EDUCATING FOR A VIDEO GAME CULTURE –
A MAP FOR TEACHERS AND PARENTS

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Council of Europe

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Summary

A digital citizen is someone who uses technology safely, ethically and responsibly and who has the ability to engage positively, critically and competently in the digital environment drawing on the skills of effective communication and creativity, to practise forms of social participation that are respectful of human rights and dignity, through a responsible use of technology.[1]

Being a digital citizen, in other words, means creating, working, sharing, socialising, investigating, playing, communicating and learning with competence and positive engagement in a society that is profoundly influenced by digital technologies. Today, more than ever, it has become important to participate actively and responsibly in the communities around us: local and global communities and even online communities, which offer users infinite ways to interact with each other and to share information and opinions.

With the ubiquity of new technologies, children, teenagers and young people are plunged into a world of technology and digital media. It has become almost impossible not to come into contact with mobile phones, tablets, laptops, console games and other forms of technology, whether for educational or entertainment purposes. Being a digital citizen also means being able to benefit wisely from the different forms of entertainment that technologies allow, and properly balancing your own "media diet" in order to avoid overuse or misuse.

One such technology, which has unfortunately been identified with overuse and misuse, is video games. Video gaming is one of the most popular entertainment industries in the world. It is possible to play almost everywhere, at almost any time, on almost any kind of device: sitting on the couch with a home console plugged into a television, riding the bus or metro with a mobile phone, sitting in the back of a classroom toggling on a smartphone, or even while falling asleep in bed with a portable console or a tablet.

Video games have been around since the 1970s, so they are not exactly a new phenomenon. In recent years they have grown extremely fast in terms of popularity, relevance and mechanics. They are fun, engaging and designed to capture players' attention, and these factors bring new opportunities but also new challenges in the education of children and young people.

The aim of this guide is to make teachers and parents – or, in general, adults with educational roles – aware of the complexity of this medium, as well as the potential risks and opportunities that come with it. This publication will also provide readers with some useful strategies to help choose the right video games or simply to be more informed about the topic so as to create space for talking to and engaging children or students in more opportunities for dialogue.

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1. www.coe.int/dce.

Digital Citizenship Education means working to nurture a video game culture in tomorrow's citizens. The more aware future generations are of the economic models, the structures, languages, risks and opportunities of video games, the more it will be possible to build a society that is open to recognising the beauty of this medium, to benefit from the act of playing, to build better games and to minimise the dangers that video games, as well as other media, inevitably have.

Promoting a video game culture means generating a pedagogical reflection around video games: thinking about it as a cultural tool able to offer many incentives not only to having fun, but also to thought, learning and development of the person. It also means considering the video game worthy of being the object of study and of an accurate and careful analysis of its characteristics, its mechanics, and its languages.
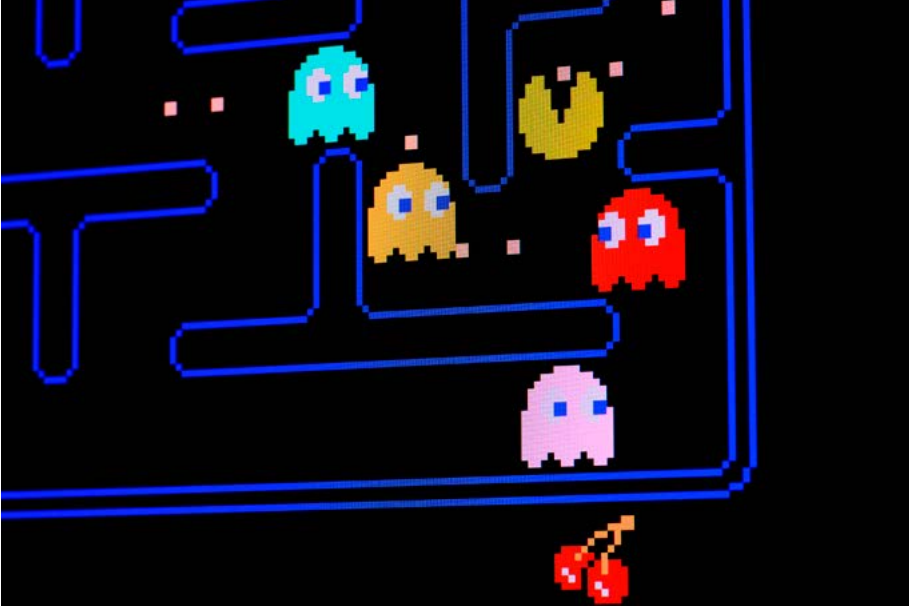
Introduction to this guide

Why not create a publication just for teachers or one just for parents? The choice to address this handbook to adults in general and not to specific targets has been made with the intention of helping everyone (be they teachers, parents, educators or practitioners) to better understand the world of video games – an extremely popular medium characterised by a diversity and complexity which is unique. This "complexity", which must not be interpreted as "difficulty" or "complication", comes with a variety of potential risks and challenges but also with opportunities and benefits in pedagogical matters. Another reason that this guide is for everyone is to try to change the way in which adults perceive video games. Most of the ideas that teachers or parents have about video games are connected to simplistic and stereotyped images of this medium: a violent and useless source of distraction which is dangerous for children. Considering video games only as a mere distraction means missing an opportunity to initiate dialogue with young people as well as missing the chance to foster children to be better digital citizens. The act of video gaming needs more attention from adults and educational practitioners in general, although this does not mean that everyone must become a player. The medium must be approached with discernment, curiosity and optimism.

This handbook can be seen as an orientation map that aims to support parents and educational practitioners as they navigate what is often considered unfamiliar and frightening territory. Creating pedagogical alliances between families and schools is key to building a video game culture able to break the strong resistance – composed of stereotypes, misconceptions, mistrust and fears – that adults have when they think about this kind of entertainment.

Promoting a video game culture means generating a pedagogical discourse around video games. This is fundamental in order to move away from oversimplistic ideas of video games which seem to relegate the medium to the status of mere entertainment – entertainment that exerts evil powers over young people or that has magical effects on the development of children. Video gaming is an extremely complex and multifaceted medium: a deeper analysis of its mechanics and characteristics is necessary to uncover its problematic elements and its risks, but also the opportunities it provides.

What are the risks that children can encounter while playing video games? What can we do to limit these risks? Are games a mere waste of time or can they promote significant and meaningful reflection and interaction? What are the educational possibilities?

This guide is an attempt to answer these questions. It is divided into three sections, three metaphorical video game worlds: "things to know", "potential risks" and "potential benefits". Each section presents short reflections called levels, just like in old-fashioned video games.

World 1 – Things to know about video games: This section provides an overview of the video game as a medium. It contains information about the video game industry, about its complexity as a medium, about online practices linked to video games, and about the tools that adults can use to monitor children while they are playing.

- ► Level 1.1: A multifaceted medium
- ► Level 1.2: A strong market
- ► Level 1.3: The video-gaming community
- ► Level 1.4: Gaming devices
- ► Level 1.5: "Flow" and gaming
- ► Level 1.6: Online stores and online services
- ► Level 1.7: Age and content ratings
- ► Level 1.8: Parental control tools

World 2 – Potential risks of video gaming: This section provides insights about some of the potential risks inherent to the experience of play. It addresses addiction to gaming and issues related to online money transactions and violent and stereotyped content.

- ► Level 2.1: Micro-transactions, in-app purchases and loot boxes
- ► Level 2.2: Online hate speech and video games
- ► Level 2.3: Violent content
- ► Level 2.4: Stereotypes, gender representation and attention to minorities
- ► Level 2.5: Video-gaming addiction

World 3 – Potential benefits of video games: This section describes some of the educational and pedagogical potential of video games. First, the characteristics that distinguish games will be presented. Secondly, the detailed learning opportunities

that video games provide will be discussed. Lastly, the potential of the videoludic medium in terms of creativity will be tackled, both as regards fostering creativity and coding.

- ► Level 3.1: Characteristics of video games
- ► Level 3.2: Learning from video games
- ► Level 3.3: Using educational video games
- ► Level 3.4: Using video games to stimulate tangential learning
- ► Level 3.5: Using video games to develop critical thinking
- ► Level 3.6: Video games and creativity

Warning!

This publication is not intended to be a full and exhaustive guide to the pedagogical use of video games, nor is it intended to be any kind of handbook about the correct and proper use of this medium. Parents, teachers and children are kindly asked to take these pages as a suggestion: a suggestion to start considering video games from a different, more open and more discerning, point of view.

The 10 domains of digital citizenship

This guide is meant to help teachers and parents to be more aware of the complexity of video games: a medium that needs to be closely observed, understood and which contains many potential risks and opportunities. Digital citizenship education is a key element in fostering a culture of video games in today and tomorrow's learners that will help them develop a balanced media diet, avoid the related risks, live meaningful lives and enrich their gaming experiences.

With the intent to help readers find more information about digital citizenship education, every paragraph (named "level") will be marked with icons of the 10 digital domains: readers will be able to find interesting materials, ideas for activities, theoretical insights and research findings by consulting the Digital Citizenship Education website,[2] the *Digital citizenship education handbook*,[3] or the Digital Citizenship Education – Trainers' Pack and looking for that specific domain.

	Access and Inclusion This domain concerns access to the digital environment and includes a range of competences that relate not only to overcoming different forms of digital exclusion but also to the skills needed by future citizens to participate in digital spaces that are open to every kind of minority and diversity of opinion.
	Learning and Creativity This domain refers to the willingness and the attitude of citizens towards learning in digital environments over the course of their lives, both to develop and express different forms of creativity, with different tools, in different contexts. It covers the development of personal and professional competences as citizens prepare for the challenges of technology-rich societies with confidence and in innovative ways.

