# IT'S NOT JUST A GAME

## Karen Anderson

### ABSTRACT

*Computer games are fun – but they are so much more. This workshop will examine their role in education and demonstrate how they can be used for all ages and in a variety of subjects. It will show practical ways to use them as a powerful teaching resource that students will enthusiastically receive and understand. In addition, it aims to prove that young people can realistically aspire to a career in the games industry.*

What do you think about computer games? Just a bit of fun? Ever considered they could be something much more? In fact they are a powerful educational tool which can increase student interest and commitment to learning across a wide range of ages and subjects. They are part of modern society and are growing in influence and appeal. This is an exciting time for games development and students can realistically aspire to a career in the games industry. Want to know more? Read on…

### WHAT IS A GAME?

Before investigating the subject of computer games, it is important to define exactly what a game is. Things that might come to mind include games from earlier days such as Pacman, Tetris, Space Invaders, Sonic The Hedgehog, or more recent games like Halo, Wii Sports, Pro-Evolution Soccer or World of Warcraft. There are so many games out there spanning such diverse subjects and genres, it would be impossible to even begin to name them. And don't forget about Interactive DVDs – ever played Who Wants To Be A Millionaire – or card games, boards games, Rubik's Cube? What about a game of football or a boxing match? Games are everywhere, even where you least expect them, and by understanding the elements, they are recognisable and definable.

### ESSENTIAL FACTORS

- Objectives/goals/purpose
- Rules
- Main characters (protagonist/antagonist)
- Story/narrative/backstory
- Objects/pickups
- Good vs evil/struggle
- Winning and losing
- Achievement
- Replay ability and longevity
- Challenge
- Environment

### ADDITIONAL FACTORS

- Sound
- Escapism
- Fun
- Secrets
- Competitiveness
- Individual or social interaction
- Supporting characters (NPCs = non-playing characters)

Although this is not exhaustive, it gives a foundation upon which the term 'game' can be built.

Let's apply these elements to noughts and crosses:

- **Objective:** to get three in a row
- **Rules:** you have to take turns, only use a nought or a cross, only play within lines
- **Environment:** a 3 x 3 grid
- **Main characters:** nought (protagonist) and cross (antagonist)
- **Story:** battle of good vs evil, conflict, struggle
- **Achievement:** it is possible to win, lose or draw
- **Challenge:** as this is a multiplayer game, it depends on the skill of the other player

## A VERY QUICK HISTORY

The first computer games were made in the 1950s, although there are a lot of arguments over who did it first. Early games were monochrome (black and white) and relatively simple. Tennis For Two, which later became Pong, involves a bat at either side of the screen and hitting a dot (ball) across a line (net). Compared with the games of today, this may seem quite boring, however, it had all the elements of a modern game and proved to be very addictive and highly successful.

Over the next thirty years the market was flooded with ever-increasing technology, each new release saw something innovative be added. Score tables, sound, multiplayer – all features that we take for granted today had to be invented and improved. This period saw some classic names in gaming emerge: Spectrum, Commodore, Atari, Amiga.

The early 1980s saw the explosion of interest in gaming with the release of the Nintendo Entertainment System and the Sega Master System. Home gaming overtook the previously popular arcades which went out of fashion. With the introduction of these consoles, and the marketing wars that went with them bringing the prices down, home gaming became affordable and desirable. This was the period where you didn't play games; you 'played on the Nintendo'.

Back in 2007, we are now in the seventh generation of consoles and games. The PC is now a powerful system capable of playing games, some PCs even dedicated to that task, and the three console giants (Microsoft Xbox 360, Sony PlayStation 3 and Nintendo Wii) are developing bigger and better games and technology in order to be at the front of the market.

## WHY ARE GAMES IMPORTANT?

On an individual level, games encourage development in players of all ages, from young children to adults. They exercise the brain, just like a crossword does. This is most evident in games like Dr Kawashima's Brain Training (on Nintendo DS) but even Lara Croft, whatever her criticisms, has to solve puzzles as she jumps around in those short shorts.

