International Journal of Entrepreneurship and Management Practices
IJEMP
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

INTERNATIONAL JOURNAL OF ENTREPRENEURSHIP AND MANAGEMENT PRACTICES (IJEMP)
www.gaexcellence.com/ijemp

VIRTUAL TRY-ON AND THE DIGITAL SHOPPING EXPERIENCE: A SYSTEMATIC LITERATURE REVIEW USING SCOPUS AI–ASSISTED ANALYSIS

Nurliyana Abas[1*], Hanani Hussin[2], Azlyantiny Mohammad[3], Siti Khadijah Rafie[4]

[1] Faculty of Business and Management, Universiti Teknologi MARA (UiTM), Malaysia
liyana322@uitm.edu.my https://orcid.org/0009-0004-3073-1338
[2] Faculty of Business and Management, Universiti Teknologi MARA (UiTM), Malaysia
hanani12@uitm.edu.my https://orcid.org/0009-0007-2314-2828
[3] Faculty of Business and Management, Universiti Teknologi MARA (UiTM), Malaysia
azlyantiny@uitm.edu.my https://orcid.org/0009-0001-3291-4523
[4] Faculty of Information System, Universiti Teknologi MARA (UiTM), Malaysia
khadijahrafie@uitm.edu.my https://orcid.org/0009-0000-6927-3187
*Corresponding Author

Article Info:

Article history:
Received date: 15.01.2026
Revised date: 19.02.2026
Accepted date: 04.03.2026
Published date: 17.03.2026

To cite this document:

Abas, N., Hussin, H., Mohammad, A., & Rafie, S. K. (2026). Virtual Try-On and The Digital Shopping Experience: A Systematic Literature Review Using Scopus Ai–Assisted Analysis. *International Journal of Entrepreneurship and Management Practices, 9* (33), 221-249.

Abstract:

Virtual try-on (VTO), a fashion and appearance-based e-commerce category that largely consists of augmented reality (AR) and artificial intelligence (AI)-based applications, has become significant in improving online product evaluation. Although academic interest has grown, the available literature is still divided into technological, experiential, behavioural, and organisational views, which restricts a holistic view of how VTO generates value in online retail business contexts. This research is based on a systematic literature review of VTO publications, which are indexed by Scopus and were obtained on 13 February 2026. The search strategy was structured and implemented using titles, abstracts, and keywords, with concept mapping and thematic synthesis conducted through the help of AI. Five dominant thematic clusters are identified in the analysis and include technological innovation, consumer experience, behavioural responses, marketing and retail strategy, and e-commerce performance outcomes. Based on Stimulus-Organism-Response (S-O-R), this study formulates a conceptual framework that suggests that VTO technological features (stimulus) positively influence consumer experiential judgements (organism) which in turn positively impact organisational performance through behavioural responses (adoption and purchase intention). The study contributes to the literature as it brings together multidisciplinary results in a logical theoretical framework that connects the

International Journal of Entrepreneurship and Management Practices
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

technological capability, psychological mechanisms, behavioural responses, and e-commerce performance outcomes. The results offer conceptual development and operational directions to retailers who wish to adopt immersive digital technologies in online retailing.

DOI: 10.35631/IJEMP.933014

Keywords:

Consumer Behaviour, Customer Experience, Digital Retail, Purchase Intention, Systematic Literature Review, Virtual Try-On

Introduction

The rapid evolution of digital commerce has transformed the retail sector since people can now search, compare, and buy products without necessarily having to physically inspect them. E-commerce is convenient and easily accessible, but it limits physical inspection of products, especially in cases of fashion and appearance-based shopping, where fit, size, and appearance harmony are essential factors to consider (Kim and Forsythe, 2008; Hwangbo et al., 2020). This drawback heightens uncertainty in product evaluation, decreases the level of purchase confidence, and leads to an increase in the rate of product returns, which adversely influences the level of consumer satisfaction and the efficiency of retailers (Islam et al., 2024; Kashyap et al., 2024).

One of the recent digital retail technologies is virtual try-on (VTO), which is developed to solve these issues. VTO provides consumers with the ability to visualize products on their body or a personalized virtual mirror with the help of augmented reality, computer vision, and deep learning (Nurhidayanti et al., 2024; Vandanapu et al., 2024). Simulating the physical fitting process, VTO makes product information richer and allows consumers to better evaluate the suitability of the product before buying (Srinivasan et al., 2025). In turn, the growing scholarly and managerial interest in VTO has been drawn by the fact that it is a mechanism that can be used to minimise the experiential distance between the physical and online retail settings.

In this study, VTO refers to AI- and AR-enabled virtual fitting systems used in fashion and appearance-based online shopping contexts, where visual compatibility plays a critical role in decision-making. In addition to technological capability, VTO plays a great role in consumer psychological and behavioural reactions in online stores. The existing research shows that VTO

influences cognitive and affective judgement, such as perceived usefulness, enjoyment, perceived risk, and attitudes towards technology-based retail interfaces (Costa et al., 2025; Nguyen et al., 2025). These ratings, in turn, influence the behavioural intentions, including purchase intention, adoption intention, and online activities (Chidambaram et al., 2023; Akter et al., 2025). The development of artificial intelligence, augmented reality, and personalised avatar modelling have also increased the realism and interactivity of VTO systems, which have increased its ability to support consumer decision-making (Al'mayahee et al., 2025; Jegadeesan et al., 2025).

