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My video game console is so cool! A coolness theory-based model for intention to use video game consoles

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ABSTRACT

With the outbreak of COVID-19, the video game console market is thriving again. In this study, we attempted to explore users' intention to use video game consoles by developing a causal model mainly based on coolness theory and the technology acceptance model. To better illustrate user experience for video game consoles, we added several concepts to the causal model, including hedonic motivation, system and service quality, perceived cost, and game variety. Through examining survey-based data from 360 Koreans, we discovered that the model had a high explanatory power for users' intention to use video game consoles. The key findings were as follows: First, among the components of coolness theory, individuals' attitude toward consoles was significantly related to subcultural appeal and originality, but not to attractiveness. Second, originality positively influenced subcultural appeal significantly. Overall, this study implied that the novel coolness theory is effective for exploring user experience regarding of specific devices and services.

1. Introduction

The rapid development of technology, coupled with the global COVID-19 pandemic, has ushered in the second golden age of the video game console industry. Specifically, research shows that technological advancements in diverse areas (e.g., visual recognition and virtual reality) have elevated the user experience of video game consoles to a whole new level (Wehden et al., 2021). Additionally, the restrictions on outdoor activities imposed by numerous governments worldwide owing to the COVID-19 pandemic have further accelerated the growth of the video game console market (TRTWORLD, 2021). Within this scenario, Nintendo Switch sold 15.6 million units until September 2020, making it the most popular video game console during the COVID-19 pandemic; it was followed by PlayStation 4 and Xbox, which sold 7.22 and 2.17 million units, respectively (Southern Maryland Chronicle, 2020).

The South Korean console market conforms to this trend. According to the Korea Creative Content Agency (2020), domestically, this industry is expected to reach 1 trillion won in sales by the end of 2021. This is a significant growth compared with the numbers in 2019, when sales in this market reached 694.6 billion won (Korea Creative Content Agency, 2020).

Moreover, as implied by several scholars (Che et al., 2021; Cui et al., 2020; Davis, 1989; Park, 2020a), improving user experience for specific products or services can play a positive role in the success of a for-profit organization. Based on this viewpoint, this study aimed to provide guidelines to improve user experience for a specific video game console.

To this end, we integrated the Technology Acceptance Model (TAM) and the coolness model in order to propose an integrated model of user experience for video game consoles. The coolness model, developed by Sundar et al. (2014), has already been utilized to explore individuals' perceptions in areas such as robot-serviced restaurants (Cha, 2020) and smart TVs (Park, 2020b). Given that a "cool" product can attract strong public attention, has a better chance at market success (Kim et al., 2015), and that few studies have applied this model to investigate user experiences (e.g., perspectives or intentions) in specific video game consoles, we decided to examine which elements of "coolness" influence users' assessments of these consoles. Using this novel integrated model, we hope to provide more comprehensive explanations for individual behaviors regarding video game console use.

In addition to elements from the TAM and coolness theories, our proposed integrated model also considers other factors (i.e., hedonic motivation [HM], variety of games [VG], system and service quality [SSQ], and perceived cost [PC]) that are likely to notably affect user experience regarding video game consoles (see Chong et al., 2012;

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DeLone and McLean, 2003; Luarn and Lin, 2005; Van der Heijden, 2004). Overall, our research is one of the first to apply the coolness framework to explore user experience—or more specifically, intention to use at the individual level—for video game consoles. Accordingly, we posited the following research questions (RQs):

RQ1: Can coolness elements influence users' intention to use video game consoles?
RQ2: Can TAM components influence users' intention to use video game consoles?
RQ3: Can HM, VG, SSQ, and PC influence users' intention to use video game consoles?

2. Literature review and hypotheses development

2.1. Video game console

A video game console is a device that allows one or more persons to play a game using a display signal from a device (e.g., TV or monitor). While it is true that the video game console market has passed its golden age owing to the advent of mobile games, the market is flourishing again, with the COVID-19 pandemic having accelerated this upswing. Specifically, the South Korean console gaming market demonstrated a compelling growth trajectory after the COVID-19 pandemic, as both the sales and the market share within the entire gaming industry increased (Korea Creative Content Agency, 2020).

Notably, the Korean console gaming market grew despite the fall in sales of the traditional market leader (i.e., PlayStation) by 54.5% in 2019 compared to 2018 (Donga, 2020). The reason behind this was the immense success of Nintendo Switch titles such as "Animal Crossing" and "Ring Fit" (Donga, 2020). According to data from a Korean distributor, Daewon Media, in the second quarter of 2020, Nintendo Switch sales demonstrated a 106.4% increase compared to the same period in 2019 (Yonhapnews, 2020), and the number of Nintendo Switch games sold in this period reached 325,545 units, nearly three times higher than in 2019 (Yonhapnews, 2020). Furthermore, owing to a major shortage of the Nintendo Switch console in Korea in 2020, the few retailers and individual sellers that still had it in stock sold the console at a huge premium (Yonhapnews, 2020).

