

[Original Article]

## Analysis of preferences and purchase intentions for fashion brands on ZEPETO

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### Abstract

This study investigates the preferences and purchase intentions of ZEPETO users regarding fashion brands that have recently joined ZEPETO, a leading metaverse platform in South Korea. The study surveyed 279 users in their 20s to 40s about their usage patterns, preferences, and purchase intentions toward products from brands like MCM, DKNY, Nike, and Puma. The results reveal that users in their 20s exhibited higher preference and purchase intention for Nike products, as well as greater purchase intention for Puma products. On the other hand, users in their 40s displayed a higher preference and purchase intention for MCM and DKNY products and a stronger preference for Puma products compared to other age groups. Users in their 30s showed a lower preference and purchase intention for both MCM and Puma products, a lower purchase intention for DKNY products, but a preference for Nike products compared to other age groups. Furthermore, men showed a higher preference and purchase intention for most brands, including MCM, Nike, and Puma. These results suggest that fashion brands on ZEPETO need to implement effective marketing strategies targeting users in their 20s and 40s, as well as male users. This study lays the groundwork for further research on the ZEPETO metaverse platform and provides foundational data for understanding user behavior, essential for establishing effective promotional strategies.

*Keywords: ZEPETO, fashion brands, metaverse platforms, preferences and purchase intentions*

### I. Introduction

Since the COVID-19 pandemic, the normalization of contactless lifestyles and the development of various fourth industrial revolution technologies such as Internet of Things (IoT), artificial intelligence (AI), and big data have accelerated the digital transformation of society, economy, and culture.

Following the COVID-19 pandemic, the normalization of contactless lifestyles—along with the development of various Fourth Industrial Revolution technologies, such as the artificial intelligence (AI), big data, cloud computing augmented reality (AR), and virtual reality (VR)—has accelerated the digital transformation of society, economy, and culture. The advancement of these technologies has created a new

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non-face-to-face virtual environment called the metaverse, which extends the existing web space and has the potential to replace economic and social activities in the real world. Brands have started to pay attention to the metaverse to maintain effective communication with their consumers (Kim, Hur, & Choo, 2022; E. C. Kim, 2022; J. K. Kim, 2022). The metaverse transcends the spatial and temporal constraints of the real world by allowing for gaming, daily life, leisure, and economic activities through virtual characters within the metaverse environment. The metaverse is evolving into a virtual world where real profit generation is possible (J. K. Kim, 2022; Lee & Um, 2021).

The growth in metaverse platforms has expanded its application in diverse industries such as gaming, entertainment, education, tourism, electronics, automobiles, and fashion. Global fashion brands such as Gucci, Burberry, Ralph Lauren, Balenciaga, Levi's, Louis Vuitton, Marc Jacobs, and Valentino have recently launched digital fashion products through active collaborations with various metaverse platforms to use the metaverse for marketing (Lim, 2022; Park, 2022). ZEPETO, a Korean metaverse platform, provides a 3D avatar community service in which various fashion brands, such as Gucci, DKNY, MCM, Christian Louboutin, MLB, Nike, Christian Dior, Puma, Twice, ITZY, and Hello Kitty, have joined its collaboration shop to sell fashion items (Bang, 2021; Park, 2022). Domestic and international fashion brands are utilizing ZEPETO's Creator Mode to create and sell digital fashion products, either by replicating existing brand designs or by developing new designs for ZEPETO, thereby generating new revenue streams. They are actively promoting their brands to the digital-native generation, potential customers, through the ZEPETO metaverse platform. ZEPETO users can also create and sell various fashion items through ZEPETO's Creator Mode to generate income (Kim & Ahn, 2021; E. C. Kim, 2022).

Various metaverse platforms have been launched recently and are utilized in many fields. The growth

in metaverse platforms has attracted the attention of scholars, who have published a variety of papers on the subject. Studies related to the ZEPETO metaverse platform include case studies on fashion brands' metaverse flagship stores on ZEPETO (W. B. Kim et al., 2022), research on collaborations on the ZEPETO metaverse platform (Yoo & Choi, 2022), case studies on new cultural spaces for teenagers centered on ZEPETO (Song, 2022), the development of new *hanbok* avatar fashion designs using ZEPETO (Shin & Yum, 2022), the development of textile designs using Shin Saimdang's folk paintings centered on ZEPETO items (Nam, Seong, & Kim, 2022), proposals for makeup functions on ZEPETO (Nam & Kim, 2023), and studies on the activation of virtual spaces using the ZEPETO app (Kim & Ahn, 2021). Studies have also examined Generation Z experiences on the ZEPETO metaverse platform (Ko & Park, 2022), research on perceptions of luxury fashion brand experiences on the metaverse platform with a focus on ZEPETO (Um & Ko, 2022), and Generation Z perceptions of idol marketing in the entertainment industry via ZEPETO (Lim & Kim, 2022). However, there is a lack of research on preferences and purchase intentions for fashion brand products in the ZEPETO metaverse.

This study investigates the preferences and purchase intentions of users in their 20s to 40s toward fashion brands that have joined ZEPETO, a leading metaverse platform in South Korea. This study is significant, because it provides foundational data for future research on the ZEPETO metaverse platform by analyzing the perceptions of ZEPETO users toward fashion brands within the context of the rapid growth of the metaverse industry, the Fourth Industrial Revolution, and contactless culture. This study also lays the groundwork for further research on the ZEPETO metaverse platform and digital fashion products; moreover, it provides basic information for brands interested in the ZEPETO metaverse platform within the expanding metaverse market to help them under-

stand metaverse consumers and establish promotional strategies.

## II. Review of Literature

### 1. ZEPETO metaverse platform

The development of digital technology has led us to the world of the metaverse. The metaverse, a compound word of “meta,” meaning transcendence and abstraction, and “universe,” meaning world and cosmos, can be described as a world beyond our own, one that transcends the real world, a digital earth where avatars live (Kim & Shin, 2021; I. Lee, 2021). The metaverse allows users to use avatars to present their personas, enjoy their hobbies more freely in a virtual world that transcends the limitations of reality, and to form interpersonal relationships with other avatars. The metaverse can be described as a virtual world where avatars are used for social, economic, and cultural activities in a virtual space, essentially meaning a virtual reality space (Son, Lee, Shim, & Yang, 2006; Yoon, 2021).

According to the Institute of Electrical and Electronics Engineers (IEEE), the metaverse signifies an advanced internet composed of permanent three-dimensional (3D) spaces connected to a perceived virtual world (Wayback Machine, 2014). In other words, the metaverse is an extended transcendent world where reality and the virtual world interact, a 3D digital space where avatars can create anything, including social and economic activities, as substitutes for users’ real selves (Yoo & Choi, 2022). Major metaverse platforms include Roblox, ZEPETO, Animal Crossing, Fortnite, The Sandbox, Minecraft, and Decentraland. ZEPETO specializes in avatar creation features and offers services that range from avatar clothing to detailed facial features, eyes, nose, mouth, and makeup, along with communication through voice chat features and adding detailed human expressions and movements to avatars using augmented reality (AR) technology (Choi & Lee, 2021; B.-K. Lee, 2021; Lim, 2022;

Lim, 2023; Yoo & Choi, 2022).