Although research on VTO is increasing, the literature remains fragmented among various disciplines such as computer science, marketing, consumer behaviour, and information systems. Most research is done on technological development or behavioural outcomes in isolation, without providing a combined view of technological innovation, consumer experience, behavioural outcomes, and e-commerce performance outcomes in a conceptual framework (Islam et al., 2024; Hwangbo et al., 2020). Moreover, the fast development of AI-driven VTO systems has also introduced new themes and technological opportunities that are yet to be synthesised inside the bigger picture of digital consumer experience and online processes of making decisions.

With the aim of filling this gap, this research paper undertakes a systematic literature review that will be guided by AI-assisted analysis to synthesise and integrate the information on VTO and its impact on the online shopping experience and purchase decision-making. In particular, the paper uses concept mapping and emerging theme analysis with the assistance of Scopus AI to determine prevailing research sets, conceptual connections, and changing research trends. On the basis of this synthesis, a conceptual framework is formed to describe the impact of VTO on consumer experience, behavioural responses, and e-commerce performance outcomes.

The synthesis is conceptualized on the basis of the Stimulus-Organism-Response (S-O-R) model (Mehrabian and Russell, 1974) that describes the idea of the influence of technological stimuli on the internal psychological states and the consequent behavioural outcomes. This theoretical perspective allows the incorporation of technological capability, experiential evaluation, behavioural intention and organisational performance in a single explanatory tool.

This research makes contributions to the literature in a number of ways. First, it provides a systematic synthesis of cross-disciplinary VTO research with a systematic and AI-assisted analysis. Second, it incorporates major technological, psychological, and behavioural processes underlying the effects of VTO on the online buying decisions. Third, it suggests a theoretically supported conceptual model shedding light on the strategic position of VTO in digital retail setting and provides a platform on which future empirical and theoretical studies can be based. Lastly, the results offer managerial implications to retailers and technology developers who might want to improve consumer experience and e-commerce performance outcomes with the use of immersive technologies.

The rest of the paper will include the methodology and AI-assisted systematic review procedure and then descriptive analysis, conceptual classification, and framework development. It is followed by theoretical contributions and the implications to a practical setting, as well as the limitations and recommendations concerning the new research directions. The paper will end up with an overview of major findings.

International Journal of Entrepreneurship and Management Practices
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

Methodology

The paper uses an AI-supported structured literature synthesis methodology to examine and synthesise the work of research regarding the virtual try-on (VTO) technology in online shopping settings. A systematic literature review helps researchers identify, appraise, and synthesise pertinent research studies by means of a transparent and replicable process and thus delivers a holistic perspective of a research field (Tranfield et al., 2003; Snyder, 2019). Since VTO studies cut across various fields of study, such as marketing, information systems, computer science, and consumer behaviour, an organized method will enable a logical assimilation of disseminated academic works.

A systematic search of the literature was performed on 13 February 2026 in the Scopus database. Title, abstract, and keywords were searched using predefined keyword combinations to filter down to publications pertaining to VTO, digital retail, consumer behaviour and e-commerce outcomes. No restriction was imposed on publication year to capture the full development of VTO research. Peer-reviewed journal articles and conference papers in Scopus indexed in English language were only considered.

Instead of manual record-by-record screening, the creation of the analytical corpus of this study was based on Scopus-generated thematic aggregation tools using AI. Synthesising conceptual relationships and finding predominant patterns of research was done with the help of the AI-supported outputs, such as summaries, expanded summaries, concept maps, and emerging theme analyses. In line with this, this paper adopts an AI-assisted thematic synthesis methodology, which prioritises conceptual amalgamation instead of procedural screening listing.

Search Strategy

A systematic key word plan was established to remove studies that pertained to virtual try-on (VTO), online retail settings, consumer experience as well as online purchase behaviour. The search query was developed using key constructs that had been developed through existing literature and narrowed down to provide an effective coverage of research areas of interest. The last search query used in the Scopus is shown in Table 1.

Table 1: Search Strategy

Element	Description
Database	Scopus (Scopus AI–assisted analysis)
Search approach	Concept-based search using Boolean operators and Scopus AI concept expansion
Search string	("virtual try-on" OR "virtual fitting" OR "augmented reality" OR "3D fitting") AND ("online shopping" OR "e-commerce" OR "digital retail" OR "internet shopping") AND ("customer experience" OR "user engagement" OR "consumer behavior" OR "purchase intention") AND ("technology" OR "innovation" OR "software" OR "application")
Search fields	Title, abstract, and keywords
Search date	13 February 2026

Inclusion criteria	English-language, peer-reviewed journal articles and conference papers related to VTO, online shopping, consumer behaviour, customer experience, and e-commerce outcomes
Exclusion criteria	Studies unrelated to retail, consumer behaviour, or VTO applications in digital shopping contexts
Analysis method	AI-assisted concept mapping, emerging theme analysis, and linked concept path summaries
Review approach	AI-assisted systematic thematic synthesis

Source: (Scopus AI, 2026)

The search was narrowed down to peer-reviewed journal articles and conference papers to get both technologies and behavioural research related work. These types of publications are especially useful to the VTO area as there are fast changes in technology and the interdisciplinary disposition of the field that cuts across marketing, information systems, computer science, and consumer research.

