

AR-Induced Consumer Experience in Hybrid Retailing

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Abstract

Retail augmented reality is rapidly modernizing by redefining shopping patterns, preferences, and decision-making process. Enhanced real-world product visualization, try-before-you-buy, personalized product recommendations, product information, interactive and guided shopping experiences, marketing, and brand engagement are ways that experience value is created for consumers and retailers. In order to better understand how AR-induced experiential values affect value creation and decision-making in the retail sector, this paper will review the relevant literature. This study analyses literature through a systematic review approach using PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) by reviewing 162 articles. This review identifies the need for consumers to have a value-in-use experience when using augmented reality (AR) and integrates a new conceptual framework that depicts the pathways leading to value creation for retailers and consumers in retail contexts throughout their shopping journey. Additionally, it makes recommendations for future research directions in areas of consumer perception and behavior with AR value creation and multifaceted values of augmented experience.

Keywords: Augmented Reality (AR), Decision making, Experiential value, Retailing, Value creation.

Introduction

The development of shopping experiences is becoming more vital in the retail industry to gain a competitive edge and satisfy the needs and desires of customers. The constant growth of innovative technologies such as AR and VR has extremely modified the retail scenario which influences consumer shopping and buying behavior further enhancing the retail experience of the consumers (1-3). Consumers can attain experience either using physical shopping (brick and mortar stores), online shopping (digital platforms, websites, and applications), and Omni channel (both online and offline) across various sectors such as retailing, healthcare, manufacturing, entertainment, tourism, and learning (4-6). Nowadays consumers prefer different choices, values, and engaging experiences, so it is a must for retailers to provide a shopping environment with more entertainment and enthusiasm (7). Hence retailers have discovered new ideas to make use of and choose suitable virtual technology effectively among virtual reality, augmented reality, virtual try-on, and salespeople which adds value to consumers and increases their shopping experiences (5). Customers can interact with products and brands

more effectively, thanks to the unique platform that is created by the seamless integration of digital overlays onto the physical environment. The experiential value during shopping helps retailers forge enduring connections with their customers (8). The ability to create experiential value using AR is one of the special advantages that retailers can make use of. Augmented Reality (AR) generally provides a realistic augmented user experience by integrating simulated digital information into the physical world (9-11). An experiential value obtained from retail experience using interactivity involves consumer perception of goods or services either as direct/indirect examination of AR applications using dimensions of service excellence, aesthetics, consumer ROI shopping value (12), and playfulness thus providing a seamless experience to shoppers (13-15). Consumer behavior these days has undergone a significant transformation as the importance of AR has been recognized by consumers and retailers. Retailers in both online and offline environments are quickly embracing augmented reality (AR), in particular (3, 16). Many factors are driving the surging interest in AR retail which includes consumer acceptance of

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the technology, advancements in immersive technology, and ease of accessibility (17, 18). Two developing models are considered as the subject of AR study in the context of retail. One explains how AR is used, while the other explains the impact of AR purchases in the retail context (9). Retailers have used AR to create immersive customer experiences and state that AR will play a substantial role in the future of the retail sector (19, 20). Numerous literature studies on AR in the retail context are based on consumers which in turn provide positive responses leading to results such as facilitating the process of decision making, improving consumer loyalty, intent to purchase and providing a better shopping experience, and delivering true customer value (9, 11, 21). The rise of retail has been facilitated by AR's capacity to generate experiential value and impact the purchase decisions of consumers. Consumers' positive affective responses and purchase intent might increase with the use of experiential elements of AR in online retail (22). As the value of pleasure and emotion is recognized, the consumer experience has emerged as a critical issue in the retail industry where rational, emotional, sensory, and physical reactions are all a part of the consumer experience (23). AR creates value for retailers using experience, increasing brand awareness, customer attention, and sales volume in both online and offline environments promoting consumer behavior (23). Retailers make use of AR to help customers for identifying the product of their needs and wants and offer personalized assessment before making the actual purchase thereby improving sales volume and the shopping experience of consumers (3, 24, 25). The prevailing literature studies show the influence of AR functionalities on user experience and experiential value, while only a few studies have focused on different experiential value dimensions and types that impact AR in the retailing sector. Hence this study focuses to examine the research objectives such as: How does the implementation of AR technology by retailers influence the customer's perception of the shopping process? To what extent does AR technology act as a bridge between online and offline shopping experiences? What are the mechanisms through which AR technology generates experiential value for customers in the retailing industry? What role

does AR impacts in value creation? Do experiential value dimensions enhance consumer decision making?. This systematic review adds to the current body of knowledge by synthesizing previous research, identifying key drivers of experience value creation, developing a conceptual framework, integrating findings and offering implications. These contributions will significantly advance our understanding of AR's role in improving consumer experiences in retail settings. While previous studies have explored themes such as AR in retail context, AR and consumer experience, AR and value creation and AR based consumer behavior. This current study is presented in different research themes based on existing literature such as impact of experiential value creation, retail consumer experience with AR and how AR experiential value enhances consumer value creation and decision making. This study integrates consumer experience dimensions such as cognitive, emotional and social values enhancing value creation in AR retailing which has not been combined before. Therefore, this study aims to provide a holistic retail consumer experience with AR. One of the major contributions of the study is that it analyses the experiential value creation based on different dimensions of experience while integrating with immersive technologies throughout consumer shopping journey in retail sector. There is a gap determined based on previous studies whether consumer experience dimensions drives value creation and consumer decision making as studies frequently explored experiential value of AR as hedonic and utilitarian values. This study relates value creation of AR among buyers and sellers in retail purchase environment, by generating experiential values influencing consumer behavior. As a result, the purpose of this study is to analyse the existing literature on augmented reality (AR) in the retail sector in order to understand how customers interact with AR in the business and suggest areas that may require more examination in future studies.