2. www.coe.int/dce.
3. Richardson J. and Milovidov E. (2019), *Digital citizenship education handbook*, Council of Europe Publishing, Strasbourg, available at www.coe.int/dce.

Media and Information Literacy

This domain concerns the ability to interpret, understand and express creativity through digital media, as critical thinkers. Being media and information literate is something that needs to be developed through education and through a constant exchange with the environment around us. It is essential to go beyond simply "being able to" use one or another media or simply to "be informed" about something. A digital citizen has to maintain an attitude relying on critical thinking as a basis for meaningful and effective participation in his/her community.

Ethics and Empathy

This domain concerns online ethical behaviour and interaction with others based on skills such as the ability to recognise and understand the feelings and perspectives of others. Empathy constitutes an essential requirement for positive online interaction and for realising the possibilities that the digital world affords. A grasp of concepts such as coherence and understanding others' feelings and reasons is paramount if individuals are to live their online experiences positively.

Health and Well-being

This domain relates to the fact that digital citizens inhabit both virtual and real spaces. For this reason, the basic skills of digital competence alone are not sufficient. Individuals also require a set of attitudes, skills, values and knowledge that render them more aware of issues related to health and well-being. In a digitally-rich world, health and well-being imply being aware of challenges and opportunities that can affect wellness, including but not limited to online addiction, ergonomics and posture, and excessive use of digital and mobile devices.

ePresence and Communication

This domain refers to the development of the personal and interpersonal qualities that support digital citizens in building and maintaining an online presence and identity, as well as online interactions that are positive, coherent and consistent. It covers competences such as online communication and interaction with others in virtual social spaces, as well as the management of one's data and traces.

	Active Participation This domain relates to the competences that citizens need to be fully aware of how they interact within the digital environments they inhabit in order to make responsible decisions, while participating actively and positively in the democratic cultures in which they live. Active participation includes the competences that citizens need to reach a level of awareness of themselves in relation to the environments they are plunged into, in order to take sensible decisions and participate actively and positively in the democratic cultures they live in.
	Rights and Responsibilities This domain concerns digital citizens' awareness and understanding of their rights and responsibilities in the online world. Rights and responsibilities are something citizens enjoy in the physical world, and digital citizens in the online world also have certain rights and responsibilities. Digital citizens can enjoy rights of privacy, security, access and inclusion, freedom of expression and more. However, with those rights come certain responsibilities, such as ethics and empathy and other responsibilities to ensure a safe and responsible digital environment for all.
	Privacy and Security This domain covers competences such as the effective management of information shared online and using tools (navigation filters, passwords, anti-virus and firewall software) to avoid dangerous or unpleasant situations or to retain some sense of anonymity. Privacy concerns mainly the personal protection of one's own and others' online information, while security is related more to one's awareness of online actions and behaviour.
	Consumer Awareness This domain relates to the fact that the World Wide Web, with its broad dimensions, such as social media and other virtual social spaces, is an environment where being a digital citizen often also means being a consumer. Understanding the implications of the commercial reality of online spaces is one of the competences that individuals will have to deal with in order to maintain their autonomy as digital citizens.

World 1 – Things to know about video games

Level 1.1. A multifaceted medium

It is very difficult to talk about video games "in general" and it does not make too much sense to do so. Video games are as diverse as anything else and can give rise to as many different gaming experiences. We are referring to a very diverse medium, which can ignite very different kinds of gaming experiences among players.

Different audiences, different perceptions

Everyone is different, and context matters more than you think! This means that the same content originating from the same video game will have different effects on different audiences depending on the individual, the context and the interaction initiated by others (mediation of peers, parents, teachers).

Choosing the right games, negotiating a proper daily gaming schedule, imposing limits and explaining why, and proposing other forms of entertainment are all good and necessary practices, but they are not enough!

It is paramount to mediate the experience of play with children and young people by being present and, when possible, playing along; by talking and asking them about their video-gaming experience, and in so doing opening a dialogue about their passion.

AAA or indies

Behind the development of a game there are different kind of teams and this impacts strongly on the kind of gaming experience. There are the so-called AAA productions, developed by big teams of game developers over many years, funded by big publishers who invest a great deal of money. There are also smaller teams or even individuals who work independently of the big publishers to develop smaller titles. These games, called "indies", are not less engaging or less interesting. As a matter of fact, they can at times offer a more meaningful, more engaging and more entertaining gaming experience.

Did you know…

▶ The cost of developing *Grand Theft Auto 5* was more than €230 million and it generated income of more than €5.2 billion.

▶ *Red Dead Redemption 2* took more than eight years to develop and involved more than 3 000 professionals.

▶ In only three days, *Red Dead Redemption 2*'s sales revenue exceeded €678.6 million.

Genres and types of games

Apart from their development, games can be very different in the nature of their gameplay; examples include interactive stories, driving games, beat-em-ups, shoot-em-ups, first-person shooters (FPS), platforms, action games, brain teasers, real-time strategy games (RTS), role play games (RPG), etc.

Each type of game has its own specific characteristics, which can be very different from others. However, over the last few years genre hybrids have become fairly common, so that it may not be immediately clear to which genre a game belongs. You can have RPGs in first person with strong brain teaser mechanics, or RTS with nuances of RPG, platforms with shoot-em-up dynamics, etc.

Gameplay

▶ The word "gameplay" refers to the mechanics of a video game in terms of all the possible interactions between the player (or players, if the game allows for more than one) and the game.

▶ A game can be visually poor but at the same time be incredibly well done in terms of gameplay.

▶ If you look online for "gameplay videos" you will find much video footage of players who record their own screen while playing video games.

Identifying genres in video games has become more and more difficult and, in most cases, it does not make too much sense. Sometimes the different genres overlap in determined components of the game, sometimes the genre is determined by some famous exponent of a specific gameplay mechanic.

It is, however, useful to try to understand the different mechanics underlying the structures of gameplay. By identifying similarities, differences and analogies, you can take the first step towards a critical understanding of video games and realise that talking about "video games" in general terms is a wrong approach.

Narratives

Games can differ profoundly even in the way in which they tell their story to players. Some games do not even have a background story, some games do not need it; others have a story, but it is hidden from players and must be discovered along the way by paying attention to small details. Some stories are quite clear and simple while others are extremely complex and intricate. Some games have direct links to real stories or historical facts. Some have a strong metaphorical message, or even address very delicate topics such as mental illness (like *Celeste* or *Hellblade: Senua's Sacrifice*), refugee conditions (*Bury me, my love!*), the horror of war (like *This war of mine*, a game inspired by the conditions of civilians during the siege of Sarajevo), etc.

Did you know…

► **There are games with stories so complex and well written that entire online communities spend a great amount of time discussing and trying to understand them.**

► **The narrative context of a video game is called "lore".**

Interaction between players

Another important difference between games is the kind of interaction that they offer to players. Interactions can be co-operative or competitive, synchronous or asynchronous, and can occur online (if the game is an online one) or face to face (if the game is played on the same device). There are many approaches to multiplayer games.

Examples of multiplayer video games with different models of interactions

Online multiplayer games allow users to play with other players which are connected through the web and who share the same game.

Other games allow players to share the same screen and play together either to compete with each other or to co-operate for a common task. These kinds of games are particularly interesting because they create the conditions for people to gather in the same room and simply play, all together.

Other titles allow players to play with other players online. Once again, the kinds of interactions that can occur between players are diverse and can range from matches where hundreds of players compete alone against all others, or situations where players have to collaborate in teams and compete against other teams.

Did you know…

► The nature and scope of these interactions can deeply transform the experience of players. This is why it might be useful to know which kind of multiplayer system the games played by your children or students have.

► Many online games allow players to interact through a real-time voice chat system and talk to each other like a phone call.

Links with Digital Citizenship Education

Media and Information Literacy

I recognise that video games are a complex and diversified medium, rich in terms of the variety and experiences that can ignite from them.

Are all games equal? Does it make sense to talk about video games in general?

Level 1.2. A strong market

The video game medium is a big player in the entertainment industry. It is definitely here to stay and most certainly will grow even further in years to come.

It has been estimated[4] that in 2020 revenue from the video game industry world-wide was around €145 billion. Only seven years before, in 2013, these revenues were estimated at €67 billion. These are impressive numbers. By way of comparison, in the same year the global box office revenue of the movie industry was €39 billion.[5]

Video games are a huge phenomenon. It is possible to play on almost any digital device you can think of, from a keychain holder to a professional personal computer, from an old mobile phone to a last-generation gaming console: tablets, laptops, MP3 readers, mobile and home consoles … basically everywhere!

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4. www.gamesindustry.biz/articles/2020-12-21-gamesindustry-biz-presents-the-year-in-numbers-2020.
5. www.statista.com/statistics/271856/global-box-office-revenue/.

Going back to some figures, in 2019, 46% of income from the video game market came from mobile devices (37% from smartphones and 9% from tablets), 30% from consoles and the remaining 24% from PC games, 2% of which came from browser games. This is a growing trend, and according to the SuperData annual report, every year the video-gaming industry growth is 12%.[6]

In the past number of years, video games have gained importance on many levels; they have evolved from a "simple" entertainment medium to a complex and complete industry with many aspects, including yearly awards, international expo events and, of course, e-sports. E-sports, or the phenomenon of multiplayer video games being played at professional level in national or international tournaments, has become more and more important in the video game scene: here we are talking of 143 million frequent viewers and 192 million occasional viewers in 2017, rising to 165 million frequent viewers and 215 million occasional viewers in 2018.