Screening and Corpus Construction

This study employed AI-generated literature summaries, expanded summaries, concept maps, emerging themes, and linked concept paths in Scopus to build the analytical corpus as opposed to manual record-by-record screening. By combining and generalising indexed publications using the search query set, these AI-assisted results allow systematic detection of dominating themes and conceptual connections. The authors went through the synthesised thematic outputs to ascertain that they aligned with VTO applications within digital retail and consumer behaviour processes. In this manner, this paper represents an AI-assisted thematic synthesis and not a conventional PRISMA-like systematic review with clear numbers of screening.

Study Selection and Characteristics

By using AI-generated summaries and connection of concepts, the study was able to find important research clusters and thematic connections in the VTO literature. The AI-assisted system organises and synthesises indexed journal articles, which makes it possible to find key studies and conceptual trends without extracting screening statistics manually. This methodology is consistent with new methodological practices that integrate the use of artificial intelligence in order to improve literature synthesis and conceptual mapping (Donthu et al., 2021).

Table 2 summarises the characteristics of the analysed studies such as authors, publication year, source, document type, and research focus. The table gives a synopsis of some representative works and reflects the interdisciplinary feature of VTO research in the marketing, technological, computer science, and consumer behaviour spheres.

International Journal of Entrepreneurship and Management Practices
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

Table 2: Summary of Selected Studies Included in The Review

Authors	Year	Title	Source	Research Domain	Study Type	Key Focus
Akter, M. S.; Khan, S. A.; Sultana, N.; Islam, M. T.	2025	*Unpacking how virtual try-on technology influences consumer decision-making in online shopping: Insights from Bangladesh*	Human Behavior and Emerging Technologies	Consumer behaviour / E-commerce	Quantitative empirical (PLS-SEM survey)	Influence of VTO on consumer decision-making; hedonic-motivation model; gender moderation
Costa, A.; Marozzo, V.; Abbate, T.	2025	*Consumers' attitudes toward virtual try-on technology: An extended TAM model*	International Journal of Retail & Distribution Management	Marketing / Technology adoption	Quantitative empirical (SEM survey)	TAM extension; perceived enjoyment, innovativeness, environmental benefits; purchase intention
Hwangbo, H.; Kim, E. H.; Lee, S. H.; Jang, Y. J.	2020	*Effects of 3D virtual try-on on online sales and customers' purchasing experiences*	IEEE Access	Retail technology / E-commerce analytics	Mixed methods (case study + sales data analysis)	Impact of 3D VTO on online sales and return rate reduction
Islam, T.; Miron, A.; Liu, X.; Li, Y.	2024	*Deep learning in virtual try-on: A comprehensive survey*	IEEE Access	Computer vision / AI / Retail technology	Systematic technical review	Deep learning models for VTO; datasets; evaluation metrics; system limitations
Jegadeesan, R.; Pachiappan, K.; Mythili, B.; Irin Sherly, S.; John Augustine, P.; Samson Isaac, J.	2025	*AI in augmented reality and virtual reality applications*	International Conference on Emerging Trends in Engineering and Technology	AR/VR / Consumer behaviour	Mixed methods (literature review + survey)	AR-VTO behavioural intention; usefulness; immersion

International Journal of Entrepreneurship and Management Practices
IJEMP
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

Authors	Year	Title	Source	Research Domain	Study Type	Key Focus
Kashyap, M.; Dambhare, H.; Kumar, R.; Singh, A. K.; Saxena, S.	2024	*VTO: Human shape and dimension estimation for virtual try-on*	Lecture Notes in Networks and Systems	Computer vision / Body modelling	System development study	Body dimension estimation; AR integration; return reduction
Kim, J.; Forsythe, S.	2008	*Adoption of virtual try-on technology for online apparel shopping*	Journal of Interactive Marketing	Marketing / Consumer behaviour	Quantitative empirical (survey; TAM-based model)	Adoption of VTO; perceived risk; enjoyment; technology anxiety
Konarzewski, B.; Reiner, M.	2023	*Augmented shopping: Virtual try-on applications in eyewear e-retail*	Communications in Computer and Information Science	E-retail / Consumer behaviour	Qualitative empirical	Impact of VTO in eyewear retail; shopping behaviour shift
Nguyen, Q. H.; Hanh, T. T.; Hanh, N. L. M.; Nhi, N. D. L.; Anh, D. N.; Linh, H. T.	2025	*The impacts of virtual try-on for online shopping on consumer purchase intention: The moderating role of technology experience*	Cogent Business & Management	Marketing / E-commerce	Quantitative empirical (SEM)	Purchase intention; moderating role of technology experience
Nurhidayanti, C.; Misbullah, A.; Farsiah, L.; Nazaruddin; Budiansyah, A.; Junidar	2024	*Implementation of virtual try-on for clothing products using deep learning methods*	International Conference on Electrical Engineering and Informatics	Deep learning / Image synthesis	System implementation study	GAN-based VTO; model evaluation (SSIM, IS scores)
Srinivasan, G.; Gadad, A. R.; Danaraddi, A. G.; Kagwade, A.; Bhavana, M. C.	2025	*Virtual matching system with virtual try-on (VTON) for enhanced online shopping experience*	International Conference on Data Science and Information Systems	Computer vision / E-commerce	System development + performance evaluation	GAN-based matching system; personalization; alignment accuracy