Theoretical Background

To obtain an overview of the study SLR is performed. Various studies have been performed by researchers based on AR acceptance and user experience impacts on consumer behavior and decision-making processes. The most commonly

used theories in this field are Technology Acceptance Model(TAM) (3, 11, 13, 15, 26, 27), Virtual Luminoid theory (3, 28), Uses and gratification theory (11, 27, 29, 30), Situated cognition theory(3, 11, 31), flow theory(3, 7, 13, 27, 32, 33), equity theory (3, 11, 14, 34, 35), SOR theory (3, 11, 36), mental imagery theory (3, 11) and experiential value theory(7). Despite various theories employed in the AR shopping experience to enhance consumer behaviour, theories such as consumption value theory, SOR (3, 11, 36), experiential value theory (7), consumer value theory(37, 38), typology of consumer perceived value (39, 40) and AR theory (24) acts as a base for this study. This study uses the SOR framework, which claims that when an individual experiences a stimulus, they form internal states and respond accordingly. Similarly, consumer's usage of AR retail functionalities resulting in an engaging experience, thereby providing decision comfort and creates value. Consumer value topology serves as a basic theme for the study. To analyze the values incorporated in retail shopping settings, experiential value, and consumer value perspectives are considered more useful to this study. There has been an extensive background on the growth of augmented reality experiential value in retail and its rising importance in impacting consumer behavior which explains why more study on AR's influence on decision-making is necessary (14, 21, 23, 41, 42). Given the experiential value discovered in the existing academic research, a thorough understanding of the consumer experience factors that impact digital technologies is essential. Three aspects of the consumer experience such as cognitive, emotional, and social values are the primary determinants of the experiential value of digital immersive technology (18, 43). Previous literature studies on consumer experience have identified various categories of experiences and their values such as hedonic and utilitarian values (44). Immersive retail realities, such as augmented reality, virtual reality, and mixed reality, provide varied experiences in various circumstances (45). However, it is important to analyze the influence of immersive technology in boosting experience value, which supports value creation and decision-making processes. Researchers have identified AR usage and customer experience throughout their shopping

journey in various contexts influencing consumer behavior and purchase intention (10, 16, 20, 41, 42). This study aims to fill the gap and expand previous studies' literature by enhancing experiential value dimensions such as cognitive, sensory, and social values on using AR specifically in the retail sector.

Methodology

Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Systematic review is regarded as an efficient tool for systematically assessing and evaluating literature from the existing studies. PRISMA and its extensions outline the broadly used guidelines for reporting the results of systematic reviews. The new design of PRISMA 2020 flow diagram was adapted for this study and includes three stages, i.e. identification, screening, and inclusion which offer updated recommendations for systematic reviews to impact changes in approaches such as to find, choose, and evaluate the studies including database searches, registers, and other sources. The author used EndNote, a reference managing tool to execute the PRISMA process. The articles from 2001 to 2022 were considered for the study, as shown in Figure 1. As a result of the PRISMA approach, 162 articles were selected for the review process. A complete description of the process is given below. Figure 2 shows the PRISMA flow diagram used in the study for new systematic review.

Identification

In the identification stage, the author considered the SCOPUS database to explore the literature as it is the most reputed and common database, which indexed over 30000 peer-reviewed journals from multiple fields including humanity, Social sciences, mathematics, information technology, and medicine. After the database selection, identification of the search terms was carried out after reading papers related to augmented reality. Based on reading 40 Augmented reality related papers, the final list of keywords included "Augmented reality", "retail", "Marketing", "Experiential value", "Decision making", "Customer/consumer experience", "Customer/consumer value", and "Buying behavior". The combination of widely used keywords for search term analysis and literature identification of the study is shown in Table 1. A combination of finalized keywords, AND, OR, and

NOT operators were used as search terms in an advanced database search option. The primary search resulted in 1940 articles in five database searches with different search term combinations. To the search result, filters were applied to limit the articles to document types such as articles, reviews, conference papers, and subject areas "Business, Management and Accounting", "Decision sciences", and "psychology". As a result, 1484 articles were identified from 2001-2022. The search term combinations are as follows: (retail* OR marketing) AND "experience" AND "experiential value" AND "customer value" OR "consumer value" AND NOT (tourism). (Retail* OR marketing) AND "augmented reality" and "experience" AND "experiential value" AND NOT (tourism). (Retail* OR marketing) and "augmented reality" AND "experiential value" AND ("buying beha*" OR "decision making"). "augmented reality" AND ("experiential marketing" OR "experiential value") AND (retail* OR marketing) AND NOT (TITLE-ABS-KEY (tourism)) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "PSYC") OR LIMIT-TO (SUBJAREA , "DECI") . "augmented reality" AND ("experiential marketing" OR "value creation") AND (retail* OR marketing) AND NOT (TITLE-ABS-KEY (tourism)) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "DECI") OR LIMIT-TO (SUBJAREA , "PSYC")

Screening

To further streamline the process, screening process determines the quality of articles based on title and abstract screening and full text-based evaluation. The initial step of the screening process involved eliminating duplicate papers and only considering English-language articles, reviews, and conference proceedings. A total of 390 duplicated articles were excluded and the remaining 1094 articles were considered for the next stage of the screening process. In the next stage, the screening of the titles and abstracts was performed to identify relevant articles to support the research questions. Based on inclusion criteria, articles that appeared to help find answers to the research objectives were included and the remaining articles were excluded. As a result, 459 articles were included and 635 articles were excluded. The articles from the screening process were sought for retrieval. The author

ordered and downloaded articles from the library. A total of 34 articles were excluded due to the unavailability of full-text access. The articles with full text were reviewed and only articles relevant to the study were considered eligible. The criteria to identify the eligibility of the articles were framed based on the article's relevance and area of focus. Non-relevant articles are eliminated based on exclusion criteria, including those concentrating on other digital immersive technologies such as virtual reality, mixed reality, and IoT. Articles that are not specifically related to AR in the retail sector, but are employed in other sectors such as healthcare, tourism, gaming manufacturing, etc. Finally, the articles do not emphasize consumer's experiential value creation functionalities and decision-making. For the study's relevancy, only publications about consumer AR usage and experience in both online and offline retail contexts, as well as value creation, were included. Table 2 outlines the inclusion and exclusion criteria used for the article selection and screening process. This process resulted in the exclusion of 275 articles due to non-relevance to the study. As a result, 150 articles were concluded for the review process.

Identification of Studies via Other Methods

Records identified through other sources than database search are captured in an additional column on the right side of the PRISMA flow diagram. All 22 records that appear relevant to the study were identified through citations during the assessment of articles identified via database search.

Screening of Studies Identified via Other Methods

All articles identified through citations were sought for retrieval. The author ordered and downloaded articles from the library. A total of 4 articles were excluded due to the unavailability of full-text access. After excluding the unavailable articles, a total of 18 articles were assessed for eligibility. During the assessment process, 6 articles were identified and eliminated since articles with more recent studies of the same were identified during the database search. As a result, a total of 12 articles were considered for the study.

