

# How to Safely Transfer Knowledge and Skills Derived From Gaming Into the Real World?

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skill, knowledge, transfer, digital game, analog game, AI, gaming, virtual reality

Dear readers of Simulation and Gaming,

When you read articles in the S&G Journal, you will recognize our community focuses on how to use knowledge and skills acquired with playing games in real life. As our previous editorial pointed out, even professionals such as F1 drivers, pilots and doctors use games for improving their skills. In addition, the youngest and talented Shogi (Japanese chess) player ever, who now gains eight titles at the age of twenty-one as of 2023, is known that he has improved the skills playing AI Shogi game.

That said, people sometimes are at risk, mixing up the virtual world of playing games with reality. In the real world, skills derived from gaming may be very useful, but usually quite different rules and ethics apply. For example, gamers who are very good at playing war games may end up be overconfident about their skills when taking active part in the military. It is not, that people do not know the difference between the reality and the games. But, they may lack insight in –or recognition about– what applies, and what does not (and to what extent) in real life. So, what are the differences of the recognition between professionals and ordinary people?

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To illustrate the above, let us highlight a most unfortunate example from the past. A young Japanese man who was good at flight simulator games came to believe that he could navigate a real aircraft and he did move into action in 1999 (Peters, 2023). The man hijacked an aircraft with 517 passengers and aircrews. After he managed to kill the captain, the hijacker took control of the airplane and flew it as he had learned himself having using flight simulator games. He managed to take control over f the aircraft, by ordering the captain to navigate the airplane to his liking. This situation went on for over one hour, before he sent out the copilot from the flight deck and then killed the captain to fly the airplane himself. Then, the aircraft was about to crash. Fortunately, the copilot and pilots who were among the passengers on the plane, managed to overpower him just in time, regaining control over the aircraft, saving the lives of themselves and all other passengers and crew.

This very apparent case caught a lot of media and public attention. But it is rather likely that more players apply skills derived from gaming or virtual worlds into real world not for the better, but for worse. Such behavior may have gone unnoticed. Especially, when it has not resulted in obvious damage, when it failed to have caught the public eye or when the situation has ‘flown under the radar’ -or has otherwise gone rather unnoticed to society to date. But inappropriate or faulty translation of game-derived skill may cause harmful in the near future, especially if no mitigation strategies are in place. Simulation and gaming may be at risk of this kind of backlash.

Our S&G community believes that playing games can contribute to science, education and society in many ways, by improving individual and organization skills and knowledge. That said, we must be aware and awake, and act appropriately when negative transfer skill derived from games is about to happen. A strategy game in itself.

When using analog games with well-trained facilitators and with proper debriefing, the risk of harm may be less. However, most of the digital games are not with facilitators or debriefing. Therefore, we need to discuss what mitigation strategies are to be built into digital games, to prevent about inappropriate transfer of knowledge and

Submissions with any innovative ideas and solutions about our challenge of this editorial are welcomed!

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