ZEPETO was launched in 2018 and is operated by the Korean company Naver Z, a metaverse platform that offers an avatar service based on AR. As of March 2022, the platform surpassed 300 million registered users worldwide (Choi, Song, Zhang, Gao, & Shin, 2022; Oh, 2022). ZEPETO Studio, ZEPETO’s content creation platform, was launched in April 2020, has about 2 million creator subscribers, and has sold over 68 million items made by its subscribers (Choi, 2022). Avatars in ZEPETO, created by merging 3D technology with AR, present users as an animated 3D character in a virtual reality environment. Users are able to finely customize their avatar’s face and purchase desired outfits and hair designs from a 3D store to create an avatar that matches their personality and identity.

Virtual avatars act as a medium that connects reality and a virtual space. It serves as a portal to display a persona that individuals may find impossible or difficult to embody in reality (Kim & Ahn, 2021). Therefore, within the virtual reality of ZEPETO, individuals can act as a different version of themselves by combining “the real me,” “the me I do not want to show,” and “the ideal me I envision” (Kim, 2020; Nam et al., 2022). ZEPETO is not just a simple gaming platform but a metaverse platform that deftly showcases the characteristics of the metaverse by integrating AR content, games, social networking services, and avatar utilization. Unlike Roblox or Minecraft, which focus on economic activities within the virtual world, ZEPETO emphasizes social interactions through avatars. In Roblox, users become developers of the game by focusing on game and software development, while in ZEPETO, friends gather to chat in virtual spaces using voice chat features and participate in mini-games or take selfies. While creating worlds in ZEPETO might be more complex than in Roblox or Minecraft, users can use avatars to explore different themed content and worlds within the metaverse (Kim, Seong, & Kim, 2022; Lim & Kim, 2022).

ZEPETO offers users several functionalities. First, ZEPETO allows users to create 3D avatars and naturally integrates them into real photos or virtual backgrounds using AR technology. Users can create an avatar by selecting a provided character and changing the face shape, hairstyle, or outfit. They can also use an AR camera to take a photo of their face. AI technology then creates a character that resembles the user and selects a photo from the user's phone gallery to create a virtual character. The avatar allows users to change all aspects, such as expressions, gestures, hair, makeup, and fashion, according to their preferences. In a virtual space, avatars can interact with each other using text, voice, and emoticons, and they can enjoy various activities such as games and dancing in this space. Second, ZEPETO also provides platforms like ZEPETO Studio and Market for economic activities. ZEPETO users can not only create worlds but also design their own avatar's clothes and accessories using templates provided by ZEPETO Studio or 3D modeling programs, and then release and sell the items on ZEPETO to earn ZEPETO's two digital currencies: Zem and coins. Users can earn Zem and coins by completing quests and daily check-ins and use Zems and coins to purchase virtual fashion items. If the amount of digital currency reaches a certain threshold, it can be exchanged for real money in the user's bank account. Third, ZEPETO allows users to use their avatar to explore virtual worlds within the metaverse, each with a different theme and content such as shopping, and gaming and exploration activities. In addition to the official worlds provided by ZEPETO, users can also create their own worlds using their imagination, worlds that include cafes, escape rooms, fishing spots, subway stations, and stages for fashion shows. Such virtual spaces can be freely created around any desired theme, where users can communicate or enjoy games. Furthermore, various brands in different fields, such as convenience stores (CU), sports clothing (Nike), luxury clothing (Gucci, Gentle

Monster), and idols (Blackpink), have built worlds in ZEPETO that align with their brand identity and offer users the chance to experience these virtual spaces. Thus, ZEPETO worlds serve as spaces for both user interaction as well as marketing spaces for businesses. Fourth, ZEPETO offers social media functions similar to SNS. Users can manage their own social media pages like Instagram or Facebook with customized avatars and upload photos and videos to their avatar pages. Users can also take pictures in various poses, upload videos of their avatar dancing to music, share them on social networks like TikTok, Instagram, and Facebook, receive likes, follows, messages, and send gifts to other avatars on social media. ZEPETO recently introduced ZEPETO Live as a live broadcasting feature similar to live streaming platforms like YouTube, where streamers can broadcast content with their avatars and generate income through viewer support (Kim, 2020; Kim & Ahn, 2021; K. Kim, 2022; Lim & Kim, 2022; Shin & Yum, 2022; Yoo & Choi, 2022).

## 2. ZEPETO and fashion brand collaborations

Famous global fashion brands, such as Burberry, Ralph Lauren, Balenciaga, Levi's, Louis Vuitton, Marc Jacobs, Valentino, and Gucci, are also collaborating with metaverse platforms. ZEPETO is the metaverse platform with the most brand collaborations. Global fashion brands, such as Gucci, Dior, Ralph Lauren, Christian Louboutin, DKNY, MCM, Zara, Nike, Adidas, Puma, MLB, Covernat, and Gentle Monster, have established collaboration shops on ZEPETO to promote their products and implement new marketing strategies through consumer experiences (Bang, 2021; Lee, 2023; Lim, 2022; Yoo & Choi, 2022).

Gucci, in collaboration with ZEPETO, constructed an experiential space called Gucci Villa, a 3D world map set in Florence, Italy, where avatars can try on the brand's items. This allows users to wear virtual replicas of Gucci's products and walk in Gucci Villa's

garden and communicate with ZEPETO users from around the world. The virtual Gucci store on ZEPETO also sells high-end fashion items, such as clothes, bags, and accessories, similar to those sold in their offline stores, but at much lower prices than the actual products. This breaks down the high price barrier of real luxury products, making it possible for anyone of any generation to visit luxury stores within the ZEPETO metaverse. These factors have opened up the possibility for attracting more users to ZEPETO (Choi & Pyun, 2021; J. K. Kim, 2022; Lim, 2022; Nam et al., 2022).

Ralph Lauren, through its collaboration with ZEPETO, has launched a virtual digital collection featuring a variety of fashion items including polo shirts and a limited edition skateboard item available only in the ZEPETO collaboration shop. ZEPETO and Ralph Lauren have created “The World of Ralph Lauren,” which includes the brand’s New York Madison Avenue flagship store, Ralph’s Coffee, and Central Park, offering a new brand experience through a digital interactive space. Users can wear the digital fashion items available in the flagship store’s showroom—most of the items are popular items in actual stores, made to resemble the actual materials and colors, and sold as ZEPETO outfits (Lee, 2023; Yoo & Choi, 2022).

Nike, in collaboration with ZEPETO, released sneaker items that sold over 5 million units, surpassing offline sales, and has gained significant popularity by joining ZEPETO’s collaboration shop. In 2022, Nike opened a brand experience space in ZEPETO called Nike Land, where users can enjoy a battle-style soccer shoot-out game. Collection items exclusive to Nike Land were introduced, with the same design available for purchase in offline stores. Thus, by allowing users to purchase the same design of actual clothing offline, Nike is making efforts to seamlessly bridge the virtual and real worlds to secure potential customers (Lee, 2023; Yoo & Choi, 2022).

