

The influence of visual aesthetic design and cross-cultural regions on virtual item purchase intentions in the genshin impact game

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Abstract – This study examines how Visual Aesthetic Design and Cross-Cultural Region impact the intention to purchase virtual items in the game Genshin Impact. The independent variables are Visual Aesthetic Design and Cross-Cultural Region, while the dependent variable is Purchase Intention. Data was gathered using SPSS 20 by distributing a questionnaire to 96 active players from Indonesia, aged 18-35, who have been playing Genshin Impact for at least 3 months. The research uses a quantitative associative approach with primary data and non-probability purposive sampling. The results show that Visual Aesthetic Design has a positive and significant effect on Purchase Intention, evidenced by a t-count of 3.486 (exceeding the t-table value of 1.661) and a significance level of 0.01 (below 0.05). Likewise, Cross-Cultural Region has a positive and significant impact on Purchase Intention, with a t-count of 5.576 (greater than the t-table value of 1.661) and a significance level of 0.00 (below 0.05). The combined effect of both Visual Aesthetic Design and Cross-Cultural Region on Purchase Intention is significant, as indicated by an F-count of 70.984 (surpassing the F-table value of 3.09) and a significance level of 0.00 (below 0.05).

Keywords: visual aesthetic design, cross-cultural, purchase intention

I. Introduction

The term "game" originates from English and describes activities governed by rules to achieve objectives. In the 1950s and 1960s, computer scientists developed simple games like Spacewar! in 1962 at MIT, marking an early milestone in gaming history. Video games gained commercial success by the late 20th century, becoming a dominant form of media in the 21st century. Now, over 2.7 billion gamers spend an average of 6.5 hours per week playing. The inclusion of diverse cultural elements and enhanced accessibility has expanded game concepts, benefiting companies' marketing efforts. Summarizing the most recent trends, gaming has seen further evolution through the integration of virtual and augmented reality, enhancing user experience. Gamification techniques have also penetrated sectors like education and business, broadening gaming's societal impact beyond entertainment.

Year after year, internet technology continues to develop, so that many companies continue to develop their online-based games following the development of the existing internet. The development of technology and communication tools is progressing so rapidly and has penetrated all aspects of life. The development of technology is becoming more sophisticated

because technology is always updated every year. Likewise, the media for playing games, many are more sophisticated because of the development of existing technology. The authors state that in the field of information technology, especially in communication, there are two technologies that have experienced significant improvements, namely mobile phones and computers connected to the internet. These two technologies allow someone to connect with others without being limited by distance and time (Kasemin, 2015).

In 2020, to be precise on September 28, 2020. A game from the bamboo curtain country made by the developer miHoYo called Genshin Impact was released. The game is a game with the type of Massively Multiplayer Role-Playing Game (MMORPG) where the game can be accessed by many players and can also be played en masse to play together in a virtual world. In the increasingly fierce competition between game developers today, the Genshin Impact game creates an aesthetic visual design for the content on its page. In addition, they also add cultural elements with a cross-culture theme by uniting various cultures from various countries. They do this in order to attract players' purchasing intentions for virtual items in the Genshin Impact game. As a result, the revenue obtained by Genshin Impact in the last 2 years is \$ 3.7 billion or if converted to rupiah as much as Rp. 56,353,960,000,000.- and makes Genshin Impact rank third in the mobile game with the highest revenue generation No. 3 globally since its release under the PUBG and Honor King games.

