

# Skill Based Slot Games-Bringing “Gaming” onto the Gambling Floor

December 2017

*Sarah Davis, Advisor at GameSense, NCPG Emerging Trends Sub-committee  
sarah@gamesensema.com*

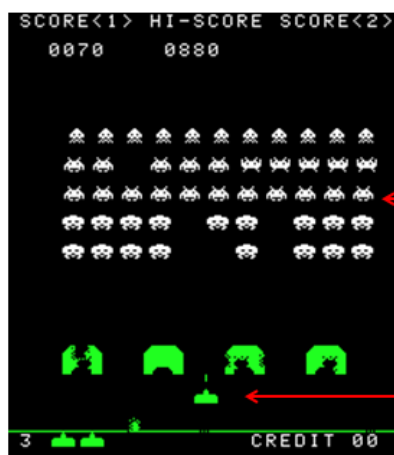
*Teresa Fiore, Research and Responsible Gaming Program Manager at the Massachusetts Gaming Commission, NCPG Emerging Trends Sub-committee  
Teresa.fiore@state.ma.us*

## INTRODUCTION

Since video games began to grow in popularity in the 1990’s, video gaming companies have used neuroscience and market research to inform product development (Krook). Given their popularity, casino slot innovators such as Scientific Games, GameCo and Gamblit Gaming are beginning to capitalize on a new generation of gamblers by developing skill based slot machines which mimic traditional video games.

## FROM GAMERS TO GAMBLERS

The model for slot machines has changed little over time. The reels may have become digital and bonus games flashier, but the constant remains that players have very limited control over the outcome. Recent market trends have ushered in a new interest in the development of skill based games, which gives players more control over the outcome. Features of these games change the normal factors of a slot machine to a game where the win or loss percentage is dependent upon the skill level of the player. For one such game, a players’ skill influences a variable payback percentage, which “based on skill level of the player, [ranges] from a minimum 86.73 percent to a potential 96.8 percent with a maximum skill level” (GGB Staff). The below graphic helps to illustrate this concept:



**Each symbol is randomly assigned a different number, which translate to a dollar amount for the player. A player’s skill in hitting these symbols can manipulate the payback percentage. In this instance from a minimum of 86.73% to a maximum of 96.8%.**

**Player controls the shooter.**

New skill based games include nostalgia themes such as Space Invaders, which incorporates skill into a bonus round, competitive Pac-man in which the winning player receives a cash box, first person shooter games played with handheld controllers, and free-to-play games such as Candy Crush which incorporate wagering. By turning nostalgia themes and current popular free-to-plays into casino games, developers hope to capitalize on the pre-existing interest. “According to the developer King, the game [candy crush] has been installed more than 500 million times across Facebook, iOS, and Android. It’s so popular that,

according to the studio, one out of every 23 Facebook users is a fan of the game” (Webster). This figure suggests a population of potentially a half billion people who believe that they have developed a level of skill that they would be willing to gamble on.

The creation of skill based games comes at a time when casino revenues from gambling is declining, and is instead primarily coming from dining and entertainment (Cano). Multiple studies conducted in Las Vegas support this finding, the cause of which is simply translated into “millennials are not interested in casino gambling”. Yet it is easy to lose site of the context within which millennials live versus that of older generations which serve as comparison groups. Consider the Las Vegas studies. The city as we know it today is very different from the Las Vegas of 35 years ago. Not only was it designed to appeal to tourists, but it was also one of two places with legalized casino gambling (Hwang). There have been numerous theories regarding millennial’s waning casino spending, including greater access to online gaming information, high debt, preference for socially interactive games and interest in different forms of gambling.

The transition to skill-based games is an obvious solution considering that videogames really became widespread during the childhoods of many millennials. Getting casinos to test out skill based games may seem like a challenge for an industry which is steeped in history; however, the time-tested entertainment value of video games helps to justify the risk. Overall testing out skill based games is a straightforward approach as casinos are eager to pull people away from their computers and mobile devices and attract them to their floors. Interestingly, casinos aren’t the only gambling entities struggling with a “millennial problem”. Lottery sales amongst this generation are also on the decline, and even the highly profitable Massachusetts state lottery is grappling with ways in which lottery games can be digitized and made more attractive to younger players.

For prevention workers and those in the treatment field, the advent of skill based games takes on an entirely different meaning. As described in a recent article on digitizing lottery games yet also applicable to skill based casino games, the outcomes are black and white; “Embrace a digital future, and we might turn a new generation on to one of history’s greatest addictions.” (Kumler)

### **STEPS FOR PREVENTION**

While research on skill based and free to play games is still in its infancy, prevention advocates argue that the move towards skill based games may create a new high-risk group for gambling addiction. Characteristics of and prevention efforts for this group may include:

- Popular games being moved from personal devices onto the gaming floor can perpetuate the myth that there is little risk in skill based games.
- Many at-risk and problem gamblers incorrectly believe that there is skill involved in slot machine play. The introduction of skill-based games would only propagate that myth.
- A group that is generally living in debt (millennials) may be more likely to take risk on something familiar, possibly viewing their previous play as unplanned training.
- The odds of skill based games and the variability of payback percentage should be made easily available to the players and public alike. This would help to explain the difference between skill and house advantage.

- For skill based gamblers struggling with their gambling, temptation may be even greater as non-gambling versions of skill-based slot machines and free to play games can be played anytime, anywhere.
- Parents may be an important target audience to educate on the potential dangers of skill based and free-to play games, as the skills are likely developed at home before children are legally able to gamble.
- Those in prevention, policy and treatment should remain cognizant of recently released and upcoming research conducted on the effects of skill based games.

While skill based games allow players increased control over the outcomes of play, they are still not completely in control, thus classifying them as gambling. Key to any type of problem gambling prevention work is that players understand how games work and are exposed to messaging about responsible gaming strategies and techniques.

### **Sources**

Krook, Joshua. "Business of addiction: How the games industry is learning from casinos". 13 Sep, 2017.

<http://www.abc.net.au/news/2017-09-13/video-game-addiction-how-the-industry-is-learning-from-casinos/8941114>

GGB Staff. "Space Invaders". August 2017.

<https://ggbmagazine.com/article/space-invaders/>

Webster, Andrew. "Half a billion people have installed 'Candy Crush Saga'". 15 Nov. 2013.

<https://www.theverge.com/2013/11/15/5107794/candy-crush-saga-500-million-downloads>

Garcia Cano, Regina. "Report: Las Vegas Draws More Millennial, First-time Visitors". 5 April 2017.

<https://www.bloomberg.com/news/articles/2017-04-05/report-las-vegas-draws-more-millennials-first-time-visitors>

Hwang, Jeffrey. The Millennial Problem: The Problem with the Casino Millennial Problem. 20 September 2016.

<https://www.fool.com/investing/2016/09/20/the-millennial-problem-the-problem-with-the-casino.aspx>

GLS Research. Las Vegas Visitor Profile Study. 2016.

<http://www.lvcva.com/includes/content/images/media/docs/2016-Las-Vegas-Visitor-Profile.pdf>

Kumler, Emily. Gaming the System: Why We Need Millennials to Gamble. July 9 2017.

<http://www.bostonmagazine.com/news/2017/07/09/millennials-gambling/>

Fisher, Christian. The Rise of SKILL BASED Gaming Regulation. 2016.

[https://www.imgl.org/sites/default/files/media/publications/theriseofskill-basedgamingregulation\\_fisher\\_agl\\_autumn2016.pdf](https://www.imgl.org/sites/default/files/media/publications/theriseofskill-basedgamingregulation_fisher_agl_autumn2016.pdf)