In 2021, MCM launched the utopian world MCM

Cubic Map in ZEPETO to communicate with Millennials and Generation Zs and promote the MCM metaverse worldview and brand experience opportunities. MCM also joined ZEPETO’s collaboration shop and showcases virtual digital fashion items such as clothing, bags, hats, and accessories. In June 2022, MCM continued its metaverse-related marketing efforts to communicate with Millennials and Generation Z by releasing 15 digital fashion items and a virtual space for the MCM Golf Line capsule collection Golf in the City. The casual brand COVERNAT has also joined ZEPETO’s collaboration shop to showcase various virtual digital fashion items. Visitors to the COVERNAT brand space can participate in marketing events by posting photos in ZEPETO wearing COVERNAT’s virtual digital items, such as knits and sweatshirts, using the hashtag #Covernat to receive the actual products worn by the avatar (Lim, 2022; Na, 2023). The global eyewear brand Gentle Monster collaborated with ZEPETO to introduce Gentle Monster House Dosan, the world’s first photo scan-created space. The brand photographed the actual flagship store and recreated it as a 3D space where users can wear Gentle Monster’s limited edition sunglasses, thus breaking down the barriers between reality and the virtual world and enabling a more immersive experience of the brand’s experimental worldview (Yoo & Choi, 2022).

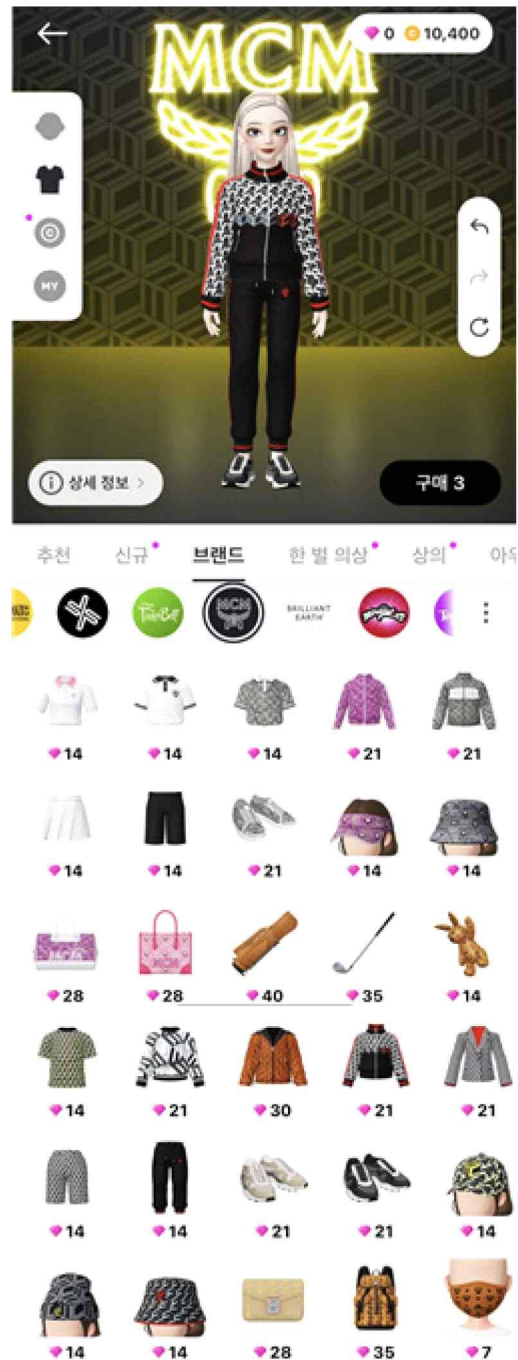
Thus, ZEPETO users are able to try on and purchase fashion items released in collaboration with fashion companies through their avatars. This has allowed users to not only purchase fashion items but also immerse themselves in the unique sentiments and worldviews of brands through interactive experiences and various events in digital spaces that complement the items. Levene’s test, homogeneity of variance test, was performed prior to the independent sample *t*-test. The independent sample *t*-test was performed by selecting the *t*-value and the *p*-value according to the result of the homogeneity of variance test.

### III. Research Method

This study analyzed the preferences and purchase intentions toward fashion brands in ZEPETO among men and women in their 20s to 40s living in the metropolitan areas of Seoul, Incheon, and Gyeonggi in South Korea. The online survey was conducted by Macromill Embrain (www.embrain.com), a professional online research company, and took place from January 29 to February 1, 2024. After excluding incomplete and insincere responses, a total of 279 responses were used for the final analysis.

Previous studies primarily focused on Generation Z, particularly teenagers, with insufficient research on older age groups; hence, this study conducted an online survey targeting individuals in their 20s to 40s. The fashion brands studied, based on previous research by Bang (2021), Lee (2023), Lim (2022), and Yoo & Choi (2022), were global fashion brands that actively collaborate with the ZEPETO metaverse platform and continuously update their ZEPETO fashion items. These brands included MCM, DKNY, Nike, and Puma. Measurement items for ZEPETO usage experience, product preference, and purchase intention toward fashion brands were developed based on research by Bang (2021), Jeon (2022), K. Kim (2022), and Park (2022). In the survey, images of the fashion items sold by MCM, DKNY, Nike, and Puma within ZEPETO (Fig. 1, 2, 3, and 4) were presented to participants to determine their product preferences and purchase intentions toward fashion brands.

This study utilized IBM SPSS Statistics 26 for the statistical analysis. First, descriptive statistics (frequency analyses) were conducted to analyze the participants' demographic characteristics such as gender, age, marital status, education, occupation, ZEPETO usage experience, fashion item preferences, and purchasing behavior. Second, an analysis of variance (ANOVA) and a Duncan's post-hoc test were conducted to analyze differences in product preferences and purchase intentions toward MCM, DKNY, Nike, and

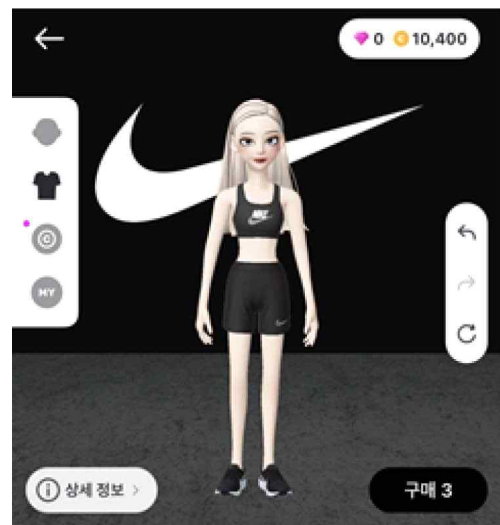


<Fig. 1> MCM fashion brand's ZEPETO fashion items

Puma fashion brands in ZEPETO among the 20s, 30s, and 40s age groups. Third, independent sample *t*-tests



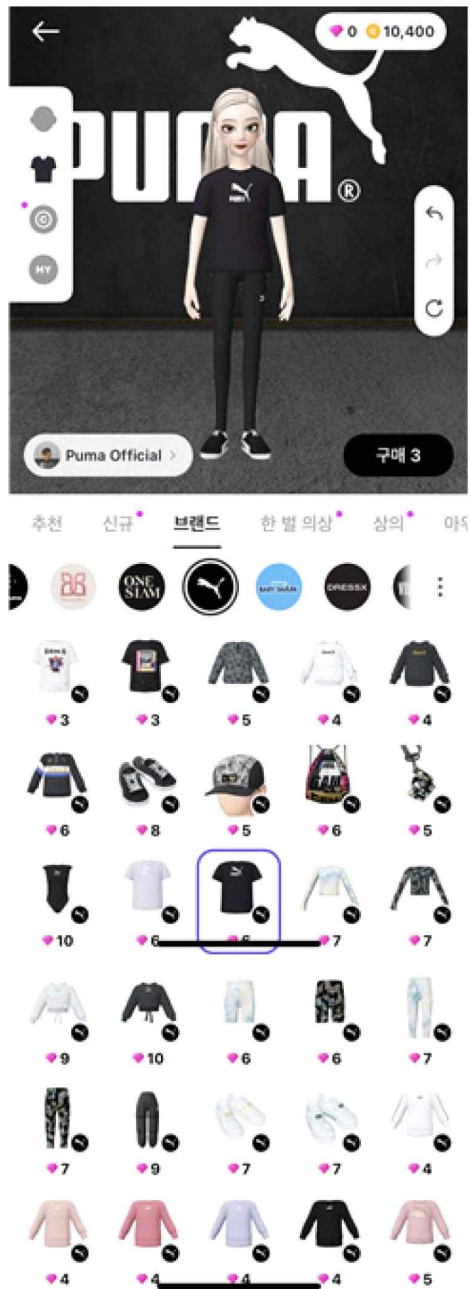
<Fig. 2> DKNY fashion brand's ZEPETO fashion items