Table 1 Top Mobile Game Sales Revenue
2020-2022

No	Rank Game	Revenue
1	Honor of Kings	\$5.5B
2	PUBG Mobile	\$4.9B
3	Genshin Impact	\$3.7B
4	Roblox	\$2.5B
5	Candy Crush Saga	\$2.3B

Source: Sensor Tower (2022) (processed)

Although Genshin had changed developers from miHoYo to COGNOSPHERE, the new developer did not slow down the pace of game development. This has caused players' purchasing intentions for virtual items in the Genshin Impact game to increase over time. Wilson and Keni (2018) stated that Purchase Intention can be understood as a commitment or probability that consumers have to buy or use a product or service produced, produced or sold by a company. The increase in players' purchasing intentions cannot be separated from the visual aesthetic design and also the planting of cross-cultural elements in the Genshin Impact game. In providing added value to the playing experience, the Art style in the Genshin Impact game is very different from several other similar games, Genshin Impact presents a non-realistic anime style in its design so that the design in the Genshin Impact game has more value for game fans, especially for game lovers with an anime display style. In addition, the aesthetics in the Genshin Impact game refer to the planting of existing cross-cultural elements, so that the aesthetics applied are in accordance with the cross-cultural elements in each region.

Meanwhile, the planting of cross-cultural elements in the Genshin Impact game is located in the regions or areas in the game. There are a total of 7 regions or areas in the Genshin Impact game, starting from German, Chinese, Japanese cultures, to the recently released one using the Middle Eastern cultural concept, namely the Sumeru region (genshin.hoyoverse, 2022). And each has different cultural elements, ranging from clothing characteristics, residential environment, building shapes, musical accompaniment, character accents, and cultural characteristics of each region such as festivals, traditional events, and beliefs each following the background of the theme of each region.

Table 2 Research Gap

No	Variable	Wu et al. (2017)	Hudani (2020)	Peña- García (2020)
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1	Visual Aesthetic Design on Purchase Intention	Negative	Negative	Positive
2	Cross-Cultural Relationship To Purchase Intention	Positive	Positive	Negative
Results		Negative and insignificant in Visual Aesthetic Design but Positive and Significant in cross-cultural.	Negative and insignificant in Visual Aesthetic Design but positive and significant in cross-cultural.	Positive and Significant in Visual Aesthetic Design but Negative and insignificant in cross-cultural.

This study uses the Technology Acceptance Model (TAM) as the theoretical framework to explain and predict players' acceptance of the information system in Genshin Impact. TAM, an extension of the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen (2020), assesses user behavior in technology adoption. According to TAM, constructs such as perceived usefulness, attitude toward using, behavioral intention to use, and actual system usage impact the acceptance of information technology.

Purchase intention, as defined by Kotler and Keller (2020), reflects a consumer's desire to select or buy a product based on prior experiences and desires. Astuti (2018) identifies five components influencing purchase intention: price, customer perceptions of services, promotions, and satisfaction with quality.

Aesthetics, while associated with beauty and art, also encompasses the value of form and content. Hasnidar (2019) highlights the role of aesthetics in expressing philosophical ideas and impacting user perception and experience. Cross-cultural elements, defined as interactions between different cultures and their influence on one another (Faridi, 2021; Kusherdyana, 2019), contribute to the diversity of experiences within the game.

Nurfakih et al (2024) explore how service quality mediates the influence of customer value and brand experience on repurchase intention at PTNJM Bali. Yusof et al (2023) analyse the impact of free trial experiences and aesthetic design on consumer buying interest in Genshin Impact game products. Wu and Hsu (2018) examine the role of authenticity in virtual item purchase intentions in MMORPGs. Melanie et al (2023) investigate the factors influencing interest in purchasing virtual goods in Genshin Impact in the Jakarta area. Alalwan (2018) studies the effect of social media advertising features on customer purchase intention. Chetioui et al (2020) focus on how fashion influencers affect consumers' purchase intentions, while McClure and Seock (2020) explore the role of brand involvement through social media pages in shaping consumer purchase intentions.

This study aims to explore the influence of visual aesthetic design and cross-cultural elements on players' purchase intentions in Genshin Impact, utilizing TAM to analyze how these factors affect players' acceptance and behavior within the game.