Despite the increasing popularity of video game consoles, its user experience has yet to be more thoroughly researched, as only a few scholars have conducted such analyses. Among the few, Oh and Yoon (2014) relied on the structural equation modeling (SEM) outcomes of 254 samples to conclude that users' intentions to use video game consoles were remarkably influenced by perceived enjoyment (PE) and perceived usefulness (PU). Moreover, Kartas and Goode (2012), after conducting research with 285 participants, discovered that PE and complexity influenced users' intention to use video game consoles.

Most user-oriented studies on video game consoles have used utilitarian and hedonic values for predicting users' intentions. However, to the best of our knowledge, no research has employed coolness elements for such predictions. Thus, we aimed to utilize this framework to develop a model for explaining users' intention to use video game consoles and explore specific predictors.

2.2. The relation between attitude and intention

The term "attitude" (ATT) has been demonstrated as one of the most significant elements affecting intention to use devices/services; in fact, several prominent cognitive theories (e.g., planned behavior theory) have implied that individuals' positive attitude toward specific technologies can lead them to use the technologies (Ajzen, 1991). In this paper, we conceptualize ATT as the level of a user's perception which can lead to a specific action (Ajzen, 1991). In the field of user experience, studies have demonstrated a notable connection between individuals' ATT and intentions (Davis, 1989; Mariani et al., 2021; Nastjuk et al., 2020). This association has also been supported in the gaming context (Kartas and Goode, 2012; Wang and Sun, 2016). Consequently, we posit the following as our first hypothesis:

H1. . Positive ATT will induce stronger intention to use video game consoles.

2.3. Coolness elements

To offer a more comprehensive illustration of technology adoption, numerous scholars have tried to identify the key influencing factors of such adoption aside from the already well-known utilitarian factors (explained in subSection 2.4). Coolness theory is considered a prominent cognitive theory on this topic and is therefore intensely scrutinized in academia. According to Sundar et al. (2014), the coolness concept is mainly derived from attractiveness, subcultural appeal, and originality; that is, individuals perceive a particular technology to be cool when it is considered esthetic, trendy, and unique. Furthermore, individuals generally have a positive evaluation of and a desire to adopt products perceived as "cool" (Sundar et al., 2014).

Some empirical studies employed coolness constructs to develop the causal model of adoption of products, which was capable of explaining a great portion of individuals' intentions (e.g., Ashfaq et al., 2021;Park, 2020b). These studies also indicate the significance of heuristic coolness for the diffusion and success of particular products/services.

2.3.1. The relation between attractiveness and ATT

Individuals are generally attracted to objects or people with aesthetically appealing features and appearances (Dion et al., 1972), and several scholars have indicated that individuals tend to have more positive assessments of products that have an attractive appearance and features (Goodman et al., 2013; Tractinsky et al., 2000).

In the context of video game consoles, we chose to use the following definition for attractiveness: "the degree to which users consider video game consoles to be attractive in terms of appearance or functions" (Sundar et al., 2014). The positive role of attractiveness in improving user experience of devices/services has been supported by the literature (Cha, 2020; Kim et al., 2015; Park, 2020b). For instance, Park (2020b) used SEM in a sample of 1176 people to demonstrate that attractiveness can induce positive ATT toward smart TVs. This leads to our second hypothesis:

H2. . Attractiveness will induce a more positive ATT toward video game consoles.

2.3.2. The relation between originality and ATT

Products that have a unique function or appearance are often perceived as original (Sundar et al., 2014). Individuals tend to feel distinct when using such products and have a positive perception about the product's originality (Park, 2020b). Subsequently, this positive feeling strengthens consumers' desire to purchase such unique products. Sundar and Marathe (2010) showed that the positive effects of uniqueness are particularly evident for earlier adopters who seek originality and innovation.

For this study, we chose to define the term "originality" for the video game console context as "the level to which individuals feel that a particular video game console is functionally or aesthetically different from similar products" (Cui et al., 2021; Sundar et al., 2014). Some empirical works have demonstrated the notable association between originality and ATT (Kim et al., 2015; Park, 2020b). For instance, based on the SEM results from the data of 246 people, Kim et al. (2015) reported that originality can induce users' positive ATT toward smartphones. Hence, the third hypothesis is as follows:

H3. Originality will induce a more positive ATT toward video game consoles.

