

Welcome to play school

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Most kids would rather be sat in front of a PlayStation 2 than in a lecture learning complex theory. That's why education consultant Ged Lee turned to a resource they know only too well. Heather McLean reports

Imagine a school day that involves students racing into class so they can learn by playing computer games. It may sound like the stuff of children's dreams, yet it could soon be reality. For the last two years, a consortium of organisations has been working to create a PlayStation game in challenging, curricular chunks, specifically designed to teach science and collaboration in the classroom. Three years ago education consultant Ged Lee, former head of Hirst high school in Ashington, Northumberland, compared his school to the national average for pupil:computer ownership within a secondary school catchment area. The result was 20% computer ownership in the Ashington area, versus 70% nationally. Yet he also discovered that almost every Ashington pupil had a Sony PlayStation and saw its potential if converted for educational use. "By putting this technology into a school environment, young people will learn far more rapidly than they do at the moment because of the motivation of using a PlayStation," says Lee. "Students can use a PlayStation console without even looking, whereas it takes a long time to teach a young person to use a computer keyboard. We need to get them interested and motivated to learn first before we complicate things, as many disaffected young students don't have keyboard skills. "Add this to the challenge that you have to be extremely good at one level of a game before you can move on to the next, and students will learn rapidly to get up to the next level, just because they want to. Each level will reinforce learning from the preceding one, while adding more information. They learn despite themselves." Lee began approaching organisations that could help fulfil his dream. Criterion Software provided its renderware platform that forms the base of many PlayStation games for free, saving £120,000. A team of digital content game developers at the International Centre for Digital Content, at Liverpool John Moores University, were interested in helping develop a proof of concept prototype. They were already working in the field with the blue skies research institute, Nesta Futurelab, which promotes its best projects to the Department for Education and Skills. And Sony donated PlayStation 2 developer status, normally £100,000 for the requisite software and training, to the centre to convert the consortium's PC-based prototype into an educational PlayStation 2 game. The name of this first game for the classroom is Astroversity, which has been under development for over a year. It is set on a space station in the future, where a disaster has created hazards and hurt crew members. Each pupil controls a robotic probe that goes on to the ship to search for hazards and people. However, each probe can only spot a specific danger, so pupils have to learn about the hazards and work collaboratively to plot safe rescue routes for the crew. Pupils programme in agreed rescue routes and send in a retrieval probe, which tells them when they exit the game if they have kept the injured crew members alive.

"Astroversity is putting abstract knowledge into a collaborative environment," says Lee. "Students work on team-building and problem-solving skills without realising they are doing it. This is especially important for disaffected young people, who often don't talk to others. If we're to improve their potential, we have to increase their communication skills without making an issue of it. This technology can also raise their understanding about their own ability to solve problems, helping them realise they have the skills they need to change their future." According to Keri Facer, director of learning research at Nesta Futurelab, in tests students have been unwilling to tear themselves away from the enticing format, despite the scientific and collaborative content. Nesta Futurelab is cultivating projects with a strong scientific slant. Facer explains why: "Games manage to get children to do very difficult things for very long periods of time, and are very challenging. They actively support young people's learning by encouraging them to learn from and with each other. "The idea that games are isolating is very misleading. Astroversity was developed because there are real difficulties and challenges in teaching children to work together. All of science in the real world is about people working in teams to make sense of data and the complex reality we live in, which is why we're supporting the development of games that promote science and collaboration." The future for the classroom PlayStation 2 looks good, says Lee, who believes this technology can be used to cover most of the curriculum, including bringing PSHE and citizenship to the fore every time a game is played. Today, up to 16 PlayStations can be linked together and used over a broadband connection. Lee says this capability could one day allow students to work in homework teams in the evenings, collaborating from their individual bedrooms to complete tasks that are then saved to the school intranet for use the next day. "The next stage for this project is funding to get it and more games produced and into schools. Bringing PlayStation into the classroom will start slow, like PCs did in schools, but it will snowball. It may take 10 years, but it will come."