International Journal of Entrepreneurship and Management Practices
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

Authors	Year	Title	Source	Research Domain	Study Type	Key Focus
Vandanapu, S. G.; Dasari, H.; Desai, A. K.; Rani, K. M. S.	2024	*Virtual try-on for fashion ecommerce platform: A review*	Advances in Computing, Control, and Telecommunication Technologies Conference	Retail technology / AR systems	Technical review	Motion-gesture VTO systems; system architecture; integration challenges

Source: (Scopus AI, 2026)

Table 2 shows the type and extent of the studies that are incorporated in this review. The articles span from 2008 to 2025, which shows the gradual advancement of VTO studies - the initial research on the technology implementation and the recent examination of behavioural, experiential, and performance implication studies.

Disciplinarily, the literature shows that it is highly interdisciplinary, and it includes marketing, consumer behaviour, retail technology, computer vision, and artificial intelligence. The initial studies were mainly concerned with the processes of consumer acceptance and adoption. For example, Kim and Forsythe (2008) studied the role of perceived risk, enjoyment, and technology anxiety in VTO adoption. Still more recent research also stretches to behavioural outcomes of purchase intention and decision-making which apply modern theoretical frameworks like the Technology Acceptance Model (Costa et al., 2025) and hedonic-motivation system adoption model (Akter et al., 2025).

In terms of their methodology, the literature has been a mixture of a balanced set of consumer-based empirical studies, system development research, and technical reviews. Consumer attitudes, behavioural intention, and technology acceptance are studied using survey-based structural equation modelling through the extensive use of this method (Costa et al., 2025; Nguyen et al., 2025). These studies provide an understanding of the psychological processes of VTO adoption. In parallel, system-oriented studies focus on the development of technologies and assessment of their performance, especially in deep learning, computer vision, and generative adversarial networks, to improve the level of realism, personalisation, and accuracy (Nurhidayanti et al., 2024; Srinivasan et al., 2025).

There is growing practical and commercial relevance demonstrated in the literature. According to Hwangbo et al. (2020), 3D VTO systems increase online sales and reduce product return rates, highlighting the strategic importance of immersive digital technologies. Similarly, technical surveys and reviews (Islam et al., 2024; Vandanapu et al., 2024) report advancements in system development, dataset creation, and model precision, which can lead to enhanced consumer experience and improved e-commerce performance outcomes.

This development demonstrates the maturity of VTO technology and its rising strategic role in the online retail space. These features are the basis of the further descriptive and conceptual analysis of VTO research.

International Journal of Entrepreneurship and Management Practices
IJEMP
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

Scopus AI–Assisted Analytical Procedure

Scopus was used to determine the conceptual patterns, themes, and research directions in the VTO literature using AI-supported analytical features. As shown in Figure 1, the analytical process will involve two main tools concept mapping and emerging theme analysis, both tools were used to support the formulation of the conceptual framework.

The concept mapping was initially used to recognize the major constructs and conceptual associations in the study of VTO. This analysis will give a pictorial illustration of the association between technological development, consumer experience, behavioural feedback as well as the e-commerce outcomes. Concept mapping permits creating conceptual bridges between studies and thus allows a systematic understanding of how VTO has been discussed within interdisciplinary realms.

Thereafter, an emerging theme analysis was employed to determine the existing and changing research trend in VTO in online shops. In this analysis, the conceptual and technological progress has been identified, such as the utilisation of artificial intelligence, personalised VTO systems, and immersive retail technologies. These tendencies can be attributed to the current development of VTO in the direction of smarter, more flexible, and user-friendly digital retail solutions.

Figure 1 illustrates that by combining concept mapping with the development of an emergent theme, it is possible to identify both conceptual relationship and developmental patterns within the literature in a systematic way. This analytical process as a whole forms the basis of the following conceptual classification and structure as will be presented in the next sections.

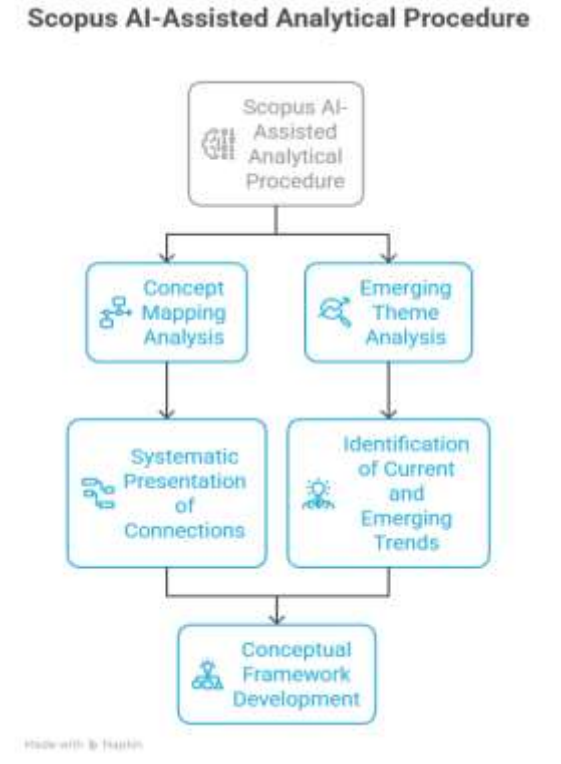

Figure 1: Scopus AI-Assisted Analytical Procedure

Source: Napkin AI (2026)