Table 1
Participants' demographic characteristics.

Age	n	Gender	n	Education	n
20–29	124	Male	172	High school or below	32
30–39	136	Female	188	College	299
40–49	91			Graduate or above	29
Over 50	9				

2.3.3. The relation between subcultural appeal and ATT

Consumers tend to try and differentiate themselves by using cool products or services that reflect their unique characteristics and interests (Cha, 2020; Rahman, 2013). Since the use of products that are unique in appearance and function is uncommon in mainstream society, their use tends to stand out, promoting the development of subcultures related to these products (Kim et al., 2015). In addition, console manufacturers have been attempting to cultivate a subculture related to consoles that induce the perception of coolness.

Conceptually speaking, subcultural appeal for video game consoles refers to "the level to which individuals think that using a specific video game console can differentiate themselves from others" (Sundar et al., 2014). Through an evaluation of data from 363 Korean respondents, Kim and Shin (2015) found that subcultural appeal can positively affect individuals' ATT toward smartwatches, an association that has also been validated for smartphones (Kim et al., 2015). Consequently, the fourth hypothesis is that:

H4. . Subcultural appeal will induce a more positive ATT toward video game consoles.

2.3.4. The relation between originality and subcultural appeal

Uniqueness theory holds that individuals tend to try and remain "special" in comparison to others (Fromkin and Snyder, 1980). Research also shows that commodities are important sources of self-consciousness, and that the scarcity or uniqueness of products plays a mediating role in the establishment of one's perception of their own uniqueness (Snyder, 1992). Furthermore, Lynn (1991) indicated that individuals who have a high desire for specialness are attracted to scarce products. As implied in Snyder (1992) and Cha (2020), since individuals can perceive themselves as being different from others by using innovative and unique products or services, we infer that the originality of a products can lead to a greater subcultural appeal. This leads to our fifth hypothesis:

H5. . Subcultural appeal will be positively influenced by the originality of video game consoles.

2.4. The relations among PU, perceived ease of use, and ATT

TAM (Davis, 1989) is a major model for exploring user experience with or user perception of devices/services, and Davis (1989) reported that both PU and perceived ease of use (PEU) are major constructs in this model. Moreover, existing studies have indicated the need to explore the positive impacts of utilitarian factors (e.g., PEU and PU) on users' assessments of technological products (e.g., video game consoles) (Choi, 2018; Liu and Li, 2011; Oh and Yoon, 2014; Park, 2020a). This demonstrates the significance of investigating whether users will have positive assessments toward video game consoles if they think that their use does not demand much effort and improves their quality of life. Additionally, Sundar et al. (2014) have implied that usefulness concept is helpful to understand the "cool" products. Several user-oriented studies have also expanded the coolness model, including factors related to PU and PEU, explaining a high portion of the variance in intention to use products (Ashfaq et al., 2021; Kim and Park, 2019). Thus, we believe that a model that integrates TAM and the coolness model may prove effective in exploring users' intention to use video game consoles.

Generally, PU has been interpreted as the level to which individuals perceive that using a product/system can improve their job performance (Davis, 1989). However, Jung et al. (2009) and Liu and Li (2011) reported that this conceptualization may not be relevant for hedonistic technologies (e.g., mobile games and media), which have little relevance to one's job. Thus, the original definition of the term PU may not be suitable for studies on video game consoles. This led us to follow the guidelines of Liu and Li (2011) and interpret PU as "the level to which individuals believe that using video game consoles can improve their life quality." Meanwhile, PEU has been conceptualized as "the level to which individuals think that using video game consoles does not need much effort" (Davis, 1989).

The constructs of PU and PEU have played remarkable roles in research aimed at improving user experience for devices/services. For instance, by analyzing data from 313 Koreans, Lee et al. (2019a) reported that PU can induce a more positive ATT toward autonomous vehicles. Additionally, Yuen et al. (2020) analyzed the data from 274 Chinese consumers and described that both PU and PEU positively influence a more positive ATT toward autonomous vehicles. Based on the results of SEM from 268 participants, García et al. (2019) also depicted how PU and PEU can positively predict intention to accept mobile learning.

Furthermore, Davis (1989) argued that individuals tend to have positive PU toward specific technologies when they find the technologies easy to use, a viewpoint that has been supported by some research

Table 3
Fit indexes.

Indexes	Measurement model	Structural model	Suggested values
Chi-square /df	1.432	2.123	<3
Comparative fit index	0.982	0.951	>0.9
Normed fit index	0.944	0.912	>0.9
Root mean square error of approximation	0.035	0.056	<0.08
Tucker Lewis index	0.979	0.945	>0.9
Goodness of fit index	0.905	0.850	>0.9 or >0.8

Table 2
Discriminant validity results.

