



Dr Patricia Edgar

Why gaming is good for kids

There is a science to game playing. No one tells the kids the rules; they figure them out as they go.

When it comes to technology my four grandchildren, aged between 7 and 13, regularly teach me things I don't know.

For this generation, a computer is nothing special; it is simply another tool to master, which they do quickly. I've seen older siblings teaching preschoolers to operate a mouse before they can read and write.

I have watched the four of them on networked computers playing *World of War Craft* and had a go myself. I can see they develop strategies and work out how to collaborate. Their dexterity, concentration and persistence are remarkable to witness playing *Guitar Hero*. They are highly motivated to meet the challenges games offer and to connect with their friends.

The extraordinary growth in gaming among children is a phenomenon of the last decade. Early games were played on a dedicated video device; now platforms range from personal computers to small handheld devices. Many mobile devices with user-friendly screens – mobile phones, PDAs, graphing calculators, GPS receivers, MP3 players, digital cameras and watches – can be used to play games off-line or on. This increased accessibility has led to many young gamers drifting away from television to spend time with interactive play.

The evidence is growing that games are, in fact, effective and valuable tools for learning. There is a science to game playing. No one tells the kids the rules; they figure them out as they go. They seek information and piece together data from many places. They make decisions quickly that have clear consequences. They become experts at multi-tasking and parallel processing and learn to collaborate with others over a range of networks.

Learning and Teaching Scotland (LTS) – the main organisation for development of the curriculum – analysed the effect of daily playing of a brain-training game developed by Dr Kawashima on the Nintendo DS. The study, which involved more than 600 pupils in 32 schools across Scotland, found the game improved pupils' concentration and behaviour. While all groups improved their scores, the group using the game improved by a further 50 per

cent. The time taken to complete the tests also dropped from 18.5 minutes to 13.5 minutes. The improvement in the games group was double that of the control group. This demonstrates evidence that this type of computer game could improve attainment in schools.

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There is growing advocacy for the use of games in education from bodies such as the Federation of American Scientists, researchers, and the high profile Chairman of Futurelab in the UK, film producer David Putnam, who fears many teachers lack the technological know-how to be effective teachers in the new century. The danger is that they will try to adapt technology to reinforce old ways of thinking. New technology can, and should, encourage new approaches to learning and education. Games should be purposely designed to meet each stage of child development, to help scaffold learning at different levels, and provide learning content.

It does not make sense to leave the development of media products for children in the hands of the commercial entertainment media whose game business is thriving, while kids are forced to 'power down' when they enter the classroom. If this continues, the disconnection between children's everyday lives and their experience of formal education will grow from a gap to a chasm. ■

*Dr Patricia Edgar is an author, television producer, educator and founding director of the Australian Children's Television Foundation. Her latest book is **The New Child: In search of smarter grown-ups.***



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