

# Gamification

**Amy Price, FA Women's National Coach Developer, explains the ideas behind – and practical use of – coaches incorporating video game design when creating new sessions for their player.**

Five or six years ago, looking on the internet for more information on what a video game is, it was apparent that the core element that they all come down to is design. The design of an activity is what can make it game-like or not.

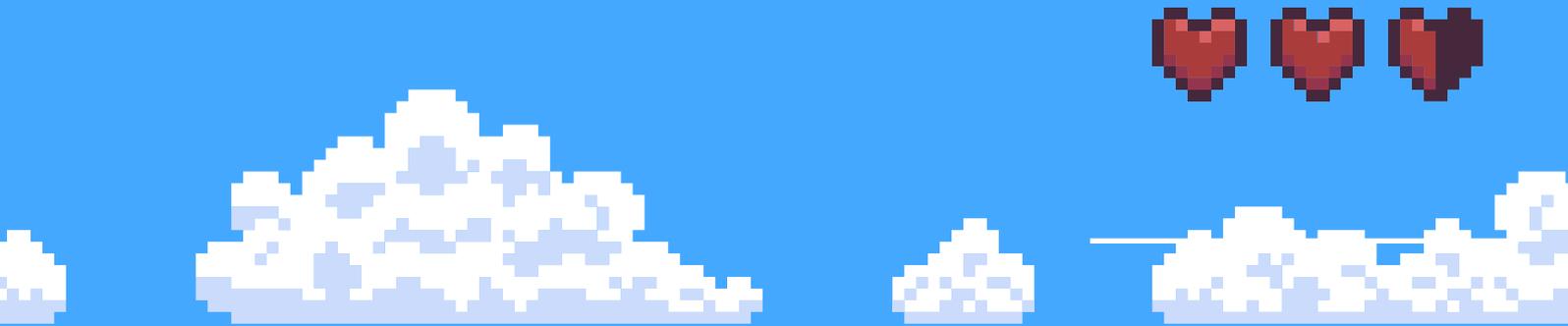
That fundamental point caught my attention because as coaches and teachers we've not yet appreciated how video games are effectively designed to enhance learning and performance.

Looking beyond sport, Professor James Paul Gee of Arizona State University has considered video game design in education and what design features school education programmes can take from video game design.

I adapted and narrowed that, looking at how I could provide a video game experience on a sports pitch in training. When I continued that work into my Professional Doctorate study, that became the five design principles that coaches and teachers can use.

All that is underpinned by a theory of metacognition which no other coaching methods really offer, and I think it can only be good for the coaching community to have a full array of tools to work with.





Specifically, this coaching method promotes three metacognitive game skills which are based around the opposition – how much you know about them, how you can get that information and how you can make the most of it.

It all boils down to strategising, and that’s what a well-designed video game is all about. It gets the player to think, “what will the computer do if I do this?”

Traditionally, athletes have been trained to follow a game plan, not to think strategically by themselves as a game progresses.

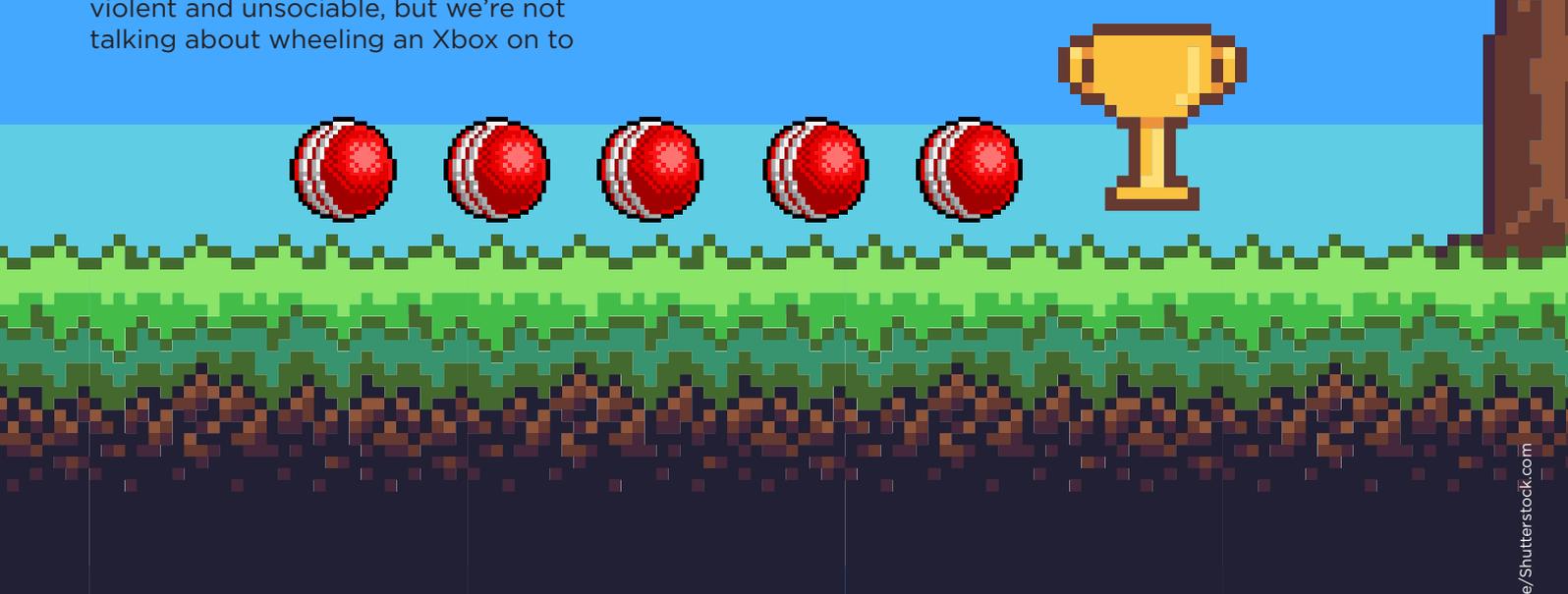
But ultimately we want players to be as independent as possible, and when we play video games there’s no coach or teacher there. We are the ones coming up with strategies by ourselves, as the game is ongoing.