Inclusion

An additional check was performed at this stage to ensure no relevant articles were omitted during the process. A total of 162 articles were concluded for the study out of which 150 articles were from the database search and 12 articles

from other methods such as websites, organizations, citation searching, etc. Finalized articles for the study were stored and maintained in the EndNote reference manager with parameters like Author, year, Title, Journal, Keywords, Abstract, and DOI.

Table 1: Association of Keywords for Relevant Literature Identification

First Term	Second Term
'augmented reality'	'experiential marketing', 'value creation', 'retail*', 'marketing'
'augmented reality'	'experiential marketing', 'experiential value', 'retail*', 'marketing'
'retail*'	'experience', 'experiential value', 'customer value', 'consumer value'
'marketing'	'experience', 'experiential value', 'customer value', 'consumer value'
'retail*'	'experience', 'augmented reality', 'experiential value', 'buying behavior*', 'decision making'
'marketing'	'experience', 'augmented reality', 'experiential value', 'buying behavior*', 'decision making'

Table 2: Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Articles published in the English language	Removal of duplicates
Articles, reviews, and conference proceedings are considered	Articles not relevant to research objectives
Full-text articles	Unavailability of full-text access
Articles strictly focus on consumer decision-making with the aid of AR and the experiential value contribution of AR in online and offline retail settings to consumers.	Non relevance articles
	Articles focusing on other technologies such as virtual and mixed realities
	Articles that are not related to AR in the retail sector.
	Articles not focusing on consumer's experiential value creation and decision-making.

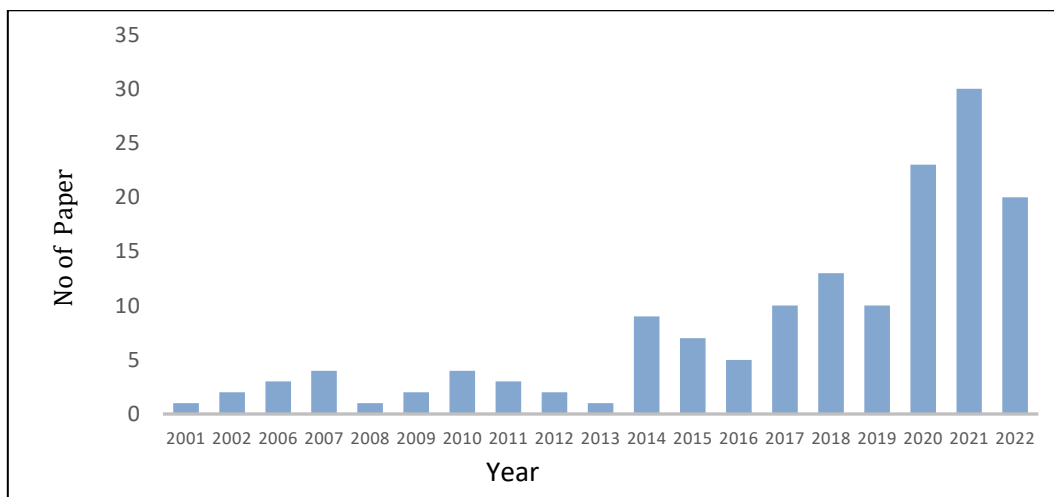


Figure 1: Year-Wise Distribution of Papers

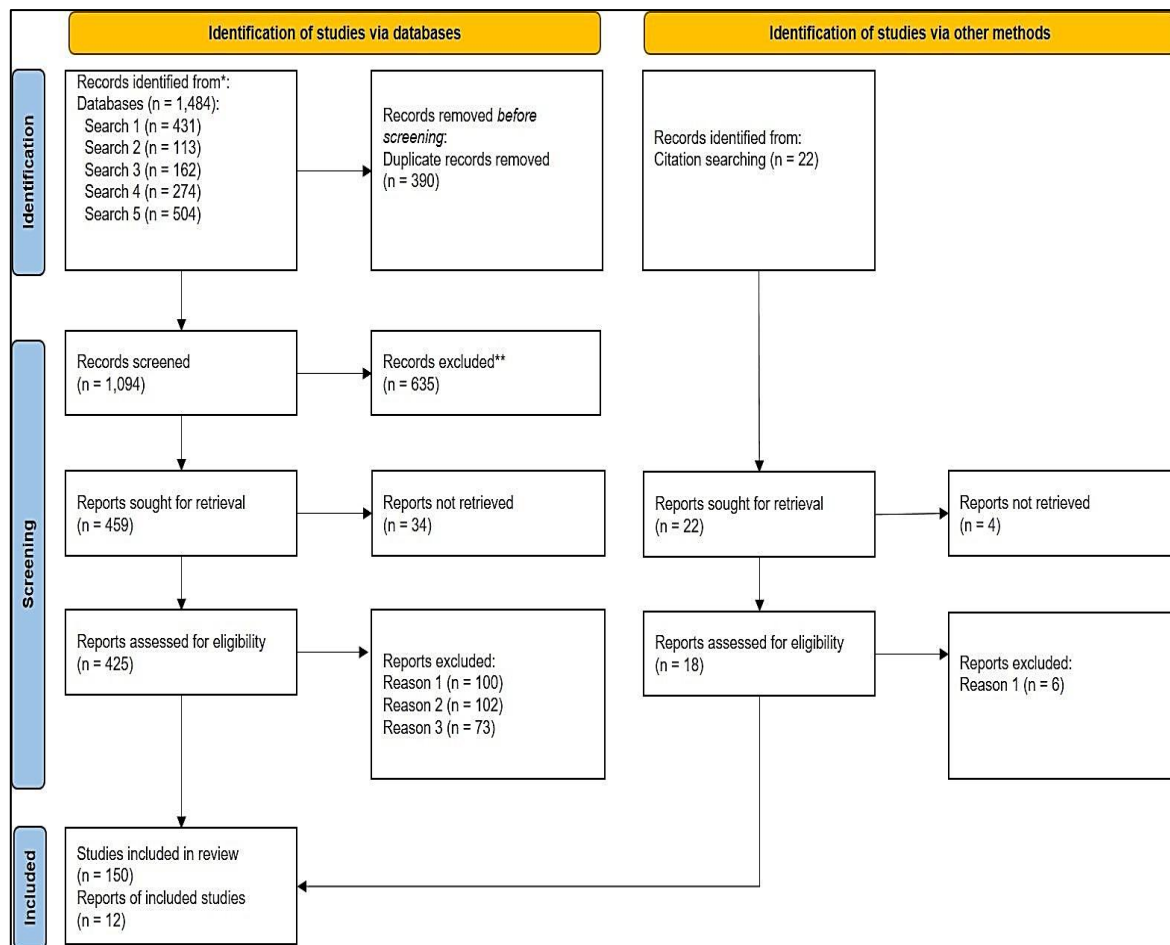


Figure 2: PRISMA Flow Diagram for New Systematic Reviews Including Database Searches and Other Sources

