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Redefining Advertising: Exploring Quality, Functionality, and Usefulness in the Metaverse Era [(*)]

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Redefining Advertising: Exploring Quality, Functionality, and Usefulness in the Metaverse Era [*]

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Abstract

Metaverse-based advertising is transforming how companies' market to customers and engage with them. Keeping this in mind, this study aims to explore the product quality, product functionality, and perceived usefulness of products in metaverse-based advertising and how it has changed mass communication in Abu Dhabi. A qualitative approach has been adopted, including interviewees from 15 digital marketing and advertising experts from different advertising firms to obtain a holistic view. Analysis was done in content analysis by identifying themes. The study found that metaverse advertising improves product quality by providing in-depth virtual interactions, improves functionality by allowing customers to test and explore products in a simulated environment, and increases perceived usefulness through personalized and immersive experiences. The study also suggested that metaverse-based advertising has transformed mass communication by making it more engaging, customized, and interactive. These findings can be used by marketers to create more interesting and personalized metaverse-based advertising campaigns to enhance customer engagement.

Keywords: Metaverse-Based Advertising - Product Quality - Product Functionality - Perceived Usefulness - Mass Communication.

1   Introduction

The metaverse and augmented reality (AR) are revolutionizing how businesses interact with consumers by offering immersive digital environments for real-time interaction (Dwivedi et al., 2022). These technologies have transitioned advertising from traditional, one-dimensional approaches to dynamic experiences like 3D product demonstrations and virtual try-ons (Yang, Carlson, and Chen, 2020). This transformation enables businesses to personalize

marketing campaigns, enhancing consumer engagement and satisfaction (Rane, 2023).

Despite these advancements, existing research primarily focuses on the impact of metaverse technologies on consumer engagement, with limited attention to their influence on perceptions of product quality, functionality, and usefulness (Mittal and Bansal, 2023; Payal et al., 2024). Addressing this gap, the current study investigates these dimensions within the context of Abu Dhabi's advertising industry. By doing so, it contributes to both academic and practical discussions on leveraging metaverse-based advertising to improve customer experience and mass communication. Therefore, this study aims to explore the product quality, product characteristics and perceived utility in metaverse advertising along with mass communication innovation.

2   Literature Review

2.1 Enhancing Product Quality Perception via Metaverse Advertising:

Product quality is a key factor in influencing customer perceptions and purchase decisions in the context of metaverse-based advertising. Research by Mehrotra et al. (2024) claims that because the metaverse is immersive, brands more successfully display the quality of their items through virtual try-ons and 3D representations, allowing customers to engage with the products in ways that were not previously feasible. Similarly, Zhao et al. (2022) emphasize that in the metaverse, realistic simulations and high-definition visuals make for a more engaging experience, allowing businesses to more effectively communicate the quality of their products. Additionally, Barrera and Shah (2023) point out that a deeper comprehension of product quality can only be attained through the ability to examine and manipulate virtual products in detail, something that is not possible with traditional advertising approaches. As a result, marketers have a unique opportunity to showcase product quality in the metaverse, which empowers consumers to make better decisions.

2.2 Showcasing Product Functionality via Metaverse Advertising:

Customers explore and test products in a virtual environment through interactive experiences in metaverse-based advertising. This effectively communicates the functionality of the product. According to Sharma and Bansal (2023), marketers utilize the metaverse to develop simulations where users test products and understand how they work before purchasing. Customers benefit from having firsthand knowledge of how things work in real-world scenarios. Moreover, a study by Taylor (2022) highlights the fact that metaverse-based advertising makes it possible to illustrate complex product aspects that could be difficult to convey through traditional media. In the metaverse, the use of interactive lessons and guided experiences ensures that users understand the full

potential of a product. Similarly, Rane (2023) asserts that this communication approach both teaches and increases the confidence of clients in using the product. Thus, the metaverse serves as a helpful channel for explaining the functionality of product work clearly and interestingly.

