Making Games for Environmental Design Education: Revealing Landscape Architecture

Christopher M. Marlow, Ball State University, USA

ABSTRACT

This paper features a pilot study about making games to foster good contemporary learning, challenging traditional environmental design education to embrace games as inspiration for better teaching, learning, and contributing to the general lack of investigation of video games in environmental design education. Alongside select literature supporting playing and making games for learning, this paper reveals design processes and products from an immersive, interdisciplinary, landscape architecture elective course on game design. Evidence suggests that designing and making games in the context of such an environmental design curriculum has potential to stimulate traditional pedagogies and foster student learning, providing an enriched venue for students to learn about their chosen discipline, and make teaching and learning enjoyable, meaningful, and memorable. Discussion also indicates future directions for how the course could provide an even better environment for quality learning.

Keywords: Digital Landscapes, Environmental Design, Environmental Design Education, Environments, Games

INTRODUCTION

There is a three-part purpose for this paper. One part is a response to a call to action – to make games on purposeful content to embody what good contemporary learning is all about (Harel Caperton, 2010), one part personal desire to challenge and energize traditional environmental design education to celebrate gaming as a means to inspire innovative teaching and learning for our digital native students, and one part is a contribution to the lack of research on video games in environmental design education (particularly Landscape Architecture). In essence, this paper highlights a pilot project for an ongoing study of games and learning in landscape architecture. Although it does not present statistical analysis to demonstrate significance or prove something, it does present a compelling account of the educational benefits that a unique game design elective course had and could have in a landscape architecture curriculum that does not typically support (for curriculum and personnel reasons) or endeavor
such activities. Evidence suggests that designing and making games provides more and better learning than just playing them.

Why Landscape Architecture? Simply put, it is among the most ideally suited disciplines in the world for integrating games to augment and energize learning. Landscape Architecture (LA) encompasses the analysis, planning, design, management, and stewardship of the natural and built environments (ASLA, http://www.asla.org/). It is a combination of engineering, art, design, horticulture, ecology, natural resources, architecture, and urban planning that ultimately is about fitting people to the land and fitting the land to people. Despite the fact that the profession is often misunderstood, frequently underappreciated, and almost always a victim of severely limited public perception, the United States Department of Labor (2010) has identified LA as among the fastest growing (projected 20% growth through 2018), most in-demand (for site/environmental planning, design and remediation), and most important careers of the future. The LA discipline is well situated to be the subject of, and active agent for, a variety of good and useful games.

Current LA pedagogies are largely built on the studio model of learning, where exploration & discovery lead to creative and functional project-based problem solving. Although generally successful, studio pedagogies have been relatively unchanged for decades. In particular, recent years have revealed the need to see our students more engaged and enthusiastic, and striving for higher levels of achievement in learning (and teaching) Landscape Architecture. The expectation here is that games and gaming technologies can provide a creative outlet where environmental design students can learn more and differently about their chosen discipline.

Answering the Call

According to Harel Caperton (2010), the learning value of game modding and design is related to Constructionism. She describes Constructionist learning (particularly from the perspective of MIT Professor John Seely Brown) as a roll-taking way of learning through “tinkering” in a workshop-style/studio-like environment and “learning-to-be” (as opposed to “learning about”). She affirmed that significant global problems are likely to be systematic and cannot be addressed by one specialty; therefore, students need to be comfortable working in cross-disciplinary teams that encompass multiple ways of knowing and doing. Constructionism is a learning theory born in MIT computational environments (i.e., digital media, computer games, programming, simulations, etc.) approximately 30 years ago. Since then, Constructionist learning theorists and practitioners have emphasized the epistemological (pertaining to the nature and scope of knowledge – what it is & how it’s acquired, including what people know and how they come to know it) value of those environments as tools for thinking, tinkering, and learning (Harel Caperton, 2010). LA education has long been engaged in the core principles of Constructionism (albeit in an environmental design setting, not a digital learning/computational one). The Constructionist theory is essentially the foundation of the LA design studio, where student learners apply knowledge and values to solve environmental design problems, make designs on the land, and learn the ways of a landscape architect. Unfortunately, this studio model is not often enough interdisciplinary, where learners come together from different backgrounds and with varied expertise to solve comprehensive design problems. That’s where and why designing games is valuable, especially designing them as part of a traditional LA curriculum (explained further in the Project Description and Methodology section).

Challenging Tradition

A typical traditional accredited Bachelor of Landscape Architecture (BLA) Degree is earned in five years (some happen in four). The curriculum is built around semester-long, project-based design studios, where students apply knowledge and skills gained from support courses to continually make landscape designs
Games and Quizzes in Online Journalism: Reaching Users via Interactivity and Customization
www.igi-global.com/chapter/games-and-quizzes-in-online-journalism/135167?camid=4v1a

Co-Creating Games with Children: A Case Study
www.igi-global.com/article/co-creating-games-with-children/136333?camid=4v1a