

AI-Powered “Voice Recognition Avatar”: A New Way to Play Games

Asad Hassan Butt, Dongbei University of Finance and Economics, China

Hassan Ahmad, Dongbei University of Finance and Economics, China

 <https://orcid.org/0000-0003-3925-3956>

Muhammad Noman Shafique, Gomal University Dera Ismail Khan, Pakistan

ABSTRACT

Consumers like to try innovative technologies when they perceive them to be approachable, convenient, and entertaining. The purpose of this study was to explore the adoption of AI voice recognition avatar in the gameplay. This study’s interesting insights show us that gamers are keen and interested in voice recognition technology. The study augments value to TAM theories, perceived value theory, and the flow theory with localization’s moderating role. The 218 respondents from China provided useful insights. In China, gaming is a vast industry, and such gaming options can attract current and new gamers. Thus, AI can benefit gamers in this regard and give them the freedom to interact with their avatar through the power of voice recognition.

KEYWORDS

AI Avatar, Online Gaming Intention, Perceived Ease of Use, Perceived Enjoyment, Perceived Usefulness, Perceived Value, Voice Recognition

1. INTRODUCTION

Technology is aiding consumers and organizations in many different ways, especially on the retail side (Chopra, 2019; Vahdat, Alizadeh, Quach, & Hamelin, 2020). Artificial intelligence (AI) plays a significant role in gaming and other consumer-based apps and devices. Many different AI services are developed, and a few are voice recognition, augmented reality, face recognition, and chatbots (Butt, Ahmad, Goraya, Akram, & Shafique, 2021). Gaming is a vast industry, and it is still growing, and more new gaming technology is being added in the form of AR and VR (C.-H. Lee, Chiang, & Hsiao, 2018; Yildirim, Carroll, Hufnal, Johnson, & Pericles, 2018). Using novel technologies keeps gamers fully immersed and gives a sense of pleasure in this virtual environment. The studies predict that the gaming industry will evolve and generate sales and revenues for game developing companies (Entertainment Software Association, 2016; E.S Association, 2019). The current study focuses on the idea through AI voice recognition avatar where gamers can play through the speech or voice and make its avatar perform. Preferably than using hands or fingers, voice recognition will do everything for the avatar, basically for the gamer. Thus, the purpose of this study is to find out

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gamers' intentions towards the AI voice recognition avatar and how consumers would think of this particular phenomenon.

AI is demarcated as a structure that can perform as humans and act like human behavior, and its network functions through sensors and intelligent programs (Russell, Norvig, & Intelligence, 1995; Sohn & Kwon, 2020). AI aims to provide human-like facilities intellectually and help organizations triumph (Buckner & Shah, 1993; Pantano & Pizzi, 2020). Voice recognition AI is used in many formats. It is an AI instrument that interrelates with consumers through voice command and delivers online and offline stores (Hoy, 2018). A simple example is operative voice assistant AI technology in mobile phones as speaking strokes effortlessly test-based messaging (Butt et al., 2021; Moriuchi, 2019). Companies like Google, Facebook, Microsoft, and Amazon are currently developing AI-based technologies to engage consumers in the market. Thus, AI voice recognition in gaming prospect can be an exciting instrument for gamers to use.

The research provides exciting views about the youngster being immersed in gaming and spending more time on it and feel associated with their gaming avatar (Liao, Cheng, & Teng, 2019; Wang, Butt, Zhang, Shafique, & Ahmad, 2021). Avatar influences consumers to spend money and buy in-game features to enhance game performance (Park & Lee, 2011; Wang et al., 2020). Over time, gamers, when addicted to a particular game, spend money and use the game options to buy money, weapons, and avatar attire (Hamari et al., 2017; Wang et al., 2021). Thus, voice recognition in a game format may be helpful for gamers in the form of its easiness, no use of hands, convenience, enjoyment, and perhaps good value for money and time. The current study will explain the following research questions; RQ1: Will AI-powered voice recognition avatar be of great importance to gamers? And RQ2: Will gamers adopt such technology in the gameplay? These are questions that need to be addressed with the integration of new technology in the game formats. There are hardly any games found with this particular voice recognition phenomenon in RPG, MMORPG, or MMO game formats. It will allow gamers to interact and play with the game through their voice and eye coordination rather than hand-eye coordination. It is predicted that voice recognition will play a key role in consumer conversations with AI technology (Siddike, Kalam, Spohrer, Demirkan, & Kohda, 2018). Using AI voice recognition as a playing tool may provide pleasure and enjoyment to gamers.

