

Exploring the Antecedents and Consequences of Personalizing Sport Video Game Experiences

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Abstract

Despite the strong appeal of personalization (through creating personalized players, teams, and leagues) in sport video games (SVGs), little is known about its marketing implications. This study explores the effect of personalization on SVG gaming enjoyment, repurchase intention, and consumption level. Further, the predictive functions of perceived skill and past experience on participants' intention to personalize their SVG experience were examined. Current users ($N = 459$) of a sport video game, "FIFA 06 Live", participated in the study and the results revealed that users who utilize personalization options reported they enjoy the game more, are more satisfied with the product, and spend more time playing the game than users who do not use personalization options. In addition, past experience and perceived gaming skill played significant roles in predicting individuals' intention to utilize personalization options.

Introduction

In a virtual world, people can create their own personalized characters and compete with Tiger Woods or play one-on-one with LeBron James. The development of innovative game technologies has brought unprecedented opportunities for video game players to customize their gaming experiences. For instance, sport video game (SVG) players can create their own players, teams, and leagues to compete with other players in other parts of their city, region, or country through an online connection. As such, leading video game brands (e.g., Electronic Arts) continue to develop newer versions of games, allowing fans to further customize their team building and management (Alexander, 2009). Such personalization gives individual gamers the opportunity to manipulate and optimize game playing levels that gratify their varying needs (e.g., fun, excitement).

According to Oulasvirta and Blom (2007), personalization features can align the psychological resources with the user's action and therefore increase perform-

ance and enjoyment of use. From a marketing standpoint, personalization is often utilized to create profit for the producer and increased value for the consumer (Montgomery & Smith, 2009). In the consumer behavior literature, empirical studies have found that personalized information and promotions facilitate more positive attitudes (Kalyanaraman & Sundar, 2006) and loyalty (Zhang & Wedel, 2009) toward the product/service. In this regard, it would be important for SVG marketers to understand the role of personalization on various attitudinal and behavioral consequences. For instance, would utilizing personalization options enhance the user's levels of enjoyment and repurchase intentions? Would users who create their own characters and teams spend more time playing these games? To date, however, little empirical research has examined whether personalization can enhance levels of enjoyment and consumption levels in the SVG context. Specifically, no studies were found dealing with the personalization effects on user experience. Using the hedon-

nic consumption paradigm (Hirschman & Holbrook, 1982; Holbrook & Hirschman, 1982) as a theoretical framework, the current contribution aims to extend insight into the managerial implications of personalization in the SVG context. In particular, the present study examines the roles of past experience and perceived gaming skill on personalization intentions and attitudinal and behavioral consequences of utilizing personalization options. In order to control for potential confounds, actual SVG game users of a specific game, "FIFA 06 Live," were recruited for the study.

Backgrounds

SVG Experience

Video games are a multibillion dollar industry, generating more revenue than the film industry (Wolf, 2006). According to the Entertainment Software Association (2008), from 1996 to 2006 computer and video game sales in the United States grew from \$2.6 billion to \$7.4 billion. SVGs ranked second in total number of units sold in 2006, accounting for 17% of total industry sales (Entertainment Software Association, 2008).

To date, however, only a handful of studies have investigated SVG-related behavior (Kim & Ross, 2006; Kim, Walsh, & Ross, 2008). For example, Kim and Ross (2006) developed a scale to identify motivating factors of SVG players. The authors conducted focus groups to list primary motives and seven factors emerged from a main study. The seven prevailing motivations included: identification with sport, entertainment, fantasy, knowledge applications, social interaction, competition, and diversion (Kim & Ross, 2006). In a later work, Kim et al. (2008) examined the consumptive behaviors and psychology of SVG consumers. They found that the majority of avid gamers were heavy sport consumers who engaged in more sport consumptive behavior (e.g., watching sports on TV, reading sports paper, playing sports, and visiting sport news websites) than light gamers. These findings indicate that those playing SVGs are ardent fans of sport. Although there have been some efforts to better understand SVG phenomena, from a consumer behavior perspective, little is known about the implications of personalization in the SVG context. The current study extends the existing SVG research by employing the hedonic consumption paradigm (Hirschman & Holbrook, 1982).