An e-sport event, followed by thousands of people

Even looking at the most common online video platforms, such as YouTube or Twitch, the channels which deal with video games are among the most viewed, and these views generate a large amount of income every year.

Links with Digital Citizenship Education

Consumer Awareness

When I think about video games I acknowledge the fact that it is one of the most relevant industries in the entertainment market.

Why do you think that mobile gaming is so popular?

Level 1.3. The video-gaming community

To think that the act of video gaming ends when the console is switched off or the game is closed might be too simplistic. Similar to what happens when watching a movie or reading a good book, the mind starts wondering what will happen in the next gaming session, or maybe the player is prompted to think about alternative ways to overcome certain challenges which are particularly tricky.

6. www.superdataresearch.com/reports/2019-year-in-review.

Players can gather, say at school, and discuss their digital experiences. They may talk about the way they played, share tricks or even complain because a teammate did not behave properly in an online match.

Moreover, players can engage in online communities to look for help from other players, follow the daily streaming event of a favourite gamer on Twitch or YouTube, look for online video gameplays or even follow forums or specialised websites to stay informed about the latest news regarding an upcoming video game.

In many cases these activities might not comprise a simple "consumer culture" where people passively await content, news or updates from others. They can become, in Henry Jenkins' (2003) terminology, proper "participative culture", or, in other words, processes where the subjects are actively involved because they feel a sense of belonging to a community where they are willing to express themselves creatively and where they collaborate with each other, offering help or solving problems together.

Did you know…

▶ **Twitch is an online platform owned by Amazon specifically conceived for hosting videos and streaming related to video games.**

▶ **In 2020, the monthly average of minutes watched was 93 billion. This corresponds to almost 176 820 years.[7]**

▶ **Every day, more than 26 million visitors watch Twitch content.**

Links with Digital Citizenship Education

Learning and creativity

Playing video games means also learning new rules and new game-languages. It can also be a powerful act of creativity.

Have you ever tried to encourage someone to play creatively, to play "against the rules" of the game or to change strategy in order to overcome certain situations?

Have you ever noticed that the more people play the better players they become?

ePresence and Communication

Players engage in online communities to follow other players and to see them playing, or to share their knowledge and tips to become better at gaming.

Do you know about good online communities that discuss gaming? How do your students or children behave in those communities?

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7. https://twitchtracker.com/statistics.

Level 1.4. Gaming devices

There are literally hundreds of devices that allow the playing of video games. Personal computers, home consoles, portable consoles, smartphones, tablets and coin-operated machines are only the main examples. It is even possible to find video games on the entertainment systems of planes during international flights!

The traditional setting in front of a screen or TV, playing via a keyboard or joypad, is still present, but, with the spread of portable consoles and mobile gaming, playing has become a more diverse activity.

Nowadays, every smartphone has the option to install games: some games are free while there is a charge for others, and some are free but encourage players to buy add-ons while playing – for more on this see Level 2.1.

Playing on a smartphone

> **Warning!**
>
> ► Playing has broken the boundaries of the "common spaces" of the house: children can now play literally everywhere – in bed, in the bathroom, at school during lessons, and even at the bus stop … ask them about their playing behaviours. Show that you care about it.

Recently, two new ways of playing have been growing in popularity – Augmented Reality (AR) and Virtual Reality (VR). What is the difference between the two?

AR games are video games that use the camera of the devices they run on to show elements that do not actually exist. For instance, the popular mobile game *Pokémon GO* allows players to walk the streets of their cities and look for strange animals to catch and collect. These animals appear only when the players point the smartphone to a specific place which is marked on a map through GPS co-ordinates. "Augmented" literally means something more – something that is shown only on the screens of the devices used to play.

VR is a technology based on the principle of stereoscopy, a technique that is able to simulate an illusion of depth in the viewer. How is this possible? VR works by means

of special visors equipped with two small screens which send a different point of view to each eye and trick the brain into an illusion of being actually present in the game's environment. There are many kinds of VR visor; most function only if connected to a PC or gaming console, some work standalone, while others are like simple "goggles" that support an external device (a smartphone for example).

Level 1.5. "Flow" and gaming

This medium has evolved so much since its inception. Nowadays it is almost impossible to find games based on the classical level-structure, as even the idea of in-game points has lost its importance in recent products. Today, players are more familiar with concepts of achievements, missions, campaigns and matches.

Did you know…

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► **The first video games date back to the first years of the 1950s. One was called *Bertie the Brain* and was an electronic version of the tic-tac-toe game.**

► **The main PC gaming platforms, such as Steam, Origin or even the latest game consoles, have an inner system of rewarding players who achieve particular steps in games. This system is called achievement and awards those players with points. Mostly these points serve only as something to be collected but, in some cases, can also be used to receive discounts when buying other games.**

This evolution, of course, has changed the experience of gaming profoundly throughout the years. For instance, not all games allowed players to save and reload a match, and even this option differed from title to title. This evolution has also affected the ways in which players engage in a match, in other words, players' level of engagement.

The act of play is not a passive activity: au contraire! If a game offers the right amount of challenge then the player is transported into a state of high focus and high commitment which is called "flow" (Csíkszentmihályi 1975). In this state of flow, players are completely immersed in the gaming experience and almost nothing can distract or interrupt them: the tension reaches a peak and is maintained for a while.

Nowadays, it is very common to hear the following dialogue:

> Parent: "Hey, switch off that game and come to dinner."
> Son/Daughter: "I can't! I'm in the middle of a mission! Let me finish it!"

If this sounds familiar, it is because games are designed to keep players engaged in order to maintain their state of flow. Often, play sessions are marked by missions to complete or objectives to achieve and, in many cases, gamers do not want to suspend the match until the climax has ended.

To better explain this phenomenon, you can consider a session of play as like a sinusoid where the level of challenge and commitment rises and drops following the pace of the game. During a football match on *FIFA 20*, players' focus may drop after each action and is at its peak in the seconds before the shot into the goal. The peak is even longer in the case of a match with an online multiplayer shooter like *Fortnite*, for example: quitting an online match or mission without the consent of teammates or opponents can sometimes cause trouble or arguments.
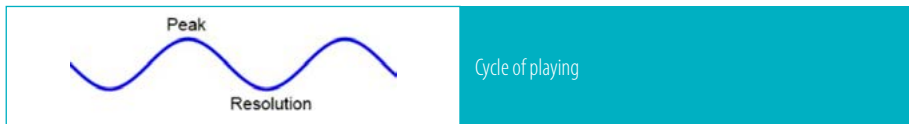
Asking someone to quit playing a game (or watching a movie or reading a book) during a peak of tension or when they are experiencing a state of flow can spark conflict.

There are games which are designed to have shorter or longer cycles of peak–resolution and others which allow players to save the game and restart from that point, while others allow saving only in specific areas or at specific moments. Moreover, there are consoles (such as the Nintendo Switch) which allow players to freeze the match at any time and restart from exactly that moment, while other systems need to be restarted and it can take five minutes to re-enter the game. It is important to know and try to understand these dynamics in order to better relate to players.

A passive activity?

Callois (1958) identified two different components in games: the Paidia and the Ludus. The first refers to a free, improvised, spontaneous attitude towards the act of play while the second refers to a more structured, rule-driven, regulated kind of game. Similarly, some video games offer more constrained gameplay while others allow players to roam freely in digital worlds or do not necessarily follow a structured path.

Children and players in general can activate a state of "play" or "game" in every kind of video game by bending the rules of the games, creating a new system of personal rules, or simply by not following the rules at all (Juul 2007).

Playing video games is not a passive activity that sedates thinking, but can activate creativity, fantasy and learning (Prensky 2006). For more go to Level 3.2.

Links with Digital Citizenship Education

Health and Well-being

Video games are designed to be more and more engaging and balancing a proper media diet can be a difficult task.

How do you manage your role as mediator of video-gaming experiences? Are you interested in the gaming activities of your children or your students?

Level 1.6. Online stores and online services

Having a home gaming console and owning an online game may not be enough to play online. Most of the main home consoles on the market inform their users that they need to subscribe to a monthly or yearly membership plan if they want to be able to play multiplayer online games. These are some of the options.

▶ Some online console games (for example, *Fortnite* or *Apex Legends*) allow you to play without subscription on some platforms.

▶ Subscriptions are usually not needed to play online from PCs or mobile devices.

▶ Each console has its own online service.

▶ Not all games allow players from different gaming platforms to play together. Only a few actually do!

▶ When the subscription ends, it needs to be renewed for the user to be able to play again online.

▶ Subscription plans differ with some offering more services, which may include free games every month, discounts to buy new games, etc.

Did you know…

▶ **When you buy games through platforms like PlayStation Store, Nintendo Store, Xbox Marketplace, Steam, etc., you do not actually buy the physical edition but a digital downloadable version.**

▶ **This version is connected to the user-profile who bought it, and it is not possible to lend or resell it.**

Fortnite, 2017, Epic Games

Each console has its own dedicated online store where users can buy new games and download demos (free trial versions of games) and extra content.

On a personal computer the situation is slightly different since dedicated software must be downloaded and players can buy and launch games and organise online matches.

Recently, taking inspiration from services like Spotify or Netflix, some online gaming services for console and PC have allowed users to pay a monthly subscription of a few euros to download and freely play all the titles offered in the online collection. Once the subscription expires the subscriber can no longer play.