We know gamers are influenced by their avatars and are well connected to them (Christy & Fox, 2016; Wang et al., 2020). Thus, gamers feel like doing things they cannot perform in real life through their avatar (Peña & Kim, 2014; Teng, 2017). This idea may provide consumers with the convenience of playing the game through AI voice recognition avatar would be more entertaining, convenient, easy to use, and helpful during the gameplay. This gives us the idea that AI voice recognition can also help gamers if available to them. Language input is critical in voice recognition, and the use of localization of language in voice recognition can help in its more effectiveness (Zhou, 2015). The localization option in voice recognition engages consumers in human-computer interaction and shows loyalty towards the service (Moriuchi, 2019). Perhaps, such a form of AI options in the gameplay like voice recognition avatar can help gamers and game developers. The data was collected by 218 respondents and analyzed by SMART pls software. The following sections are literature review, methodology, research analysis, discussion, and conclusion.

2. LITERATURE AND CONCEPTUAL FRAMEWORK

2.1 Perceived Ease of Use (PEU)

The technology acceptance model (TAM) provides us consumer insights towards adopting new technology through its perceived ease of use (Abdullah, Ward, & Ahmed, 2016; Eastman, Iyer, Liao-Troth, Williams, & Griffin, 2014; Vahdat et al., 2020). The use of technology may help the end-user in its usability and functionality. The lesser efforts and energy required to use a particular product

or service, the better its usability and easiness from the consumer's perspective (Ahmad, Butt, Khan, Shafique, & Nawaz, 2020; Jiang, Ahmad, Butt, Shafique, & Muhammad, 2021).

Further, PEU also affects the usefulness of technology in a positive manner. The studies have shown that PEU positively influences a technology's PU (Kawakami & Parry, 2013; Junghyo Lee, Kim, & Choi, 2019). Thus, PEU studies give us the idea that consumers use technology to make fewer efforts (Fazal-e-Hasan, Lings, Mortimer, & Neale, 2017). Therefore, we know that gamers use their hands and eye coordination while playing games. If the AI voice recognition avatar option is made available to them, perhaps it will be effortless to play the game. Another study revealed that if a product increases overall performance expectancy, consumers are willing to accept it (Giunipero, Ramirez, & Swilley, 2012; Tao, Nawaz, Nawaz, Butt, & Ahmad, 2018). We can see the proposed framework in figure 1. Thus, the AI voice recognition avatar is dependent on the gamer's interaction with it during the game. We offer the following hypotheses:

H1a: PEU of AI voice recognition avatar will have a positive influence on PU.

H1b: PEU of AI voice recognition avatar will have a positive influence on consumer adoption towards it.

2.2 Perceived Usefulness (PU)

The perceived usefulness concept states that consumers feel that using a particular product or service can enhance their performance (Butt et al., 2021; Hess, McNab, & Basoglu, 2014). Thus, AI voice recognition avatar usefulness is what we need to understand from its end-user. The benefit helps the consumer in many forms, such as convenience, time-saving, satisfaction, and even to some extent, trust-building towards the brand (Chuah et al., 2016; Wang et al., 2020). Through research, consumers retort to computers socially despite knowing that they are not humans (Nass & Moon, 2000; Nguyen, Ta, & Prybutok, 2019). It is further found out from a research that technology usage stays alive with consumers' attitudes, social norms, perceived behavioral controls, and personal norms (Gangale, Mengolini, & Onyeji, 2013; Jiyeon Lee, Lee, & Kim, 2020). Perhaps, consumers can perform multitasking through the use of an AI voice recognition avatar.