Following Hirschman and Holbrook's (1982) conceptualization, playing an SVG is a form of hedonic consumption behavior that involves dimensions such as feelings, fantasies, and fun (cf. Brakus, Schmitt, & Zarantonello, 2009). According to Brakus et al. (2009),

consumers' experience with a brand varies depending on the type of product/service. According to the hedonic consumption paradigm, people are primarily motivated to maximize their pleasure and positive emotional state when using the product/service. Likewise, playing SVGs should differ from utilitarian consumption behavior, which involves consumer decision-making based on the functional qualities of the product/service. Rather, people enjoy playing video games for the sake of experience itself, which elicits fun, enjoyment, and fantasies (Holbrook, Chestnut, Olivia, & Greenleaf, 1984). Within the hedonic framework, the dynamic interaction between product/service and consumer is important (Hirschman & Holbrook, 1982). For example, the reaction of a video game player has complex reciprocal effects on both performance and the level of enjoyment.

In addition, attaining skill and mastery of such products is an essential part of the SVG experience (Kwak, McDaniel, & Kim, 2009; Murray & Bellman, 2007). Like other leisure activities (e.g., participant sport), playing video games often involves a learning component that facilitates consumption (Murray & Bellman, 2007; Sherry, 2004). Empirical findings have supported that consumer expertise or skill is an important factor in continuing consumption when the context involves mastering an activity (e.g., video gaming or sport participation) (Holbrook et al., 1984; Kwak et al., 2009; Matzler, Fuller, & Faullant, 2007; Murray & Bellman, 2007). In one of the earliest studies on video game players, Holbrook et al. (1984) found that a skill-relevant factor (e.g., video game performance) was a key determinant in a consumer's emotional response (i.e., pleasure) to their consumption experience. Consequently, we conceptualize that playing an SVG is a form of hedonic consumption behavior that involves a learning component (Kwak et al., 2009).

Personalization in SVG

Personalization features are implemented in almost all aspects of products and services, including cars, houses, licensed merchandise, fitness services, mobile services, online portals and so forth. Apparently, video games are no exception to the growing personalization features implemented in consumer products and services. From a marketing standpoint, personalization is closely related to the idea of interactive marketing (Montgomery & Smith, 2009).

Entertainment researchers have explored the way people enjoy various forms of media (Sherry, 2004; Zillmann, 2006). According to Klimmt, Hefner, and Vorderer (2009), video games have dominated today's landscape of entertainment media with the most important attribute—interactivity. Utilizing such inter-

active attributes of video games, video game players often engage in personalized experiences that affect game enjoyment. For instance, video game users “become” a character rather than merely observing a character (Klimmt et al., 2009). As such, playing a video game is different from other traditional media behaviors (e.g., watching TV) and blurs the boundary between a character and audience.

In the case of an SVG (e.g., soccer game), the perceived character immersion would become even more salient by using a personalization option. For instance, an individual can experience being a general manager of his or her favorite team and customize players, teams, or leagues the way he or she wishes. In fact, many current SVG titles offer such personalization options for users to become a virtual general manager of a specific team. In this way, users should make various managerial decisions related to the team including roster management, player recruitment, team budgeting, sponsorship contracts, facility renovations, and so forth. Therefore, personalization in SVGs involves the immersive experience of being a general manager.

Prior research in management has attempted to define and conceptualize personalization (see Montgomery & Smith, 2009, for a review). Although there lacks a unified framework for personalization and customization due to the variety of different interactive marketing strategies and platforms (Vesonen, 2007), the fundamental goal is to create value for both producer and for the consumer. Given the primary purpose of playing SVGs is for affective outcomes (e.g., fun, pleasure) we conceptualize personalization as a way of enhancing the gaming experience. Consequently, we define personalization as customizing some feature of a SVG so that the user experiences more fun, enjoyment, and positive emotions (cf. Peppers & Rogers, 1997). Therefore, based on the relevant literature, we expect that SVG users who like to personalize their gaming experience will report more enjoyment and repurchase intentions, and will subsequently spend more time playing SVG.