2. Method

According to Creswell (2014), research design is the set of techniques or procedures used by researchers to focus on the study topic while analyzing, gathering, and processing data in a logical, methodical, and objective manner. An associative research strategy is used in this study to determine the connections between two or more variables. The survey approach is employed, wherein questionnaires are sent to gather data (Sekaran & Bougie, 2016). The method is quantitative and entails gathering and examining numerical data in order to spot trends, connections, and patterns (Bryman, 2016). The data source for this study is primary data, obtained directly through observation and the distribution of questionnaires. The type of data collected is primary, and the data collection method involves a field survey using a questionnaire. A Likert

scale is used as the measurement scale for the questionnaire, which, according to Sugiyono (2019), measures attitudes, opinions, and perceptions about social phenomena. To gather the necessary data, the researcher will conduct the study online within the Genshin Impact group on Facebook, focusing on Indonesian users. The respondents are individuals with a Genshin Impact game account, aged 18-35, who are active players with at least 3 months of gameplay experience. The sampling technique used is Purposive Sampling, which, as per Sugiyono (2016), involves selecting samples based on specific criteria. Since the exact population size is unknown, the population includes all Genshin Impact players. Given the unknown population size, the sample size is determined using the formula for an unknown population, resulting in 96 respondents as recommended by Sugiyono (2016).

3. Results and Discussion

Table 3 Multiple Linear Regression Test Results
Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.675	1.090		1.537	.128
1	Visual Aesthetic Design	.269	.077	.322	3.486	.001
	Cross-Cultural	.340	.061	.515	5.576	.000

a. Dependent Variable: Purchase Intention

Source: SPSS Data Processing Results

Based on the results from SPSS 20, the multiple linear regression equation can be formulated as follows: $Y = 1.675 + 0.269 X_1 + 0.340 X_2$. The constant term, 1.675, indicates that when the values of the variables X_1 (Visual Aesthetic Design) and X_2 (Cross-Cultural Influence) are both zero, the value of the purchase intention variable Y would be 1.675. The regression coefficient for X_1 , which is 0.269, represents the impact of Visual Aesthetic Design on purchase intention. This positive coefficient implies that for each one-point increase in Visual Aesthetic Design, the purchase intention (Y) will increase by 0.269 points. Similarly, the regression coefficient for X_2 , which is 0.340, reflects the influence of Cross-Cultural Influence on purchase intention. This positive coefficient means that for each one-point increase in Cross-Cultural Influence, the purchase intention (Y) will increase by 0.340 points.

Table 4 Results of Determination Coefficient Test
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.777 ^a	.604	.596	2.574

a. Predictors: (Constant), Cross-Cultural, Visual Aesthetic Design

Source: SPSS Data Processing Results

From the table above, it can be seen that the coefficient is 0.604 or 60.4%. This can be interpreted that Visual Aesthetic Design and Cross-Cultural on Purchase Intention in the Genshin Impact game in Indonesia is 60.4% while the remaining 34.3% is influenced by other variables such as the story plot and game soundtrack.

Table 5 T-Test Results

Coefficients					
	Model	Unstandardized Coefficients		Standardized Coefficients	t
		B	Std. Error	Beta	
	(Constant)	1.675	1.090		1.537
1	Visual Aesthetic Design	.269	.077	.322	3.486
	Cross-Cultural	.340	.061	.515	5.576

a. Dependent Variable: Purchase Intention
Source: SPSS Data Processing Results

Based on the analysis results, the following conclusions are drawn: For the effect of Visual Aesthetic Design on purchase intention, the t-test results indicate that the calculated t-value is higher than the t-table value ($3.486 > 1.661$), with a significance level of 0.01, which is below the 0.05 threshold. Consequently, the null hypothesis is rejected, and the alternative hypothesis is accepted. This indicates that Visual Aesthetic Design has a positive and significant impact on the intention to purchase Virtual Items in Genshin Impact in Indonesia. Similarly, for the effect of Cross-Cultural Influence on purchase intention, the t-test results show that the calculated t-value exceeds the t-table value ($5.576 > 1.661$), with a significance level of 0.00, which is also below the 0.05 threshold. Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted, suggesting that Cross-Cultural Influence positively and significantly affects the intention to purchase Virtual Items in Genshin Impact in Indonesia.