Table 3: Key Findings of Past Studies and the Relationship Between the Concepts

Author	Key findings	Major Elements	Purpose of the study
Lavoye V, Mero J, Tarkiainen A (3)	AR enhances the shopping experience of consumers in a retail setting by generating transactional, brand-related, and technological outcomes as well.	Utilitarian and hedonic values Decision making Virtual self Negative effects	To examine the importance of consumers using AR in the retail environment and its consequences for consumers
Keng CJ, Huang TL, Zheng LJ, Hsu MK (7)	The service encounter results in personal interaction and the physical environment positively influences the experiential value and behavioral intention of the consumers.	Perceived aesthetics, playfulness, efficiency Excellence and Customer behavioral intentions	To discover the influence of service functionalities of experiential value and behavioral intention of the consumers

Mathwick C, Malhotra N, Rigdon E (8)	Experiential value encourages the usage behavior of the consumers based on dimensions such as functional, conditional, social, emotional, and epistemic utility.	Playfulness Aesthetics Customer return on investment Service Excellence	To create a scale on experiential value for the shopping experience in retail.
Kumar H (11)	The AR features have a significant impact on utilitarian, hedonic, perceived risk, and experiential value, which leads to a favorable outlook, and aids in decision-making.	Media features Perceived value Customer experience Risk factors Decision making Behavioral intention	To determine consumer behavior of AR in the online retail environment
Qin H, Osatuyi B, Xu L (13)	Retailers can incorporate AR into current marketing networks to give customers the chance to get knowledge about the product/service and interact with it.	Virtual presence Experiential value Shopping benefits Perceived value	To evaluate how consumers level their experiences and how that affects how they behave, predominantly in the mobile context using AR
Perannagari KT, Chakrabarti S (15)	Augmented reality has been widely adopted in retailing contexts and has been developed in the form of portable device applications.	Augmentation quality Media Characteristics Design features Behavioral intention Psychological factors	To determine the factors of retail consumers that enhance technology acceptance of AR in the retail environment.
Huang TL, Liao S (17)	AR interactive technologies create experiential value based on presence, product environment, cause and effect simulations proving media richness and narrative experience among consumers	Playfulness Aesthetics Customer return on investment Service Excellence Perception presence Perception narrative Media richness	To study upon which level experiential value can be attained using spatial presence, media richness, and narrative experiences using interactive technologies of AR .
Hoyer WD, Kroschke M, Schmitt B, Kraume K, Shankar V (18)	Through computer-generated displays, AR enhances the experience of being in a real-world setting, giving users a more engaging, vivid, and richer experience. Different experiences and dimensions like cognitive, sensory, and social values have been distinguished by customer experience.	Customer experience Customer journey Augmented reality Experiential value	To recognize the importance of innovative technologies throughout the customer shopping journey and driving customer experience by Artificial Intelligence.

Chen R, Perry P, Boardman R, McCormick H (21)	Retailers are looking to engage customers with an augmented shopping experience by implementing the functional and experiential requirements for a successful AR experience.	Augmented reality Cognition, affective, and experiential values Decision making Brand and app-related responses Approach/ avoidance behavior	To explore a new focus of the research based on augmented reality
Watson A, Alexander B, Salavati L (22)	Enhancement through AR encourages excitement, escapism, and immersion, which increases experiential value creation and impacts consumer behavior.	Augmentation Purchase intention Affective response Experiential retail	To investigate the effect of experiential technologies using AR on affective and behavioral responses of consumers in an online shopping context.
Han S, Yoon JH, Kwon J (41)	Experiences involving the immediate use or remote appreciation of goods and services are referred to as having experiential value.	Visual appeal Entertainment Enjoyment Escapism	To examine by what means various mechanisms of AR experiential value will influence behavior enhanced through satisfaction and experiential validity of consumers
Zarantonello L, Schmitt BH (45)	The term "consumer experience" refers to the internal individual reactions customers have across various points of contact with either a brand/product or business using multi-dimensional AR technology experiences.	Sensory experience Cognitive experience Affective/emotional experience Behavioral/physical experience	To determine the experiential consumption and encouragement of services among consumers using AR technology.
Vongurai R (46)	With the aid of AR technology, consumers can make informed decisions about their purchases and gain a variety of experiential benefits. Experiential value leads to long-term customer relationships, shopping intentions, and intent to return.	Playfulness Aesthetics Customer return on investment Service Excellence	To examine the features that impact AR-empowered experiential value of consumers in the online environment.
Rintamäki T, Kirves K (47)	Customer proposition of value are made to resonate with these desired results from the retailer's perspective and perception of customer value generates shopping outcome	Functional Emotional Economic and Symbolic values Satisfaction WOM	To demonstrate how contextual viewpoint influences the evaluation of customer value propositions, a scale for measuring and modeling customer value was

			validated.
Leroi-Werelds S (48)	The customer co-creates value Through the combination of resources in the service context with the growth of innovative technologies, consumption, customer service context, and transformative	Positive values Aesthetics, efficiency, control excellence, status, self-esteem, playfulness, personalization, and novelty Social, ethical, and ecological benefits Negative values Price, time, effort, risk (privacy, financial, physical, performance)	Understanding customer value in today's environment upon different levels serves as a basis for Holbrook's typology.
Jain R, Aagja J, Bagdare S (44)	Consumer experience provides an all-inclusive process of customer attraction, retention, and pleasure by creating value through user experience.	Service experience Customer experience Customer value Co-created value	To provide deep knowledge about consumer experience for creating value and satisfaction
Foroudi P, Cuomo MT, Foroudi MM (38)	Retailers should focus on values that are based on consumers and enhance continuous usage interaction in online platforms mainly, social media.	Functional value Social value Experiential value Satisfaction loyalty	To study how user-continuance interaction intention is affected by customer values that expand satisfaction and loyalty.
Cachero-Martínez S, Vázquez-Casielles R (36)	Various dimensions of consumer experience have a boundless influence on consumer behavior and don't directly impact the engagement of the consumers.	Sensory experience Intellectual, emotional Social experience Pragmatic experience Engagement	To examine the connection between various aspects of the shopping experience and engagement with the consumers and willingness to stay longer.