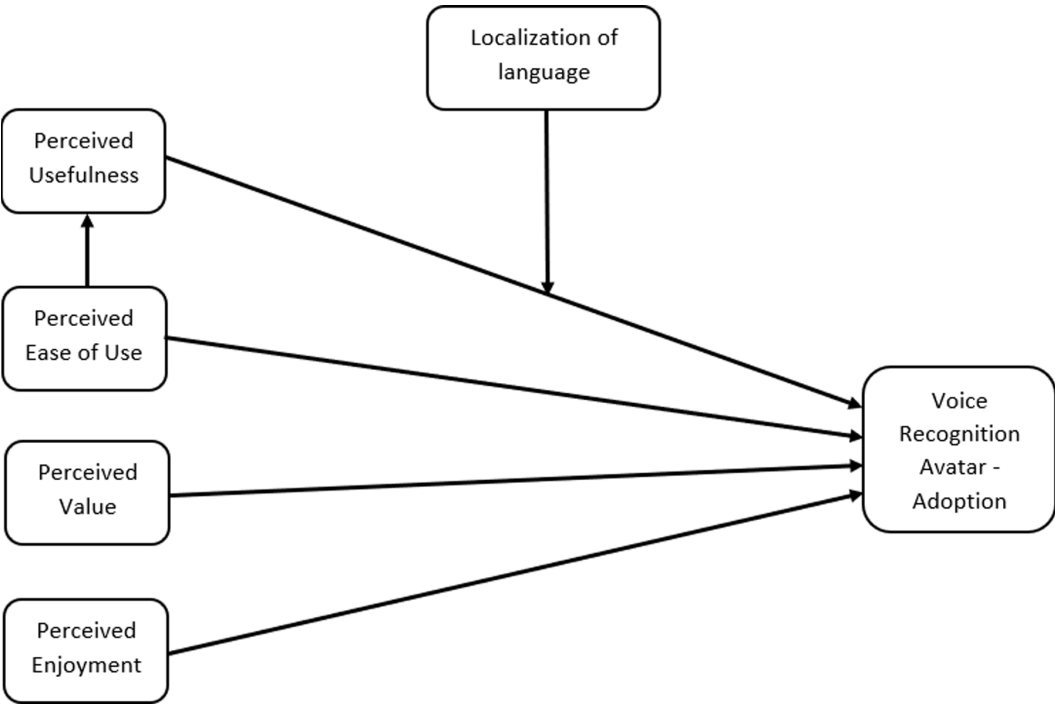
Consumers can be engaged with the use of new technologies such as AI systems. Engagement means consumer interactive experiences related to different technologies (Brodie, Ilic, Juric, & Hollebeek, 2013; Cheung, Pires, Rosenberger, & De Oliverira, 2020). Further research showed that boosting new technologies can increase all consumer touchpoints (Blázquez, 2014). Consumers engage in an activity when they believe it's beneficial for them in value (e.g., Perceived Usefulness) (Kumar, Rajan, Venkatesan, & Lecinski, 2019). Thus, we have to understand the PU of the AI voice recognition avatar in this study. We proposed the following hypothesis:

H2: PU of AI voice recognition avatar will have a positive influence on consumer adoption towards it.

2.3 Perceived Value (PV)

It is defined as a consumer's perception of a product or service's usefulness or capability regarding receiving and giving. It is widely accepted in the marketing field because consumer evaluates the current situation through their past experiences (Adapa, Fazal-e-Hasan, Makam, Azeem, & Mortimer, 2020; de Kervenoael, Hasan, Schwob, & Goh, 2020; Zeithaml, 2000). Consumers value things that can benefit them and fulfill their needs and wants; thus, perceived value has been explored in this context is an intangible service format (Troccoli & Felizardo Jr, 2020; Zeithaml, 2000). It is not easy to assess a product or service's actual performance, but consumers can decide on its perceived value by evaluating its overall benefits and losses (Parayitam, Kakumani, & Muddangala, 2020; Smith & Colgate, 2007). Thus, the gamers' use of AI voice recognition avatar can also be evaluated as to how it will be received, given, and its effect on the gameplay. Perceived value theory offers the

Figure 1. Conceptual framework



consumers an understanding of their situation with their knowledge and experiences by evaluating the possibilities (Jin, Lee, & Lee, 2015; Shaw & Sergueeva, 2019).

Different game formats allow consumers to enjoy free-to-play online such as MMORPG, RPG, or MMO. These games provide the end-user with the ability to interact with the game avatar. Because of the internet, players can share their virtual gaming experience and further use in-game options to buy weapons, money, and upgrades (S.-L. Wu & Hsu, 2018). These virtual items add value to the avatar and make them believe it will enhance their game performance. AI voice recognition may give them a perceived perception of their freedom to use an avatar through it. The avatar is an essential character for gamers; thus, its functionality is vital. And the AI voice recognition purpose is to enhance the functionality of the avatar character by giving the gamers freedom as no use of the hands. We propose the following hypothesis:

H3: Perceived value of AI voice recognition avatar will have a positive influence on consumer adoption towards it.

2.4 Perceived Enjoyment (PE)

Perceived enjoyment is the consumer's internal satisfaction development using a particular product or service (Barry & Graça, 2018). PE is part of flow theory, where consumer behavior is stimulated by using a product or service when it provides entertainment or fun. Hence, the dimension of flow theory, i.e., perceived enjoyment, can give the consumer insights and how happy they feel while using a technological product or service (Curran & Meuter, 2007; Jang & Park, 2019). Thus, the fun can help understand the consumer's level of fulfillment towards the product or service. In gaming research, joy has been studied before and has shown positive game adoption (Butt et al., 2021; Weibel, Wissmath, Habegger, Steiner, & Groner, 2008).

