

## Chapter XXXIII

# Wag the Kennel: Games, Frames, and the Problem of Assessment

**David Williamson Shaffer**  
*University of Wisconsin — Madison, USA*

### ABSTRACT

*In this chapter, I look at the relationship between games and assessment—and more broadly at what that tells us about the relationship between educational reform and technological change. Research already shows that with their ability to provide rich, complex, and compelling virtual worlds, well-designed computer games can teach players innovative and creative ways of thinking, deep understanding of complex academic content, and valuable forms of real-world skills. But, in the end, even effective games can only take students as far as the tests will let them go. If we want to use games to prepare young people for life in a changing world, we need to change how we think about assessment first. To address this challenge, in what follows I examine one way to think about assessing the development of innovative and creative thinking through game-play.*

*Good education has always been about good testing.*

—U.S. Secretary of Education Margaret Spellings<sup>1</sup>

### INTRODUCTION

In this chapter, I look at the relationship between games and assessment—and more broadly at what

tells us about the relationship between educational reform and technological change.

The central issue is straightforward. Research already shows that with their ability to provide rich, complex, and compelling virtual worlds, well-designed computer games can teach players innovative and creative ways of thinking, deep understanding of complex academic content, and valuable forms of real-world skills (Adams,

1998; Barab, Hay, Barnett, & Squire, 2001; Gee, 2003, 2004; Shaffer, 2005, 2007; Shaffer, Squire, Halverson, & Gee, 2005; Starr, 1994). But in the end, even effective games can only take students as far as the tests will let them go.<sup>2</sup> Because in the deepest sense, Ms. Spellings is right: assessment drives instruction. Tests tell students and teachers what we value in education, and thus what they need to do to be rewarded for their efforts (Strickland & Strickland, 1998). Assessment is the proverbial tail that wags the dog of instruction.<sup>3</sup> There is nothing wrong in principle with this kind of educational accountability, as long as the assessment that drives teaching and learning drives them in the right direction. But today, in practice, our tests are taking us in anything but the right direction.

The problem is by now well known. Technology now allows companies to send any job overseas that can be done by a skilled worker according to some well-established process (Antr  as, Garicano, Rossi-Hansberg, & National Bureau of Economic Research., 2005; Blunden, 2004; Burgess & Connell, 2006, 2005; Hagel & Brown, 2005; Hunter, 2006; Kanter, 2001; Kehal & Singh, 2006; Markusen, 2005). As a result, young people today need to learn to deal with problems that do not have ready-made, rote answers. They need to learn to solve problems that instead require judgment and discretion, creative thinking, collaboration, and complex problem solving.

Unfortunately, today young people in the United States—and many other countries—are being prepared for standardized jobs in a world that is punishing those who cannot innovate. Nearly a third of the jobs in the workforce in the United States, for example, require complex thinking skills, and barely a quarter of all workers are up to the challenge (Autor, Katz, & Kearney, 2006; Autor, Levy, & Murnane, 2003; Davenport, 2005). At the same time, the No Child Left Behind Act mandates standardized tests to ensure that all children make adequate yearly progress in basic reading and math skills. But we cannot

“skill and drill” our way to *innovation*, because, by definition, standardized testing produces standardized skills.

Because assessment drives instruction, it should come as no surprise that so many popular educational games, such as *Math Blaster* or *Zombie Division*, are little more than fancy wrapping around traditional skill-and-drill activities that are historically aligned with an industrial approach to education, in which schools bear striking similarities to factories. As long as we measure educational accomplishment by standardized test scores of basic facts, games—and, indeed, any new approaches to education—necessarily focus on teaching those standardized skills. As long as we continue to use ideas about assessment designed for schools of the industrial era, the games we develop and the curricula we write and activities we design to support them will all continue to reinforce the message that thinking means merely memorizing collections of facts and mastering specific skills, and that academic subjects are sets of unpleasant obstacles to be overcome rather than ways of thinking that are interesting, important, and empowering. It may be true that educational games designed to help players learn basic facts and skills can raise test scores. But in the process they do little to foster understanding, creativity, or interest in the subjects students need to master for success in the modern economy.

If we want to use games to prepare young people for life in a changing world, we need to change how we think about assessment first.

To address this challenge, in what follows I examine one way to think about assessing the development of innovative and creative thinking through game-play. There certainly can be other approaches, and rather than advocating for one specific solution to the problem, my purpose here is rather to describe one alternative as a way of illustrating the *kind* of change in thinking that is required.

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