Research Hypotheses

Two main research questions guided this study: (1) what are the antecedents of personalization intention? and (2) what are the attitudinal and behavioral consequences of using personalization features? As discussed earlier, we propose that personalization provides a unique opportunity for SVG users to enhance their hedonic experience. In this study, we empirically examine the factors that influence one’s personalization intentions as well as the marketing implications of such personalization.

Antecedents of personalization intention. In reviewing the antecedents of personalization, skill-relevant factors such as past experience and familiarity have been identified as significant variables (Coupey, Irwin, & Payne 1998; Crow & Shanteau, 2005). That is, consumers who have experienced the product/service more frequently and have prior knowledge or skill are more likely to utilize personalization features. This supports the notion that personal factors (e.g., prior knowledge, experience) are closely associated with one’s decision and choice (Brucks, 1985; Coupey et al., 1998). When an individual is familiar with the task and has acquired some task-relevant skills, the individual is more likely to adopt personalization features.

This concept of skill familiarity is important to consider in light of sport video games, particularly in relation to the modes of play offered to the user. The vast majority of consumer sport video games offer two basic modes of play: “exhibition” mode and “career” mode. Exhibition mode allows users to jump right into gameplay, and the action and results from that game exist only within that small window of time; that is, the results are impermanent within the game’s framework. Career mode, on the other hand, offers users an environment of permanence, where their team’s outcomes, injuries, and statistics impact the virtual reality of the game’s world. As an example, in the most recent edition of EA’s FIFA series, the user can choose to play an exhibition game between the English club teams of West Ham and Chelsea. Once the game is finished, the results and statistics from that contest are lost forever. However, if the user decides instead to start a career mode game in the Premier League, the results of the user’s match between West Ham and Chelsea will be recorded within the mechanics of the game, and will affect items such as statistics, league table, and other items, for the specific user.

Additional elements have been added to some games in recent years which help to extend the two basic modes of exhibition and career. One such feature allows for users to create a player, then play entire games and/or seasons as that player. Using the aforementioned FIFA series, a player could create a midfielder, and alter nearly everything about that player, from their physical appearance to their on-field skill set. The user can then take that player and play a career as a footballer, occupying whatever role they see fit to occupy. In career mode, this player will gradually progress both physically and mentally as they receive more playing time. Some games, such as EA’s NHL series, even allow the user to take their created player online to play in career mode games with and against other users. While a user could ostensibly utilize exhibition mode for a created player, it is unlikely they

would; part of the allure of using a created player is watching them develop skills and accrue statistics throughout a career.

Csikszentmihalyi's (1997) flow theory also provides a theoretical framework to explain the importance of skill dimension in one's engagement of media usage. The theory postulates that a balance between an individual's skill and the difficulty of the task is important for flow experience. Therefore, perceived skill would be closely related to one's intent to personalize the gaming experience. Consequently, it is hypothesized that past experience and perceived gaming skill will be positively related to personalization intention.

H1: Past experience will have a positive effect on personalization intention.

H2: Perceived gaming skill will have a positive impact on personalization intention.

Personalization effects. As previously noted, the goal of personalization is to create and increase the customer value. For functional products/services, customizing features would provide the customer with more convenience, lower cost, or some other benefit (Peppers & Rogers, 1997). In contrast, for hedonic products (e.g., SVG), personalization would be employed to better match customer needs to enhance consumer enjoyment, pleasure, and loyalty. Therefore, we propose that personalization features could function as a customer lock-in so that the users who utilize personalization features would report higher levels of engagement with the product than users who do not use personalization features. The following hypotheses were developed to examine the personalization effect on enjoyment, repurchase intention, and behavioral loyalty.

H3: Personalization feature users will report higher levels of enjoyment than users who do not use personalization features.

H4: Personalization feature users will report higher levels of repurchase intention than users who do not use personalization features.

H5: Personalization feature users will report more playing time than users who do not use personalization features.