	PU	PEU	HM	AT	OR	SA	SSQ	PC	VG	ATT	IU
PU	.833										
PEU	.567	.864									
HM	.816	.700	.904								
AT	.625	.382	.574	.869							
OR	.619	.451	.577	.774	.919						
SA	.421	.085	.286	.593	.503	.944					
SSQ	.651	.472	.639	.754	.686	.631	.789				
PC	.013	.054	.007	−0.035	.011	.001	.024	.804			
VG	.477	.435	.505	.492	.486	.351	.647	.077	.868		
ATT	.763	.561	.754	.615	.659	.465	.757	.003	.627	.880	
IU	.720	.529	.737	.602	.643	.339	.651	−0.071	.575	.802	.913

Notes. AT: Attractiveness; OR: Originality; SA: Subcultural appeal; IU: Intention to use.

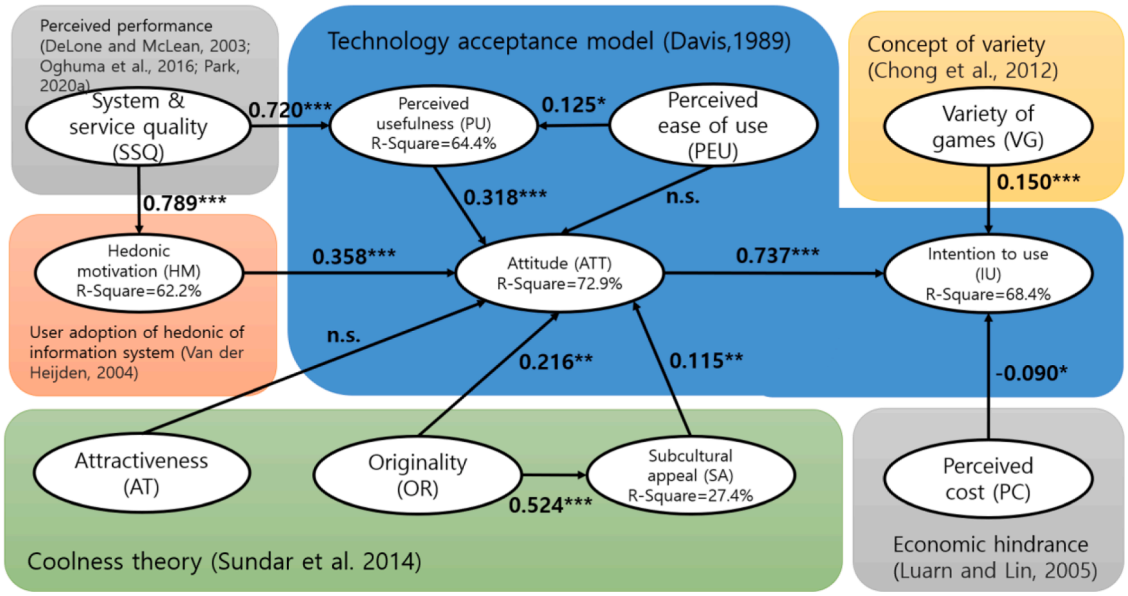

Fig. 1. SEM results.

(Hsieh and Lai, 2020; Nan et al., 2020;Yuen et al., 2020). For example, Nan et al. (2020) analyzed data from 205 Korean users to show that PEU enhances PU regarding mobile payments. Together, these discussions lead to hypotheses 6, 7, and 8:

H6. . PU will induce a more positive ATT toward video game consoles.

H7. . PEU will induce a more positive ATT toward video game consoles.

H8. . PEU will induce greater PU regarding video game consoles.

2.5. The relation between HM and ATT

As implied in self-determination theory, individual behavior is strongly influenced by extrinsic (utilitarian) and intrinsic (hedonic) elements (Babin et al., 1994; Deci and Ryan, 2008). Van der Heijden (2004) also noted that, when exploring user behavior for information systems, not only should researchers explore utilitarian elements (e.g., PU and PEU) but also hedonic elements (e.g., HM). Thus, following this recommendation and with the intent to more comprehensively grasp users' perspectives and behaviors regarding video game consoles, we chose to include the concept of HM in our research model.