<Fig. 3> Nike fashion brand's ZEPETO fashion items

were conducted to analyze differences in product preferences and purchase intentions toward MCM, DKNY,

Nike, and Puma fashion brands in ZEPETO based on gender.



<Fig. 4> Puma fashion brand’s ZEPETO fashion items

#### IV. Results and Discussion

##### 1. Demographic analysis of participants

The survey targeted 279 men and women in their

20s to 40s with experience using digital fashion products in ZEPETO. The demographic characteristics of the respondents are presented in <Table 1>. Regarding the distribution by gender and age, 69 men (24.7%) and 210 women (75.3%) participated in the survey, among the participants, 91 (32.6%) were in their 20s, 103 (36.9%) in their 30s, and 85 (30.5%) in their 40s, showing a similar ratio across the three decades. Regarding marital status, 172 (61.6%) of the respondents were unmarried, 104 (37.3%) were married, and 3 (1.1%) other, showing a higher proportion of unmarried individuals. Regarding education level, 191 (68.5%) were college graduates, 42 (15.1%) were school graduates or higher, 26 (9.3%) were currently in college, and 20 (7.2%) were high school graduates. Regarding occupation, 141 (50.5%) were general office workers, 49 (17.6%) were professionals, 35 (12.5%) were students, 14 (5.0%) were self-employed/business owners, 14 (5.0%) were full-time homemakers, 11 (3.9%) were production/technical workers, 9 (3.2%) were sales/service workers, and 6 (2.2%) were categorized as other. Regarding monthly household monthly income, 82 (29.4%) earned between KRW 2 and 4 million, 71 (25.4%) earned between KRW 4 and 6 million, 57 (20.4%) earned more than KRW 8 million, 51 (18.3%) earned between KRW 6 and 8 million, and 18 (6.5%) earned under KRW 2 million.

##### 2. ZEPETO usage experience and fashion item usage status

<Table 2> summarizes the results of the frequency analysis conducted to examine the respondents’ ZEPETO usage experience and fashion items’ usage status. The respondents’ reasons for using the ZEPETO metaverse platform were analyzed, with “Because I want to experience new technology” being the highest at 131 (47.0%) respondents, followed by “Because it is interesting” at 72 (25.8%) respondents, “Because it allows community activities” at 40 (14.3%) respondents, and “Because I can play with friends” at 26 (9.3%) respondents. These results differed from those



&lt;Table 1&gt; Demographic characteristics

(n=279)

		Frequency (n)	Percentage (%)
Gender	Men	69	24.7
	Women	210	75.3
Age	20s	91	32.6
	30s	103	36.9
	40s	85	30.5
Marital status	Single	172	61.6
	Married	104	37.3
	Other (divorced, etc.)	3	1.1
Education level	High school graduate	20	7.2
	Currently in university	26	9.3
	University graduate	191	68.5
	Graduate school or higher	42	15.1
Occupation	Student	35	12.5
	General office worker	141	50.5
	Professional	49	17.6
	Sales/Service worker	9	3.2
	Production/Technical worker	11	3.9
	Self-employed/business owner	14	5.0
	Full-time homemaker	14	5.0
Average monthly household income	Other	6	2.2
	Less than KRW 2 million	18	6.5
	KRW 2 million to less than KRW 4 million	82	29.4
	KRW 4 million to less than KRW 6 million	71	25.4
	KRW 6 million to less than KRW 8 million	51	18.3
	KRW 8 million and above	57	20.4

obtained by Park (2022) in their study that targeted individuals in their late teens and early 20s, where the most common reason was “Because it is interesting.”

In terms of how often ZEPETO was used per month, “1–2 times per month” was the most frequent response at 110 (39.4%) responses, followed by “3–4 times per month” at 74 (26.5%), and “5–10 times per month” at 49 (17.6%). Regarding the number of fa-

shion items owned in ZEPETO, “1–10 items” was the most frequent response at 136 (48.7%) respondents, followed by “11–20 items” at 76 (27.2%), “21–30 items” at 35 (12.5%), and “31–40 items” at 20 (7.2%). When analyzing the favorite types of fashion items in ZEPETO, “Sets of a top and bottom” was the highest at 207 (74.2%), followed by “Tops” at 37 (13.3%), “Accessories” at 18 (6.5%), and “Shoes” at 10 (3.6%).

&lt;Table 2&gt; ZEPETO usage experience and fashion item usage status

(n=279)

		Frequency (n)	Percentage (%)
Reasons for using ZEPETO	Because it is interesting	72	25.8
	Because I want to experience new technology	131	47.0
	Because I can play with friends	26	9.3
	Because it allows community activities	40	14.3
	Because it can generate income	5	1.8
	Other	5	1.8
Reasons for using ZEPETO	1-2 times per month	110	39.4
	3-4 times per month	74	26.5
	5-10 times per month	49	17.6
	11-20 times per month	36	12.9
	21 or more times per month	10	3.6
Number of ZEPETO fashion items	1-10 items	136	48.7
	11-20 items	76	27.2
	21-30 items	35	12.5
	31-40 items	20	7.2
	41-50 items	3	1.1
	51 items or more items	9	3.2
Favorite ZEPETO fashion items	Tops	37	13.3
	Bottoms	5	1.8
	Sets of a top and bottom	207	74.2
	Shoes	10	3.6
	Accessories	18	6.5
	Other	2	0.7
Style of ZEPETO fashion items	I try on styles I usually wear	74	26.5
	I try on styles that are difficult to wear in real life	205	73.5
Preferred ZEPETO collaboration shops	Luxury brands	116	41.6
	Sports brands	80	28.7
	Idol shops	62	22.2
	Character brands	20	7.2
	Other	1	0.4

This was in line with the findings of K. Kim et al. (2022) and K. Kim (2022).

Whether respondents wore fashion items in ZEPETO that they would usually find to difficult to wear in

real life was measured by the statement “I try on styles that are difficult to wear in real life,” and was selected by 205 (73.5%) respondents. The response, “I try on my usual style,” was given by 74 (26.5%), indicating a preference for experimenting with different styles in ZEPETO. When analyzing which brands in ZEPETO’s collaboration shop garnered the most interest, the item “Luxury brands such as Gucci, Ralph Lauren POLO, DKNY, and MCM” was the highest at 116 (41.6%) responses, followed by “Famous sports brands such as Nike, Adidas, and Puma” at 80 (28.7%), “Idol shops such as Blackpink and ITZY” at 62 (22.2%), and “Character brands such as Disney and Hello Kitty” at 20 (7.2%), showing a preference for luxury brands in ZEPETO’s collaboration shop. This result differed from the findings of K. Kim et al. (2022) and K. Kim (2022), who conducted their surveys across all age groups. Their studies showed a higher preference for idol shops due to their inclusion of teenagers.