2.3   Perceived Product Usefulness via Metaverse-Based Advertising:

Metaverse-based advertising provides a novel means of communicating perceived usefulness which is a crucial component in customer decision-making. According to Toraman and Geçit (2023), marketers enhance perceived usefulness by using the metaverse to construct scenarios that show consumers how items would fit into their lives. This immersive method increases the relatability and desirability of a product by assisting customers in visualizing its useful applications. In a similar vein, a study by Jung (2023) showed that the metaverse successfully illustrates how products can solve real-life problems, boosting their perceived utility by allowing people to experience these products in a virtual setting. Additionally, Kaur, Mohammed and Mazharul (2024) note that consumer perception of perceived usefulness is further enhanced by the capacity to personalize experiences in the metaverse since they can see how items fulfil their individual needs. Thus, expressing the perceived value of products through advertising in the metaverse is crucial for increasing customer happiness and engagement.

Metaverse-based advertising has a significant impact on mass communication, altering the way individuals consume and process information. Research by Chakraborty and Biswal (2024) claims that the immersive and interactive nature of the metaverse has increased engagement and altered traditional mass communication. Unlike traditional advertising, which typically communicates passively, the metaverse invites viewers to take an active role. This transforms consumers into participants rather than mere recipients of information. With the addition of message experience and reception, this modification has increased the dynamic nature of mass communication. According to Crespo-Pereira, Sánchez-Amboage and Membiela-Pollán (2023), the customization elements of the metaverse facilitate targeted communication by allowing businesses to tailor their messages to specific audiences. This could lead to increased mass communication efficacy since messages are more likely to resonate with their intended audience (Oltarzhevskyi and Oltarzhevska, 2023). Thus, the metaverse is not just another platform for advertising; rather, it is a revolutionary technology that is revolutionizing mass communication.

2.4 Conceptual Framework:
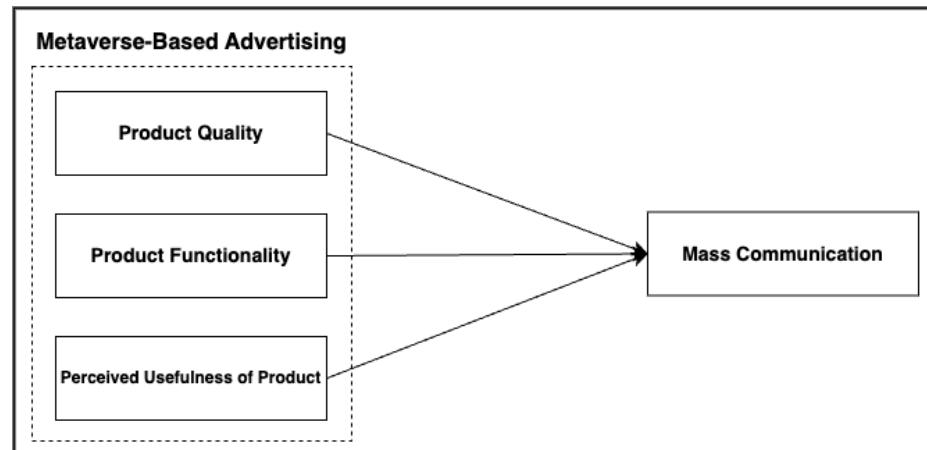
Fig. 1. Conceptual Framework.

The framework presented above shows that the review of literature on product quality, product functionality, and perceived usefulness of products in metaverse-based advertising influences mass communication. However, as the existing research has not focused specifically on the Abu Dhabi marketing sector, thus, this study will fill this research gap.