Method

Sample and Procedure

A convenience sample ($N = 459$) of FIFA soccer video game (FIFA Live 06) users were recruited both online (56%) and offline (44%) from a metropolitan area in Korea. The FIFA soccer video game was chosen for this study because it is one of the top sellers of the Electronic Arts (EA) brand, one of the leading video gaming brands in the world (Fisher, 2007). The Korean

sample was chosen for this study for two reasons. First, several industry reports have suggested that avid young Korean gamers represent the ideal global test market for game companies to try out new game concepts and titles (e.g., Cain, 2010; Moon, 2007). Nearly 90% of the 15.9 million Korean households have broadband Internet access, and tech-savvy Korean populations have become an attractive target market for video game companies (Moon, 2007). Second, some Korean gaming software companies (e.g., Neowiz, NCSoft) have become global leaders in the video gaming industry. For example, EA collaborated with Korean gaming companies to develop an online version of the FIFA Soccer game, which became an instant hit (Moon, 2007). Therefore, we believe the Korean sample represents a major market for SVGs, and findings from this study should provide meaningful implications for game developers and practitioners.

The actual users of the game were screened to control for potential confounding effects from other types of soccer video games. Overall, 97% of the respondents were males, ranging in age from 15 to 33, with a mean age of 20.16 years old. Online respondents ($N = 256$) were recruited from an online video gaming forum in Korea. A banner advertisement with a direct link to the online survey was placed on the main web page. When members of the forum clicked the banner, they were asked if they had previously played the FIFA soccer game. Only those respondents who had played the game before were instructed to proceed with the survey. In an effort to get a broader sampling of users, offline participants ($N = 203$) were also recruited from a large national university in Korea. Consistent with the online recruitment procedures, the students were first asked if they had previously played the FIFA soccer game. Only those respondents with prior experience with the FIFA soccer game were given the survey booklet to participate in the study. Overall, online and offline respondents were similar in terms of education, gender, and past experience.

Measures

The measures underwent an additional review and were translated into Korean. A panel of two scholars and one graduate student in a sport management program then examined the items for content validity. The resulting questionnaire consisted of six main variables: past experience, perceived skill, personalization intention, enjoyment, repurchase intention, and playing time.

Past experience. In order to assess respondents' past experience with the game, respondents were asked if they had played the previous versions of the FIFA soccer game (FIFA Live 04, FIFA Live 05, FIFA Live 06,

and FIFA Manager) on a yes/no dichotomous item (no = 0, yes = 1). The answers from four items were then added to create a composite past experience score (ranging from 1 to 4).

Perceived gaming skill. The perceived gaming skill measure gauged respondents' perception of their skill level playing the FIFA soccer game. A four-item perceived skill scale was adapted from Pavlou and Fygenon's (2006) study on e-commerce adoption and respondents were asked to rate their game playing skills on five-point Likert-type scales. The four items were: (1) If I wanted to, I could become skillful at playing the FIFA soccer game, (2) Becoming skillful would make it (much more difficult/easier) for me to get information about this product, (3) If I wanted to, I could easily become knowledgeable about getting all relevant information about playing the FIFA soccer game, and (4) Becoming knowledgeable about getting information would make it (much more difficult/easier) for me to play the FIFA soccer game well ($\alpha = .82$).

Table 1.
Descriptive Statistics of Age, Gender, Education, and Daily Average FIFA Game Consumption

Variables	N (%)
Age	
15-17	116 (25.3)
18-24	288 (53.2)
25-29	47 (10.2)
30-34	8 (1.7)
Total	459 (100)
Gender	
Males	448 (97.6)
Females	11 (2.4)
Total	459 (100)
Education	
Middle School	105 (22.9)
High School	62 (13.5)
Bachelor's degree	249 (54.2)
Graduate degree	43 (9.4)
Total	459 (100)
Daily Average FIFA Game Consumption	
Less than 30 minutes	144 (31.4)
30 min. – 1 hour	71 (15.5)
2 hours	72 (15.7)
3 hours	72 (15.7)
4 hours	40 (8.7)
More than 4 hours	47 (10.3)
No response	13 (2.7)
Total	459 (100)

Personalization intention. Personalization intention was measured with two five-point Likert-type items. Respondents were asked if they would like to use the personalization option (i.e., Career Mode), which allows users to modify and personalize gaming experience. By using Career Mode, for instance, the user becomes a general manager of a specific team to customize various team-related attributes (e.g., roster, training, sponsorship contract, facility management, fan promotion, etc.). Thus, the Career Mode option represents a good example of personalization in the game. Respondents were asked: "The likelihood of using the Career Mode is: (very low to very high)" and "My willingness to use Career Mode is: (very low to very high)" on a 5-point Likert-type scale ($\alpha = .95$).