Regarding whether respondents have ever created and sold fashion items in ZEPETO, 226 (81.0%) of the respondents answered “I have never created and

sold ZEPETO fashion items”, compared to 53 (19.0%) respondents who answered “I have created and sold ZEPETO fashion items” (Table 3).

For those who have created and sold fashion items in ZEPETO, when asked about the methods they used to make fashion items, 41 of the 53 respondents (77.4%) said they used ZEPETO Studio’s fashion item example files and edited them in Photoshop or similar software, compared to 12 respondents (22.6%) who used 3D CAD modeling programs (e.g., 3D MAX, Maya) (Table 4).

Regarding purchasing fashion items in ZEPETO with Zem or coins, 181 respondents (64.9%) answered “I have purchased”, more than the 98 respondents (35.1%) who answered “I have not purchased” (Table 5).

The questions about purchasing behavior in ZEPETO were analyzed among the 181 respondents who answered “I have purchased ZEPETO fashion items with Zem or coins.” The results are summarized in <Table 6>. When analyzing the type of currency used to purchase fashion items in ZEPETO, 115 respondents (63.5%) used Zem and 65 (35.9%) used

<Table 3> Whether respondents had created and sold fashion items in ZEPETO (n=279)

	Frequency (n)	Percentage (%)
Have you created and sold ZEPETO fashion items	53	19.0
Have you never created and sold ZEPETO fashion items	226	81.0

<Table 4> Methods of creating ZEPETO fashion items (n=53)

	Frequency (n)	Percentage (%)
Used fashion item example files from ZEPETO Studio and edited them in Photoshop, etc.	41	77.4
Used 3D CAD modeling programs (e.g., 3D MAX, Maya)	12	22.6

<Table 5> Whether respondents had purchased ZEPETO fashion items (n=279)

	Frequency (n)	Percentage (%)
Have purchased	181	64.9
Have not purchased	98	35.1

&lt;Table 6&gt; Purchasing behavior on ZEPETO

(n=181)

		Frequency (n)	Percentage (%)
Mainly used currency for purchasing fashion items	Zem	115	63.5
	Coins	65	35.9
	Other	1	0.6
Participation in quests or events to earn Zem or coins	Yes	166	91.7
	No	15	8.3
Average purchase price for fashion items	6 Zem (2,000 coins) or less	34	18.8
	6-9 Zem (2,000-3,000 coins)	65	35.9
	9-12 Zem (3,000-4,000 coins)	49	27.1
	12-15 Zem (4,000-5,000 coins)	25	13.8
	15 Zem (5,000 coins) or more	8	4.4
Number of fashion items purchased per month	1-5 items	125	69.1
	6-10 items	35	19.3
	11-15 items	11	6.1
	16-20 items	7	3.9
	21 items or more	3	1.7

coins. These results differed from those of K. Kim et al. (2022) and K. Kim (2022), who found coins were used more frequently than Zem.

On whether users participated in quests or events to earn Zem or coins for purchasing fashion items in Zepeto, 166 (91.7%) of the respondents said “Yes” compared to 15 (8.3%) who said “No,” consistent with the findings of K. Kim et al. (2022) and K. Kim (2022). Regarding the average purchase price for fashion items in ZEPETO, “6-9 Zem (2,000-3,000 coins)” was the highest at 65 (35.9%) respondents, followed by “9-12 Zem (3,000-4,000 coins)” at 49 (27.1%) respondents, “6 Zem (2,000 coins) or less” at 34 (18.8%) respondents, “12-15 Zem (4,000-5,000 coins)” at 25 (13.8%) respondents, and “15 Zem (5,000 coins) or more” at 8 (4.4%) respondents. This result differed from the study conducted by Park (2022), who found that 6 Zem (2,000 coins) or less was the highest average purchase price.

In terms of how many fashion items respondents

purchased in ZEPETO on a monthly basis, “1-5 items” was the highest at 125 (69.1%) respondents, followed by “6-10 items” at 35 (19.3%) respondents, “11-15 items” at 11 (6.1%) respondents, “16-20 items” at 7 (3.9%) respondents, and “21 or more items” at 3 (1.7%) respondents. These results were similar to the findings of Park (2022) who targeted individuals in their late teens to early 20s.

### 3. Product preference and purchase intention for the MCM fashion brand in ZEPETO

A one-way ANOVA and independent samples *t*-test were conducted to investigate differences in product preference and purchase intention toward the MCM fashion brand in ZEPETO based on demographic characteristics such as age and gender. The results are summarized in <Table 7>.

The results of the one-way ANOVA and Duncan’s post-hoc test to understand age-related differences showed significant differences in responses to the

&lt;Table 7&gt; Preference and purchase Intention for MCM fashion brand's ZEPETO products by age and gender

Items	20s (n=91)	30s (n=103)	40s (n=85)	F-value	Men (n=69)	Women (n=210)	t
	Mean (SD)				Mean (SD)		
I am well aware of this brand.	3.96 (0.74)	3.84 (0.70)	3.85 (0.73)	0.71	3.74 (0.82)	3.93 (0.68)	-1.74
I prefer this brand.	2.98 (0.98) AB	2.76 (0.94) B	3.07 (0.91) A	2.77*	3.26 (0.92)	2.81 (0.94)	3.45**
The ZEPETO fashion products shown by this brand are attractive.	3.12 (1.00) AB	2.98 (0.99) B	3.29 (0.88) A	2.48*	3.49 (0.92)	3.00 (0.95)	3.76***
The ZEPETO fashion products shown by this brand are trendy.	3.19 (1.01) A	2.89 (0.99) B	3.44 (0.85) A	7.56**	3.35 (1.00)	3.09 (0.97)	1.90
The ZEPETO fashion products shown by this brand accurately reflect the real products of this brand.	3.47 (0.81)	3.41 (0.87)	3.53 (0.75)	0.53	3.51 (0.82)	3.45 (0.81)	0.49
The ZEPETO fashion products of this brand have made me interested in this brand.	3.07 (1.05) AB	2.84 (0.97) B	3.15 (0.92) A	2.51*	3.20 (0.98)	2.95 (0.98)	1.87
The ZEPETO fashion products of this brand have given me a positive impression and liking for this brand.	3.13 (0.96)	2.95 (0.95)	3.24 (0.92)	2.19	3.36 (1.00)	3.01 (0.92)	2.71**
I want to purchase the ZEPETO fashion products shown by this brand.	2.95 (1.00) AB	2.76 (1.05) B	3.13 (1.00) A	3.11*	3.13 (1.01)	2.87 (1.03)	1.86
If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them.	2.80 (1.02) AB	2.70 (1.13) B	3.09 (0.97) A	3.47*	3.20 (0.95)	2.74 (1.07)	3.22**
I think the price range of this brand's ZEPETO fashion products is appropriate.	3.11 (0.92)	2.90 (0.88)	3.01 (0.87)	1.31	3.23 (0.86)	2.93 (0.89)	2.47*

\*  $p<0.05$ , \*\*  $p<0.01$ , \*\*\*  $p<0.001$ . Letter denotes Duncan test results, A>B. SD: standard deviation.

items “I prefer this brand” ( $F=2.77$ ,  $p<0.05$ ), “The ZEPETO fashion products shown by this brand are attractive” ( $F=2.48$ ,  $p<0.05$ ), “The ZEPETO fashion products shown by this brand are trendy” ( $F=7.56$ ,  $p<0.01$ ), “The ZEPETO fashion products of this brand have made me interested in this brand” ( $F=2.51$ ,

$p<0.05$ ), “I want to purchase the ZEPETO fashion products shown by this brand” ( $F=3.11$ ,  $p<0.05$ ), and “If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them” ( $F=3.47$ ,  $p<0.05$ ). The results indicated significant differences across age groups.