3   Methodology:

This study employed an interpretivism research philosophy to investigate product quality, product functionality, and perceived utility in metaverse advertising. This approach values subjective understanding over wide generalizations (Alharahsheh and Pius, 2020). An epistemological research paradigm was adopted to conduct a full investigation of metaverse advertising, which comprised a literature review and empirical data analysis (Omodan, 2022). The study chose a descriptive research design (Siedlecki, 2020) following a qualitative approach for a detailed description and exploration of the study problem using interviews. The qualitative data was gathered during the semi-structured interviews of 15 digital marketing and advertising experts from different advertising firms in Abu Dhabi using an open-ended questionnaire wherein the questionnaire was divided into 2 sections i.e. demographic and thematic sections. Purposive sampling was used to target specific individuals who could offer in-depth and insightful information regarding metaverse-based advertising. For data collection, authors contacted advertising firms to explain the purpose of this study and a convenient time was scheduled for the interviews. Finally, a telephonic interview was conducted to get the required data. The data gathered was transcribed and coded for thematic analysis. The demographics of the respondents were examined using tabular analysis while the themes were examined textually to draw more detailed insight into the metaverse-based advertising. In addressing ethical considerations for primary

data collection, the emphasis was on obtaining informed consent, safeguarding data confidentiality, participant anonymity, and assuring voluntary participation. A unique alphabet code was assigned to all interviewees to maintain confidentiality and access to the respondents' names was given only to the researcher. When accessing secondary data, ethical issues included honoring copyright regulations and properly citing sources following American Psychological Association norms (Roig, 2015).

4   **Data Analysis**:

The data analysis for interviews is done using thematic analysis. The themes appearing in the interview are coded and analyzed. To understand the respondents and their ability to answer questions related to metaverse-based advertising, the demographic profile of the respondents is examined.

Table 1. Demography of the interviewees.

Interviewee	Job role	Number of employees in the firm	Type of firm	Involvement in Metaverse-Based Projects
A	Digital Marketing Specialist	Less than 100	Full-service advertising agency	Minimal involvement
B	Advertising Manager	100-200	Digital marketing agency	Minimal involvement
C	Creative Director	300-400	Media planning & buying agency	Moderate involvement
D	Marketing Analyst	200-300	Creative boutique	Moderate involvement
E	Media Planner	100-200	In-house marketing team	Minimal involvement
F	Digital Marketing Specialist	Less than 100	Full-service advertising agency	Minimal involvement
G	Advertising Manager	200-300	Digital marketing agency	Moderate involvement
H	Creative Director	100-200	Media planning & buying agency	Minimal involvement
I	Marketing Analyst	300-400	Creative boutique	Significant involvement
J	Media Planner	300-400	In-house marketing team	Significant involvement
K	Digital Marketing Specialist	300-400	Full-service advertising agency	Significant involvement
L	Advertising Manager	100-200	Digital marketing agency	Minimal involvement
M	Creative Director	300-400	Media planning & buying agency	Significant involvement
N	Marketing Analyst	200-300	Creative boutique	Moderate involvement
O	Media Planner	200-300	In-house marketing team	Moderate involvement

The demographic profile of the interview revealed that the selected interviewees for the study were mainly the employees of advertising firms who were working at the middle level or top level i.e. they were digital marketing specialists, advertising managers, creatives, directors, marketing analysts, and media planners. The total number of employees in the selected firms varied

from less than 100 to 400. Also, to have wider perspectives, different types of advertising firms were selected like full-service advertising agency, digital marketing agency, media planning & buying agency, creative boutique, and in-house marketing team. All these employees had minimal to extensive level involvement in metaverse-based projects. This demographic information reveals that as the selected employees are from the advertising sector, at the middle or senior level and are involved in metaverse-based projects, thus, they are suitable for providing insights about the product quality, functionality, and perceived usefulness in metaverse-based advertising.

Themes were identified after the manual coding of the interview. Differences and trends in the responses of interviewees were analyzed. The themes obtained were analyzed to explore product quality, functionality, and perceived usefulness in metaverse-based advertising. The figure below shows the themes and the same are discussed below.

Table 2. Themes Identified in the Study.