Further, enjoyment can relate to the user-friendliness of using the gameplay. We can get an idea of how consumers enjoy different levels of freedom or wish to enjoy this using their avatar characters while playing the game (McGloin, Farrar, Krcmar, Park, & Fishlock, 2016). Gamers also consider the virtual game items to be a fun factor during the gameplay (Jang & Park, 2019; J. Wu & Liu, 2007). Thus, we can assume that the AI voice recognition avatar may also provide enjoyment to the end-user through its functionality. This is a new idea that is yet to be implemented in the gaming zone, especially with the MMORPG, RPG, or MMO game formats. Thus, we propose the following hypothesis:

H4: Perceived enjoyment of AI voice recognition avatar will have a positive influence on consumer adoption towards it.

2.5 The Moderating Role Of Localization Of Language

Voice recognition features in different technological devices and is helping consumers in many ways. It helps to reduce misunderstanding and miscommunication between people and increases communication efficiency. Companies are integrating voice recognition services both in online and offline platforms to help consumers. The term “localism” is becoming a significant factor in brands and technological advancements. This term uses consumer preferences and context information (e.g., location, user activities, and languages). International brands are working hard to understand the local market while keeping in line with the brand’s key features. Localization provides consumers with the best information about their preferences (Fang, Gu, Luo, & Xu, 2015). The use of AI voice recognition avatars in gaming with local beliefs and attitudes can be crucial in this study. This feature can help companies equip their needs and want according to context-specific and target (Zhou, 2015).

Another critical factor that can help understand consumers’ localization expectation is culture (Chun, Singh, Sobh, & Benmamoun, 2015). The localization of voice recognition avatar regarding gaming is exciting and adapts all aspects of a user’s personality and cultural features. It can adapt local language, accent, slang, cultural values, and other regional elements with local users. Research that localization improves consumers’ usage on websites (T. Wu, Peng, Shi, & Sia, 2015). Thus, we propose the following hypothesis:

H5: Localization of language is moderating the relationship of perceived usefulness and consumer adoption towards the AI voice recognition avatar.

3. METHODOLOGY

3.1 Construct Measures and Selection

It is a cross-sectional study, and the data was collected from China. The sample size was 218, which include both male and female. The respondents mainly are students as the survey was distributed among the students. The respondents were those gamers who have had the experience of playing different games such as RPG, MMORPG etc. Experienced gamers can give a better view of the AI voice recognition avatar. The idea was introduced to the gamers at the start of the survey to have no ambiguities. The Dalian city of China was our targeted city, and all the received responses were recorded within a month. Each item of the questionnaire was measured on a seven-point Likert scale (1= “strongly disagree” to 7 = “strongly agree”). At first, the scales were in English, so the back-translation method was adopted to protect the conceptual framework idea. The questionnaire was pretested by four master students, 1 PhD student, and one professor of business studies for feedback. After the input with minor changes in the questionnaire, it was concluded. The items for perceived ease of use, perceived usefulness, and intention to use were adapted (Koul & Eydgahi, 2018; Rahman, Lesch, Horrey, & Strawderman, 2017). The items for perceived value were adapted (Chae, Kim, Lee,

& Park, 2020; Hsu & Lin, 2015). The items for perceived enjoyment were adapted from (Rouibah, Lowry, & Hwang, 2016). The items for localization were adapted from (T. Wu et al., 2015).

3.2 Data Collection and Sample

The data was collected using a convenience sample technique through WeChat and Weibo in October 2020. The respondents were informed about the idea of a voice-recognition avatar before starting the questionnaire. The respondents chosen for the particular study were gamers who have had experience playing different online games and often have a habit of playing such games. There was a total of 227 gamers responded to this study. However, a total of 218 respondents were included for data analysis after carefully screening. The responses that were not considered for the final analysis had errors and similar responses. The respondent's profile is available in table 1.

3.3 Data Analysis

A partial least square based on structural equation modeling PLS-SEM has been used to analyze the data. PLS-SEM is designed to calculate different paths, correlations, confirmatory factor analysis, second-order factor analysis, and regression models (Lin & Jeng, 2017). PLS-SEM consists of two models. The outer measurement model evaluates the reliability and validity of constructs. The other is the inner or structural model, which assesses the hypothesized relationship between constructs.