There is the popularised idea that video games just make people lazy, violent and unsociable, but we’re not talking about wheeling an Xbox on to

the pitch. We’re opening up a whole new set of possibilities to coaches by using video game design principles, and I think that’s something to be really excited about.

In a way it’s also a great motivational tool for the coach, because it gives us another angle into players. For many of the younger (and older!) generation, video games are a major part of their world, so why wouldn’t we aim to engage with them using a method they can relate with?

It would be great if cricket coaches could try some of this out and share what they find, discuss challenges and successes. That way we can all improve.



## The **3** metacognitive game skills

1. **Planning ahead.** Are players considering their next move as the game is going on around them?



2. **Setting problems.** Can players see what effect they can have on the opposition, and how that can be used to block what the opposition is trying to do?



3. **Knowing what information you need, and setting out to find it.** For example in football, a striker will want to know whether they are quicker than the defender who's marking them. Can that striker, and their teammates, plan for a ball to be played behind the defender early on to create that test?



## The **5** design principles

1. **Missions.** Think about a classic video game like *Mario Bros* – the mission is set up at the start, with a princess in a castle which you need to rescue. How exactly you do that is up to you. Converting this into a sports setting, there are many ways you can set a mission and what you do will depend on your sport and the age of the participants. But it needs to be just an end goal, we're not wanting to give the players the process of how to achieve it, that's for them to discover. This is moving away from the traditional ideas of technical/tactical/skill learning outcomes or session focus, which coaches have generally been asked to consider when planning sessions. There is still an outcome with this approach, via the three metacognitive game skills, but it's not as clear as an outcome like a catch, an interception or creating a goal. So therefore, when devising a mission, avoid sport specific language because this will automatically imply that you're asking players to focus on something specific to do with the game.
2. **Level-ups.** How can we break this down into a series of simple-to-complex problems for players to solve? We can vary time and space, and in cricket we can also look at shot power or distance, to see how we can overcome problems. Once a problem has been solved (a player has hit a ball a certain distance, or in a certain area) that player or team can move up a level and a new set of problems are posed (a new, harder distance or target). This obviously tests the skill and imagination of the coach, as these problems can't just be random, they need to be well designed and structured in a way that meets the needs of the players as they improve. This is goes against forms of coaching where we look to progress the practice. Instead, Level-ups are automatically woven in to design, meaning that the task is made more difficult by levelling up - not when the coach decides it's time to progress or move on.

**3. Super powers.** In most video games there is the ability, often a need, to access an extra power in order to overcome a really tough problem, because that power opens up a part of the game that can't be experienced otherwise. When I used to play *Sonic the Hedgehog*, I'd always look out for the fast speed power (which I had to earn by jumping up and finding it in the palm tree), which gave me the ability to run and jump over the lava, which I could never do without that power's help. So on any level I'd have to think: where do I need that power? What do I need to do to earn it? As it only lasts a few seconds, how do I make best use of it while I have it? That makes players plan ahead, set and solve problems and find out key information. This is as useful a tool for coaches when their managing a group with varying ability levels – everyone requires a super power at some stage but the key is that players must earn the power first (not just be given it by the coach)!

**4. Pausing.** With the press of a button a video game freezes, at a moment which the player chooses. Sport pauses or stops too, but usually as decided by the coach, because time is up or they want to make a point. If we give players the power to pause, how will they decide when to do it? And what to do with that time? Do they want to access a change in the game settings? My original plan was to let the players be in complete control of the pause but when I tried it out with children, they weren't tuned in to that. So I've had to scaffold that in a bit, by sometimes being the one who hits pause, but then giving the players the choice about what to do with that moment. And that's a really good tool for education full stop, to give learners the chance to pause, to show some awareness of their own learning. We don't want players to wait until the in-built break in play (half time in football) to think and strategise, we want them to be able to do it at any moment. I try to follow a '4C' framework during the pauses, to encourage players to strategise about when, how and why they use their pause. They can choose to use CHEAT (giving an answer or example), CHANGE (how the game is designed to your advantage), CLUE (questions or prompts) or CHALLENGE (make the task more difficult).

**5. Save progress.** It's quite common practice to work on one thing with players in training, then come back the next session with a new or slightly different focus. But part of the reason why video games are so successful at developing learning and performance is that when you return to play the game, you start from where you left off last time. For example, training ends on level three, and next time training starts on level three! That means you're offering players the time to master problems that are in the game. Not having to spend time starting from scratch also allows them to be more creative and bold with where they are. If they've saved progress at the start of level four, they know they can't go back to below that, so they're more likely to take risks to get to level five.

## A design principle in action: super powers



I tend to use bibs as my signifier as they are nice and visual, to be placed somewhere on the pitch. To earn that bib and the power it holds, the batter has to hit the ball through or over it. That way you can position it strategically for shot selection or as an area for the bowler and fielders to defend. The batter can then wear the bib either for a set amount of deliveries or until the bowling team achieve something (a play and miss for example). The wearer of the bib now has access to a power, which again can be tailored to develop a skill. The batter could be allowed to place the fielders, or to remove a mode of dismissal. Where it goes depends on the desire – and imagination – of you as the coach!