Enjoyment. A three-item enjoyment scale was adapted from Childers, Carr, Peck, and Carson (2001). Respondents were asked to rate their overall enjoyment when playing the FIFA soccer game, using the following dimensions: fun, exciting, and enjoyable, on a five-point Likert-type scale (1 = strongly disagree; 5 = strongly agree) ($\alpha = .81$).

Repurchase intention. Repurchase intention was measured with two five-point Likert-type items (Yi, 1990). Respondents were asked whether they would like to purchase a newer version of the game in the future, and how possible it is that they would like to purchase a newer version of the game ($\alpha = .94$).

Playing time. Actual playing time was assessed through a single-item where participants were asked to provide information on their daily average playing hours: "In the past week, how many hours, on average, did you play the FIFA soccer game per day?" We used the following range of responses to assess respondents' playing time: (1) less than 30 minutes, (2) one hour, (3) two hours, (4) three hours, (5) four hours, (6) more than four hours.

Results

Descriptive, Reliability and Validity Tests

Table 1 summarizes descriptive information about the sample in terms of age, gender, education, and average daily playing time. The majority of respondents were between 18 and 24 years old (53.2%), followed by a 15- to 17-year-old group (25.3%) and a 25- to 29-year-old group (10.2%). Respondents were predominantly male (97.6%) and the bulk of the respondents had a college degree (54.2%). In the past week, 31% stated that they had played the FIFA soccer game less than 30 minutes per day, approximately 30% indicated that they had played the game for two to three hours, and 19% reported that they had played the game more than four hours a day. Reliabilities of the following multi-item

Table 2.
Hierarchical Multiple Regression Predicting Personalization Intention

	R^2	F	β	ΔR^2
Personalization Intention				
1 st Block – Covariates	.11	28.18		
Age			-.33**	
Gender			-.09	
2 nd Block – Predictors	.30	47.87		
Past experience			.13**	
Perceived gaming skill			.39**	.19**

** $p < .01$.

scales were assessed using Cronbach's alpha coefficient and ranged from .81 to .95: perceived gaming skill, personalization intention, enjoyment, and repurchase intention.

In order to examine the predictive validity of the personalization intention, participants' actual use of personalization features (e.g., player creation, team creation, league creation, online match) was assessed by using a dichotomous variable ("yes" = 1, "no" = 0). Scores were summed to create a composite scale for personalization usage, with scores ranging from 0 to 4. The validity of the personalization intention was demonstrated by its significant positive correlation with actual personalization usage ($r = .49, p < .001$). Further, the predictive validity of the perceived gaming skill was examined using respondents' actual game-playing skill scores. Utilizing a popular Internet-based FIFA Soccer message board (<http://cafe.naver.com/shootgoal>), the authors listed 13 game-playing techniques (e.g., step-over dribble, wall-to-wall pass, man-to-man defense, through pass, off-side trap, etc.) that are aimed at advanced players. Respondents rated their ability to master each technique in game play (e.g., "know the skill and can utilize it during playing the game" = 1; "do not know the skill" = 0). Scores were then summed to create a composite gaming skill scale, ranging from 0 to 13. The validity of the perceived gaming skill was verified by its significant positive correlation with actual game-playing skill scores ($r = .46, p < .001$).