Table 6 F Test Results
Anova

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	940.945	2	470.473	70.984	.000 ^b
1	Residual	616.388	93	6.628		
	Total	1557.333	95			

a. Dependent Variable: Purchase Intention
b. Predictors: (Constant), Cross-Cultural, Visual Aesthetic Design
Source: SPSS Data Processing Results

The significance threshold is less than 0.05 ($0.00 < 0.05$), and the calculated F value is more than the F table value ($70.984 > 3.09$). As a result, the alternative hypothesis (H_a) is accepted and the null hypothesis (H_o) is rejected. This suggests that the desire to buy virtual items in the game Genshin Impact is significantly influenced by Visual Aesthetic Design and Cross-Cultural Region taken together.

4. Conclusion

In general, numerous factors can influence a person's purchasing decisions, but each research subject may have distinct dominant factors and outcomes. This study concludes that some factors have a more pronounced effect on purchasing decisions than others. Specifically, Visual Aesthetic Design significantly affects the intention to purchase Virtual Items in the game Genshin Impact. This suggests that visual elements such as color, shape, animation, sound, and typography are crucial in shaping players' aesthetic preferences and perceptions. Additionally, Cross-Cultural Influence, a key feature of the game, also has a significant impact on purchase intention. The game's integration of diverse cultures, including German, Chinese, Japanese, and Middle Eastern,

adds variety to Virtual Items, allowing players to choose items that match their personal tastes. The synergy between Visual Aesthetic Design and Cross-Cultural Influence has been shown to effectively complement each other, significantly contributing to the creation of engaging and varied content within the game. Therefore, it is important for HoYoverse, the developer, to continue leveraging the combination of design and cultural elements to enhance the likelihood of purchasing Virtual Items in the future.

The findings suggest several implications: First, Visual Aesthetic Design greatly influences the intention to purchase Virtual Items in Genshin Impact, with aspects such as color, shape, animation, sound, and typography being pivotal in shaping players' aesthetic preferences. Second, Cross-Cultural Influence also plays a significant role, as the inclusion of multiple cultures, such as German, Chinese, Japanese, and Middle Eastern, offers a wide variety of Virtual Items, catering to diverse player preferences. Third, the effective combination of Visual Aesthetic Design and Cross-Cultural Influence creates diverse and engaging game variations. Consequently, HoYoverse should continue to optimize the integration of visual design and cultural elements to further enhance players' intention to purchase Virtual Items in the future.

As a recommendation for the developers of Genshin Impact, it is suggested that they maintain stability in developing in-game content, particularly related to Visual Aesthetic Design and Cross-Cultural Influence. These two variables have a strong impact on increasing players' purchase intentions because each player has different perceptions and preferences, especially given the global reach of the game. Therefore, HoYoverse is expected to continue developing these aspects and add new features to ensure that Genshin Impact remains competitive in the increasingly crowded market. Additionally, for future researchers who may use this study as a reference, it is recommended to consider adding other factors that can support players' preferences and perceptions. If possible, future researchers could include moderating or mediating variables to update and expand the research on Genshin Impact, as there are still many aspects of the game that can be further explored.