Serial Number	Themes
Theme 1	Product quality in metaverse-based advertising
Theme 2	Product functionality in metaverse-based advertising
Theme 3	Perceived usefulness of the product in metaverse-based advertising
Theme 4	Impact of metaverse-based advertising on mass communication

Theme 1: Product Quality in Metaverse-Based Advertising:

The interviewees are suggestive that a key component of metaverse-based advertising is product quality. They argued that the immersive nature of the metaverse is a distinct benefit that allows consumers to interact with products in ways that traditional advertising cannot. For example, interviewee O stated that features like virtual try-ons and 3D representations enable customers to *"engage with virtual products in detail"*, which promotes a deeper understanding of the quality of products. Interviewee A also suggested that *"high-definition visuals and realistic simulations"* of the metaverse offer an engaging and informative experience. This empowers users to assess the quality of products more precisely. Multiple interviewees concurred and stated that the metaverse offers businesses a chance to highlight the excellence of their goods and enable customers to make more educated choices. Interviewee N said, *"the metaverse transforms the way we perceive product quality, making it a more interactive and insightful process"*. Overall, the participants hold the view that metaverse-based advertising holds great promise for improving consumer communication

about product quality, which could ultimately result in more assured purchasing decisions.

Theme 2: Product Functionality in Metaverse-Based Advertising:

Interviewees emphasized the significance of product functioning for metaverse-based advertising. According to many interviewees, the metaverse allows customers to *"explore and test products"* in a virtual environment, providing them with an interactive experience that helps them understand the features of the product before making a purchase. Respondent B said, *"we can simulate real-world scenarios where users interact with products in the metaverse, which allows them to see how they work in practice"*. High-end products that can be challenging to explain in traditional advertising were a great fit for this interactive method. In the words of respondent M, *"interactive lessons and guided experiences in the metaverse ensure customers grasp the full potential of a product,"* thereby increasing their trust in its use. The responders continued by saying that this type of marketing is more engaging and instructive since it provides customers with access to products in ways that traditional media cannot. Accordingly, the participants concluded that metaverse-based advertising offers a pleasant and transparent means of elucidating a product's functionality, rendering it a valuable instrument in the quickly evolving field of mass communication.

Theme 3: Perceived Usefulness of Product in Metaverse-Based Advertising:

The perceived utility is crucial in metaverse-based advertising, according to interviewees. As a result, customers view items as having more utility since they can interact with them in a way that feels relevant to their daily lives, according to several participants in the metaverse. Interviewee C stated that consumers are more interested in a product when *"they can see how the metaverse would enable them to use it in their everyday life"*. The immersive atmosphere *"allows people to interact with products in ways they couldn't before",* as respondent L pointed out, which makes the products more appealing. Furthermore, several participants talked about how customizing interactions inside the metaverse enhances their perceived utility. *"When customers can customize their experience, they better understand how the product meets their individual needs",* stated participant D in the interview. Numerous people cited this customization as a crucial element of the lucrative metaverse marketing strategy. Nonetheless, a few of the respondents emphasized that the effectiveness of this tactic depends on the caliber of the virtual environments produced. Participant K said, *"if the scenarios aren't well-designed, the perceived usefulness may not be as strong"*. Hence, the respondents state that using metaverse advertising to communicate the perceived worth of items is necessary to increase consumer pleasure and engagement levels.

Theme 4: Impact of Metaverse-Based Advertising on Mass Communication:

The interviewees emphasize how metaverse-based advertising has a significant impact on mass media. The metaverse is altering how individuals interact with knowledge, according to several interviewees. Interviewee E said, *"the immersive environment of the metaverse makes users more engaged compared to traditional media"*. Respondent J who explained that metaverse-based advertising shifts viewers' roles from passive observers to active participants said, *"instead of just watching an ad, people in the metaverse interact with it"*. Others also noted this point. The ability of metaverse advertising to be customized was also covered by the responders. Interviewee F noted, *"the ability to customize messages for particular audiences within the metaverse makes communication more effective"*. It's commonly believed that this personalization contributes significantly to increasing the messages' resonance and relevancy, which results in more successful communication. Significantly, the respondents also discussed the dynamic mass communication in the metaverse. Participant I stated that *"the metaverse's interactive features are changing the landscape of mass communication, making it more engaging and participatory"*. Therefore, rather than merely being a new medium, all the respondents argue that metaverse-based advertising is a revolutionary force that is altering the character of mass communication.