Table 1. Respondent's profile

Characteristics	Distribution	Frequency	%
Gender	Male	171	78.44
	Female	47	21.56
Age	18 - 25	27	12.39
	26 - 30	97	44.50
	31 - 35	41	18.81
	36 - 40	35	16.06
	Above 40	18	8.26
Education	Undergraduate Degree	195	89.45
	Master Degree	18	8.26
	Ph.D. Degree	5	2.29
Occupation	Student	66	30.28
	Job	143	65.60
	Business	9	4.13
Playing days per week	1-2 Days	31	14.22
	2-3 Days	22	10.09
	4-6 Days	23	10.55
	5 - 6 Days	33	15.14
	Everyday	109	50
Amount of time per day	1-2 Hours	66	30.28
	3-4 Hours	41	18.81
	> 5 Hours	111	50.92

4. ANALYSIS AND MEASUREMENT MODEL

4.1 Common Method Bias

To check the discriminant validity and common method bias, the expert statisticians and researchers suggest many measures. Fornell-Larcker Criterion is a very known and authentic measure among discriminant validity measures and common method bias. Content validity is measured by factor loading of the constructs' constructs, and convergent validity is evaluated by the average variance extracted. Table 2 demonstrates the Fornell-Larcker criterion.

Another measure to evaluate the discriminant validity is the HTMT correlation based on Monte Carlo simulation and recently developed by Henseler and Sarstedt (2013). Table 3 illustrates the values of HTMT correlations, and the highest value is 0.83, which confirms the adequate discriminant validity of constructs and reflects the acceptable quality of the measurement model.

4.2 Measurement Model Evaluation

The Outer measurement model evaluated the composite reliability, discriminant validity, internal consistency, convergent validity, and content validity of constructs (Ho, 2006). Content validity is assessed through factor loadings. Composite reliability and Cronbach's alpha aimed to determine the internal consistency of the constructs. Table 4 illustrates the values of Cronbach's alpha and composite reliability, factor loadings, VIF, and AVE.

Table 2. Discriminant validity fornell-larcker criterion

	BIVA	LOC	PU*LOC	PEU	PV	PE	PU
BIVA	0.75						
LOC	0.61	0.80					
PU*LOC	0.37	0.40	1.00				
PEU	0.64	0.67	0.30	0.83			
PV	0.57	0.56	0.30	0.54	0.81		
PE	0.58	0.60	0.25	0.60	0.53	0.80	
PU	0.56	0.54	0.32	0.55	0.64	0.52	0.76

Table 3. Hetrotrait Monotrait correlations (HTMT)

	BIVA	LOC	PU*LOC	PEU	PV	PE	PU
BIVA							
LOC	0.73						
PU*LOC	0.41	0.42					
PEU	0.77	0.79	0.33				
PV	0.68	0.66	0.32	0.63			
PE	0.72	0.73	0.28	0.73	0.63		
PU	0.69	0.64	0.34	0.65	0.76	0.64	

Table 4. Reliability and validity test

Perceived Ease of Use	PEU1	2.719	0.882	0.848	0.9	0.694
	PEU2	2.637	0.877			
	PEU3	2.655	0.87			
	PEU4	1.303	0.687			
Perceived Usefulness	PU1	1.577	0.787	0.812	0.869	0.571
	PU2	1.562	0.719			
	PU3	1.474	0.684			
	PU4	2.191	0.843			
	PU5	1.72	0.737			
Localization	LOC1	1.922	0.817	0.855	0.896	0.635
	LOC2	2.165	0.822			
	LOC3	2.044	0.827			
	LOC4	2.108	0.83			
	LOC5	1.42	0.678			
Perceived Value	PV1	2.486	0.85	0.866	0.904	0.654
	PV2	2.879	0.872			
	PV3	2.522	0.836			
	PV4	1.718	0.717			
	PV5	1.844	0.758			
Perceived Enjoyment	PE1	1.944	0.799	0.802	0.873	0.635
	PE2	2.482	0.87			
	PE3	2.14	0.861			
	PE4	1.225	0.637			
Behavioral Intention to Use Voice Recognition Avatar	BIVA1	2.463	0.748	0.8	0.862	0.556
	BIVA2	2.423	0.758			
	BIVA3	1.433	0.698			
	BIVA4	1.829	0.781			
	BIVA5	1.691	0.741			

4.3 Structural Model

4.3.1 Coefficient of Determination

Coefficient of determination (R^2) evaluates the overall effect size and model's predictive accuracy and indicates the variance explained by independent variables. The standard values of R^2 as suggested by Henseler, Ringle, and Sinkovics (2009) and Henseler and Sarstedt (2013) are .75, .50, and .26, where .75 considered as substantial, .50 as good, and .26 considered as weak. This study's R^2 value

is .545, interpreted as independent variables (PU, PEU, PV, PE) collectively explain 54.5% variation in the dependent variable (BIVA).