International Journal of Entrepreneurship and Management Practices
IJEMP
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

Conceptual Synthesis Approach

Conceptual synthesis is based on the outcomes of the descriptive and thematic analysis to create a comprehensive framework that describes the role of VTO in online shopping situations. The synthesis is developed to explain the linkages between technological innovation, consumer experience, behavioural responses and e-commerce outcomes.

It is a structured and complete synthesis of VTO studies that will be presented by applying the principles of systematic literature review and using AI-aided concept mapping and thematic analysis. The approach of integration preconditions the following theoretical formulation and the practical implications of the digital retailing sphere.

Descriptive Analysis

This part entails the descriptive review of the literature resting on AI-assisted analytical processes, i.e. concept mapping and emerging theme analysis. These analytical deliverables can depict the conceptual map, the areas of knowledge of interest, and the emerging research trends in the area of VTO in online shopping.

Concept Map Analysis

The concept map offers a graphical demonstration of the main conceptual associations in the VTO research field. As shown in Figure 2, VTO serves as the central construct connecting technological innovation, consumer experience, consumer behaviour, marketing strategy, and e-commerce performance outcomes. This framework shows the integrative nature of VTO in the digital shopping experiences and purchase processes.

The technological basis of the VTO systems is advanced digital technologies, such as augmented reality, computer vision, and deep learning, which allow realistic and interactive visualisation of the products (Nurhidayanti et al., 2024; Kashyap et al., 2024; Vandanapu et al., 2024). Such features contribute to visual accuracy and personalised simulation, which increases the capacity of consumers to determine the compatibility of products and visual aspects in the online space (Srinivasan et al., 2025).

In addition to the technological capability, the concept map shows the effect of VTO on consumer experience. Engagement, perceived usefulness and perceived enjoyment are improved by interactive and immersive features in the shopping process (Kim and Forsythe, 2008; Costa et al., 2025). These experiential improvements build trust in product testing and support better decision-making.

The concept map also shows how the consumer experience is connected to the behavioural responses. According to previous studies, VTO positively affects the attitude to online shopping and purchase intention by improving the perceived value and alleviating the uncertainty associated with the product (Nguyen et al., 2025; Chidambaram et al., 2023). These behavioural reactions further lead to the improved e-commerce performance outcomes in terms of higher conversion rates, lower return rates, and greater customer satisfaction (Islam et al., 2024; Hwangbo et al., 2020).

International Journal of Entrepreneurship and Management Practices
IJEMP
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

Generally, the concept map positions VTO at the centre of a multi-layered association involving technological innovation, experiential assessment, behavioural intention, and e-commerce performance outcomes in digital shopping contexts.

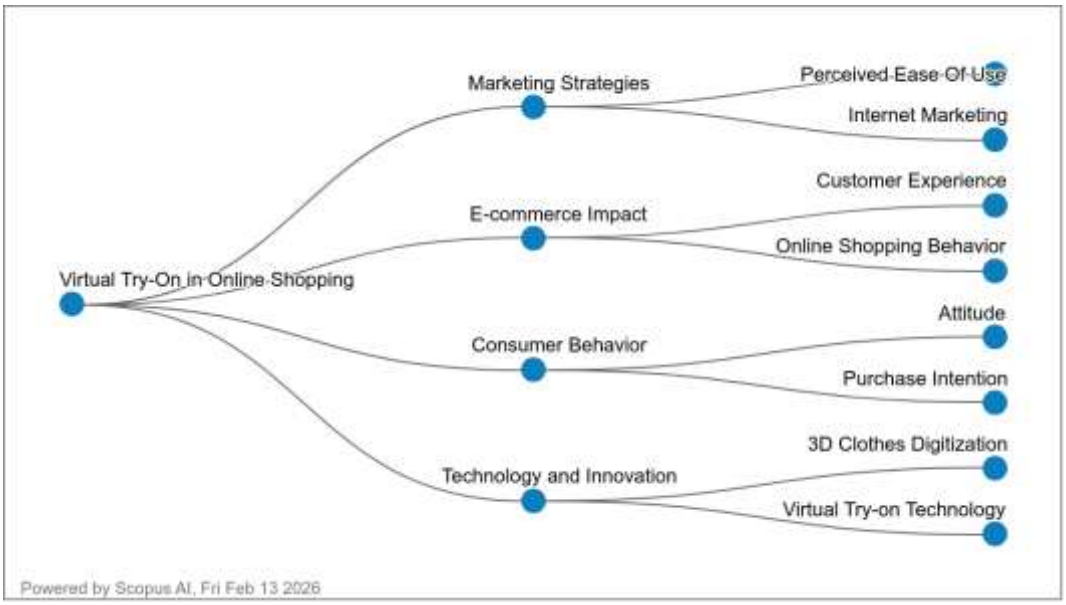

Figure 2: Concept Map Illustrating The Conceptual Structure of Virtual Try-On Research in Online Shopping Environments

Source: Scopus AI (2026)

Emerging Theme Analysis

The new theme analysis reveals significant research trends that determine the development and usage of VTO in digital retail environments. These themes are based on the patterns that are accumulated in the reviewed literature, and they demonstrate how technological innovation, consumer experience and behavioural outcomes would be increasingly integrated in the VTO research.