Some other services, like Sony PlayStation™ Now, Microsoft Project xCloud or Google Stadia will allow people to play games directly online through streaming on almost every device, without any sort of download.

Links with Digital Citizenship Education

Consumer Awareness

The way video games are shifting from "proper objects to possess" to "digital services to subscribe to" puts the adults in the difficult position to monitor and carefully observe what happens around them.

Are you aware of the gaming services that your students or your children use every day? Are you curious about them?

Level 1.7. Age and content ratings

Pan-European Game Information (PEGI) has developed a rating system for video games specifically designed to inform buyers about potentially risky content and to suggest the right target age.

Although in most countries PEGI represents a recommendation, in the UK it has been law since 2012.

When you look at video game packaging, you will usually find a series of icons marked "PEGI" somewhere on the box. These icons are also presented when buying games from online stores via a mobile phone, home console or other device. The icons show age labels and content descriptors.

Age labels

These are coloured icons with a number representing the minimum recommended age for the game. The age range is 3, 7, 12, 16 and 18, and the colour changes from green to red.

PEGI age rating labels

Content descriptors

This set of icons are grey and black and they mark types of risky content which the game contains. Violence, bad language, fear, gambling, sex, drugs and discrimination are the kinds of potentially harmful content. Recently the PEGI system added two more icons, namely one that signals the presence of "online gaming" and another that signals that the game foresees "in-game purchases".

PEGI age rating labels

More information is available on the official PEGI website, which also contains a search engine where it is possible to look for all video game ratings.

Did you know…

Children generally prefer to play games not suited for their age. This applies, in truth, to all media: children tend to prefer media products that are conceived for a more mature audience (Schneider 1987). Reasons for this may be found in the relationships that young people have with their peers or older brothers or sisters, and also in their lifestyle. Once a media product is launched, it is unusual for a player not to get wind of it. In view of this, the World Wide Web and advertisements have a great responsibility.

As adults involved in pedagogical relationships it is very important to know and to consider these rating systems but it is equally, if not more, important to adopt an approach oriented towards dialogue and negotiation with children rather than a mere simplistic application of these ratings as control tools.

If you wish to know more

On its official website, PEGI offers content such as advice on parental control tools and tips for parents aimed at helping families to foster a healthy relationship with video games.
https://pegi.info/page/tips-parents

ISFE, Europe's Video Games Industry, has plenty of resources for parents and educators regarding the video games industry and responsible gaming.
www.isfe.eu/responsible-gameplay/

Another interesting resource that can be used by parents or teachers is Common Sense Media (www.commonsensemedia.org), an American online website where thousands of product reviews and educational activities are collected.

The British branch of ISFE, UKIE, developed a platform to support parents and players with information, insights and various kinds of support material with the aim of providing advice on how to play games safely and responsibly.
www.askaboutgames.com

PédaGoJeux is a French collective born in partnership with the Ministry of Family. Its goal is to inform parents and raise their awareness of video games so that games can become a positive and enjoyable experience for the whole family.
www.pedagojeux.fr

Links with Digital Citizenship Education

Health and Well-being

Due to their contents, not all video games are suitable for young people. Choosing the right video games is very important.

Do you know the PEGI rating system?

Level 1.8. Parental control tools

Most of the gaming devices available nowadays allow you to play any kind of game. This may include games with very violent or disturbing content. Parents who do not want their children to play video games not suited for their age can use parental control tools to limit the kind of content accessible from that device.

These tools are very powerful and allow parents to:

▶ choose games based on PEGI age ratings;
▶ apply filters to internet browsers;
▶ control and limit the daily duration of play;
▶ control and limit the digital purchases that some games allow.

In some cases, it is also possible to monitor information directly from your own smartphone.

These options are available on most operating systems (Microsoft Windows, Apple MacOS), portable devices (Android, Windows, iOS) and gaming consoles on the market (Sony PlayStation, Microsoft Xbox and Nintendo Switch).

More information on the above may be found on:

▶ Microsoft Family: https://account.microsoft.com/family/
▶ PlayStation Parental controls help: www.playstation.com/en-gb/support/account/ps5-parental-controls-spending-limits/
▶ Nintendo Switch: www.nintendo.com/switch/family-fun/parental-controls/
▶ Android Parental controls help: www.playstation.com/en-gb/support/account/ps5-parental-controls-spending-limits/
▶ Apple Parental controls help: https://support.apple.com/en-gb/HT201304

Playing together

Links with Digital Citizenship Education

Privacy and Security

Online games allow players to interact with other players who can be friends or complete strangers. Parental control services can be set to guarantee your children's privacy.

Can you use parental controls on your gaming devices?

World 1 – Things to know

Walkthrough

▶ It is very difficult to talk about video games "in general" and it does not make much sense to do so. There are different kinds of games – different in terms of gameplay mechanics, narratives, forms of interaction between players and many other elements.

▶ The video game industry is growing in numbers and profits: it is a bigger market than movies.

▶ Video games continue after play sessions: players seek the help and support of online communities, peers and friends, and sometimes become involved in confrontation about aspects of a game.

▶ It is possible to play on many different devices (PCs, home consoles, portable consoles, tablets, smartphones), basically everywhere from the living room sofa to the bus stop.

▶ Each player is different: the same content originating from the same video game will have different effects.

▶ The mediation of adults and the context in which the game is played play a fundamental role.

▶ Choosing the right games, negotiating a proper daily gaming schedule, imposing limits and explaining why, and proposing other forms of entertainment are all good and necessary practices, but they are not enough: playing together and discussing it is key.

- ► Managing the duration of play can be difficult especially in online games where players must wait until the match is over.
- ► Having a home gaming console and owning an online game may not be enough to play online: in some cases a subscription is needed.
- ► Parents who do not want their children to play violent games or games for mature audiences can use parental control tools.
- ► The PEGI classification system supports parents in identifying which games are suitable for which age.

World 2 – Potential risks of video games

Level 2.1. Micro-transactions, in-app purchases and loot boxes

Some titles allow players to buy items or other kinds of content directly from the game through a credit card connected to the gaming account.

This content can vary as follows:

▶ in-game values: money to spend inside the digital world set up by the game;

▶ aesthetic changes: new clothes, skins or 3D model for the game avatars;

▶ gameplay changes: new and more powerful characters, weapons, tools or add-ons;

▶ DLC (downloadable content): extensions to the gaming experience, for example, new tracks in a racing game; new missions; new maps or new game modes.

Even if a game is free (free-to-play is the common term used), this does not mean that its creators do not earn money. Online games like *Fortnite*, *Apex Legends* or *Warframe* are perfect examples: these titles can be downloaded for free and players are not forced to spend any money to play them. However, since its release in July 2017, *Fortnite*, the famous Epic Games' title, has raised more than €1.3 billion per year, not to mention the mobile versions of *Fortnite*, downloadable for free, which raises an average of €2.2 million[8] every day.

Where does all this income come from? Mostly from in-app purchases: players spend money when buying in-game content.

Free-to-play games are not the only ones that contain micro-transactions: this mechanism can also be found in games that are not free.

Another interesting mechanism is "loot boxes": virtual items that can be bought with in-game value or with real money and that contain a random selection of virtual items. In some countries this practice is considered a form of illegal gambling, since it is not regulated.

Links with Digital Citizenship Education

Consumer Awareness

Free-to-play games are the most popular and most rewarding ones.

How is it possible for them to make so much money?

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8. www.gamesindustry.biz/articles/2018-07-24-fortnite-daily-mobile-revenue-reaches-usd2m.

Level 2.2. Online hate speech and video games

When online have you ever encountered comments to posts, forums, social networks or even videos containing racism, homophobia, verbal or visual violence, discriminatory or disrespectful interactions between users?

This phenomenon, relatively new and extremely common in the digital world, is called hate speech online; it is not simply caused by latent discriminatory and racist attitudes of online users but also strongly relates to how these users use the internet

> Hate speech covers all forms of expression which spread, incite, promote or justify racial hatred, xenophobia, antisemitism or other forms of hatred based on intolerance, including: intolerance expressed by aggressive nationalism and ethnocentrism, discrimination and hostility against minorities, migrants and people of immigrant origin.

Source: Committee of Ministers, Council of Europe

If you want to know more about hate speech online and how to overcome it, check these links:

No Hate Speech movement promoted by the Council of Europe[9]

Bookmarks – A manual for combating hate speech online through human rights education[10]

When online, people think less about the consequences of what they do or what they say because their presence is mediated by a screen. This does not mean, however, that the effects of those actions or words are less harmful.

Online games, video gamer communities and gameplay online streamers provide players with spaces to interact and discuss. These discussions can be polluted by racist, misogynistic, antisemitic and homophobic comments. They can be fertile terrain for specific forms of cyberbullying (Qing 2015).

What are these spaces?

- ► text and voice chats in online games;
- ► comments under online videos;
- ► real-time chats on online streaming video platforms;
- ► online forums;
- ► website comments.

Is monitoring these spaces enough to combat hate speech online? The answer is no. Hate speech must be seen as a symptom of a deeper problem, whose roots are planted deep in society. This is why monitoring, censoring or moderating online actions is not enough: mediation in pedagogical terms is crucial.

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9. www.coe.int/en/web/no-hate-campaign.
10. Keen E., Georgescu M. (2016) revised edition, *Bookmarks – A manual for combating hate speech online through human rights* education, Council of Europe Publishing, Strasbourg, available at https://rm.coe.int/168065dac7.

Warning!

In some video games (see Level 3.6 "Video games and creativity"), users can create different kinds of content, such as new levels, characters and games. Teachers and parents should be aware of this because children may come into contact with material that is not suitable for minors or which contains instances of hate speech, discrimination, violence or mature content.