4.3.2 Path Coefficient and Significance

Standardize beta coefficient in simple regression analysis and path coefficient in PLS-SEM are the same. Table 5 shows the direct effects of the proposed hypotheses, and figure 2 shows the path coefficients.

For H1a, the coefficient value is 0.551, and T-stat is 12.100. These values indicate that PEU causes a 55.1% variation in PU. This effect is significant at the 1% level as depicted by the p-value; hence these results robustly supported the H1a. Moreover, testing the positive and significant impact of PEU on BIVA (H1b), findings suggest that this relationship is positive and significant ($\beta=.332$, T-stat=4.07 and $p<0.001$), indicating that H1b supported and accepted. In H2, we proposed that PU positively and significantly affects BIVA; findings are shown in Table-4 ($\beta=.124$, T-stat=1.884 and $p>0.05$) partially supported H2 as the significance level is 10%. In H5, we proposed a moderating effect of LOC on the relationship of PU and BIVA; findings indicate that the moderating effect is positive and significant ($\beta=.093$, T-stat=2.225 and $p<0.05$), therefore supporting H5. The impact of PV on BIVA is positive and effective, as depicted by findings shown in Table-4 ($\beta=.151$, T-stat=2.225 and $p<0.05$), confirming H3. This study proposed that PE positively and significantly affect BIVA; results ($\beta=.161$ T-stat=2.153 and $p<0.05$) robustly supported H4.

4.3.3 Standardized Root Mean Square Residual (SRMR) and Normed Fitted Index (NFI)

PLS-SEM difference between actual and observed correlation is known as Standardized Root Mean Square Residual (SRMR). SRMR is a measure of model fit and evaluates the average difference between expected and observed correlation of constructs. SRMR value reported below Table-6 is 0.07 below the threshold value hence proving the good model fit. The first measure for the model proposed by Bentler and Bonett (1980) in structural equation modeling is the Normed Fit index. The NFI value for the model of this study reported below Table-6 is 0.749 indicating a good model fit.

4.3.4 Goodness of Fit (GOF)

The goodness of fit (GOF) index is used to measure the complete model fit to verify that model is sufficiently explaining the data (Tenenhaus, Vinzi, Chatelin, Lauro, & analysis, 2005). GOF value for this study's model is 0.510, proving the global validity of this study's model.

Table 5. Direct effects

	Hypothesis	coefficients	SD	T Statistics	P Values	Decision
H1a	PEU → PU	0.551	0.046	12.100	0.000***	Accepted
H1b	PEU → BIVA	0.332	0.081	4.077	0.000***	Accepted
H2	PU → BIVA	0.124	0.066	1.884	0.060*	Accepted
H3	PV → BIVA	0.151	0.068	2.225	0.027**	Accepted
H4	PE → BIVA	0.161	0.075	2.153	0.032**	Accepted
H5	PU*LOC → BIVA	0.093	0.042	2.225	0.027**	Accepted

Note: ****, ***, **, denote the significance level 1%, 5% and 10% respectively. R² value=0.545

