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Let's Be A Real Estate Entrepreneur!

A Game of Socially (Ir)Responsible Real Estate Development

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Abstract

Since the 2008 Olympics held in Beijing and the 2015 Tianjin explosion, real estate development in China has been critiqued by many people, both internally and externally of China. In this poster session, the authors will describe one element for teaching and outreach created for the MIT Real Estate Entrepreneurship Lab to engage Chinese students on topics of socially responsible real estate entrepreneurship and urban development, a multiplayer video game developed for tablets and mobile devices. The game will serve as the backbone for a 2-week summer workshop curriculum held at Chinese universities and high schools.

Background

Real estate games have a longstanding historical popularity, from Monopoly to the SimCity video game franchise. SimCity was initially published in 1989; the original game spawned a wide ranging franchise of games and inspired a now well established genre of games. While not developed with educational purposes in mind, both have been used in education (Minnery & Searle, 2014; Darr & Cohen, 2016).

In collaboration with the Samuel Tak Lee MIT Real Estate Entrepreneurship Lab and MIT's Center for Real Estate, the MIT Game Lab and MIT Education Arcade are designing games to help Chinese students explore some of the systems involved in real estate entrepreneurship. This first game prototype emphasizes the interconnected nature of development, the need for investment capital to develop real estate, and understanding the social responsibility between real estate developers and the communities they serve.

The goal is to increase interest in the entrepreneurial side of real estate development while emphasizing the benefits of socially responsible real estate development. In this context, socially responsible real estate development means considering the needs of present and future residents of the communities being created as well as considering the environmental impact of both construction and completed development.

Modeling Real Estate Development – Simply

In order to encourage players to develop their own deeper understanding of real estate development (Gee, 2013), the game uses an abstract, simplified model of capital and reputation.

Players draw contract cards from the building decks and choose which to build on the shared city board, borrowing money at a fixed rate to start their career as developers. Buildings have a cash cost to build, and return cash and prestige to the player once built. Each building gives a different return of cash and prestige, depending on its type and original expense. Some buildings allow the builder to turn a significant profit; others are built at a loss but increase the player's prestige greatly. Players can also choose to invest in infrastructure, which is always built at a loss but protects the city – and the players – from randomly occurring events. All buildings require cash to build, and as the game goes on buildings increase in cost and value. Players must carefully manage their available capital and debt in order to keep building, but the winner in the end is the player with the most prestige, not the most money.

While the game is a competitive one, the interactive nature of buildings and their locations encourage active social interaction between players. Encouraging other players to invest in needed infrastructure that one cannot currently afford, or trying to get players to place particularly beneficial buildings next to already built structures, creates a framework that encourages collaboration within the inherently competitive game.

Choosing where to build is almost as important as choosing what to build, as every building affects the value of buildings around it. Most buildings increase their neighbors' values, so actions taken by the player almost always increase the cash flow and prestige of other players. A few buildings, particularly the very profitable but noisome factories, can decrease the prestige of their builders and those of neighboring buildings if not carefully placed.

Curriculum Integration

The game is positioned to be the backbone of a 2-week summer workshop at Chinese universities and high schools, run by the MIT Real Estate Entrepreneurship Lab. In the first days of camp, the game will be used as a playful means to introduce the students to key concepts and vocabulary used in the rest of the curriculum.

As the camp progresses, students will play the game periodically, following up gameplay sessions with facilitated debriefing (Thatcher, 1990; Crookall, 2010), particularly discussions about the strategies used by both themselves and their classmates. Between gameplay sessions, new concepts will be introduced, and when the students revisit the game, they will discuss both the realistic and unrealistic aspects of the game as compared to the case studies and examples discussed in class.

Once the students are fully competent with the game, and have been exposed to all the concepts covered in the camp curriculum, they will be asked to produce alternate versions of the game. There are many different directions the game could be taken to make it more 'realistic'; it will be up to the students to decide how to interpret what they have learned in class and express what they think is the most important 'improvement' to the game.

First Test in China

The game was first tested with volunteer undergraduate students from the Inner Mongolia University of Technology in Hohhot and from Tsinghua University in Beijing. Students at both colleges came from their respective schools of architecture, representing the three primary majors of urban planning, architecture, and landscaping. These are students who are not usually looking to enter real estate graduate programs (programs largely composed of students from finance backgrounds). These students were already familiar with some of the socially responsible aspects of development but not necessarily familiar with basic financial understandings of capital and investment.

This first major test helped us confirm that our game both hit on the basic knowledge components we were hoping for, but was also able to spur ideas among the students to 'improve' the game by simulating more specific aspects of real estate development. While we did not test the 'modify' the game lesson plan, the students (some of whom would not consider themselves 'gamers' or extensive game players) could theorize game mechanics that would represent aspects of real estate development that they were already familiar with. Without too much prompting, some of the students were able to talk about the tensions that exist in capitalism between maximizing profit and better serving the communities.

Next Steps

The game is in continuous development, with its delivery for the summer camps serving as both the primary delivery mode but also a test bed for improvement. In this first year, development has focused on simple elements of capital and social responsibility related to location and zoning. Future development will focus not only on improving the game for clarity and polish, but also on adding new features to better illustrate elements of social responsibility within other aspects of real estate development, such as bidding for contracts and in building construction.

References

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