Links with Digital Citizenship Education

Ethics and Empathy

Online games, or online communities connected to the gaming world, can offer room for hate speech, discrimination, racism, sexism or bullying.

Do you encourage your children/students to create safe and inclusive online environments?

ePresence and Communication

Being able to communicate effectively, politely and respectfully is key to having good gaming environments.

Do you talk to your children about the way they communicate through these spaces?

Level 2.3. Violent content

As seen in the section dedicated to the PEGI rating system, not every video game is suitable for everyone. This is important and must be emphasised. The same goes of course for movies, novels, songs or comics, which, despite their artistic value, may not be suitable for minors and children. The same critical process applies to video games.

Violence in video games is currently the topic of many scientific and political controversies, and has led, in some countries, to the censorship of titles that are particularly explicit in term of violent content. This is a difficult and complex topic.

Apart from being aware of the dangers and risks as consumers, another necessary approach is to open a dialogue with the game industry: the Council of Europe in co-operation with the Interactive Software Federation of Europe (ISFE) has published a set of guidelines specifically designed for game developers to help them produce games that are respectful of and possibly promote human rights.[11]

Are video games violent?

Many of the most popular video games can be labelled intrinsically violent. There are countless games where, in order to advance, the player is asked to take down opponents more or less violently. It is true that not all games are like this, but it is also undeniable that most games are.

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11. Council of Europe (2008), Human rights guidelines for online games providers, available at https://rm.coe.int/16805a39d3.

Let us be clear in saying that it is impossible to talk about violence in video games without saying that there can be many forms of violent content – verbal, physical, psychological – and there can be many variations of it in terms of representation and contextualisation (Soriani, Ilardo, and Falconi, 2018; Triberti and Argenton 2015).

Some games offer a "spectacularisation" of violence as the primary – and sometimes only – element of entertainment; others use it, more or less moderated, to provide structure to the gameplay mechanics. There are also cases where the presence of violence is contextualised and motivated by the need to share a very precise message, for example, criticism of certain aspects of society or of certain values.

In addition, different degrees of violence can be represented: there are titles on the market which demonstrate a maniacal level of realism (especially for violent content) and others that are more watered-down and simplified (even games where defeated enemies disappear in a flashy cloud). This difference must be taken into consideration.

The importance of context and mediation

Research on media and violence has demonstrated that the way violent content is perceived is profoundly influenced by the context in which this act of violence takes place (Ferguson 2010). Is this act rewarded or condemned? Is it inflicted or suffered?

The emotional impact must also be considered: does shooting a clerk to rob a shop have the same impact (in terms of violence) as having the main characters hit another one in order to prevent a drunk and violent father from beating his little daughter, like what happens in the game *Detroit: Become Human*? In some cases, the context and emotional charge can even ignite an empathic reaction in players (Zillmann 1998).

Similar to context, mediation by and dialogue with adults or other peers are key elements for interpreting the violence. Are children left playing alone or is there someone near to help them to think about what they are doing or to ask the reasons for their actions? If followed by a reflection of this kind, even the most violent scene can become a stimulus for debate.

Detroit: Become Human, 2018, Quantic Dream, Sony Interactive Entertainment

Does violence in video games have a negative impact on players?

This question is not new to the scientific community. Over the past years, many professionals from the worlds of sociology, psychology and pedagogy have explored the relationship between video games and aggressive behaviour to try to provide an answer. Some studies have attempted to demonstrate that exposure to violent content in video games can lead to more-or-less conscious emulation (Kirsh 1998), and there are also studies which attempted to demonstrate that violent games are chosen by aggressive players (Anderson and Bushman 2001).

Despite all the studies on the topic, researchers could not scientifically demonstrate any correlation between the use of violent games and aggressive behaviours (Swedish Media Council 2012). The reasons for this may lie in the methodological approaches of these studies, which seem to underestimate the social context in which the games are played and the level of complexity of both the videoludic medium and the phenomenon of violence.

Parents and education professionals must be vigilant about these dynamics and be more open and curious about the video games played by their children. Sometimes a video game that is extremely violent could be a very meaningful experience and can offer interesting insights to start a dialogue; at other times an apparently innocent and innocuous video game can be a more harmful experience. To use danah boyd's words (2014): it's complicated!

Links with Digital Citizenship Education

Media and Information Literacy

Like all other media, violence is an element that can be present in video games quite easily. But not all violent contents are alike, and not all audiences perceive the same content in the same way: the social context, the mediation of adults, the way violence is represented and contextualised in the game are all elements that must be considered.

Do you know any good games which don't contain violence?

Links with Digital Citizenship Education

Ethics and Empathy

The way violence is represented can differ profoundly from game to game. This can be used as material for dialogue or reflection with young people.

Ask your students or children: why is there violence in this game?

Level 2.4. Stereotypes, gender representation and attention to minorities

Violent content is not the only delicate element that deserves attention when we talk about video games. Similar to other media products, there are a large number of games with mature content that ranges from sex and prostitution to the use and abuse of drugs, alcohol and tobacco. Some games go to the extreme in terms of stereotyped and distorted representations of categories of individuals such as older people, women, gay people, transgender people, religious and ethnic minorities and people in fragile conditions. In others, such types of people are completely absent.

Strong and bold male heroes or handsome gangsters who drink, smoke, fight and do all sorts of illegal things are, in most cases, accompanied by female characters with supermodel bodies and revealing clothes in secondary or ancillary roles. Even the numbers of male and female main characters (including on game packaging) are unbalanced in favour of male (Burgess, Stermer and Burgess 2007). These kinds of disproportion are still common, and adults need to bear that in mind when buying a title. This goes for the industry too.

Did you know…

?

- ► **The number of female video gamers is rising. In 2020, 41% of players in the United States were female.[12] In Europe the percentage of women players was 45%.[13]**

- ► **These numbers are not very encouraging when we look at women employed in the video game industry: in this sector women are still a minority and still paid less[14] than their male counterparts: could this be reflected in how gender is represented in games?**

- ► **According to Feminist Frequency, in the 2019 edition of E3 (Electronic Entertainment Expo), one of the biggest video game expositions, only 5% of games featured a female main character (the lowest percentage of the previous five years)[15] against 22% with male main characters. What can be interpreted as a positive trend is that 65% of the titles launched at E3 2019 allowed the possibility to choose the sex of the main character.**

Yet there is more to this than meets the eye. As already stated many times, video games are a very complex and diverse medium and, taking the representation of women in video games as an example, it must be kept in mind that a lot of work still has to be done. Games which offer a different vision of women have, in recent years, been increasing. Here we are referring to games where women move away from the "princess-that-needs-to-be-saved" or "sexy-and-provoking-femme-fatale" stereotypes.

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12. www.theesa.com/esa-research/2020-essential-facts-about-the-video-game-industry/.
13. www.isfe.eu/wp-content/uploads/2020/08/ISFE-final-1.pdf.
14. http://theconversation.com/more-women-are-becoming-game-developers-but-theres-a-long-way-to-go-79843.
15. https://feministfrequency.com/2019/06/14/gender-breakdown-of-games-featured-at-e3-2019/.

It has lately become more common to find numerous examples of strong, determined, autonomous and emancipated girls and women who overcome their hurdles bravely and who are not afraid of hiding their weaknesses or even loving another woman. Examples can be found in girls like Chloe and Max (*Life is Strange*), or Madeline (*Celeste*), or even women like Girs (*Gris*) or Ellie (*The Last of Us*). These heroines are not portrayed for their sexuality but for their personality, determination, strength and the ways in which they defend their choices.

The male counterpart has also been affected, yet in a different way. Males have always been portrayed as brave, muscled and action-oriented, yet on a closer look you can see that this is changing too. Examples are Guybrush Threepwood (*Monkey Island* saga) and his naïve cleverness, Ico (*Ico*) and his kindness, or Carl (*Last day of June*) and his resilience. These characters will remain in players' hearts, not because of their physical strength or virility but because of the virtues and qualities mentioned above. Good examples are there but can be hard to find!

There are also video games where you can choose the sex of the main character: this is a very interesting element because it allows players to literally become someone else and to experience the perspective of other genders. Not only that: having the possibility to choose or create your own avatar allows players to explore different kinds of personalities, bodies and roles and to reflect on their own self-image and self-representation (Bessiere, Fleming Seay and Kiesler 2007; Suler 2002; Weinstein, Przybylski and Murayama 2017).

Links with Digital Citizenship Education

Media and Information Literacy

Being able to "dismantle" video games and understand their language, their message, the values that are projected is a position that needs to be learned and practised. Video games contain many representations of genders, minorities, people with disabilities or other categories that can be stereotyped or intelligently crafted.

Do you encourage young players to reflect in this way about the games they are playing?

Links with Digital Citizenship Education

Health and Well-being

Some video games allow players to experience what it is like to be someone else (different sex, different sexual orientations, different ages). Having such opportunities can be extremely useful for young people to negotiate their identity.

Level 2.5. Video-gaming addiction

Do video games cause addiction? Video games are not a drug and they do not cause addiction directly. Yet, there is a potential addiction connected to the use of video games, which is scientifically called "gaming disorder": a behavioural addiction that can be compared to other addictions of this kind like gambling, shopping, pornography, exercise, work, etc.

Specialists who have studied this phenomenon note that consuming video games is not necessarily the cause of gaming disorders. Professor Weinstein from Cardiff University showed that the toxic use of video games can be driven by low fulfilment of needs and dissatisfaction in life (Weinstein et al. 2017): from this point of view, playing can be seen as a strategy for escaping unpleasant contextual situations.