Within the context of video game consoles, HM is conceptualized as "the level to which individuals perceive using video game consoles as enjoyable" (Van der Heijden, 2004). Research has confirmed the connection between HM and ATT: Ho et al. (2017), while examining data from 345 participants in Singapore, found that HM can induce positive ATT toward exergames. Further, Lee et al. (2019b), based on the SEM results from 350 Koreans, demonstrated that HM is positively related to ATT toward virtual reality devices. This leads to hypothesis 9:

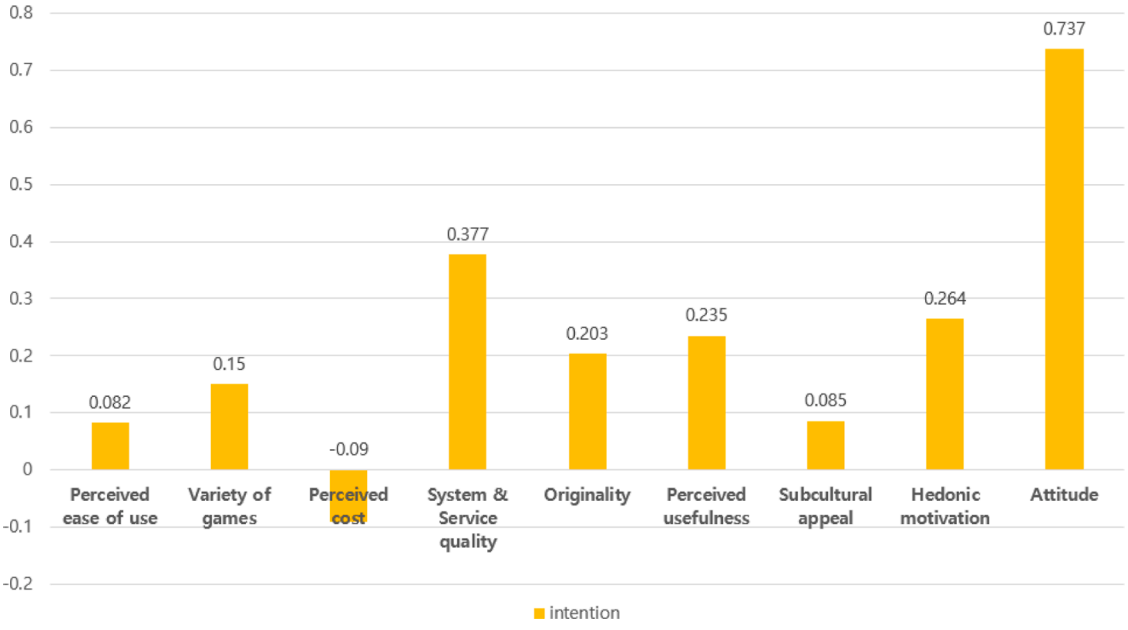

Fig. 2. Total effects of the variables predicting intention to use video game consoles.

H9. . HM will induce a more positive ATT toward video game consoles.

2.6. The relations among SSQ, PU, and HM

To attract more consumers, companies generally endeavor to improve the performance of their products/services. Accordingly, several scholars have applied the concept of SSQ, mentioned by DeLone and McLean (2003), to measure perceptions regarding the performance of systems and services (Oghuma et al., 2016; Park, 2020a).

In this paper, we deemed the construct SSQ as "the level to which individuals feel that the performance of video game consoles is superior" (DeLone and McLean, 2003; Oghuma et al., 2016; Park, 2020a). Several studies have demonstrated the positive role of SSQ on user experience. For one, Aboelmaged (2018) discovered that SSQ positively influences the PU of social network services. As implied in Jang and Noh (2011) and Kim et al. (2013), when individuals believe that the quality of both the service and the system of an application is superior, they perceive its hedonic value. Thus, we hypothesize that SSQ can influence PU and HM, leading to hypotheses 10 and 11:

H10. . SSQ will be positively related to PU for video game consoles.

H11. . SSQ will be positively related to HM of video game consoles.

2.7. The relation between PC and intention to use

Scholars have suggested that economic hindrance-related elements, such as PC, should be addressed when exploring individuals' assessments of products (Kim et al., 2021; Luarn and Lin, 2005). This is because consumers generally tend to compare products/services in terms of their financial costs and benefits (Kim et al., 2021; Park, 2020a). Thus, we included PC for constructing the causal model in the context of video game consoles.

In the current research, we conceptualized the concept of PC as "the level to which individuals feel economic burden with using video game consoles" (Kim et al., 2021; Pham and Ho, 2015). Studies have shown that PC can reduce users' positive perceptions about a product/service. For instance, Al-Saedi et al. (2020), with a sample of 436 people from Oman and using SEM, showed that PC can discourage users from adopting mobile payments. Similarly, Park (2020a) conducted a survey-based study in Korea, concluding that PC influences intention to accept smart wearable devices. This leads to hypothesis 12:

H12. . PC will negatively affect intention to use video game consoles.