The development of augmented reality, artificial intelligence, and computer vision technologies to make VTO systems more lifelike, more precise, and more interactive is one of these themes. Such technologies enhance the accuracy of body measurements, the quality of visualisation of delivered garments, and tailored product simulation, which enhances the effectiveness and usability of the systems (Al'mayahee et al., 2025; Nurhidayanti et al., 2024). The ongoing progress in deep learning and body-modelling methods has enhanced the ability of VTO systems to facilitate informed consumer decisions in online shops (Islam et al., 2024; Kashyap et al., 2024).

The second theme of emergence is connected with the impact of VTO on consumer behavioural reaction, such as purchase intention, technology acceptance, and online engagement. The available literature reveals that the perception of usefulness, enjoyment, immersion, and interactivity can be used to determine the attitudes toward VTO (Costa et al., 2025; Nguyen et al., 2025; Akter et al., 2025). These results reveal the joint significance of both functional performance and experiential value in expressing consumer reactions to immersive retail technologies.

International Journal of Entrepreneurship and Management Practices
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

Other recent research also focusses on the increased role of personalisation and immersive experience in improving the effectiveness of VTO. Custom body features and adaptive visualisation applications offer more realistic and relevant simulation, which boosts consumer confidence and comfort when making decisions online when viewing products (Srinivasan et al., 2025). This is a part of a wider trend of smart and customer-friendly online shopping.

Overall, the themes determined above suggest that VTO studies no longer revolve around technological feasibility, but represent a broader scope that explores experiential, behavioural, and performance impacts. These thematic developments are what give conceptual basis to the classification and framework development as discussed in the next section.

Conceptual Classification of Virtual Try-On Research

The literature reviewed can be structured into five general conceptual themes based on the descriptive analysis and concept mapping. These include technological innovation, consumer experience, consumer behaviour, marketing and retail strategy and e-commerce performance outcomes. Such a categorisation is consistent with the methodology of systematic literature reviews, which focus on thematic synthesis to categorise prior research into logical conceptual groups (Donthu et al., 2021).

This categorisation offers a systematic insight into the manner in which VTO has been studied through various research points of view. It explains the correlation between technological capability, psychological processes, behavioural consequences and organisational performance. The categorization also shows that the study of VTO is multidisciplinary and incorporates the perspectives of information systems, marketing, artificial intelligence, and consumer behaviour.

Table 3 refers to a conceptual categorization of the analyzed studies in terms of their main research interest and theoretical input.

Table 3: Conceptual Classification of Virtual Try-On Research Based on Thematic Focus

Research Theme	Representative Studies	Core Constructs Examined	Conceptual Role in VTO Ecosystem	Key Contribution to Knowledge	Identified Research Gap
Technology Innovation	Islam et al. (2024); Nurhidayanti et al. (2024); Kashyap et al. (2024); Al'mayahee et al. (2025)	Deep learning, computer vision, augmented reality, body modelling, image synthesis	Enabling infrastructure	Provides technological foundation for realistic garment simulation, body dimension estimation, and visual accuracy	Limited integration between technical system performance and consumer behavioural outcomes

International Journal of Entrepreneurship and Management Practices
IJEMP
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

Research Theme	Representative Studies	Core Constructs Examined	Conceptual Role in VTO Ecosystem	Key Contribution to Knowledge	Identified Research Gap
Consumer Experience	Costa et al. (2025); Jegadeesan et al. (2025); Kim and Forsythe (2008)	Perceived usefulness, perceived enjoyment, immersion, interactivity, experiential value	Psychological response mechanism	Demonstrates how VTO enhances experiential quality and perceived value in online shopping	Insufficient understanding of how experience translates into long-term behavioural outcomes
Consumer Behaviour	Nguyen et al. (2025); Akter et al. (2025); Chidambaram et al. (2023); Srinivasan et al. (2025)	Attitude, behavioural intention, purchase intention, decision-making, technology experience	Behavioural outcome mechanism	Explains how VTO influences consumer attitudes and purchase intentions	Lack of integrated models linking technology capability, experience, and behavioural intention
Marketing and Retail Strategy	Vandanapu et al. (2024); Konarzewski and Reiner (2023)	Retail adoption, digital engagement, consumer interaction, virtual retail implementation	Strategic application layer	Demonstrates how VTO enhances customer engagement and retail competitiveness	Limited empirical evidence on strategic implementation effectiveness across retail contexts
E-commerce Performance Outcomes	Hwangbo et al. (2020); Liu et al. (2020)	Sales performance, conversion rate, return reduction, customer satisfaction	Organisational outcome layer	Provides empirical evidence of VTO impact on business performance	Lack of comprehensive frameworks linking technology, experience, behaviour, and performance

Source: (Scopus AI, 2026)

The synthesis illustrated in Table 3 suggests that VTO research has several layers which are interrelated with each other, starting with the technological infrastructure and reaching organisational performance outputs. This ability is enabled through technological innovation, which facilitates realistic virtual simulation. Consumer experience is the psychological assessment of such technological characteristics. These experiential effects, in turn have an

impact on behavioural results such as purchase intention and decision-making. The behavioural responses, in turn, have an organisational outcome, which can be measured in terms of higher sales performance and lower product return rates.