Figure 2. The structural model with path coefficients

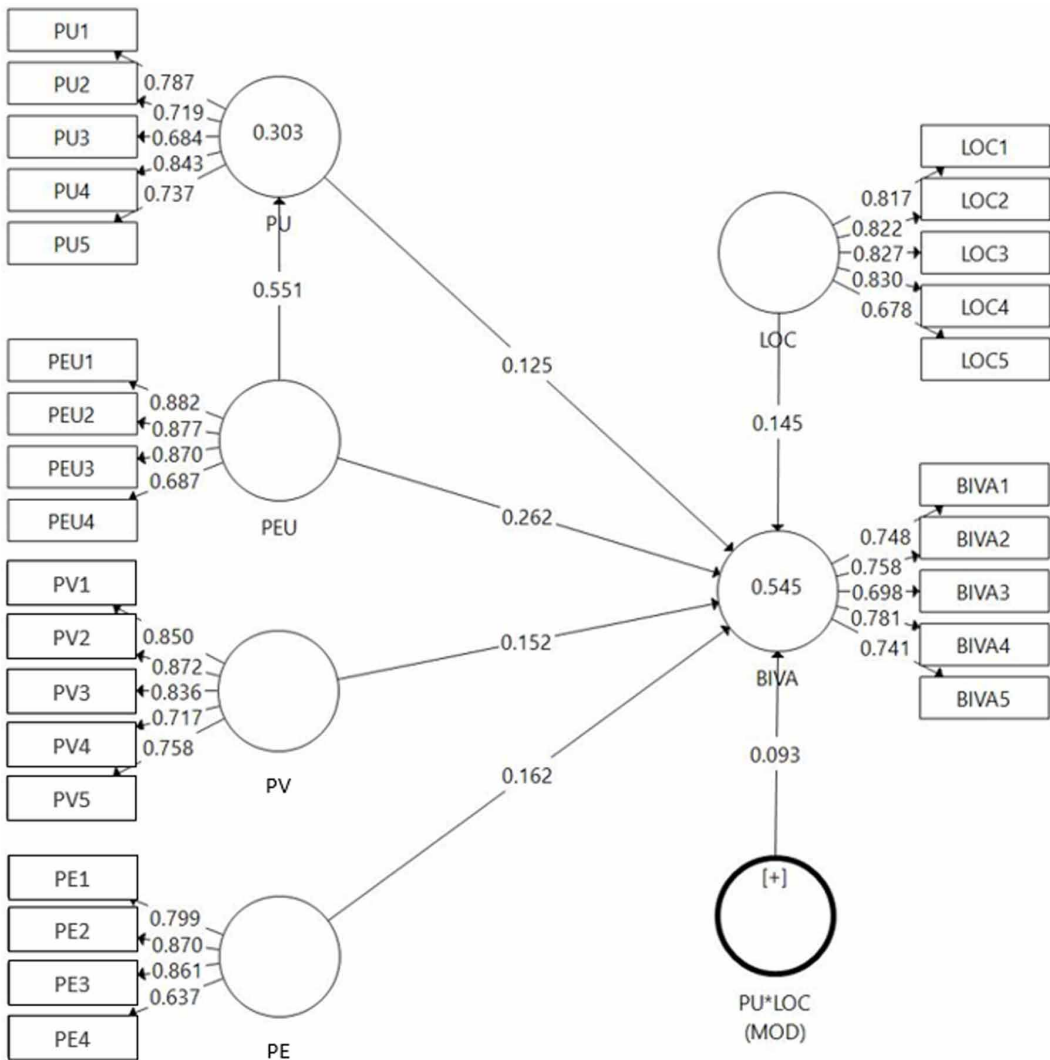


Table 6. Goodness of fit (GOF)

Constructs	AVE	R2	GOF Value
PEU	0.694		0.510
PU	0.571	0.303	
PV	0.654		
PE	0.635		
BIVA	0.556	0.545	
Average	0.622	0.424	

SmartPLS-Model Fit: SRMR=0.07, NFI= 0.749

5. DISCUSSION AND IMPLICATIONS

5.1 Findings and Theoretical Implications

The results are significant and prove that the conceptual framework is in alignment with the theoretical framework. The PEU and PU align with the technology acceptance model (Abdullah et al., 2016). H1a stated that PEU of AI voice recognition avatar has a positive effect on their PU is accepted. As previous studies have proven, consumers perceive how easy it is to use a particular technology, and results have been positive (Abdullah et al., 2016; Rahman et al., 2017). As more new technologies are coming in, more consumer concerns are arising too. H1b stated that PEU of AI voice recognition avatar has a positive effect on BIVA is accepted. The PEU has been proven in previous studies that inspire the consumer to use new technology and feel friendly (Hess et al., 2014; Suki & Suki, 2011). H2 stated that PU of AI voice recognition avatar has a positive effect on BIVA is accepted. Whenever using new technology, consumers always show concerns over its usefulness. Previous studies have shown that new technology can be embedded with the consumers' perception and can influence consumers to use the technology (Akour, Alshare, Miller, & Dwairi, 2006; Hess et al., 2014). The results are adding contribution to the TAM model from the perspective of AI voice recognition avatar.

H3 stated that PV has a positive effect on BIVA is also accepted. When it comes to using the latest technology, the consumer perceives it as a great value in terms of convenience, user-friendliness, and functionality. The previous literature supports the narrative towards PV that adds value to the consumer performance and activities (Hsu & Lin, 2015; H.-C. Wu & Li, 2017). Thus, the PV of AI voice recognition avatar is essential to the gamers if made available. The findings of the current framework related to PV contribute to the theory of perceived value. H4 stated that PE has a positive effect on BIVA is also accepted. Studies have shown that enjoyment is essential for the gamer while using its avatar (Hopp & Fisher, 2017; Jang & Park, 2019). Thus, the use of AI voice recognition avatar has a considerable enjoyment value for the gamers. The PE findings show that consumers will feel happy with such options in the gaming format. Hence, the results contribute to the flow theory.