Towards a Conceptual Framework

On analyzing various literature studies, this study establishes the framework by exploring several antecedents, drivers, and outcomes of AR experiential value creation relating to various dimensions of consumer experience. Table 3 summarizes the outcomes and findings of prior studies, exploring the relationship between the concepts for the current research. The antecedents of the study considered are AR in retailing contexts such as 3D product

visualization, virtual try-on, interactivity, product recommendations, and in-store navigation (15, 21, 45, 48-51) and the drivers for the study include various dimensions of experiential values generated on using AR such as cognitive value, social value and sensory value (8, 18, 19, 45, 51). The outcome of the study results in consumer value creation and improved decision-making among consumers. Figure 3 shows the conceptual framework generated for the study.

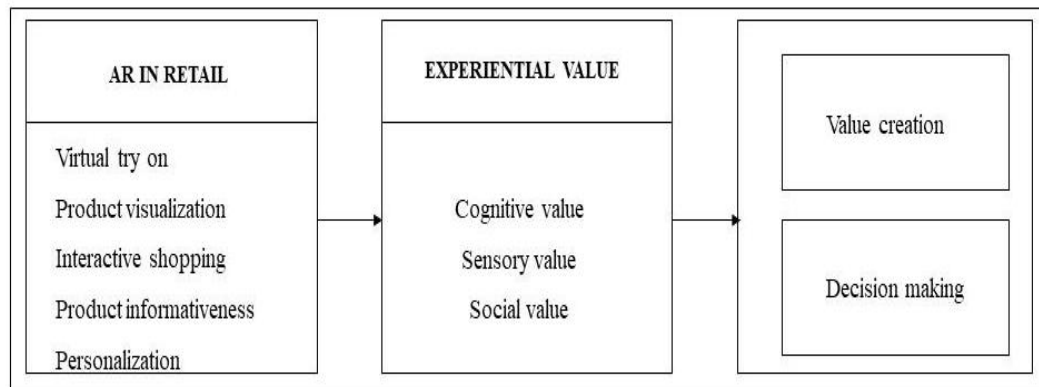


Figure 3: Conceptual Framework

Experiential Value and Consumer Experience

In general experiential value can be differentiated as intrinsic (enjoyment during the task) and extrinsic values (value of exchange) which are later extended as active and reactive values (32, 49). Based on the view of consumer value, the experiential value view is categorized as a 2 x 2 matrix (four-quadrant) which includes extrinsic active and reactive elements, and intrinsic active and reactive elements (29, 48). Aesthetics includes visual appeal and entertainment of service features in a retail context and can be provided by design, vividness, physical attractiveness, and color. Service excellence is a fundamentally reactive response obtained based on the assessment and gratitude of consumers over the goods and services involving excellence and quality. Playfulness is referred to as escapism to temporarily get away from the real world as if consumers are deeply involved with the activities. Consumer Return-On Investment includes consumer time, monetary and behavioral investment, and psychological resources to attain precise benefits. The experiential value dimensions identify the importance of new technologies in value creation and influence consumer behavior. (8, 22, 32, 49, 52). Based on customer service experience in the online environment, experiential value incorporates both perceived hedonic value which is task-oriented, and utilitarian value is personal and subjective (44, 50). The center of attention for value creation is the consumer experience. Value and its precise dimensions can be evaluated based on the contrast between hedonic and utilitarian value or the shopping value associated with the

consumption of a service (6, 44). Customer experience is a comprehensive assessment of the interactive creation of values and service experience aids as a source of value creation for the service consumption process (34, 44). Though the Service experience and customer experience have similar functionalities but differ in the way that is how the buyers experience the particular service including the service providers and experience as shopper performers which is subjective (34). Consumers today desire boundless consumer experience as they prefer value in experience rather than value in consumption (18). Based on previous research customer experience has various dimensions and experiences as well (6, 53). The affective, sensorial, and cognitive dimensions of customer experience are characterized mainly by four constructs such as sensorial and affective experiential states, interactivity, and comparative benefits (34, 53). The term BASIS stands for behavioral, affective, sensory, intellectual, and social, and is an acronym for consumer experience. Formation of customer experience can be determined through three phases of value creation namely value in pre-use (customers acquire knowledge about the product), in-use (experience gained during purchase), and post-use (overall satisfaction and loyalty after using the product/service). Value in use intermediates the experience of the consumers thereby improving satisfaction and loyalty toward the retail environment (5, 34, 53). AR experiences can be both one-dimensional and multidimensional as well. Based on the previous literature studies of consumer and service experience, dimensions such as sensory, emotional, cognitive, social, and

behavioral are considered stable(10, 16, 42, 52). However, there is also variance among the number of dimensions in AR experience which includes either two (affective and personal connection), four (affective and cognitive features), or five (sensory, social, intellectual, affective, and behavioral)(3, 10, 11, 17, 54).AR allows consumers to virtually try on a product “try before you buy” experience by interacting with it, thus providing a unique product experience rather than an unintended product experience(46, 51, 55). The shopping experience of AR apps seems to encourage affective or behavioral responses. The experiential value of using the AR try-on feature while purchasing cosmetic products online is determined by factors such as media richness, narrative experience, and presence results that media richness has made greater experiential value (55, 56). The experiential value facilitates the association between service and behavioral intention in the in store environment which includes dimensions such as consumer ROI, playfulness, aesthetics, and service experience thereby proposing experiential value which improves customer attitude toward goods and services (7, 57, 58). High levels of customer satisfaction and loyalty result from the experiential benefits that consumers gain from interactions with retailers (43).