This stratified development highlights the necessity of a combined framework on how technological capability is converted into experiential, behavioural and organisational value creation in the digital retail settings.

Technological Innovation

The former thematic group relates to the technological basis and formation of the system of VTO. The areas of research under this category are enabling technologies, including augmented reality, deep learning, computer-vision, and gesture-recognition systems to aid in VTO functionality. Such technologies provide realistic visual simulation and personalised representation of products (Nurhidayanti et al., 2024; Kashyap et al., 2024; Vandanapu et al., 2024).

Research in this line looks at the functionality of systems, their performance and technical refining. Technological advances in artificial intelligence and generative models have enabled greater accuracy in clothing simulation and body measurement, thus improving the visualisation of the clothing fit (Islam et al., 2024; Al'mayahee et al., 2025). This sort of development leads to reliability of systems and easiness to integrate into digital retail systems.

There are also a number of studies that additionally conceptualise VTO as a strategic online retail innovation. VTO removes major flaws of online shopping experiences by allowing customers to have a more immersive and interactive experience when evaluating a product (Hwangbo et al., 2020). These technological opportunities form the basis of the increased customer experience and the better results of online shopping.

Consumer Experience

The second thematic area identifies the impact of VTO on consumer experience during online shopping situations. The studies in this field examine psychological reactions and experience reactions (such as perceived usefulness, perceived enjoyment, immersion, and interactivity) (Costa et al., 2025; Kim and Forsythe, 2008).

VTO increases the quality of product visualisation and the level of information, and it will allow assessing products in greater detail and personalisation. This enhanced evaluative functionality increases perceived usefulness and contributes to a more engaging shopping experience (Srinivasan et al., 2025). The interactive and immersive experience of VTO also makes consumers more involved and entertained, leading to more positive digital shopping experiences.

Moreover, VTO improves consumer confidence when it comes to testing the product fit and appearance. Such practical advantages determine consumer attitudes and perceptions, creating a strong impression of psychological processes that govern future behavioural attitudes.

International Journal of Entrepreneurship and Management Practices
IJEMP
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

Consumer Behaviour

The third thematic area is concerned with behavioural reaction to VTO. Research in this stream explores purchase intention, adoption of technology and web interaction.

The literature shows that VTO has a positive effect on consumer online shopping perception and purchase intentions, boosting the perceived value and decreasing the perceived risk (Nguyen et al., 2025; Chidambaram et al., 2023). Enhanced product evaluation leads to an increase in decision endorsement and an increase in purchase completion.

Perceived usefulness, enjoyment and ease of use are considered to be psychological drivers, and they are important factors affecting behavioural intentions (Costa et al., 2025; Akter et al., 2025). The results match the existing technology adoption theories that highlight the importance of cognitive and experiential judgements as the determinants of behavioural effects.

Besides, personal traits, including technological experience and digital familiarity, determine behaviours. Customers who have a higher level of technological competence are more likely to show a better attitude and intention towards the adoption of VTO systems (Nguyen et al., 2025).

E-Commerce Outcomes

The fourth thematic group discusses e-commerce performance outcomes linked to the adoption of VTO. Studies within this stream examine key e-commerce indicators such as conversion rates, product return rates, customer satisfaction, and sales performance.

High accuracy of purchase decision making enabled by VTO translates into greater purchase conversion and lower return rates since the consumer makes a more reliable decision (Islam et al., 2024; Hwangbo et al., 2020). VTO enhances the level of confidence in the decision-making and transactional efficiency by removing uncertainty in the evaluation of products.

VTO is also associated with the satisfaction of the customers through the engaging and personalised shopping experiences. When customers are satisfied, it reinforces their loyalty and helps to effectively sustain the performance of businesses in online retailing (Kashyap et al., 2024).

Strategically, VTO improves the level of customer engagement and the competitiveness of the digital retail. These are some of the benefits that highlight its significance as a strategically significant technological capability in the modern online business.

Summary of Conceptual Classification

Overall, the conceptualization points to the fact that the VTO studies represent a multi-layered process that connects technological innovation, consumer experience, behavioural reactions and organisational performance. Immersive simulation is made possible by technological capability; experiential appraisals influence consumer perception, behavioural responses influence purchase decisions, and consumer behaviour finally results in quantifiable retail outputs.

This thematic synthesis gives the conceptual grounding of the formulation of an integrated explanatory framework. The next section expands on these themes to explain how technological innovation is transformed into experiential, behavioural, and organisational value in digital retail environments.

Discussion and Conceptual Framework Development

This section summarises the results of the systematic review and develops a conceptual explanation of the effects of VTO on e-commerce performance outcomes. The synthesis integrates technological, experiential, behavioural, and organisational perspectives to provide a comprehensive account of value creation in digital commerce environments. Rather than positioning VTO merely as a technical feature, this paper conceptualises it as a multi-stage process in which technological capability shapes consumer psychological evaluations and behavioural responses, which ultimately influence organisational performance.