Antecedents of Personalization Intention

In order to test the first two hypotheses pertaining to the predictive utility of past experience and perceived skill on personalization intention, a hierarchical multiple regression analysis was employed. Age and gender were entered in the first block as covariates, and past experience and perceived skill were entered in the sec-

ond block. As shown in Table 2, age and gender accounted for 11% of the variance [$R^2 = .11, F(2, 442) = 28.18, p < .01$]. Specifically, age was negatively associated with personalization, $\beta = -.32, t(441) = -7.29, p < .01$ and gender had a marginal impact on personalization intention, $\beta = -.09, t(441) = -1.91, p = .06$. Past experience significantly predicted personalization intention, $\beta = .13, t(440) = 3.28, p < .01$. Lastly, perceived skill had a significant effect on personalization intention, $\beta = .39, t(440) = 9.52, p < .01$. Taken together, past experience and perceived gaming skill explained 30% of the variance in personalization intention, [$R^2 = .30, F(2, 440) = 60.03, p < .01$]. Therefore, hypotheses 1 and 2 were supported.

Personalization Effect on Enjoyment, Repurchase Intention, and Playing Time

A set of analysis of covariance (ANCOVA) was conducted to examine the effect of personalization on users' enjoyment, repurchase intention, and playing time of the SVG game FIFA Live 06. The sample was classified into two groups based on the participants' responses in using personalization features. Subjects were grouped into the personalization group if they responded "yes," and into the non-personalization group if they responded "no" to the question of whether or not they currently used the personalization mode (i.e., Career Mode). This procedure yielded a personalization group ($n = 304$) and non-personalization group ($n = 68$), with 72 participants being omitted because their responses were missing on the item.

Hypothesis 3 was supported, as the personalization group showed a significantly higher level of enjoyment than the non-personalization group, $F(1, 368) = 5.44, p < .05$. There was a significant main effect for repurchase intention (H4), $F(1, 368) = 84.44, p < .01$, suggesting that the personalization group reported a significantly higher level of repurchase intention than

the non-personalization group. Lastly, H5 was also supported, as the personalization group played the game significantly longer than the non-personalization group, $F(1, 368) = 47.55, p < .01$. Therefore, the results supported H3, H4, and H5, respectively.

Discussion

The present study aimed to provide insights on personalization attributes in an SVG context. The current investigation used survey data pertaining to actual users of the FIFA soccer SVG to examine the antecedents of personalization intention, and to investigate the personalization effect on game enjoyment, repurchase intention, and actual consumption level. Overall, the results support the study's main hypotheses. H1 was supported, as an individual's past experience with the game did predict personalization intention. Results suggested that users with greater prior experience with the SVG were more likely to adopt personalization features in the game. H2 was also supported in that perceived gaming skill had a significant impact on personalization intention. The findings showed that users' skill perception is important in predicting one's intention to utilize personalization options. These findings are consistent with previous views on factors influencing personalization and customization (Coupey et al., 1998; Crow & Shanteau, 2005).

Therefore, the results of this study imply that gamers with greater levels of experience and skill are more likely to utilize the game's personalization options, which subsequently leads to greater enjoyment and increased consumption. Although the current study contributes to the sport marketing literature by highlighting the significance of the personalization experience in the sport media entertainment context, more research in this area should be conducted to further explore the role of personalization in the SVG experience.

For instance, while the current study posited that player skill and past experience were antecedents to personalization intention (cf. Crow & Shanteau, 2005), it might also be interesting to explore if skill acquisition is a direct or indirect consequence of personalization. A less experienced gamer might increase his or her gaming skill by utilizing personalization options. SVG developers and interactive marketing researchers would also want to find out if personalization features can be effective in engaging light users. Therefore, we recommend that future studies utilize experimental design to examine if personalization can also help less experienced or light users enhance their gaming experiences.

The findings of this study also showed the use of personalization features resulted in significant effects on enjoyment and loyalty. For instance, users who use personalization options reported significantly higher

levels of game enjoyment, repurchase intention, and daily average consumption. H3 was supported in that the personalization group reported significantly more enjoyment than the non-personalization group. Likewise, H4 was supported, as individuals in the personalization group were more likely to purchase the newer version of the game. Lastly, personalization also had a significant impact on behavioral outcomes, as the personalization group reported more game playing hours per day than the non-personalization group (H5). Overall, the reward of personalization within an SVG experience was increased value for the consumer and increased profitability for the provider.