As children are developing, one of the first innate tasks they perform is pattern recognition, identifying faces is key to who is safe, who will look after them. From that point all recognition uses the same process, for recognising a table, a sunset or a seven-letter word in scrabble. Playing games can develop those skills, for example Tetris and its set of seven falling tetrominoes are repeating patterns that we learn and, as we become more familiar with them, can place them in lines faster.

Games can improve dexterity as gamers hands know instinctively where the i key is on the keyboard to bring up their inventory, or console players know where the X button is to cast a spell. The Nintendo Wii, a revolutionary console released in 2006, has taken this to a new level, with a wireless controller that can detect motion and rotation in three dimensions – in other words, more physical interaction and movement is required, for example when playing tennis, the controller becomes a racket and you move as if you are actually playing.

Competition and challenge are two features which can keep people playing whether it is against the computer or real people. Modern gaming has opened up a whole new world in terms of social interaction. What was once a very solitary experience; gaming can now be performed in a global arena from the comfort of your own home. This can be done through PC (MMO – Massively Multiplayer Online gaming) and on consoles (Xbox Live, Wii Online and PlayStation Home). From one person sitting in their living room, they can play with people from all over the world and communicate with them through headsets with speakers and microphones.

Games can provide practise for the real world by simulation. The boom in sales of skateboards after the release of each instalment of the Tony Hawks' skateboarding games is showing that games are encouraging children (and some adults) to try it for real. Guitar Hero is doing the same for guitar playing. However, games also give you the chance to try these things without the risks of the real world. If you fall off your skateboard in Tony Hawks, you don't really get injured, but your character does, which demonstrates that actions do have consequences, a lesson that can be learnt effectively without having to break your own bones.

Finally, games are important because they are part of modern culture. Just like understanding film, television, advertising and even the English language, games are here, they are integrated in society and they are here to stay.

## THE GAMES INDUSTRY

What is the biggest selling media product of all time? You are probably thinking some Hollywood blockbuster like Spiderman 2 ($40.5 million on opening day). You would be close, but wrong. The media product that grossed the most sales in the first 24 hours is Halo 2 (available on Xbox) reaching a staggering $125 million.

The games industry is a viable career opportunity for students. It used to be small teams, a very tight-knit community and was impossible to break into it. Now the teams for each game are getting bigger and bigger, the jobs available are broader and the companies are more stable.

The types of jobs available include:

- Artists
- Script Writers
- Animators
- Programmers
- Audio (music/SFX)
- Online Technologies
- Producers/Directors
- Testers
- Marketing

The games industry in the UK is currently worth £1.6 billion and growing. This compares with the British film industry, which is around £3.5 billion.

Worldwide, the film industry is worth £42.3 billion, with the games industry worth £10.1 billion – if you think how big films are, to have a quarter of that amount is a demonstration of the growth games have made in a very short timeframe.

The UK video games industry currently employs more than 22,000 people, compared to the UK film industry of 57,000 people.

There were 25 million consoles sold in the UK in the last eight years. There were 350 million consoles sold worldwide. If you think that each of these console-buyers may also buy ten, fifteen, fifty games, the size of the market begins to become clear. And this doesn't even include the PC gaming market that is also big and growing.

After the US and Japan, the UK is the third biggest video game market, something which is not often known and demonstrates that this is a viable industry for British students to aspire to enter. Some of the biggest games have been produced in the UK, such as Grand Theft Auto which is primarily made by Rockstar North in Scotland, Team 17 who make Lemmings and Worms are in Wakefield and the Total War series is developed by The Creative Assembly in Sussex.

Returning to opportunities for students, it is a viable career, the industry is booming. This is reflected by the fact that there are over 255 university courses in the UK involving games technology and development. It is being recognised at higher education that this is an established career path. Some colleges and sixth forms at further education level are beginning to develop games design courses, but there is the opportunity and demand for so many more.

