

Creative Game Design Training Requirements

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Abstract

Current technological advances have replaced traditional games with digital games, which indicate the rapid expansion of digital or video games. Creativity and innovation are essential elements for designing successful games. However, many games produced in the market failed due to a lack of creativity. There is no specific method of training creativity for game courses taught at higher learning institutions. Game designers also have no specific tool to help them create innovative games. Therefore, a systematic approach to train creative game designing skills is needed. This study aimed to model the requirements for creativity training in game design. Specifically, the study's objectives are to identify creativity components for game design, develop a training model and validate it. The method used involved document analysis, interviews with game developers and game development educators, and the model's construction by mapping and validating the model using the expert review technique. Results found that intelligence, thinking style, motivation, personality, experience, game genre, environment, storyline, goals, rules, community, and task distribution are requirements for creative game design. These elements were mapped and categorized as the model components - the designer, knowledge, creativity training in the game design process, method, and technology support. The model validation result using the Inter-Rater Reliability (IRR) coefficient is 0.90 (90 %), indicating excellent reliability as approved by the experts. The creativity training model will be implemented either in software or conventional training modules for designing creative games.

Keywords: *Creativity; Creative Thinking; Training Model; Game Design; Playcentric Method.*

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Perspectives on Creative Game Design

A game is a system where players engage in an artificial conflict for entertainment or educational purposes. Today, computer games are the most exciting form of entertainment among youths, children, and adults. Furthermore, technological advancement has a significant impact on mobile game applications and computer games. Many new games entered the market, and they are easily acquired. (Lince 2016). Thus, game designers experience a competitive environment. Game designers' tasks become more challenging as there are many new games on the market.

Furthermore, technology evolution is significant in influencing computer game development [1], [2]. Upgrades and enhancements to hardware make gaming better, and thus more large-scale games are developed. Computer game production started more than four decades ago by creating the earliest game called 'Spacewar' [3]. Two decades later, most computerized games were no longer produced just by any individual but by a small number of programmers [4] (Burnett 2017).

The video game industry spearheads video game monetization, development, and marketing. This industry is a significant economic sector that provides thousands of wide-ranging employment opportunities globally [5]. According to Newzoo's Global Games Market Report [6], a market research firm that tracks trends and usage of esports, mobile, and video games, this year, gamers worldwide will likely spend around \$138 billion on games. This number correlates to an extra \$16.2 billion or a 13.3 percent increase year over year. The world is now seeing the advent of 2.5 billion gamers. Altogether, both groups are expected to drive an increase of +9.6% year-on-year, based on projected spending of \$152.1 billion on games in 2019 (Rosa 2019).

According to Afanasyeva 2014 One of the most crucial phases of game development is the game design—a field that is far from limited. Hence, it is common to see game designers with diverse backgrounds in graphic design, creative writing, computer science, and programming. These designers take the creative lead and breathe life into the characters, gameplay, interface, dialogue, rules, environments, and stories of games. Hence, creative thinking and skills are essential assets for game designing, thus need to be taught to aspiring game designers. Therefore, this study's main objective is to propose a model of creativity training for game design.

Conclusion

The input requirements for training creativity in-game designs are the designer and knowledge components. The creativity training process in game design has three main components - skill, method, and technology. All components and elements of this model are requirements derived from game industry practices, theoretical components of creativity, the dimension of creativity, creative thinking, and innovative components, as well as creativity and activity theory. The model can be used to guide teaching and training creativity for designing a game. It can also act as a guide in training creative thinking for students, either through implementation in tools or training module, which will be part of the future work.

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