Consumer Value Creation Typology

Seven foundational characteristics of value have been recognized using a widespread literature review based on service-dominant logic. At first, the value of the consumer is linking the interaction between the customer and the object(38), second its interchange between the benefits and product price, third it is value-in-use (experiential) which states value is not acquired as characteristic of the object but derived from the experience of the customers on using the object, fourth it's personal, the customer's perception of own(59), fifth value is not only on its own but context-explicit(48), sixth value involves various types of values and is multi-dimensional as well, at last value is co-created by incorporation of its sources(39). Based on the in store (mall) and online shopping retail experience merging of active or reactive dimensions and extrinsic or intrinsic dimensions of Holbrook's value to make a distinction between four value typologies which include efficiency, excellence,

aesthetics, and play for greater shopping experience (48). Several studies have resulted in a positive connection between the shopping experiences of consumers and consumer value. Customer value is frequently discovered to be a key indicator of purchasing behavior and a major factor in influencing customers' purchase decisions. (35, 38). Customer value has been earlier recognized in stages of pre-purchase by identifying whether an expectation over a product/service meets customer needs and intent to buy it and benefits decision making as well, but later it also plays a vital part in post-purchase stages as buyers tend to assess their values towards product/service leads to satisfaction and repurchase (59). Customers today co-create their value by combining the retailer's in-store resources and interactions with other shoppers. The value experienced by the consumer plays a major role in deciding whether his journey is going to be effective or not. Retail communication executives can increase customer intentions to continue interacting in a competitive market by using the functionalities of consumer value by exploring shoppers' experimental, social, and functional values (43). The perceived value which exposes the result and purpose of shopping takes a lead in the decision-making process and proposing value includes methods and approaches for maintaining customer value using functional (value attained from the capacity of the product), emotional (value attained by stimulating feelings on the usage of product), social and conditional dimensions (value obtained from various groups of consumers) (44). This serves as the major viewpoint of value creation for consumers in the retailing environment which varies on the type of products and paths resulting in customer satisfaction and word of mouth (35, 37). The cognitive and affective processes throughout pre as well as post-purchase mitigate value related to the shopping experience (51). The total value of the customers in an in-store shopping environment encompasses utilitarian, hedonic, and social value (60). The utilitarian (43) values (cognitive information processing) are considered as functional needs that aid in the process of decision-making, hedonic values (experiential) relate to multisensory and emotional self-experience with the products, whereas social value (representative

interactionism) includes status and self-image of the consumers (39, 61).

Retail Experience with AR

Traditional retailing involves advancement and appealing in-store experience to attain the satisfaction of consumers whereas, in the modern retailing environment, new technologies offer immersive shopping experiences thus improving customer satisfaction and decision-making (24). The in-store experience thus obtained creates customer value and generates revisit intention among consumers. The growth of traditional retail stores has been distressed due to the advancement of technological innovations used in online retailing. To remain modest, the retail stores must offer in-store experiences throughout the customer's journey which are multisensory, interactive, emotional, and challenging as well (60). The experiential strength in the online environment depends upon four basic ideas namely experience, aesthetics, interactivity, and vividness. At first, it includes interactivity elements which are moreover formed or co-created whereas aesthetic elements are inactively responded which paves the way for consumer value (active/reactive), Secondly, new dimensions have been established in a retail setting such as website quality and atmospheric features. Later includes theory-building approach and scale formation in a retail context (62). Retailers have the chance to develop a cutting-edge offering that increases customer value because of consumer expectations for the seamless integration of offline and online shopping channels (29, 63) and they have attained a new stage of providing numerous values to their customers such as virtual try on and try out capabilities, interactivity with the product due to the advancement of the online retail sector (43, 52). Initially, for an in-store environment, AR provides virtual try-on services using the virtual mirror and fitting rooms which help customers to try clothes without really wearing them which is limited to use (64). In an online retail environment, AR allows virtual try on a product through trying and interacting with it thereby allowing improved decision-making among buyers using immersion and ownership (11, 22). In comparing virtual try on using AR in online and physical apparel retail environments, AR offers enough information about the product including product measurements and visual

attributes thus enhancing the buying experience of consumers and make informed purchase decisions (30, 47, 51). The AR technologies include shopping assistance applications in in-store retail environments for store navigation purposes and offer customization thus providing an enhanced experience to consumers utilizing both offline stores combined with electronic assistance in real-time (58). The retail industry is also putting more importance on experiences, as it has been said that it is decisive to create emotionally appealing experiences for in-store customers. The in store experience of a retail environment comprises sensory and imagery aspects that provide pleasure and consumer value, the emotional aspect offers positive value-generated customer experience and social connections as well and online shopping provides valued experiences in a virtual atmosphere where both the retailer and customer together co-create their experiences (6). AR leads to an enriched experience by offering complete information about the product and encourages decision comfort and satisfaction. This reduces the mental load of consumers and increases confidence during decision-making processes (17, 23). In the context of online retailing AR provides an immersive experience through its functional media characteristics such as interactivity, vividness, augmentation, situated physical control, and environmental embedding (30). AR has been widely used in the retail sector rather than gaming by providing virtual try-ons of clothes and virtual trial rooms before buying by providing a 360-degree view and fit. AR also supports furniture buyers to make a selection via virtual platforms (47, 64). The virtual try-on technology was introduced by online retailers to evaluate the clothes which in turn also influence consumers' decision-making process (30, 64).

The virtual try-on application provides utilitarian value by providing useful information that helps in the evaluation process of the consumers. It also provides hedonic value through the interactive shopping experience, in addition to social values by sharing how clothing fits them with their family and friends. Furthermore, telepresence using 3D technology enhances user engagement in affective, behavioral, and cognitive aspects along with the co-creation of value thereby

influencing purchase intention in the context of online retailing (65).

Role of AR in Experiential Value Creation

AR creates diverse values for consumers as well as retailers in a retail environment involving both online and in-store shopping. AR offers value for consumers using interactivity, experience, engagement, informativeness, satisfaction, and personalization (10). AR enables interactivity with the product through augmentation and can significantly improve the way how consumers interact with services as they can excite sensory experiences that can enhance the self and reduce mental intangibility (52). AR experience with virtual products stimulates mental imagery which leads to a rise in purchase intent and consumer behavior. AR allows virtually trying on a product and seeing how it fits them by providing more information about the product and how it works, which creates more satisfaction, revisiting intention and intent to personalize the product based upon their needs thus creating an immersive experience (14, 20, 56). Augmented Reality (AR) features such as virtual try-on, personalization, 3D visualization, interactivity, and product informativeness improves the experiential value creation in the retail environment by providing immersive and engaging experiences to improve their buying process(24) and bridge the gap between in-store and online purchase experience(11, 16, 21, 23, 32).AR allows consumers to virtually try on the product before the actual purchase, which leads to increased satisfaction, reduced returns, and informed decision-making (29, 66). The adoption of virtual try-on technology is widely used in the apparel, and fashion sectors. For example, Ray-Bans eyewear, Nike, and L'Oreal allow consumers to virtually try on their products resulting in enhancing online consumer decision-making (35). Another use case of AR in retail is 3D product visualization which allows consumers to view the product in the real world environment. For instance, buying furniture with the IKEA app which allows 3D product visualization of products and how they fit in the real space increases the purchase decision of consumers. AR provides personalized product recommendations based on tailoring customer shopping experience and leveraging consumer data of prior purchases or