Managerial Implications

Personalization appears to be an important feature in SVG as it relates to customer enjoyment and retention. Marketers should consider developing easy-to-adopt personalization features that help lock in game users. For instance, EA Sports has integrated personalization options into their online play components. In the NHL and FIFA series of games, players may create a personalized player, at whatever position they desire, then take that created player online and compete with and against the created players of other human users on the gaming network. This affords the user a chance to extend the personalization effort beyond the confines of their own home system or small group of friends. By taking the personalized character into the online public sphere, players have a vested interest in the game title franchise, and in carrying their created player forward from year to year within the franchise.

Some sports titles are now programming and selling mini-games, which are primarily aimed at personalization. 2kSports, makers of the NBA 2k series, sell an online-only "draft combine" version of their NBA 2k franchise for only \$5. The stated purpose of this software is to allow a user to create a basketball player as a prospect, have that player participate in a digitized version of the NBA draft combine held in the city of Chicago, and then save that virtual player's data for later import into NBA 2k10. The virtual player may then be drafted by the user in the larger, full-price game. This series of events allows the user to develop a sense of personal achievement through the progression of the virtual player they control.

The NHL and Tiger Woods Golf series have integrated the personalization process even further, by having the user create a player as part of their actions when starting up the game for the very first time. Both series then use the created player as part of the introduction of the series' game controls. It would appear that EA's efforts in this area are intended to get the user personally integrated into the game structure from the very

beginning, by connecting the area of personalization with the development of user skill.

Past experience and perceived gaming skill were significant predictors of personalization intention. Therefore, diversifying the difficulty levels of the game would be appealing to attract more game users to develop their gaming skills. There have been some efforts in this area from the programming community. During the middle of the prior decade, the EA Madden series instituted a feature at the start of the game that ran the user through a series of skill tests. The game's difficulty level was then set by the computer based upon the results of these tests, which were known as "Madden IQ." However, some users found the computer-generated difficulty level to be either too easy or too difficult, and the Madden series ultimately scrapped Madden IQ as an integral part of the game experience (Berardini, 2008). Newer versions of the Madden series utilize a system called "Adaptive AI," which allows a computer-controlled opponent to alter its playcalling in response to the tendencies of the human player (Cummings, 2009).

EA's NBA Live series has introduced a system called "Dynamic DNA," which adds difficulty and realism to games by utilizing constantly updated data from actual NBA players and teams. As noted by Nardozi (2008): "Dynamic DNA simply takes these player tendencies further. Instead of a CPU Kobe merely taking it to the cage, a Dynamic DNA Kobe will drive left in situations where real Kobe drives left. A Dynamic DNA Kobe's shooting percentage is based off real Kobe's positioning on the floor. The breakdown of the data goes on and on, eventually creating *NBA Live 09* characters that really do seem to share DNA strands with their real-deal counterparts" (p. 2).

These and other efforts appear to be aimed at providing a virtual environment that is immersive and challenging, yet not so challenging that the user is frustrated by an inability to succeed. For SVG marketers, these are important areas of the user experience. Programming the games in a way that combines fun with realism, and measured challenges instead of overwhelming ones, helps to increase consumer confidence in their skills within the gaming environment. As noted in the results section, self-perceived skill is an important factor in intent to utilize personalization options. Self-perceived skill is also intrinsically tied to difficulty level, because the purpose of "difficulty" in video games is to provide a more stern (or lesser) test to a user's skill.

While the current study first examined the antecedents and consequences of personalization features in the SVG context, there are still some limitations that need to be acknowledged. For example, the

results are based on one particular SVG and the results cannot be generalized to other types of games or to other cultures. Thus, more research in this area should replicate and extend this study to different types of SVG (e.g., basketball, auto-racing, baseball, etc.) and in different cultures, to enhance a sport marketer's ability to have a broader understanding of SVG phenomena. As discussed previously, game technologies and interactive features continue to evolve to maximize the hedonic properties from the SVG experience. Therefore, it would be an interesting avenue for future research to employ different types of personalization features (e.g., online competition) and explore their various marketing implications.

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