In June 2018, the World Health Organization (WHO) included "gaming disorder" in the 11th Revision of the International Classification of Diseases (ICD-11), defining it as

> a pattern of gaming behaviour ("digital-gaming" or "video gaming") characterised by impaired control over gaming, increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities, and continuation or escalation of gaming despite the occurrence of negative consequences.

WHO goes into more detail and specifies that

> for gaming disorder to be diagnosed, the behaviour pattern must be of sufficient severity to result in significant impairment in personal, family, social, educational, occupational or other important areas of functioning and would normally have been evident for at least 12 months.[16]

Gaming disorder can be a very serious issue and must be promptly diagnosed by medical specialists and professionals. It is also important that parents, teachers and educators are observant in terms of identifying potential cases of this disorder.

With regard to the above, we must pay attention to the following:

► the time spent on playing and on all other activities connected to the gaming experience;

► changes in physical or psychological health and social functioning;

► the ways in which the subjects play;

► the behaviours when they can't play.

Gaming disorder situations are extremely delicate and must not be underestimated, especially since studies have shown that the period in which a subject is more vulnerable and more exposed to the development of addictive behaviours is between puberty and adolescence (Ernst, Pine and Hardin 2006; Gladwin, Figner, Crone and Wiers 2011; Hammond, Mayes and Potenza 2014).

Despite the gravity of the matter, an alarmist response is unnecessary: it must be pointed out that being passionate about video games and spending a lot of time

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16. www.who.int/features/qa/gaming-disorder/en/.

on them does not necessarily mean that a person is suffering from this addiction. Moreover, researchers around the world are still debating the topic and highlighting the importance of not falling into the trap of "moral panic around the harm of video gaming" which may lead to "premature application of diagnosis in the medical community and the treatment of abundant false-positive cases" (Aarseth et al. 2017).

Talking about the subject to try to understand the underlying issues (such as stress, peer pressure, depression) behind the abuse of video games can be an effective and necessary first step, but you should not hesitate to consult experts should you feel they are needed.

More on managing gaming behaviour

Managing a balanced daily media diet, including time spent on games and screens in general, is very important. This is part of the process of education towards digital citizenship.

There are thousands of studies and different point of views about how parents can manage their children's screen time.

On one side there are voices like Serge Tisseron (2013), who launched the 3-6-9-12 campaign, an initiative to raise parents' awareness of how long children should spend in front of a screen (for more information visit: www.3-6-9-12.org/).

There is also research like that of Sonia Livingstone and Alicia Blum-Ross, from the Department of Media and Communication of the London School of Economics and Political Science; they suggest a few important approaches to parents (Livingstone and Blum-Ross 2016).

► **Move on from an approach focused solely on risks:** when parents are told their only role is to control and monitor the digital activities of their children, children are left without enough help to access the unique benefits offered by technology.

► **Use different approaches:** the right approach is a combination of different strategies such as setting boundaries and limits and modelling positive and active digital behaviours.

► **Emphasis on screen time is misleading:** the researchers argue that the focus on the quantity of digital media consumption is an obsolete approach. Parents should rather focus on discussing with their children where, when and how media are accessed (context), what is being watched or played (content), and whether and how relationships are influenced by the use of media (connections).

Warning!

Completely and blindly following screen time suggestions could be extremely difficult, if not, in some cases, impossible. Instead, as a parent, you can work on shared strategies for limiting the duration of use and negotiating the rules of use, and be present and show interest in your children's digital practices. If allowing a child to use a digital device is a repeated strategy to keep him or her quiet, most probably it will become a bad habit.

Links with Digital Citizenship Education

Health and Well-being

Gaming disorder is a behavioural addiction that must be promptly recognised and treated with the help of specialists. Monitoring the gaming habits of your children is important but must not lead to alarmism: spending a lot of time playing does not mean that someone is addicted.

World 2 – Potential risks

Walkthrough

► Be aware that some titles allow players to buy items or other kinds of content directly from the game (through "in-app purchases" or "loot boxes"). In most cases, this requires credit card information.

► Online games, video gamer communities and gameplay live-streamers provide players with spaces to interact and discuss. These spaces can be the theatre for racist, misogynistic, antisemitic and homophobic comments. Stay vigilant.

► Can video games be blamed for players' aggressive and violent behaviour? The answer is that it is not possible to say. The social context, the mediation of adults, the representation of the violence and the way it is contextualised in the game are all elements that must be considered. To read more go to Level 2.3.

► Violent content is not the only delicate element that deserves attention when we talk about video games: stereotypes, gender representation, and the presence and representation of minorities are also very important topics.

► Do video games cause addiction? Video games are not a drug and they do not cause addiction directly. "Gaming disorder" is a behavioural addiction that can be compared to other addictions connected to behaviours (like gambling, shopping, pornography, exercise, work, etc.). Consuming video games is not necessarily the cause of gaming disorders: playing could be a strategy for escaping unpleasant contextual situations.

► Despite the gravity, we should not have an alarmist response to gaming disorder: being passionate about video games and spending a lot of time on them does not necessarily mean that a person is suffering from this addiction.

World 3 – Potential benefits of video gaming

Level 3.1. Characteristics of video games

Often, when we refer to the video game, we think in general and simplified terms. However, it is important to consider that talking about video games means talking about an extremely diversified medium characterised by an equally high degree of complexity (in terms of fruition, production, aesthetics, values…). The variety of video game experiences available to gamers is huge and ranges from old textual and graphics adventures like *Colossal Cave Adventure* or *Maniac Mansion*, to modern action free-roaming games like *Red Dead Redemption 2*, passing through multiplayer shooters like *Fortnite* and small games developed by independent teams like *Gris*. James Paul Gee wrote that "good video games" are those which incorporate good learning principles[17] and that the act of playing is strongly connected to the act of learning – learning the game's mechanics and language, and learning ways to overcome its challenges.

Each of the examples mentioned above is profoundly different from the others and offers completely different experiences. It is not simply a matter of quality and it might be difficult (if not impossible) to identify unequivocally the criteria that make a given game better than another. In the course of this chapter/level we will describe some of the most relevant elements that make video game experiences worth exploring.

Game mechanics

Some games engage players with their gameplay mechanics which can represent a good combination of challenge and gratification. Others are so challenging that actually winning the game can give the player genuine motivation and satisfaction. For example, *Celeste* puts the player in the shoes of a girl named Madeline who decides to climb mount Celeste. During the long and difficult climb the player discovers that over time the protagonists suffer from depression, anxiety and panic attacks, and she is willing to reach the top of the mountain to prove to herself that she is capable of achieving such a goal. Each level is almost an impossible task, and the first feelings that the player experiences are the same as Madeline's: feeling lost, wanting to surrender, frustration. But after a long series of mistakes and new attempts the player eventually succeeds, unleashing feelings such as accomplishment, fulfilment, satisfaction and self-esteem. *Celeste* (we can also mention other titles like *Braid, Ikaruga, Sekiro: Shadows die twice* is the perfect example of how games, simply by means of their mechanics, can engage players emotionally and mentally.

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17. https://academiccolab.org/resources/documents/Good_Learning.pdf.

Storytelling

Video games offer great opportunities in terms of storytelling and narration: researchers like Bogost (2007), Jenkins (2003), Juul (2001) and Sicart (2011) have explored the phenomenon widely and with different perspectives. Without going into too much detail on this interesting and complex debate, we would like to point out that the story, the game lore and the way these stories are told play a key role in determining the quality of a game. Some games have a storyline so well-crafted that they can be a real inspiration for players' fantasies and can open up new perspectives about how to write creatively in general. *What remains of Edith Finch,* published by Annapurna Pictures in 2017, is a great example of how video games can use their languages to tell stories: the game sees Edith visiting, after a long absence, the house of her childhood to look for information about her family and her relatives. As the protagonist, who is the sole surviving member of the Finch family, enters the rooms of the different relatives, she is projected into the memories of each person and is able to understand how he or she died and which feelings they experienced. Every story is told with a different technique and with different narrative expedients. It is impossible not to be impressed by the quality of the storytelling.

Quality of interactions

Not all game interaction between players ends with one person shooting down the other. Some games demand that players interact with each other in completely new ways and these can strongly stimulate their cognitive and relationship skills. For instance, in *Keep Talking and Nobody Explodes* one player is in front of the screen trying to defuse a timed bomb, and the other player is away from the screen with the instructions for the defusal: their goal is to neutralise the bomb by talking and exchanging information. Another example, in *Overcooked*, two or more players need to collaborate and co-ordinate to prepare dishes and serve them. Other games like *Super Mario Party* even allow four players to play together on the same device and compete in a series of quick mini games.

With some video games four players can play simultaneously

Aesthetics

The aesthetic differences in terms of visual arts and styles, sound effects and soundtracks can represent a key factor in determining the quality of a game. Titles like *Journey*, *Chuchel*, *Bound* or *Gris* excel in terms of aesthetic inspirations, each for different reasons: the combination of graphics and animation, the harmony between soundtrack and the in-game situations, or simply the beauty of a sight offered by the panorama during a walk or a horse ride in *Red Dead Redemption 2*.

There are so many graphic and music styles that it would be impossible to list all the games that are worthy of taking a look at: the point is that it is difficult to identify exactly the kinds of elements that different players can find moving and inspiring. An anaesthetic is something that lowers someone's senses, that turns off the sensibility. It is important to embrace the fact that video games can be the contrary of something anaesthetic, and that they can be aesthetic experiences.