preferences (56). Personalized suggestions, social media ads or mail improve attitude as well as behavioral intention and elicit positive responses to the app/brand (35).The context-driven personalization by which AR visualizes products in specific contexts, such as allowing their self-view, such as clothing and beauty apps (Sephora makeup, Ray-Ban virtual mirror, and virtual clothing) or with the projection of surrounding environment such as furniture apps (IKEA catalog). Consumer's readiness to relate with AR technology leads to more interactive an engaging experience thereby increasing customer satisfaction (32). Positive customer attitudes and behavioral intentions are eventually triggered by mental imagery that is influenced by perceived interactivity with AR (26). Increased website interactivity leads to a more engaging flow experience. For instance "Wanna Kicks" AR app allows a consumer to virtually try on various shoe brands (Nike, Adidas, etc.) by walking with a virtual shoe and interacting with the product by changing its specifications, providing an appealing experience. AR improves the direct product experience by providing comprehensive product information, which is effective while shopping using AR applications. Online product presentations using augmented reality (AR) and one's self-image (vs a model) are seen as more informative than those without AR presentations (32, 67). The cognitive value is obtained from experience through the process of decision-making and knowledge/information attained and serves as a major facilitator for action by mental stimulation (18, 68). Mental imagery plays a major part in information processing where consumers can imagine and trigger by storing it in their memory which is further used to induce experiences and affect their responses as well (26).In general, customers feel confused during the phase of decision-making whether to make a purchase or not as it's hard to visualize how the product will look alike in the real environment. During online purchases consumers who are not able to visualize the product on their lead to adverse retail or service experiences, where AR comes to the rescue by providing mental imagery of products by augmenting the real world along with information and visuals and allowing consumers to unload imagery processes onto AR devices resulting in behavioral change (46, 64).

Consumers can create a visual appeal and 3D product illustration by rotating and moving the product from all viewpoints using augmented reality against the twisted impacts of mental imagination (21, 46). One of the major challenges among online retailers is to minimize the challenge of intangibility(20, 69), though it can be imagined while experiencing the product can be answered by improving the assessment of consumer goods using product images that fit relative background which is managed through the compensation of cost with the help of mental imagery and increases intent to purchase(65, 70) By evoking vivid mental images that result in an enhanced sensory experience, AR stimulates strong emotional and behavioral responses. The Sensory values which are formed by sensory and affective characteristics of new innovative technologies such as AR/VR/MR integrate the physical world, resulting in consumer values that comprise sensory stimulation and emotional connection (2, 18), similarly, a product or service gains emotional value when it affects or evokes certain feelings. In general, humans use their five senses such as sight, touch, hearing, smell, and taste to perceive the world, which implies the same in the retailing context as well (71). The sensory features aid as a major aspect in both traditional and modern retailing thereby influencing consumer behavior (21). The role of consumer emotions influences retailers in various ways such as how consumers feel or react, and what kind of emotion they experience while make a purchase (19, 21). Consumer experience was found to be improved by a customer's level of positive emotions, such as pleasure, entertainment, and enthusiasm throughout the consumer journey. AR with motion capture in an online apparel environment allows consumers to visually try the clothes by generating real-time video images and providing prior intention to purchase thus consumers perceive emotional value influencing hedonic and utilitarian benefits (21, 26). Consumers can explore and experience consumption behavior by drawing on their vivid memories. Vivid memories of consumers in online shopping can be triggered by interactive AR experiences generated by 3D visual representations using real-time product visualization, audio, and haptic effects. Visual and emotional appeal and purchase intentions are

considered major outcomes of multisensory technologies in the retailing environment. The haptic states can be considered as either autotelic (natural touching of product for fun) or instrumental (non-spontaneous), and its need for touch is to the extent users prefer to make use of tactile devices to progress the information, in the case of AR experience, self-referencing is initiated from haptic states (21, 27). The multisensory interplay between the cues among the consumers such as visual-tactile interplay results in cognitive, emotional, and behavioral responses, where visual cues (perception of goods by what consumers see with their eyes) and tactile (touch the product before actual purchase) influence user experience and decision making processes (27). Consumers can feel sensations as they interact with virtual objects with the help of integrated gloves, outfits, or other touch devices that have been incorporated by augmented reality, virtual reality, and mixed reality technologies (2, 16). Voice assistants like augmented reality/Virtual reality, Google Assistants, and Amazon Echo enhances several applications for both retailers and consumers by combining voice blend, recognition, and language processing systems thereby promoting consumer's decision-making and trust using perceived auditory control along with social interaction (27). The auditory cues influence the emotions and buying behavior of the consumers. The use of background noise or music in a retail setting improves customer experiences and brand perception. The values attained by linking to the social environment of the consumers involve their behavior and relationships with others through interactivity with the product and how consumers need to perceive themselves or perceived by others (38, 61). Social interaction serves as a major perspective in the retailing environment as there are huge consumers where one's experience can impact other people such as families and friends. People with greater social needs might be more receptive to technologies that make it easier for them to connect with others, leading to more fulfilling social experiences than other people. AR in social media allows continuous usage intent of mobile applications, generating and sharing content among others to enhance value creation and enhance brand-consumer relationships (1, 13, 20, 68).