2.8. The relation between VG and intention

Offering a variety of game types or titles is considered an important strategy in the video game console market, as this enables console companies to attract gamers with different preferences to their console. Thus, several companies, such as Sony and Nintendo, make considerable efforts to cooperate with other game companies to develop and deliver more game titles for their respective consoles. Therefore, we attempted to analyze how VG influence users' intention to use video game consoles.

Indeed, in various commodity contexts, variety plays a critical role in improving user experience. Chong et al. (2012) showed, for instance, that individuals may be inclined to adopt a mobile commerce application upon sensing that the application can provide a variety of services or functions. Moreover, Yadav et al. (2016) collected and analyzed data from Chinese mobile commerce users and concluded that offering a variety of services has a positive influence on users' intentions. Thus, finally, we hypothesize that VG can induce stronger users' intention to adopt video game consoles:

H13. . VG will lead to stronger intention to use video game consoles.

3. Methodologies

3.1. Survey design

Given that, as of 2021, Nintendo Switch is a representative video game console, we chose it as the target console for this survey. We employed a questionnaire whose items were derived from existing user-oriented research (see Table A.1 in Appendix). To ensure that the items in the Korean questionnaire were consistent and equivalent to their original languages (when translated), they were translated into Korean by a professional translator, and then reviewed by two bilingual researchers. Afterwards, the translated items were modified based on suggestions from two video game experts. Finally, two researchers independently checked the items to ensure that there was no ambiguity.

3.2. Data collection

We used a professional research panel provided by Macromill Embrain (a prominent online questionnaire company in Korea) to conduct an online survey for this study. In total, we collected usable data from 360 Koreans who had experience using the Nintendo Switch. All items in the questionnaire were responded to on a 7-point Likert scale (Cheng et al., 2020). The demographic information of participants is reported in Table 1.

3.3. Data analysis

Based on prior studies (Cheng et al., 2020; Lee et al., 2019c; Shin et al., 2018), we utilized AMOS, version 23, and SPSS, version 25, for data analysis.

4. Results

4.1. Reliability examinations

Regarding reliability of the proposed model, we computed Cronbach's alpha coefficients, factor loadings, average variance extracted (AVE), and composite reliability. As shown in Table A.2 (see Appendix), all the values satisfied the recommended levels (Fornell and Larcker, 1981; Hair et al., 2006). Furthermore, following the recommendations of prior research (Fornell and Larcker, 1981), we confirmed that each square root AVE value was bigger than the inter-construct correlations (Table 2). Thus, we deemed that our developed questionnaire passed the validity examinations.

4.2. Model fit

We also computed the fit indexes of the structural and measurement models. Based on prior research (Byrne, 1998; Hair et al., 2010), the indicators were generally acceptable (Table 3). Moreover, the goodness of fit index (GFI) for our structural model should be less than 0.9, but GFI depends on sample size (Li et al., 2021; Mulaik et al., 1989), and other research show that a GFI value greater than 0.8 also demonstrates that the measure is acceptable (Hsu and Lin, 2008; Khalilzadeh et al., 2017).

4.3. Hypotheses testing

We used SEM for examining all hypotheses. Results showed that eleven hypotheses were supported and two were rejected (Fig. 1). Additionally, the model of our scale explained 68.4%, 72.9%, 64.4%, 62.2%, and 27.4% of the variance in intention to use, ATT, PU, HM, and subcultural appeal, respectively.

Specifically, all the hypotheses related to the following relationships were supported by our data: intention to use was significantly influenced by ATT (H1, β= 0.737, CR = 14.097, p< 0.001), VG (H13, β= 0.150, CR = 3.434, p< 0.001), and PC (H12, β= -0.090, CR = -2.389, p< 0.05).

Additionally, PU (H6, β= 0.318, CR = 5.363, p< 0.001), HM (H9, β= 0.358, CR = 6.770, p< 0.001), originality (H3, β= 0.216, CR = 3.196, p< 0.01), and subcultural appeal (H4, β= 0.115, CR = 2.878, p< 0.01) all significantly positively influenced ATT. Nevertheless, attractiveness (H2) and PEU (H7) did not significantly impact ATT, so the respective hypotheses were refuted.

Further, both PEU (H8, β= 0.125, CR = 2.143, p< 0.05) and SSQ (H10, β= 0.720, CR = 9.813, p< 0.001) significantly positively influenced PU. SSQ (H11, β= 0.789, CR = 12.628, p< 0.001) remarkably affected HM in positive direction. Finally, originality (H5, β= 0.524, CR = 10.557, p< 0.001) significantly influence subcultural appeal.