References

- Ajzen, I. (2020). The Theory of Planned Behavior: Frequently Asked Questions. *Current Opinion in Psychology*, 39, 89-95.
- Alalwan, A. A. (2018). Investigating the impact of social media advertising features on customer purchase intention. *Int. J. Inf. Manag.* 42, 65–77. doi: 10.1016/j.ijinfomgt.2018.06.001
- Bryman, A. (2016). *Social Research Methods* (5th ed.). Oxford: Oxford University Press.
- Chapple, C. (2022, July). Top grossing mobile games worldwide for June 2022. Sensor Tower. <https://sensortower.com/blog/top-mobile-games-by-worldwide-revenue-june-2022>
- Chetioui, Y., Benlafqih, H., and Lebdaoui, H. (2020). How fashion influencers contribute to consumers' purchase intention. *J. Fash. Mark. Manag.* 24, 361–380. doi: 10.1108/JFMM-08-2019-0157
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). Thousand Oaks, CA: SAGE Publications.
- Faridi, A., Purba, B., Handuman, U. T., Silalahi, M., Yusa, I. M. M., Simarmata, H. M. P., Purba, S., Gandasari, D., Fitrianingrum, A., & Sudarmanto, E. (2021). *Manajemen lintas budaya*. Yayasan Kita Menulis.
- Hasnidar, S. H. S. (2019). Pendidikan estetika dan karakter peduli lingkungan sekolah. *Jurnal Serambi Ilmu*, 20(1), 97-119.
- Hudani, A. (2020). Pengaruh faktor budaya, faktor sosial, dan faktor pribadi terhadap keputusan pembelian. *Entrepreneurship Bisnis Manajemen Akuntansi (E-BISMA)*, 99-107.
- Kasemin, K. (2015). Agresi perkembangan teknologi informasi: Sebuah bunga rampai hasil pengkajian dan pengembangan penelitian tentang perkembangan teknologi informasi. Prenadamedia Group.
- Kotler, P., & Keller, K. L. (2020). *Marketing management*. Pearson Pretice Hall.
- Kusherdiana, M. Pd. (2019). *Pemahaman lintas budaya: Dalam konteks pariwisata dan hospitalitas*. Alfa Beta.
- McClure, C., and Seock, Y. K. (2020). The role of involvement: investigating the effect of brand's social media pages on consumer purchase intention. *J. Retail. Consum. Serv.* 53:101975. doi: 10.1016/j.jretconser.2019.101975
- Melanie, M., & Abdurrahman, A. (2023). Factors Influencing Interest In Buying Virtual Goods In Genshin

- Impact Online Game In DKI Jakarta Area. *Innovative: Journal Of Social Science Research*, 3(3), 10792–10804. Retrieved from <https://j-innovative.org/index.php/Innovative/article/view/3433>
- Nurfakih, S. A. W., Subagiana, I., Saputra, U. W. E., Waelan, W., & Rangkuti, A. E. (2024). Peran service quality memediasi pengaruh customer value dan brand experience terhadap repurchase intention di kantor pusat PTNJM Bali. *Kajian Pendidikan, Seni, Budaya, Sosial Dan Lingkungan*, 1(2), 73–86. <https://doi.org/10.58881/kpsbsl.v1i2.12>
- Peña-García et al. (2020). Purchase intention and purchase behavior online: A cross-cultural approach. *Heliyon*, 6(6), e04284.
- Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill-Building Approach* (7th ed.). Chichester: John Wiley & Sons.
- Sugiyono. (2016). *Metode penelitian kuantitatif, kualitatif dan R&D*. PT Alfabet.
- Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabet.
- Wilson, N., & Keni, K. (2018). Pengaruh website design quality dan kualitas jasa terhadap repurchase intention: Variabel trust sebagai variabel mediasi. *Jurnal Manajemen dan Pemasaran Jasa*, 11(2), 291–310. <http://dx.doi.org/10.25105/jmpj.v11i2.3006>
- Wu, F., Samper, A., Morales, A. C., & Fitzsimons, G. J. (2017). It's too pretty to use! When and how enhanced product aesthetics discourage usage and lower consumption enjoyment. *Journal of Consumer Research*, 44(3), 651–672.
- Wu, Shu-Ling & Hsu, Chiu-Ping. (2018). Role of authenticity in massively multiplayer online role playing games (MMORPGs): Determinants of virtual item purchase intention. *Journal of Business Research*. 92. 242–249. 10.1016/j.jbusres.2018.07.035.
- Yusof, Y. B., Supriyanto, A., & Wibowo, J. (2023). The Influence of Free Trial Experience and Aesthetic Design on Buying Interest Genshin Impact Game Products. *GREENOMIKA*, 5(2), 145–153. <https://doi.org/10.55732/unu.gnk.2023.05.2.4>