Regarding the average values for users' preference for the MCM fashion brand's ZEPETO products, "I prefer this brand", "The ZEPETO fashion products shown by this brand are attractive," and "The ZEPETO fashion products of this brand have made me interested in the brand" showed the highest preference among individuals in their 40s, with the lowest preference among those in their 30s. "The ZEPETO fashion products shown by this brand are trendy" showed the highest preference among individuals in their 20s and 40s, with the lowest preference among those in their 30s. Regarding the average values for users' intention to purchase MCM fashion brand's ZEPETO products, "I want to purchase the ZEPETO fashion products shown by this brand" and "If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them" showed the highest purchase intention among individuals in their 40s and the lowest purchase intention among individuals in their 30s.

The results of the independent samples *t*-test to examine the differences by gender showed significant differences in "I prefer this brand" ( $t=3.45, p<.01$ ), "The ZEPETO fashion products shown by this brand are attractive" ( $t=3.76, p<.001$ ), "The ZEPETO fashion products of this brand have given me a positive impression and liking for this brand" ( $t=2.71, p<.01$ ), "If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them" ( $t=3.22, p<.01$ ), and "I think the price range of this brand's ZEPETO fashion products is appropriate" ( $t=2.47, p<.05$ ).

Regarding the average preference for MCM fashion brand's ZEPETO products, "I prefer this brand," "The ZEPETO fashion products shown by this brand are attractive," and "The ZEPETO fashion products of this brand have given me a positive impression and liking for this brand" showed that men had a higher preference than women. Regarding the average values for purchase intention for MCM fashion brand's ZEPETO products, "If real products similar to the

metaverse fashion items were released by this brand, I would like to purchase them" and "I think the price range of this brand's ZEPETO fashion products is appropriate" showed that men had a higher purchase intention than women.

#### 4. Preference and purchase intention for DKNY fashion brand products in ZEPETO

A one-way ANOVA and independent samples *t*-test were conducted to investigate differences in product preference and purchase intention toward the DKNY fashion brand in ZEPETO based on demographic characteristics such as age and gender. The results are summarized in <Table 8>.

The results of the one-way ANOVA and Duncan's post-hoc test for age-related differences showed significant differences for "I am well aware of this brand" ( $F=24.98, p<.001$ ), "I prefer this brand" ( $F=5.49, p<.01$ ), "The ZEPETO fashion products shown by this brand are attractive" ( $F=2.93, p<.05$ ), and "If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them" ( $F=3.45, p<.05$ ) across different age groups.

Regarding the average values for preference for DKNY fashion brand's ZEPETO products, "I am well aware of this brand" and "I prefer this brand" were preferred most by individuals in their 40s and least by those in their 20s. "The ZEPETO fashion products shown by this brand are attractive" were preferred most by individuals in their 40s and least by those in their 30s. Regarding the average values for purchase intention of DKNY fashion brand's ZEPETO products, "If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them" showed the highest purchase intention among individuals in their 40s and the lowest among those in their 30s.

The results of the independent samples *t*-test to examine the gender differences showed significant differences for "If real products similar to the metaverse fashion items were released by this brand, I would

&lt;Table 8&gt; Preference and purchase intention for DKNY fashion brand's ZEPETO products by age and gender

Items	20s (n=91)	30s (n=103)	40s (n=85)	F-value	Men (n=69)	Women (n=210)	t
	Mean (SD)				Mean (SD)		
I am well aware of this brand.	2.79 (1.12) C	3.31 (0.98) B	3.84 (0.80) A	24.98***	3.49 (0.98)	3.24 (1.08)	1.74
I prefer this brand.	2.78 (0.88) B	3.00 (0.90) AB	3.21 (0.80) A	5.49**	3.04 (0.79)	2.98 (0.90)	0.55
The ZEPETO fashion products shown by this brand are attractive.	3.26 (0.81) AB	3.17 (0.92) B	3.47 (0.78) A	2.93*	3.42 (0.81)	3.25 (0.86)	1.42
The ZEPETO fashion products shown by this brand are trendy.	3.24 (0.82)	3.35 (0.86)	3.44 (0.76)	1.24	3.43 (0.78)	3.31 (0.83)	1.10
The ZEPETO fashion products shown by this brand accurately reflect the real products of this brand.	3.36 (0.78)	3.46 (0.72)	3.40 (0.66)	0.41	3.45 (0.70)	3.40 (0.73)	0.54
The ZEPETO fashion products of this brand have made me interested in this brand.	3.24 (0.85)	3.18 (0.94)	3.41 (0.82)	1.66	3.30 (0.93)	3.26 (0.86)	0.35
The ZEPETO fashion products of this brand have given me a positive impression and liking for this brand.	3.31 (0.81)	3.24 (0.94)	3.42 (0.71)	1.10	3.42 (0.79)	3.29 (0.85)	1.16
I want to purchase the ZEPETO fashion products shown by this brand.	3.22 (0.89)	3.10 (1.03)	3.20 (0.77)	0.51	3.33 (0.82)	3.11 (0.94)	1.74
If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them.	3.05 (0.99) AB	2.96 (0.93) B	3.31 (0.80) A	3.45*	3.32 (0.85)	3.02 (0.94)	2.32*
I think the price range of this brand's ZEPETO fashion products is appropriate.	3.20 (0.86)	3.12 (0.80)	3.18 (0.76)	0.27	3.22 (0.76)	3.14 (0.82)	0.67

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . Letter denotes Duncan test results, A>B. SD: standard deviation.

like to purchase them" ( $t=2.32$ ,  $p < 0.05$ ). Regarding the average values for purchase intention of DKNY fashion brand's ZEPETO products, men showed higher purchase intentions than women for "If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them," but no significant differences were found for all other items.

##### 5. Preference and purchase intention for Nike fashion brand products in ZEPETO

A one-way ANOVA and independent samples  $t$ -test were conducted to investigate differences in product preference and purchase intention toward the Nike fashion brand in ZEPETO based on demographic characteristics such as age and gender. The results are

summarized in <Table 9>.