Topics approached

Luckily not all video games have as their goal the defeat of the local villain or freeing of the princess. Some games tackle delicate and complex topics such as freedom of expression, the conditions of refugees during a civil war, and even physical and mental illness. They tend to do this rather elegantly, often by presenting perspectives that represent minorities, and they sometimes challenge players with strong criticism of society.

Papers, please!, for example, is a game where it is possible to play the role of a checkpoint officer of an imaginary militarised country. The player must make decisions about whom to allow and deny access to the border. *Valiant Hearts* allow players to experience the life of soldiers, prisoners, nurses (and even dogs) during the Great War. Other remarkable examples can be the already mentioned *Bury me, my love!* which addresses the topic of Syrian refugees or *This war of mine*.

Inclusive video games

The number of players in the world has grown (estimated at 2.68 billion in 2020),[18] and with this the number of players with a disability has also increased (Beetson, Power, Cairns and Barlet 2018). Recently there has been growing attention to creating video games that are accessible to a broader audience by introducing the possibility to:

- ▶ remap the buttons of the joypad or the keys of the keyboard;
- ▶ adjust the gamma (brightness of the screen);
- ▶ set the colours to meet the needs of colour-blind players;
- ▶ add subtitles;
- ▶ save the game automatically;
- ▶ adjust the difficulty of the game at any time.

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18. www.statista.com/statistics/293304/number-video-gamers/.

Another big obstacle to achieving accessibility for players (APX[19]) might be the joypad: players can have problems holding the controller properly due to physical disabilities. Fortunately, there are solutions to this, such as the Microsoft Adaptive Controller: a customisable joypad designed to allow anyone to access the world of gaming. For more information see: http://xbox.com/adaptive-controller.

Links with Digital Citizenship Education

Access and Inclusion

Some games allow you to add subtitles, correct visuals, remap buttons to meet everyone's needs; people with physical disabilities can even use special joypads to access gaming.

Do you know how to change language settings and set up subtitles?

Links with Digital Citizenship Education

Learning and Creativity

Games differ in many aspects: gameplay, storytelling techniques, interactions between players, topics approached, aesthetics. Being able to recognise the differences in terms of quality is a long process.

Do you ask your children why they like their favourite video games?

Level 3.2. Learning from video games

Video games in schools?

Despite the feelings of fear and suspicion raised when we talk about using this medium in class, the pedagogical potentials of the medium are many. The scientific community is studying closely the educational benefits of video games and, in the following pages, the ideas of some of the most relevant voices in the field are described.

Studies in this area are plentiful, as are success stories in schools that have used video games for didactic and educational purposes.

ISFE and European Schoolnet's project Games in Schools (http://games.eun.org), for example, researched schools' practices regarding the use of video games in classes and collected a series of practical experiences around Europe (Watisau, Kearney and Van den Berghe 2009).

More recently, an Erasmus+ project called App your school (www.appyourschool.eu/) experimented with the use of video games such as Minecraft or Unravel as main tools for workshops with students and for training initiatives with parents and teachers.

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19. https://accessible.games/accessible-player-experiences/.

"When you play, you learn"

It may sound strange, but when you play, you learn. In other words, the act of play can be seen as a learning process that engages the player almost in an unconscious way.

James Paul Gee's research on video games concludes that these games present the player with a set of problems/hurdles that need to be solved in order to advance. Some games, such as *Civilization VI*, *Starcraft 2* and even *Fortnite* can be really complex in terms of instructions, controls and gameplay dynamics.

When playing, children are highly engaged in this process of problem solving: they learn the internal mechanics of the game perfectly. They are not afraid of making mistakes and they do not stop trying until they manage to overcome the challenging part. They learn every command they need simply by playing, guided by the tutorials or by the training provided at each level, which is designed to introduce game mechanics little by little. If you are tempted to disagree, try a game you have never tried: you will probably fail miserably!

Moreover, games can introduce the player to foreign languages and give him or her exposure to that language (Chen and Yang 2013). The gamer can also learn skills that are very apt in the 21st century and these may include collaboration, prudent risk taking, problem solving, and strategy formulation and implementation (Prensky 2006).

Some games not only stimulate skills such as transversal thinking or memory but also work on a neurological level by improving brain plasticity and orientation abilities (Kühn et al. 2013), hand–eye co-ordination (Li, Chen and Chen 2016), and even psychological issues such as anxiety or depression (Granic, Lobel and Engels 2014).

Approaches to video games in education

Video games can offer a large space for interesting educational reflections. However, there is much criticism of and many obstacles to the use of video games in education, both in terms of pedagogical risks (see World 2) and of logistical constraints and costs. It is also true that in most cases, especially when we refer to the education system, adults do not feel confident enough with this medium to try out new pedagogical approaches. This is probably due to the fact that they often hear about video games only when unpleasant situations occur in the classroom. This is perfectly understandable. However, in the next sections we look at three approaches to the use of video games in educational contexts.

Links with Digital Citizenship Education

Learning and Creativity

Video games have lots of educational potential: some games help players to improve their foreign language or to improve co-ordination, some contain educational materials, others can be used to introduce specific topics, and some to address controversial issues.

Have you ever asked to your children or your students what they have learned from video games? You might be surprised!

Links with Digital Citizenship Education

Active Participation

Approaching specific topics through games can engage young people with causes that they might not have known before. There are also gaming platforms (like *Humble Bundle*) that devolve their incomes to NGOs or to good causes.

Level 3.3. Using educational video games

There are serious games specifically designed for educational purposes. Using this kind of product represents a very simple and direct approach that can be particularly effective for teaching basic skills such as memorising concepts or learning simple operations, or for teaching specific topics. In other words, using serious games for educational purposes means meaningfully using videoludic products whose main aim is not entertainment (Sawyer 2007); this can also represent one of the biggest limitations of this approach. Since their main aim is not entertainment, these games may not be funny enough, hence children may find them boring. This means that fun, one of the most important motivational factors of video games, might be missing.

Fortunately, the virtuous examples are there and not all serious games are bad or boring products:

► *Human Resource Machine,* from Tomorrow Corporation, is a wonderful game where the player must solve puzzles using his or her coding skills.

► *Type: Rider*, developed by Ex Nihilo, is a platform game that walks the player through the story of typography.

► *Father and Son* is an adventure game created by TuoMuseo in collaboration with the National Archaeological Museum of Naples to encourage players to visit the museum.

► *A Gender Story* is a beautiful interactive story created in the framework of the GET UP project developed by Benjamin Mutombo and Switch asbl. This game tackles gender stereotypes and discrimination by raising awareness on how these can negatively affect the educational choices and career progression of girls and women, boys and men. For more information: www.getupproject.eu.

► *Bury me, my love!* Is a delicate and intelligent interactive story that talks about the difficult journey of Syrian refugees, told through instant messages. For more information: http://burymemylove.arte.tv/.

For more information:

In 2009 European Schoolnet published an interesting and comprehensive report, *How are digital games used in schools?*: http://games.eun.org/upload/gis-full_report_en.pdf and in 2020 a handbook for teachers, *Using educational games in the classroom:* www.isfe.eu/wp-content/uploads/2020/10/2020-GiS-handbook-for-teachers-FINAL.pdf.

A Gender Story, 2018, Benjamin Mutombo/Switch asbl,
GET UP project

Bury me, my love!, 2019, ©The Pixel Hunt – Figs –
Arte France / Mathieu Godet

Links with Digital Citizenship Education

Learning and Creativity

Serious games are a very powerful and interesting means to help children approach educational content in an alternative and more meaningful way.

Did you know that there are lot of serious games available? One of them talks about the Syrian refugees' conditions.

Level 3.4. Using video games to stimulate tangential learning

This more indirect approach involves the use of "real" video games to capture students' attention and encourage them to learn. The theoretical framework of this approach is tangential learning, originally discussed by Floyd and Portnow.[20] Floyd and Portnow argue that tangential learning is the idea that a certain proportion of the public will start a learning process autonomously, if we – educators, teachers, parents, game designers – can facilitate their approach to topics they may find interesting in a context – the one put in place by the game – which they already feel is thrilling and exciting.

The aim is to use computer games to stimulate students' curiosity and to make them passionate about a particular topic, making the act of self-directed learning or discovery easier and more incisive.

Some examples will make this concept clearer:

▶ *Assassins Creed Origins* is a game set in ancient Ptolemaic Egypt where the players are plunged into a remarkably historical reproduction of territories, architectures and characters of that age. The game also provides a "discovery tour" mode where it is possible to roam freely around and get interesting information about the history of Egypt.

▶ *God of War* tells the story of Kratos, a Spartan warrior who fights the Pantheon of Ancient Greece and the gods of Norse mythology. It is one of the most popular video games of recent years and offers much insight for self-discovery about Greek and Norse historical culture.

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20. *Tangential learning: how games can teach us while we play,* Extra Credits: www.youtube.com/watch?v=rlQrTHrwyxQ&src_vid=1dLK9MW-9sY&feature=iv&annotation_id=annotation_256243.

▶ *Never Alone* is a game developed with the help of native Alaskan storytellers and elders, who present, in a delicate and poetic way, the traditional lore of the Inuit people. For more information see: http://neveralonegame.com/.

Of course, this approach has important limitations: the learning process is spontaneous and may require guidance to promote it; moreover it is strongly related to individual preferences, passions and inclinations. The mediation of adults and other education professionals is key: knowing the right games – or the right songs, movies, comics, etc. – and knowing how to properly present them to children or learners are complex and delicate tasks.