5   Discussion and Conclusion:

The perception of the interviewees is in line with the published articles on product quality, functionality, and perceived usefulness in metaverse-based advertising and its impact on mass communication. The table below shows a perceptual mapping of the same.

Table 3. Perceptual Mapping.

Serial Number	Themes	Published Literature
Theme 1	Product quality in metaverse-based advertising	Zhao et al. (2022)
Theme 2	Product functionality in metaverse-based advertising	Sharma and Bansal (2023)
Theme 3	Perceived usefulness of the product in metaverse-based advertising	Toraman and Geçit (2023)
Theme 4	Impact of metaverse-based advertising on mass communication	Chakraborty and Biswal (2024)

The study focused on how consumers' perceptions of product quality are enhanced by the metaverse. This supports studies by Zhao et al. (2022), who argue that immersive technologies, like the metaverse, provide a more complex and engaging way to demonstrate the quality of a product. According to researchers, users can interact with virtual try-ons and 3D representations to evaluate product characteristics more thoroughly. This aligns with the notion

that the metaverse has the potential to enhance consumer awareness and confidence in product quality, leading to an enhanced purchasing encounter. The study also concludes that metaverse-based advertising offers interactive product operating simulations that traditional media cannot. This is consistent with the findings of Sharma and Bansal (2023), who found that virtual environments enable people to experience and comprehend the real-world uses of products through simulated scenarios. According to Sharma and Bansal (2023), allowing consumers to test items in virtual settings enhances the effectiveness of the demonstration of functionality and builds trust. This interactive approach is particularly effective for complex or high-end products that require detailed explanations. The study also found that when people can interact with products in a virtual environment, their perceived utility improves. This result is like research by Toraman and Geçit (2023), who assert that by tailoring items to consumers' daily needs, customization and metaverse immersion raise the perceived usefulness of goods. Their work suggested that the quality of virtual environments affects the success of this strategy. While poorly executed virtual environments may make users feel less valuable, well-designed virtual environments increase user pleasure and engagement. The study also discussed the impact of metaverse-based advertising on mass communication. Recent research by Chakraborty and Biswal (2024) supports this by highlighting how immersive technology transforms consumers from passive watchers into active participants in marketing. They claim that the ability to customize advertising experiences for specific audiences greatly enhances communication efficacy. In comparison to traditional media, the interactive features of the metaverse offer more customized and captivating communication.

The study is therefore pertinent since it contributes to the definition of the integration of the metaverse in Abu Dhabi's advertising industry. The study finds that metaverse-based marketing greatly improves consumer perceptions of a product's quality, utility, and functionality. Additionally, it increases engagement and individuality, which modifies mass communication. The previously mentioned findings are consistent with recent studies on the advantages of immersive technologies and highlight the potential of the metaverse to transform advertising strategies and customer engagement.

6   Implications and Future Work:

The study provides valuable insights into the impact of metaverse-based advertising on product quality, functionality, and perceived usefulness, which has important implications for advertisers and mass communication professionals. The findings suggested that metaverse advertising enhances how consumers perceive and interact with products by offering immersive and interactive experiences. Companies that adopt this tactic can improve customer

satisfaction and assist consumers in making more informed purchases. By leveraging the immersive features of the metaverse, marketers have the potential to create more compelling advertising campaigns. The study also stressed the need to possess superior virtual environments to optimize the perceived usefulness of products. To ensure that consumers fully understand the items, advertising could focus on developing compelling and realistic virtual environments. As a result, customer connections may become more rewarding and fruitful.

For future work, expanding the sample size beyond 15 experts could provide a broader perspective and validate these findings across different markets. In addition, as the current study primarily examined the Abu Dhabi region, future research may compare the findings with other UAE regions to gain a more thorough picture of the region. Future studies can also examine how different product categories or businesses can benefit from metaverse advertising, providing a more comprehensive understanding of its effectiveness in a variety of scenarios.

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