The results of a one-way ANOVA and Duncan's post-hoc test for age-related differences showed significant differences for "I am well aware of this brand" ( $F=5.65$ ,  $p<.01$ ), "I prefer this brand" ( $F=4.30$ ,  $p<.05$ ), and "If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them" ( $F=1.95$ ,  $p<.05$ ). Regarding the ave-

rage values for preference for Nike fashion brand's ZEPETO products, "I am well aware of this brand" and "I prefer this brand" were preferred most by individuals in their 20s and least by individuals in their 30s and 40s. Regarding the average values for purchase intention of Nike fashion brand's ZEPETO products, "If real products similar to the metaverse fashion items were released by this brand, I would

<Table 9> Preference and purchase intention for Nike fashion brand's ZEPETO products by age and gender

Items	20s (n=91)	30s (n=103)	40s (n=85)	F-value	Men (n=69)	Women (n=210)	t
	Mean (SD)				Mean (SD)		
I am well aware of this brand.	4.51 (0.62) A	4.25 (0.70) B	4.20 (0.63) B	5.65**	4.25 (0.79)	4.34 (0.62)	-0.92
I prefer this brand.	4.33 (0.67) A	4.09 (0.78) B	4.05 (0.63) B	4.30*	4.10 (0.75)	4.17 (0.70)	-0.71
The ZEPETO fashion products shown by this brand are attractive.	3.75 (0.89)	3.64 (0.90)	3.74 (0.80)	0.47	3.80 (0.88)	3.68 (0.86)	1.01
The ZEPETO fashion products shown by this brand are trendy.	3.69 (0.93)	3.66 (0.90)	3.66 (0.75)	0.04	3.91 (0.78)	3.59 (0.88)	2.89*
The ZEPETO fashion products shown by this brand accurately reflect the real products of this brand.	3.97 (0.80)	3.83 (0.77)	3.82 (0.68)	1.03	3.90 (0.75)	3.87 (0.75)	0.31
The ZEPETO fashion products of this brand have made me interested in this brand.	3.44 (0.88)	3.48 (0.92)	3.52 (0.83)	0.17	3.78 (0.82)	3.38 (0.87)	3.40*
The ZEPETO fashion products of this brand have given me a positive impression and liking for this brand.	3.68 (0.80)	3.60 (0.89)	3.69 (0.82)	0.34	3.90 (0.77)	3.58 (0.85)	2.81*
I want to purchase the ZEPETO fashion products shown by this brand.	3.60 (0.95)	3.50 (0.91)	3.73 (0.75)	1.53	3.71 (0.86)	3.57 (0.88)	1.14
If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them.	3.55 (0.98) A	3.50 (1.00) AB	3.76 (0.92) B	1.95*	3.83 (0.94)	3.52 (0.97)	2.29*
I think the price range of this brand's ZEPETO fashion products is appropriate.	3.63 (0.81)	3.42 (0.88)	3.36 (0.87)	2.36	3.65 (0.82)	3.41 (0.87)	2.05*

\*  $p<.05$ , \*\*  $p<.01$ . Letter denotes Duncan test results, A>B. SD: standard deviation.



like to purchase them” showed the highest purchase intention among individuals in their 20s and the lowest among individuals in their 40s.

The results of the independent samples *t*-test to examine gender differences showed significant differences for “The ZEPETO fashion products shown by this brand are trendy” ( $t=2.89, p<.05$ ), “The ZEPETO fashion products of this brand have made me interested in this brand” ( $t=3.40, p<.05$ ), “The ZEPETO fashion products of this brand have given me a positive impression and liking for this brand” ( $t=2.81, p<.05$ ), “If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them” ( $t=2.29, p<.05$ ), and “I think the price range of this brand's ZEPETO fashion products is appropriate” ( $t=2.05, p<.05$ ) between genders.

Regarding the average values for preference for Nike fashion brand's ZEPETO products, men showed a higher preference than women in “The ZEPETO fashion products shown by this brand are trendy,” “The ZEPETO fashion products of this brand have made me interested in this brand,” and “The ZEPETO fashion products of this brand have given me a positive impression and liking for this brand.” Regarding the average values for purchase intention of Nike fashion brand's ZEPETO products, “If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them” and “I think the price range of this brand's ZEPETO fashion products is appropriate” showed that men had a higher purchase intention than women.

## 6. Preference and purchase intention for Puma fashion brand products in ZEPETO

A one-way ANOVA and independent samples *t*-test were conducted to investigate differences in product preference and purchase intention toward the Puma fashion brand in ZEPETO based on demographic characteristics such as age and gender. The results are summarized in <Table 10>.

The results of the one-way ANOVA and Duncan's

post-hoc test for age-related differences showed significant differences for “The ZEPETO fashion products of this brand have given me a positive impression and liking for this brand” ( $F=2.51, p<.05$ ), “I want to purchase the ZEPETO fashion products shown by this brand” ( $F=2.85, p<.05$ ), and “If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them” ( $F=2.67, p<.05$ ).

Regarding the average values for preference for Puma fashion brand's ZEPETO products, “The ZEPETO fashion products of this brand have given me a positive impression and liking for this brand” were preferred most by individuals in their 40s and least by individuals in their 30s.

Regarding the average values for purchase intention of Puma fashion brand's ZEPETO products, “I want to purchase the ZEPETO fashion products shown by this brand” showed the highest purchase intention among individuals in their 20s and the lowest among individuals in their 30s. “If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them” showed the highest purchase intention among individuals in their 40s and the lowest among individuals in their 30s.

The results of the independent samples *t*-test to examine gender differences showed significant differences for “I prefer this brand” ( $t=3.23, p<.05$ ), “The ZEPETO fashion products shown by this brand are attractive” ( $t=2.55, p<.05$ ), “The ZEPETO fashion products of this brand have made me interested in this brand” ( $t=3.17, p<.05$ ), “The ZEPETO fashion products of this brand have given me a positive impression and liking for this brand” ( $t=3.82, p<.05$ ), “I want to purchase the ZEPETO fashion products shown by this brand” ( $t=3.12, p<.05$ ), “If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them” ( $t=2.94, p<.05$ ), and “I think the price range of this brand's ZEPETO fashion products is appropriate” ( $t=2.11, p<.05$ ).

Regarding the average values for preference for

&lt;Table 10&gt; Preference and purchase intention for Puma fashion brand's ZEPETO products by age and gender

Items	20s (n=91)	30s (n=103)	40s (n=85)	F-value	Men (n=69)	Women (n=210)	t
	Mean (SD)				Mean (SD)		
I am well aware of this brand.	4.16 (0.70)	3.99 (0.73)	3.96 (0.68)	2.15	4.03 (0.75)	4.04 (0.70)	-0.14
I prefer this brand.	3.33 (0.91)	3.14 (0.83)	3.15 (0.72)	1.57	3.48 (0.78)	3.11 (0.82)	3.23*
The ZEPETO fashion products shown by this brand are attractive.	3.32 (0.99)	3.19 (0.99)	3.20 (0.74)	0.54	3.48 (0.93)	3.16 (0.90)	2.55*
The ZEPETO fashion products shown by this brand are trendy.	3.25 (0.94)	3.10 (0.94)	3.16 (0.78)	0.73	3.32 (0.87)	3.12 (0.90)	1.61
The ZEPETO fashion products shown by this brand accurately reflect the real products of this brand.	3.56 (0.90)	3.44 (0.78)	3.58 (0.75)	0.86	3.54 (0.83)	3.51 (0.80)	0.20
The ZEPETO fashion products of this brand have made me interested in this brand.	3.08 (0.98)	2.93 (0.95)	3.19 (0.68)	1.97	3.35 (0.80)	2.96 (0.90)	3.17*
The ZEPETO fashion products of this brand have given me a positive impression and liking for this brand.	3.22 (0.96) AB	3.01 (0.91) B	3.28 (0.75) A	2.51*	3.51 (0.87)	3.05 (0.87)	3.82*
I want to purchase the ZEPETO fashion products shown by this brand.	3.14 (1.06) A	2.83 (0.98) B	3.08 (0.79) AB	2.85*	3.32 (0.92)	2.91 (0.96)	3.12*
If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them.	3.01 (0.97) AB	2.79 (1.01) B	3.08 (0.76) A	2.67*	3.23 (0.93)	2.86 (0.92)	2.94*
I think the price range of this brand's ZEPETO fashion products is appropriate.	3.15 (0.88)	3.07 (0.91)	3.16 (0.70)	0.38	3.32 (0.90)	3.06 (0.81)	2.11*

\*  $p < 0.05$ . Letter denotes Duncan test results, A>B. SD: standard deviation.