An interesting exercise could be asking students to conduct a research about the things they have discovered through games. This would prompt them to realise how much influence their passions or hobbies have on their education.

Did you know…

?

Video games can become a means to discover the world and to promote culture and tourism. The Italian Videogame Program (IVIPRO) is an Italian non-governmental organisation (NGO) whose goal is to promote dialogue between game developers and local institutions to facilitate the process of developing games set in Italy. The IVIPRO website hosts a map showing the real locations on which some of the most famous video games are based.

Links with Digital Citizenship Education

Learning and Creativity

Serious games are not the only games that can be used for fostering learning: if certain "real" video games approach useful topics (like the Second World War, the Italian Renaissance, Ancient Egypt…) why not use them to create interest?

Games can also be opportunities to learn about new movies, new paintings, new music. Get curious!

Level 3.5. Using video games to develop critical thinking

The final approach deals with the use of video games to approach serious topics or even current events in a critical way. The purpose is to stimulate students to think critically, a kind of mindset which brings people to reflect, discern, analyse, evaluate and finally take responsible action accordingly. This practice is extremely useful in dismantling stereotypes and fighting prejudices.

If used properly, video games can offer great opportunities for in-class discussions or for educational insights. For example, topics such as ethics, empathy, racism, legal issues, gender and LGBT representation, violence, current events and other controversial issues can be approached by showing or simply talking about a video game.

In such an approach, the kind of videoludic product that can be used is not limited to serious games: opening a discussion by showing the latest *Grand Theft Auto* or the latest big, violent and superficial production can be more meaningful and can offer more stimuli for reflection.

► *Detroit: Become Human*, 2018, Quantic Dream, Sony Interactive Entertainment
This game approaches the delicate topic of racism by telling the stories of some androids who, due to a system error, acquire free will and decide to fight for their rights. In the picture it is possible to observe a scene, clearly inspired by the apartheid policies, where androids are forced to occupy dedicated areas of public transport.

► *Red Dead Redemption 2*, 2018, Rockstar Studio, Rockstar Games
The game is set in the last years of the age of cowboys and the player is asked to follow the steps of a group of bandits who are struggling with the civilisation of the West. The game poses some interesting questions and puts the gamers in the position to reflect about what is ethical, what is just and what it is like facing ineluctable changes.

It is evident that teachers need to feel comfortable with these topics and with this medium. Knowing the right video games is key, but that is not enough. The simple act of showing the right video games must be accompanied and supported by mediation and negotiation of the meaning, and the experience and perception of the learners. Moreover, it is important to view this use of video games as a complement to teaching and learning: video games, paintings, novels, songs, comic books and other forms of art: they can all contribute to stimulating significant reflections and discussions.

Links with Digital Citizenship Education

Learning and Creativity

Video games can be used as a complement to "classic" teaching and learning materials: approaching a topic by allowing students to also research it by means of a video game can enrich the learning experience.

Do you plan research activities that involve video games?

Media and Information Literacy

Being able to "read" video games critically and understand the representations of aspects of the world, the values projected and satirical content are important behaviours that must be developed by gamers.

Do you question your children and students to go beyond their first impressions of a game?

Ethics and Empathy

Some games face players with difficult and controversial situations that can offer fertile terrain to discuss meaningful aspects of the world.

Do you know some games that can foster this kind of reflection?

Level 3.6. Video games and creativity

Video games can capture players' interests and motivation by fostering and unleashing their creativity like no other medium can.

Minecraft, *Dragon Quest Builders*, *Portal Knights* and *LEGO® Worlds*, together with *Roblox*, *Little Big Planet*, *The Movies* or *Dreams* are but a few examples of this. These video games found their gameplay on user-generated content and invite players to constantly create, modify, recreate and share with other players in-game content such as levels, maps, skins of avatars, items and more. In some of the examples mentioned it is even possible to create music, sound effects, 3D models of items and characters, short cinematics and even new games.

There is also much software that allows people, especially children, to create real video games and to foster their coding skills. Some of this software is easy to approach while other software is more difficult. Some allows the player to create a specific type of game while other software is more open. Some focuses more on "coding" while others provide more simplified editors. Some software is free and some needs to be purchased. In general, these tools are very powerful and allow young people to easily create quite complex products.

Here are some tools that you can suggest to your children or students:

► **RPG maker MV:** This is a series of software that allows users to create RPG-style games. RPG stands for Role Playing Games and usually are kinds of products where the main characters can explore worlds, face monsters and develop a story. It has been released for consoles and PCs and it allows users to export games to mobile devices. For more information: www.rpgmakerweb.com/.

► **Quest:** A tool conceived to create text adventures. It is free and can be used online from a regular internet browser. For more information: http://textadventures.co.uk/.

► **Scratch:** Developed by Massachusetts Institute of Technology, Scratch is completely free and is accessible from Windows, Mac and Linux. Scratch is one of the most popular and most frequently used platforms for introducing children to coding. For more information: https://scratch.mit.edu/.

► If you want to know more about how a video game is created, watch this video created by MIT researchers: www.youtube.com/watch?v=Ex1ktxOxVgI.

► **Stencyl:** This is a complete tool, inspired by MIT's Scratch, which adds lots of graphical features to the process of creating a video game. It is possible to export games onto many platforms and to use without payment, on condition that you publish the games on their online platform. For more information: www.stencyl.com.

Another phenomenon that is worth a mention is Game Jams. These events gather groups of game developers, young people, designers and others with the intention of producing a small video game in a short amount of time. Usually the participants are grouped into small teams and are provided with a topic or issue to address.

For more information: https://itch.io/jams.

World 3 – Potential benefits

Walkthrough

- ▶ Video games must not be considered a second-league medium: the medium has the same complexity, value and potential as other media.

- ▶ Every video game offers different experiences: there are games that, because of their mechanics, storylines, aesthetics, quality of the interactions they allow and the topics they approach, can really inspire players to learn new things or improve their social skills.

- ▶ Schools are starting to include video games in their practices despite the feelings of fear and suspicion that this medium raises when we talk about using it in class. See Level 3.2 for examples.

- ▶ When you play, you learn! While playing, players are highly engaged in a process of problem solving without any fear of making mistakes. Video games present players with valuable challenges, meaningful tasks, motivation to play and to complete tasks, instant feedback and appropriate rewards: these are the key elements for effective learning.

- ▶ Serious games are games specifically designed for educational purposes: using these games is a very direct approach that can be particularly effective for teaching basic skills such as memorising concepts or learning simple operations or for teaching specific topics. For examples of good serious games go to Level 3.3.

- ▶ It is also possible to use "real" video games to engage students' attention and increase their motivation to learn. This approach, which is more indirect, is seen in the use of games such as Assassin's Creed or Never Alone to get people engaged and interested in a topic.

- ▶ Another use of video games for educational purposes is to stimulate students to think critically about the medium, about the act of playing, about the content and values of the games they play. Video games become a subject to investigate: the goal is to educate citizens to reflect, discern, analyse, evaluate, and finally take responsible action accordingly.

- ▶ Video games can capture players' interest and motivation by fostering and unleashing their creativity like no other medium can. Some games are based on allowing the player to test his or her fantasies and creativity; other games allow the player to create new levels, or even new games.

▶ Playing games is not the only option! There are many tools that allow people to create new games: for more, go to Level 3.6.

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Bound, 2016, Plastic Studio, Sony Interactive Entertainment

Braid, 2008, Number None, Inc. and Hothead Games

Bury me, my love!, 2019, ©The Pixel Hunt - Figs - Arte France / Mathieu Godet

Celeste, 2018, Matt Makes Games

Chuchel, 2018, Amanita Design

Civilization VI, 2016, Firaxis Games, 2K Games

Colossal Cave Adventure, 1976, William Crowther, Don Woods

Detroit: Become Human, 2018, Quantic Dream, Sony Interactive Entertainment

Dragon Quest Builders, 2016, Square Enix

Dreams, 2020, Media Molecule, Sony Interactive Entertainment

Father and Son, 2017, TuoMuseo, Museo Archeologico Nazionale di Napoli

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Human Resource Machine, 2015, Tomorrow Corporation

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Ikaruga, 2001, Treasure, Sega

Journey, 2012, Thatgamecompany, Sony Computer Entertainment

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LEGO® Worlds, 2017, TT Games and Traveller's Tales, Warner Bros. Interactive Entertainment

Life is Strange, 2015, Dontnod Entertainment, Square Enix

Little Big Planet, 2008, Media Molecule, Sony Computer Entertainment Europe

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Children, teenagers and young people today live in a world profoundly influenced by technology and digital media. It has become almost impossible not to come into contact with mobile phones, tablets, laptops, console games and other forms of technology, whether for educational or entertainment purposes. Video games are an important aspect of this digital landscape and in recent years they have grown very rapidly in terms of popularity, relevance and complexity. Video games are fun, engaging and designed to capture players' attention. These factors bring new opportunities but also new challenges for the education of children and young people.

This volume of the *Digital Citizenship Education* series aims to make teachers and parents – indeed all adults with an educational role – aware of the complexity of this medium as well as the potential risks and opportunities that come with it. This publication also aims to provide readers with some useful strategies to help them choose the most appropriate video games and to engage in meaningful dialogue with stakeholders.

Promoting a video game culture means generating a pedagogical reflection around video games: thinking about them as a cultural tool able to offer opportunities, not only to have fun, but also to think, learn and develop as a person. It also means considering the video game worthy of being the object of study and of an accurate and careful analysis of its characteristics, its mechanics and its language.

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