

# Appendix E

## Online Games for 21<sup>st</sup> Century Skills

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### ABSTRACT

*20<sup>th</sup> century visionaries foresaw that mastery of the dynamic processes underpinning the acquisition and manipulation of knowledge would be critical in the 21<sup>st</sup> century. Formal educational systems have not yet changed to facilitate the development of these necessary capabilities, and so people of all ages are developing them through a variety of digitally mediated mechanisms. Online games offer one area in which to examine patterns of spontaneously occurring phenomena that represent the natural development of such capabilities. This chapter reviews the character of, and need for, 21<sup>st</sup> century skills. It also illuminates existing digital domains in which these skills develop organically. Peering through the window of the present into the future, we see that envisioning change in education means taking a long look at what activity produces those skills, regardless of whether that activity is taking place in a formal setting or within entertainment-based worlds where the skills are learned incidentally through play.*

### INTRODUCTION

*The approach of the 21<sup>st</sup> century has brought a chorus of pronouncements that “the information society” both requires and makes possible new forms of education.*

*We totally agree with this. But we do not agree that tardiness in translating these declarations into reality can be ascribed, as it often is, to such factors as the lack of money, technology,*

*standards, or teacher training. Obviously there is need for improvement in all of those areas. But the primary lack is something very different—a shortage of bold, coherent, inspiring, yet realistic visions of what education could be like 10 and 20 years from now.*

*What we mean by vision is not a blueprint but a compelling view of the “look and feel” of the future—its needs, its opportunities, and how we can prepare ourselves now to act on them. Vision*

*allows us to look beyond the problems that beset us today, giving direction to our passage into the future. Even more important, vision energizes that passage by inspiring and guiding us into action.* (Seymour Papert and Gaston Caperton at the 91<sup>st</sup> Annual National Governors' Association Meeting, St. Louis, Missouri, August 1999)

In recent years there has been no shortage of well-intentioned talk in educational circles about the critical role of vision in the creation of educational systems that properly address 21<sup>st</sup> century needs. A Japanese proverb says, "Vision without action is a dream; action without vision, a nightmare." This is how many of us feel about our current education systems: we have far too much action without vision and quite a lot of rhetoric-based vision without action, but not enough of the two combined into a cohesive and effective result. There are, and have been for decades, many visions as to the "look and feel" of the future of education, but they have been largely stymied by an inability to translate via pragmatic means the here-and-now into that ideal. And we have had a great deal of "action" that creates a sense of activity and accountability in the short term, but minus a vision that translates that activity into long-term success. Actionable vision is a problem of connecting the dots, of understanding how the present converges into the future, and what we can do to affect and smooth that passage.

It is a common mistake to overlook the fact that our future is not as mysterious as it might seem, but nor is it a point to which we arrive without first journeying through our present. As author and futurist Bruce Sterling (2003) has commented, the future is already being written in our present, if only we know where to look for the hints of what is to come. This chapter will argue that the vision for learning in the 21<sup>st</sup> century already exists and is being acted upon by millions of people around the world who engage in digital activity such as sharing online information or collaborating with

peers, but most notably in the complex but little understood worlds of online gaming.

## **LEARNING IN THE 21<sup>ST</sup> CENTURY**

The world is now coming to grips with the idea that 21<sup>st</sup> century people require a different set of skills made mandatory by the complexity and pace of life and work in the face of amazing new communications technologies just beginning to entrench themselves in the social, cultural, and economic fabric of our lives. These skills for 21<sup>st</sup> century, as they are often called, are those that are necessary to succeed in an ever-changing, global society where communication is ubiquitous and instantaneous, and where software tools allow for a range of creative and collaborative options that yield new patterns and results that we are only beginning to see. The skills include critical thinking, teamwork, problem solving, collaboration, facility with technology, information literacy, and more; they are all fundamental to the success of knowledge workers.

But although we have traveled great distances technologically, these needs are not being met in today's schools, where high-stakes testing and No Child Left Behind (NCLB) policies leave little time for anything besides the standard, highly measurable, content-oriented curriculum. It is striking that many people today are not acquiring 21<sup>st</sup> century skills through structured learning environments that anticipate these needs, but rather through various "cognitively-demanding leisure" activities they choose to engage with, including to a larger and larger extent, video-games (Johnson, 2005b). Of particular note is the increasing popularity of massively multiplayer online games (MMOGs), a relatively recent videogaming phenomenon enabled by burgeoning broadband penetration<sup>1</sup> and a new generation of computers and consoles that allow rich worlds with thousands of participants to be rendered in

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