduled orders.

## 7 CONCLUSIONS

Although there is an interesting experience with the Peacemaker video game—of a marked educational nature—that has contributed to changing the stereotyped view of secondary school students on historically confronted cultures, and to look for ways of approach between Palestinians and Israelis [Alhabash and Wise 2015], there is no research on the use of commercial war video games that offer results linked to the theme addressed in this study.

After the analysis, it can be said that *This War of Mine* (ID4), *Valiant Hearts: The Great War* (ID5), *Spec Ops: The Line* (ID6), and *Metal Gear Solid 4: Guns of Patriots* (ID7) are the video games that could be considered to a greater extent possible tools to enhance critical thinking. All of them show the harshness of war from a critical approach, questioning both the survival of refugees, the suffering of collateral victims, the end justifies the means, as well as the military indoctrination of children and the war economy. These games invite the player to reflect and observe the war from a realistic position, away from the approach of video games such as *Tom Clancy's: The Division* and *Army of Two*, where progress and destruction prevail.

However, despite the fact that *Valiant Hearts* and *This War of Mine* adopt a cartoon and comic aesthetic, respectively, they portray the horrors of war less crudely than the rest of video games, without reckoning. In addition, what favors the empathy of the players with the characters (soldiers, victims, survivors, etc.) in these four games is the expression of the emotions and thoughts of the protagonists through the stories told, provoking anguish, helplessness, and compassion in contemplating the suffering caused by wars.

In these four games the spectrum of roles assigned to the actors involved in a war is broadened, the role of soldier-victim and that of survivors stand out, distancing themselves from the conventional vision of the patriotic soldier-hero that prevails in other video games. Likewise, they show that war conflicts are motivated—in most cases—by economic and geopolitical interests. This makes the player perceive and analyze the unspeakable motivations of the states to sacrifice thousands of lives.

In addition, these games allow identifying the ideological discourse that underlies them to present war as a conflict necessary to defend themselves (*Valiant Hearts: The Great War*, *Spec Ops: The Line*) or maintain the status of a nation (*Metal Gear Solid 4: Guns of Patriots*). Thus, while *This War of Mine* shows war as something undesirable, based on the experiences of refugees, others only seek to highlight the glories and exploits of the

victors, omitting the injustices caused. This allows the player to reflect on other alternative measures to war, such as the commitment to diplomatic agreements to avoid conflicts.

However, despite the opportunities that these four video games can offer to promote critical thinking, the excessive violence represented can become a limitation when it comes to school implementation. Indeed, although these games can be considered edu-communicating platforms, not all of them are optimal for use in formative contexts with minors, because they show scenes of explicit violence, which can hurt the sensitivity of younger players. Only Valiant Hearts: The Great War and This War of Mine could be exploited with secondary school students, as they perfectly reflect the horror produced by the war, without the need to offer bloody images.

In any case, and regardless of the formal educational context, it is advisable to urge players to be aware that war and human suffering is not a game. At the same time, they must be made aware of the simplistic and banal representations that some games make about war.

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Received December 2019; revised April 2020; accepted May 2020