Results and Discussion

Previous research has established that AR enhances positive consumer experience in a shopping environment, which results in increased purchase intention, brand loyalty overall customer satisfaction (31) as AR enhances experience throughout the consumer shopping journey, minimizing the risk and uncertainty of decision making thereby increasing behavioral intentions (3, 9, 42). In contradiction to this, some studies have resulted in negative consumer experiences and failed to satisfy consumers' expectations based on privacy concerns (72) which reduce the positive impact of decision comfort, cognitive dissonance, perceived intrusion, technological limitations, media irritation, and mainly contingency factors leading to negative experience. (35, 56) Though the purchasing experience in AR is more engaging and immersive, sometimes users feel it difficult to analyze actual purchases and augmented purchases; hence perceived usefulness and ease of use experience are essential to attain experiential values for consumers (32, 41). AR characteristics allow consumers to virtually try on and visualize 3D products, providing mental imagery of products in real real-time environment thereby reducing the risk associated with making a purchase online and providing informed purchase decisions (3, 16, 69). However, there are some studies stating that various features of AR in a retail environment affect consumer purchases resulting in the problem of overload (14). Some studies have shown that AR characteristics enhance the positive relationship between value co-creation and the purchase intention of consumers influencing the buying behavior of consumers and their experience. In some cases AR does not influence the consumer decision-making process because of product categories such as high and low involvement product categories and depending upon the context whether it's in-store or online (22, 46). AR applications allow consumers to visualize the product in a real-time environment eliciting positive responses but it also leads to negative responses due to the rise in perceived intrusiveness of the shopping experience. Based on the examination of two different AR apps, one allows consumers to try on themselves and the other focuses on their surroundings, resulting in growing positive and

decreasing negative persuasive consequences. AR allows direct and indirect product experience as well, while AR apps provide direct (rich sensory) and Non-AR apps foster indirect (less sensory) experience based on the amount of control the user has over the experience. (27, 28) AR allows consumers with enjoyable experiences resulting in positive emotions but in some cases, consumers who are unfamiliar with the use of AR technology persuade unpleasant feelings of intrusiveness resulting in negative emotions. This study provides a complete overview of AR-induced experiential value in hybrid retailing. Based on a systematic review analysis of the inclusion and exclusion process, a total of 162 articles were considered for this review, thereby proposing a conceptual framework and improved futuristic suggestions. AR in the retail environment enhances customer experience dimensions to create experiential value resulting in value creation and decision-making (8, 18). AR retail encompasses functionalities such as virtual try-on, 3D product visualization, interactivity, product informativeness, and personalization which influence consumer behavior and their shopping processes. AR acts as a bridge between online and offline retail shopping resulting in engaging customer experience, increased customer satisfaction, loyalty and improved decision-making. AR generates experiential value by exploring dimensions of consumer experience such as cognitive value, obtained by the process of enhancing users' cognitive/ mental imagery (70), including the learning process, memory retention and decision-making (18, 68), sensory values result in immersive engagement utilizing emotional connection and sensory stimulation (27), social values provide enhanced social interaction and user /community engagement (61) within the specific social background resulting in the overall experience. AR in retail benefits or creates value for both consumers and retailers, The potential of augmented reality technology to generate value creation will only grow as it develops, giving rise to creative retail context and immersive experience and attracting consumers. This study indicates a multidimensional approach for experiential value creation exploring the dimensions of cognitive, sensory, and social values thereby fostering a complete

understanding of purchase, proposing rich sensory/emotional experiences, and high chances of purchase and improved social engagement. However this study includes specific limitations, this study limited articles only from the Scopus database as it is considered as a common database for performing the review, therefore some of the papers relating to retail consumer experience of AR in other databases remain unidentified. It is challenging to draw generalizations regarding the efficacy of augmented reality (AR) in retail as the value-in-use experience differs in retail depending on different technologies across different contexts (43, 44, 48). Though this review found contradictory and contrasting evidence indicating that AR has benefits in the retail environment by increasing positive and engaging customer engagement, resulting in better decision-making, many studies do not adequately address potential negative experiences such as cognitive overload, media irritation, intrusiveness, or privacy concerns (72). Considering these obstacles is essential for a fair assessment of AR's function in retail. According to previous research, AR properties strengthen the favorable association between value creation and customer purchase intention, impacting consumer buying behavior and shopping experience (42). In certain circumstances, AR does not directly affect the customer decision-making process since the process is influenced by varying categories of retail settings, types of applications, and product types and involvement (9, 13).

Conclusion

This study provides a general perspective of AR-induced experiential value and its impact on value creation and consumer behavior in the retailing environment. The present study is analyzed by a systematic review of literature, thereby generating a framework on how AR in the retail environment impacts consumer behavior and explores the necessity of consumer experience dimensions such as cognitive, sensory, and social values with AR-generated experiential values which aid in value creation among consumers. Future work for the studies is described below.

Potential Facilitators with other Emergent Fields and Technologies

AR and experiential value creation can be studied with various possible facilitators such as emotional and cognitive needs, consumer personal traits, demographics, familiarity with AR, and locus of control. Further, AR customer's retail experience can be determined based on product categories. The study is performed stating the role of innovative AR technology mainly in the retailing context; hence future research can be made based on other emergent immersive technologies such as Virtual reality, mixed reality, and extended reality along with different types of experiences valued by consumers during shopping. Further studies could examine the influence of different value categories like sensory, cognitive, or social values on consumer behavior in a range of domains, such as marketing, healthcare, education, design, advertising, and business.

Consumer Perception and Behavior

Since the study is mainly focused on value-in-use experienced by consumers, future studies can examine consumer perception of AR with an ease of decision-making, increase purchase intent and value co-creation by integrating various sources and how AR enhances consumer perception with the brand, discover how AR and Value Creation are influenced by consumer perceptions and omnichannel integration. Examine the psychological effects AR has on people's feelings, thoughts, and general mental health when they purchase, as well as how these effects impact the creation of value and analyze the psychological aspects of consumers' perceptions of augmented reality in retail settings. The role of consumer usage is less studied among different product categories and AR applications which enhance perceived ease of use, perceived ownership, perceived risk, perceived augmentation, perceived aesthetics, and perceived control to co-create customer values.

AR Multidimensional Values among Different Contexts

A complete and augmented consumer journey is facilitated by the multifaceted values obtained from augmented reality experiences in retail which is essential in generating value creation in the ever-changing retail industry for both

customers and retailers. The field of AR experience with specific multidimensional values such as entertainment value, utility, functional value, Educational value, environmental, brand, and marketing values is least explored as the new experiential value scale provides an overall view that includes social value, cognitive value, hedonic value, and ethical values. Future researchers may focus on the role of experiential value influencing each dimension thoroughly based on different environmental conditions, and changing consumer needs, and also explore AR-generated values as context-explicit ones. Future studies can examine the importance of AR retailing in enhancing the consumer-brand relationship and value creation in social media which lead to better development in the consumer experience. There is a need for retailers to determine various kinds of experiences created by using AR in a different environment and which is appreciated the most throughout the consumer's shopping journey.

Abbreviation

AR- Augmented Reality.

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Keerthana D: Literature review, Methodology, Writing and original drafting. Gemini V Joy: Conceptualization, Proof Reading.

Conflict of Interest

The authors declare that they have no conflict of interest.

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