4.4. Total impacts

We also computed the total standardized effects (direct effect + indirect effect) of the significant predictors in the research model on intention to use video game consoles (Fig. 2).

5. Discussion and conclusion

This study aimed to explore the key predictors of intention to use video game consoles. To this end, we proposed an integrated model based on coolness and TAM models. For a deeper understanding of user behavior, we also chose to consider other key influencing factors (HM, SSQ, PC, VG) of intention to use which were implied in prominent user-oriented studies (Chong et al., 2012; DeLone and McLean, 2003; Luarn and Lin, 2005; Van der Heijden, 2004). Our outcomes showed that the proposed model had a relatively high explanatory power for intention to use; namely, the variables in our research model were significant predictors of users' intention to use video game consoles.

5.1. Theoretical contributions

First, we showed that SSQ positively influences ATT toward and intention to use video game consoles via PU and HM. That is, when individuals perceive the performance of video game consoles as good, they may tend toward perceiving the use of video game consoles as beneficial and pleasant. These positive feelings may then lead users to positively evaluate and accept video game consoles.

Second, we demonstrated that PEU only indirectly (i.e., the direct effect was not supported by our data) influenced ATT through the mediating effect of PU. These results concord with those of several studies (Nan et al., 2020; Slade et al., 2015), which reported that when users are skillful in the use of a product/service, the role of PEU in the perceptions of these skillful users is not strong. Hence, users that are proficient in the use of a technology do not care much about its PEU (Nan et al., 2020).

Third, we showed that ATT was positively influenced by originality and subcultural appeal, indicating that the originality and subcultural appeal of a console can lead users to positively evaluate and adopt a console. These findings are congruent with coolness theory and related empirical studies (Kim et al., 2015; Sunder et al., 2014).

Fourth, the connection between attractiveness and ATT was not supported in this research. This result is distinctive from other empirical research related to coolness concept (Kim et al., 2015; Park, 2020b). This case can be interpreted as follows. Schnurr et al. (2017) reported that individuals tend to be more sensitive about the attractiveness dimension of unfamiliar product than that of familiar products. That is, the impact of attractiveness on user's perception may not be notable as they become more familiar with the product. Thus, we infer that users may overlook the attractiveness of particular products once they become familiar with the products. Overall, users have used to the appearance and function of their video game consoles, so the attractiveness seems to have a poor effect on user perception.

Fifth, we observed that originality positively influenced subcultural appeal, demonstrating that when users perceive that the functionality and appearance of a console is unique, this may make them feel special and different from others. Interestingly, to the best of our knowledge, no prior empirical studies had examined this connection. Thus, this finding provides a novel association for the literature on coolness. Accordingly, we suggest that, when constructing a model based on coolness theory for technological products/services, this association should be examined; such analyses may improve our understanding of the effects of factors related to coolness on user experience.

Sixth, PC had a relatively weak effect on intention to use video game consoles in our study. This differs from prior evidence, which show that economic burden is a major factor reducing intention to use products/services (Ali and Li, 2019; Luarn and Lin, 2005).

Seventh, VG was shown to positively influence intention to use video game consoles, which denotes that individuals may be more likely to use a particular console upon perceiving that it has a varied game catalog. This concurs with the research conducted by Chong et al. (2012) and Yadav et al. (2016), which demonstrated that offering diverse services/functions improves user experience.

5.2. Policy implications

Since we showed that SSQ plays an important role in enhancing users' positive assessments of toward video game consoles, we suggest that companies focus on improving the performance of their products. In the case of the Nintendo Switch, poor graphics quality is often considered its major flaw (Polygon, 2020). Thus, the console may reap benefits from enhancing its graphics quality, which would improve user experience.

Among the components of coolness, we observed that originality had the strongest effect on users' intention to use consoles, while the influences of subcultural appeal and attractiveness were relatively limited. Thus, regarding the design of consoles, manufacturers and designers should endeavor to enhance console uniqueness by differentiating its appearance and functionality features from those of other consoles.

Given that we showed how VG is positively associated with intention, we suggest that console companies try and cooperate with game developers to ensure that the console provides a good amount of variety regarding game types and/or titles.

We also demonstrated how PC had a relatively weak effect in reducing users' positive evaluations toward consoles. Thus, despite the general perception that using video game consoles is costly (Cnet, 2021), we see no major need for companies to consider price reductions for their consoles.

Finally, we demonstrated that PEU had a relatively weak effect on users' intention to use a console. Accordingly, given the limited human and financial resources of console companies, we see no need for them to go to great lengths in trying to increase the PEU of their consoles.

5.3. Limitations and future research

First, as shown in prior research (e.g., Shin et al., 2018), future studies can further explore the effect of users' demographic characteristics on user experience regarding video game consoles.