This is the most exciting time for games, a time that may not even have been foreseen by those pioneers of gaming. It is becoming the norm to have a two-console or three-console home. Games not only have stories, but also backstories, sequels and prequels. Some games are even delivered free across the internet (such as MapleStory – a huge online game which is completely free). The lines between media are becoming blurred: as the final Harry Potter book is released, so is a movie and also the computer game.

## GAMES IN EDUCATION

Teaching games design is an exciting and very rewarding area and can encompass the subjects of Media, ICT, Multimedia, English and several other disciplines. The students enjoy it and therefore are receptive and work hard.

But what other roles can games play in education? They are a powerful tool that can instantly get the students' attention and make less interesting subjects more exciting. They can also offer a different method of delivery.

By using games to highlight a point or underpin a theory, they provide a vehicle to a deeper understanding. For example, when studying World War II in History, if the students play Call of Duty they will have a powerful comprehension of the reality of war as they are not just watching but are immersed in a very authentic, very accurate interpretation.

Games can be used to start debates and discussions. This can be effective in many areas, but especially so in Citizenship, General Studies and other analyses of society and culture. As games provide a common frame of reference for students, their arguments can be more rounded and easily given. Suggested topics could include gender, religion, race, science and violence. By starting a discussion with a picture of Pikachu from Pokémon or a gangster from Grand Theft Auto, depending on the age range, students will generally find these images provoking and may already have opinions and have heard stories in the media (see Contact).

Another way to use games is to have the students create their own games, targeting the areas of learning relative to the subject material (see Contact). It could even be an opportunity for cross-college learning. Here are some suggestions of how several subjects could be involved in making a game:

Each team of students would create the game concept, give it a title, and explain what will happen in the game. In addition, the specific subjects could be:

### ENGLISH

- Write the back story
- Write a walkthrough
- Discuss story structure
- Write to persuade:
  - Advertising
  - Debating (effects of gaming)

### MEDIA

- Create a storyboard for the game
- Create advertising (trailer, poster, etc.)
- Investigate:
  - Audience
  - Genre
  - Narrative

### ART

- Draw the environment of the game
- Draw the characters
- Investigate how the characters will move
- Work on 3D effects for the characters and the environment
- Translate the game into merchandise (e.g. clothing, plushies, etc.)

### ICT

- Describe control methods for gamers with special needs
- Investigate pseudocode (programming)
- Discuss the implications of games on society

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■ Look at networking (online gaming) and building LAN gaming

■ Analyse the Systems Life Cycle in terms of creating a game

Some ideas for other subjects' use of games include:

■ **Science and Mathematics**   Real physics – gravity, character movement

■ **Physical Education**   Dance mats, Nintendo Wii (Wii Sports)

■ **Geography**   Understanding game environments, learning map reading

■ **Music**   Creating background music, generating moods from sounds, making sound effects (including Foley)

■ **Business Studies**   Marketing and advertising for games

■ **Religious Studies**   Structure of stories in games e.g. Christianity, Greek mythology

■ **History**   Battle strategy, historical games e.g. Roman

## SUMMARY

■ Games are so much more than people think.

■ They can play a hugely important role in education.

■ They are applicable to all ages and a variety of subjects.

■ The majority of students will enjoy having them as part of their education.

■ Young people can realistically aspire to a career in the games industry.

## CONTACT

During the workshops I used debate starters to discuss gender, race, violence, science and religion. I also used an activity called Splodge where teams make their own games. I would be more than happy to share those resources with anyone who asks and I am available to provide advice and (hopefully) answer any questions you might have about this subject. Please feel free to contact me either through the CP3 forum or by email at karen4@gmail.com

*Karen Anderson is a teacher at a sixth form college in West Yorkshire. Having studied computing and business and worked in the IT industry, she found her calling and trained as a teacher in the secondary and post-16 sectors. She has successfully introduced Games Design to the curriculum in her college and is a passionate campaigner for games in education, both as a teaching resource and a career aspiration for students. She is involved in writing specifications for exam boards and co-writing educational textbooks.*