Puma fashion brand's ZEPETO products, men showed higher preferences than women for "I prefer this brand," "The ZEPETO fashion products shown by this brand are attractive," "The ZEPETO fashion products of this brand have made me interested in this brand," and "The ZEPETO fashion products of this brand have given me a positive impression and liking for this brand."

Regarding the average values for purchase inten-

tion of Puma fashion brand's ZEPETO products, men showed higher purchase intention than women for "I want to purchase the ZEPETO fashion products shown by this brand," "If real products similar to the metaverse fashion items were released by this brand, I would like to purchase them," and "I think the price range of this brand's ZEPETO fashion products is appropriate."

## V. Conclusion

This study investigated the preferences and purchase intentions of ZEPETO users toward fashion brands that have joined ZEPETO, a leading metaverse platform in South Korea. In response to ZEPETO's collaboration with fashion brands in ZEPETO, we conducted an online survey among users in their 20s to 40s who have created avatars and tried on fashion items in the ZEPETO metaverse. The study results can be summarized as follows.

First, regarding demographic characteristics, the sample contained more female than male users, and the distribution of respondents was similar across age groups, that is, individuals in their 20s, 30s, and 40s. The highest level of education was university graduate, the most common occupation was general office worker, and the most common category for monthly household income was between KRW 2 and 4 million.

Second, the frequency analysis conducted to determine ZEPETO usage experience and fashion item preferences showed that the most common reason for using ZEPETO was "to experience new technology" and most respondents used ZEPETO 1-2 times a month. "Sets of a top and bottom" was the most preferred type of ZEPETO fashion item. The results showed that users favored styles that they found difficult to wear in everyday life when dressing their avatars in ZEPETO. This indicates that users are able to showcase a different aspect of themselves in a virtual space, derive a vicarious satisfaction in wearing styles that they are unable to wear in real life, and highlight differences in fashion style preferences between the virtual and real worlds. Moreover, luxury brands were the most preferred brands in ZEPETO collaboration shops, indicating high preference for luxury brands in ZEPETO, possibly due to users' ability to purchase luxury fashion products at significantly lower prices than their real-world costs.

Third, the frequency analysis conducted to examine the usage status of ZEPETO fashion items showed

that most respondents had never created or sold fashion items themselves, which indicates that users primarily use or purchase fashion items provided within ZEPETO rather than creating and selling their own items. Among respondents who had created and sold fashion items in ZEPETO, "Creating with fashion item example files from ZEPETO Studio and editing in Photoshop, etc." was selected more frequently than "Creating with 3D CAD modeling programs (e.g., 3D MAX, Maya)," which indicates a preference for easier creation methods over professional 3D CAD modeling. The frequency analysis conducted to examine the purchase status of ZEPETO fashion items showed that many respondents purchased ZEPETO fashion items using Zem or coins, with Zem being used more frequently than coins. A significant number of respondents participated in quests or events to obtain Zem or coins. The average price paid to purchase ZEPETO fashion items was highest for the category "6-9 Zem (2,000-3,000 coins)."

Fourth, the one-way ANOVA and Duncan's post-hoc test conducted to examine differences in product preference and purchase intention toward MCM fashion brand within ZEPETO by age group showed significant differences, with more pronounced differences for this brand compared to the other brands. Preference for MCM fashion brand products was generally higher among individuals in their 40s and lower among individuals in their 30s. The purchase intention for MCM fashion brand's ZEPETO products was highest among individuals in their 40s and lowest among individuals in their 30s. The results of the independent samples *t*-test to examine gender differences showed significant differences for several items. Men showed a higher preference for MCM fashion brand's ZEPETO products than women. Similarly, purchase intention for MCM fashion brand's ZEPETO products was also higher among men.

Fifth, the analysis of differences in product preference and purchase intention toward DKNY fashion brand in ZEPETO by age group revealed significant

differences in several items. Overall, the preference and purchase intention for DKNY fashion brand products were higher among individuals in their 40s, with lower rates for individuals in their 20s and 30s. The analysis for gender differences showed significant differences in only one item, with no significant differences in all other items.

Sixth, the analysis of the differences in product preference and purchase intention toward Nike fashion brand in ZEPETO by age group showed significant differences across several items. The preference for Nike fashion brand products was generally higher among individuals in their 20s, with lower rates among individuals in their 30s and 40s. The purchase intention for Nike fashion brand's ZEPETO products was also highest among individuals in their 20s and lowest among individuals in their 40s. The analysis of gender differences showed significant differences across several items. Preference and purchase intention for Nike fashion brand's ZEPETO products were also higher among men.

Seventh, the analysis of the differences in product preference and purchase intention toward Puma fashion brand in ZEPETO by age group revealed significant differences across several items. Preference for Puma fashion brand products was highest among individuals in their 40s and lowest among individuals in their 30s. The purchase intention for Puma fashion brand's ZEPETO products was highest among individuals in their 20s and lowest among individuals in their 30s. The analysis of gender difference showed significant differences across several items. Preference and purchase intention for Puma fashion brand's ZEPETO products were higher among men.

Overall, the study's results show that users in their 20s showed a higher preference and purchase intention for Nike fashion brand products and higher purchase intention for Puma fashion brand products compared to other age groups, while users in their 40s showed higher preference and purchase intention for MCM and DKNY fashion brand products, and higher

preference for Puma fashion brand products compared to other age groups. However, users in their 30s displayed lower preferences and purchase intentions for MCM and Puma products, purchase intentions for DKNY products, and preference for Nike products, compared to the other age groups. In terms of gender difference, men showed higher preferences and purchase intentions for ZEPETO products from most brands, including MCM, Nike, and Puma.

This seems to show that users in their 20s, the main consumers of Nike and Puma sportswear brands in the real world, have high preferences and purchase intentions for Nike and Puma fashion brands in the virtual world. Therefore, it proposes marketing through social media such as Instagram and TikTok, which are widely used by people in their 20s, and promotion plans for the sale of ZEPETO fashion brand products favored by users in their 20s. This study intends to propose a campaign strategy for wearing fashion brand products and producing and promoting Vlog within ZEPETO. In addition, users in their 40s, the main consumers of MCM and DKNY luxury brands in the real world, seem to have high preferences and intentions for MCM and DKNY luxury brand products in the virtual world. Therefore, it proposes marketing through social media such as Facebook, which are widely used by people in their 40s, and promotion plans for the sale of ZEPETO fashion brand products favored by users in their 40s.

A number of fashion companies are actively launching and selling collaboration fashion items on the ZEPETO platform. The results of this study provide foundational data for creating ZEPETO fashion items and suggest points to consider in their production. Since this study was limited to users in their 20s to 40s and to individuals living in the Seoul metropolitan area, there are limitations to generalizing the results. To address the limitations of this study, subsequent research should include a wider range of age groups, including teenagers, and involve not only domestic but also international users of ZEPETO.

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