Second, our sample comprised only Korean participants, denoting that future research can validate the proposed model in other countries (e.g., the United States).

Third, although the Nintendo Switch has been a prominent console in 2021, the proposed model may need to be verified in the context of other video game consoles (e.g., PlayStation 5).

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Appendix

Tables A.1 and A.2

Table A.1
The items in the self-developed questionnaire.

Elements	Items
PU (Davis, 1989; Liu and Li, 2011; Park et al., 2014)	1. Overall, the Nintendo Switch is useful for me. 2. The Nintendo Switch improves the quality of my daily life. 3. The Nintendo Switch is a useful device in my life.
PEU (Davis, 1989; Munoz-Leiva et al., 2017; Nan et al., 2020)	1. Interacting with the Nintendo Switch does not require much mental effort. 2. I find becoming skilled in the use of the Nintendo Switch an effortless task. 3. I think it is easy to use the Nintendo Switch.
HM (Van der Heijden, 2004; Lu et al., 2017)	1. Using the Nintendo Switch gives me a lot of joy. 2. I think using the Nintendo Switch is fun. 3. Using the Nintendo Switch makes me feel good.
Attractiveness (Sundar et al., 2014; Bruun et al., 2016; Cha, 2020)	1. The Nintendo Switch is hip. 2. The Nintendo Switch is a stylish device. 3. The Nintendo Switch is attractive.
Originality (Sundar et al., 2014)	1. The Nintendo Switch is original. 2. The Nintendo Switch is novel. 3. The Nintendo Switch is unique.
Subcultural appeal (Sundar et al., 2014; Cha, 2020)	1. The Nintendo Switch differentiates me from other people. 2. Using the Nintendo Switch will make me stand apart from other people. 3. People who use the Nintendo Switch look great.
SSQ (Delone and Mclean, 2003; Turel et al., 2007; Park, 2020a)	1. Overall, the Nintendo Switch is well designed. 2. The Nintendo Switch fully meets my needs. 3. The Nintendo Switch has a consistent performance.
PC (Kim and Shin, 2015; Park, 2020a)	1. There are financial barriers to using the Nintendo Switch. 2. Overall, using the Nintendo Switch costs me much money. 3. Buying the Nintendo Switch and the related products is a burden for me.
VG (Chong et al., 2012; Kim et al., 2002; Agarwal et al., 2007)	1. The Nintendo Switch provides a wide variety of games. 2. The number of games offered by the Nintendo Switch meets my expectations. 3. I can play a variety of games through the Nintendo Switch.
ATT (Davis, 1989; Kim et al., 2015)	1. Using the Nintendo Switch is a good idea. 2. I have a generally favorable attitude toward using the Nintendo Switch. 3. I like the idea of using the Nintendo Switch.
Intention to use (Davis, 1989; Kim et al., 2015; Wang et al., 2019)	1. I plan to continue using the Nintendo Switch in the future. 2. I am willing to use the Nintendo Switch continuously. 3. I intend to reuse the Nintendo Switch.

Table A.2
Outcomes of the reliability and validity examinations for the self-developed questionnaire.

Factors	Items	Cronbach's alpha (> 0.7)	Factor loading (> 0.7)	Average variance extracted (> 0.5)	Composite reliability (> 0.7)
PU	PU1	0.871	0.873	0.693	0.871
	PU2		0.790		
	PU3		0.833		
PEU	PEU1	0.898	0.855	0.746	0.898
	PEU2		0.865		
	PEU3		0.871		
HM	HM1	0.930	0.872	0.818	0.931
	HM2		0.914		
	HM3		0.926		
AT	AT1	0.903	0.849	0.755	0.903
	AT2		0.867		
	AT3		0.891		
OR	OR1	0.941	0.883	0.844	0.942
	OR2		0.938		
	OR3		0.934		
SA	SA1	0.961	0.937	0.892	0.961
	SA2		0.960		
	SA3		0.936		
SSQ	SSQ1	0.828	0.778	0.622	0.832
	SSQ2		0.829		
	SSQ3		0.758		
PC	PC1	0.843	0.771	0.647	0.846
	PC2		0.866		
	PC3		0.772		
VG	VG1	0.894	0.913	0.754	0.901
	VG2		0.762		
	VG3		0.920		
ATT	ATT1	0.911	0.845	0.775	0.912
	ATT2		0.880		
	ATT3		0.915		
IU	IU1	0.937	0.910	0.834	0.938
	IU2		0.944		
	IU3		0.884		

Notes. AT: Attractiveness; OR: Originality; SA: Subcultural appeal; IU: Intention to use.

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