H5 stated that localization of language is moderating the relationship of PU and BIVA is also accepted. Language always plays a significant role when doing interacting with other humans. When language is incorporated into technology, it becomes more critical for AI systems to provide a platform where consumers can easily use that technology. Previous studies have shown that localization of the language positively impacts the consumers' intention to use a particular product (Moriuchi, 2019). Here, this study, it is moderating the relationship between PU and BIVA positively. This study suggests that consumers have a willingness to use AI voice recognition avatar when available to them. Finally, the results are significantly adding contribution to the theory development of AI. Overall, findings suggest that an AI-powered voice recognition avatar can be a valuable option for gamers.

5.2 Implications for Game Developers

Already game developers are finding different ways to attract the consumer. The use of new technology is incorporated now and then. Firstly, The AI voice recognition avatar in gameplay may make consumers perceive it convenient, useful, and entertaining. Voice recognition provides excellent assistance to consumers according to their needs and wants (Hoy, 2018; Moriuchi, 2019). The use of AI voice recognition avatar in MMORPG, RPG, or MMO can be an exciting gameplay option if made available. Secondly, such an AI-powered voice recognition avatar option should not be limited to a few gaming formats. Other gaming formats should also consider using such an opportunity. For example, augmented reality or virtual reality games can also be integrated with such options to attract different game users.

Thirdly, the game developers should develop more user-friendly game formats for such an option to work. The easier the design will be to use, than more adoption, the more opportunities in the gameplay. Fourthly, the localization option is an essential factor in this study for the users to adopt such an opportunity. Hence, gamer developers should focus on providing more state of the art

voice recognition function so that gameplay stays smooth. Lastly, the game developers can invest and introduce such features to retain the current customer base and attract new customers. Many consumers, due to natural or accidental situations, cannot move their bodies or body parts. Such features can also help these kinds of people to be part of the innovation and be amused.

5.3 Research Limitations

This study showed positive results, and all the hypotheses were accepted. But still, there are always limitations also. The number of respondents was only 218. The number can be increased to understand the consumer who wishes to use AI voice recognition avatar shortly. The city of Dalian, China, was part of the research. More urban cities can be added to have better feedback and an understanding of the proposed framework. Furthermore, research should not be limited to just one country. It can be further spread out to other countries due to differences in culture. This was a cross-sectional study. It can also be explored under experiment or longitudinal study. Finally, only there was one moderator. More moderators and mediators can be used to assess the framework.

6. CONCLUSION

The study showed a positive ray of light towards the adoption of AI voice recognition avatar. The technology acceptance model and perceived value theory work well per the framework. Localization of language also proved to be positive when used for AI voice recognition avatar. AI voice recognition avatar has the functionality and capability to allow gamers to interact with their avatars just through the speech command. For future reference, we can use more mediators and moderators in the same framework. Thus, consumers have intended to use AI voice recognition avatar when made available by the game developers.

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Asad Hassan Butt completed his Ph.D. in marketing from Dongbei university of finance and economics, Dalian, China. His master degree is from university of Leeds, Leeds, England in Advertising and Marketing Major. He has few publications in international journals. He has more than 7 years of teaching experience in reputable universities in Pakistan. Furthermore, he has been involved in student training developments. His research interests are augmented reality, gamification, artificial intelligence, neuromarketing, brand loyalty, gaming avatars, and digital marketing.

Hassan Ahmad received the B.S. degree in Commerce from the Islamia University of Bahawalpur, Punjab, Pakistan, in 2012 and the M.Phil. Degree in Business Administration in 2016 from The National College of Business Administration & Economics, Lahore, Punjab, Pakistan. He completed his Ph.D. in Business Management from Dongbei University of Finance & Economics, Dalian, PR China. From 2013 to 2016, he was a visiting faculty member with the Islamia University of Bahawalpur, Punjab, Pakistan. His research interests include Strategic Management, Financial Management, FinTech, and information technology in business. The author has a significant contribution to different SSCI journals.

Muhammad Nouman Shafique has completed his Doctor of Philosophy (Ph.D.) in Business Administration from Dongbei University of Finance and Economics, China. Now, he is serving as Assistant Professor in Gomal University Dera Ismail Khan, Pakistan. Previously, he did his Master of Philosophy (M.Phil) in Business Administration from Pakistan. Previously, He served as Lecturer in Army Public School and College. Furthermore, he has published many research papers in different journals. He also published six books on different topics, which are available all over the world. He also participated in different conferences to present and learn new methods, techniques and trends in research.