SPACE AND LEARNING

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The relationship between space and learning is today changing radically out of school, but not in school. Too often in school we still see one room, lots of students all of the same age, too little technology, and one teacher. In contrast, consider one type of out-of-school learning: video game learning. There are many other types of out-of-school learning that share many of the same features. To be specific let's take the game, *The Sims*, the bestselling video game of all time. In *The Sims* players enact, in a virtual world, the life of a family in a neighborhood. It is a life simulator. Players can develop land and design their own houses, furniture, and clothes.

In video game learning, the game (a piece of software) is like the textbook or the curriculum at school. It is the "content." But the game is only half the learning equation. There are a number of large learning communities associated with *The Sims*. These communities are interest-driven, fan-based Internet sites where players learn how to move from being players to being designers. They learn how to use 3-D tools to design homes, furniture, and clothes, as well how to design and engage in challenges within game play. They analyze and discuss the game, game mechanics, technical matters, and social and ethical aspects of the game and game play.

Content means something different in video game learning than it does in school. In school it often means facts, formulas, and information that students memorize to pass paper-and-pencil tests. In video games (and in science and life) "content" means problems to solve where facts, formulas, and information are recruited as useful tools for solving them. The first approach leads to test passing, little long-term fact retention, and weak problem solving skills. The second leads to both problem solving and fact retention.

Video game learning leads to large amounts of tacit knowledge ("knowledge in practice") about how to solve problems and large amounts of explicit knowledge about how to explicate one's tacit knowledge. Often the tacit knowledge is built up in the game and the explicit knowledge is built up in the learning community associated with the game. School too often stresses explicit knowledge at the cost of tacit knowledge. Often the long term result is the ability to talk or write well about what one cannot actually do or do anymore.

Video game learning does not divide technical and social knowledge. For example, one challenge a player gave others on a *Sims* site was to enact the life of a poor single parent. The goal was to get one's children safely to adulthood and even to college. This is hard to do in *The Sims* since it is a game made for entertainment and being poor is just not fun. The challenge required lots of thought and debate about how to adjust the technical aspects of *The Sims* to the social and ethical realities of poverty. To finish the challenge players had to write a "graphic novel", using technical tools available in *The Sims*, about their virtual experience as a poor single parent and how they got their simulation to work in terms of the rules of the challenge and the constraints of *The Sims* as a piece of software.

In video game learning, when players use algebra to design a house in *The Sims* or in *Second Life* or to "mod" (redesign or make new levels for) a game, they don't call what they are doing "algebra." They call it building, modding, or designing. When they read and discuss Barbara Ehrenreich's book *Nickel and Dimed* or discuss the realities of poverty to meet the challenge of simulating and writing about the life of a poor parent, they don't call what they are doing "social studies" or "social science."   They just see themselves as participating in the production of play, design, and knowledge in a learning community. School use labels for learning that are names for what academics know ("algebra," "physics," "social science"). Video game learning uses labels that name what players do. That's because they actually have to do something, not just learn about what others do or have done.

The Sims is played by young kids and by adults and everyone in between. The majority of players are girls and women, but a great many players are boys and men. Age is not a defining factor. The learning communities associated with *The Sims* are open to young and old, beginners and experts, people with specific interests and people whose life passion is designing for *The Sims*. On any given day, a person (young or old) might mentor or get mentored, lead or follow. For a given skill or domain of knowledge an expert may be 12 or 60. Mentorship and leadership are porous. Everyone can teach and learn, regardless of age. Even experts believe there is always something new to learn and someone else who can mentor or help them.

We have found that these sorts of non-age-graded learning communities lead in some cases (not all) to exemplary collegial behavior. The older and more expert members ensure that everyone

focuses on their shared interest and passion for learning, designing, and participating and not on socialization just for its own sake, though there is plenty of socialization. The community enforces rules of cooperation, sharing, and accessibility for all who genuinely want to learn and be proactive about their own learning (in these communities, it is always all right to ask for help, but it is never all right not to take responsibility for your own learning).

There is something else the community enforces: standards. The more collegial *Sims* learning communities stress and model high standards for design, learning, critique, and discussion. They are organized to allow everyone to meet these standards if they have enough desire and sufficient practice. They offer mentoring and supportive feedback all along, but they do not dumb down the standards. Standards become a value system one learns through participation, not an imposition from the outside. Learning is not timed. Someone may become a respected designer in six months or two years. And even as an expert, you are expected to be a learner again as things change or you develop new interests or seek new challenges. The community goes on forever and you need never leave it.

Video game learning and the knowledge it produces is collaborative and "distributed." Knowledge resides in one's ability to work with and build knowledge with others and to seek out and use good tools, just as much as it resides in one's own head. Video game learning and the knowledge it produces is dispersed. Any learning community links to and networks with related communities, knowledge building sites and good tools. Indeed, natural links and pathways for learning come to exist. For example, many designers for *The Sims* move on to *Second Life* to

design and even sell a wider range of creations or to engage in other forms of learning, design, and knowledge creation.

Why all this talk about design? School is about belief. It is about what others have claimed and whether it is true or not. That is one approach to knowledge and an important one. But video game learning—and a good deal of other out-of-school learning—is about how and whether beliefs and knowledge are useful, adequate, and functional for one's purposes, goals, and problem solving. This is a design approach to knowledge. Whether a belief is true or not is obviously relevant to its usefulness, but more goes into the equation. In a world replete with complexity and risk, and badly in need of innovation, knowing how to assess belief and knowledge and put them to use is crucial.

Video game learning can spill out into the so-called "real world," though the real world/virtual world divide is porous when people can, as indeed they do, start real businesses and earn real money around *The Sims* or in *Second Life*. Some *Sims* designers have gone on to learn to design art, architecture, and landscapes in the real world. Others have taken up aspects of computer science and software design. There is a trend today to "augment" reality with virtual features (on a mobile device, for example, with a GPS) and let people play and learn in an integrated real-virtual world. There is a trend, as well, to have people learn things in games that they can then take into the real world, as in the *i-Civics* project started by Justice Sandra Day O'Connor. In the *i-Civics* games, players are taught that "civics" is a not a set of facts, but ideas about how to participate in society.

Out of school, people live, work, and play in integrated and linked virtual spaces, networked spaces, augmented reality spaces, and in "real" space as parts of collaborative and linked learning communities. So, in redesigning the space of school, let's bring more than architects and architecture. Let's think too of space as a network of relationships, communities, and activities in which bodies and minds come together and grow in many different but complementary ways.

Bio Note:

James Paul Gee is the Mary Lou Fulton Presidential Professor of Literacy Studies at Arizona State University. He is a linguist who works on issues of language, literacy, learning, and digital media. His most recent book, on which this article is based, is *Women and Gaming: The Sims and 21st Century Learning* with his wife Elisabeth Hayes.