The conceptual classification reflects a series of the relationship between the technological innovation, consumer experience, behavioural responses and e-commerce performance outcomes. In VTO, the technological developments allow the interactive and realistic visualisation of products, which strengthens the experiential evaluation and builds behavioural intention. These behavioural reactions will then be converted into quantifiable organisational performances. Table 4 is the thematic synthesis of the reviewed studies that summarises these layers as a systematic conceptual mechanism.

Although Table 3 presents the literature in a thematic manner, based on research focus, table 4 goes a step further to state the causal links between technological capability and consumer experience, behavioural intention, and organisational outcomes. This synthesis shows that VTO is not just a technological solution but a strategic value-creation process that has an impact on consumer decision making and digital retail effectiveness.

The determined causal chain is consistent with the Stimulus-Organism-Response (S-O-R) model (Mehrabian and Russell, 1974) that is commonly used in the field of information systems and consumer behaviour studies. The S-O-R model assumes that external stimuli affect internal cognitive and affective evaluations, which in turn have an impact on behavioural reactions. Technological capability is the stimulus in the context of VTO, as it allows the visualisation of the products in an immersive and interactive way. These stimuli influence internal evaluations- perceived usefulness, enjoyment and experiential value- which are the organism component. Such psychological reactions in turn affect behavioural intentions, such as technology adoption and purchase decisions and constitute the response aspect. Lastly, the resulting behavioural outcomes create organisational implications such as higher sales performance, lower return rates, and customer satisfaction.

The aligning of the theoretical assumption with the S-O-R framework enhances the conceptual basis of the proposed model and gives a systematic account of the process through which VTO creates value based on technological, psychological, behavioural, and organisational levels.

International Journal of Entrepreneurship and Management Practices
IJEMP
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

Table 4: Thematic Synthesis and Conceptual Mechanism of Virtual Try-On Research

Stage	Key Factors	Evidence from Studies	Observed Outcome	Conceptual Mechanism
Technology innovation	Augmented reality, deep learning, GAN, computer vision	Islam et al. (2024); Nurhidayanti et al. (2024); Kashyap et al. (2024)	Enables realistic garment visualisation and body simulation	Provides technological capability that reduces product uncertainty and enables virtual product interaction
Consumer experience	Interactivity, enjoyment, immersion, perceived usefulness	Costa et al. (2025); Jegadeesan et al. (2025); Kim and Forsythe (2008)	Enhances perceived value and user engagement	Translates technological capability into positive experiential evaluation
Consumer behavioural response	Attitude toward technology, behavioural intention, purchase intention	Nguyen et al. (2025); Akter et al. (2025); Chidambaram et al. (2023)	Increases adoption intention and purchase decision likelihood	Converts positive experience into behavioural intention and decision-making
E-commerce outcomes	Sales growth, reduced return rates, customer satisfaction	Hwangbo et al. (2020); Liu et al. (2020); Vandanapu et al. (2024)	Improves sales performance and operational efficiency	Represents organisational outcomes resulting from consumer behavioural response

Source: (Scopus AI, 2026)

The thematic synthesis specified in Table 4 demonstrates a logical cause and effect development of the technological innovation on the organisational performance via psychological and behavioural processes. The use of technological potentials, like augmented reality, deep learning, and computer vision, can help to make virtual interaction with products real, increasing the perception of usefulness and experience. These favourable experiential judgments reinforce behaviour intentions, such as adoption and purchase decisions. These behavioural outcomes, in its turn, lead to better organisational performance, which is manifested in an increase in sales conversion and a decrease in the return rates. It is a sequential process which gives the conceptual framework of this paper its theoretical foundation.

Technological Innovation as the Foundation of Virtual Try-On Systems

The VTO systems are based on technological innovation as the enabler of their functionality in digital retail settings. VTO incorporates innovative computational technologies, including augmented reality (AR), computer vision, artificial intelligence (AI), and deep learning, to create a realistic image of product appearance and fit (Islam et al., 2024; Nurhidayanti et al., 2024; Srinivasan et al., 2025). Such technologies enable consumers to see clothes on customised virtual images, which is one of the crucial shortcomings of online shopping: the inability to touch products before purchase.

International Journal of Entrepreneurship and Management Practices
IJEMP
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

The VTO systems have become extremely accurate, realistic, and sizable thanks to recent developments in deep learning and computer vision. Deep learning models allow body part division, clothing reconstructions, and image synthesis, which will lead to a more customized and natural clothing visualisation (Islam et al., 2024; Al'mayahee et al., 2025). On the same note, the estimation of body dimensions and virtual garment modelling enhance the accuracy of the fit simulation which enhances system reliability and usability in digital retail contexts (Kashyap et al., 2024). These technological advances decrease the uncertainty associated with products and increase the capacity of consumers to determine the suitability of a product in the online setting.

In addition to visual precision, the technological development makes it more interactive and entertaining. The interactive product evaluation is achieved through features like gesture interaction, real-time visual feedback, and personalised virtual modelling, which turn passive product viewing into an interactive product evaluation (Vandanapu et al., 2024; Konarzewski and Reiner, 2023). All these capabilities produce the technological infrastructure in which VTO manipulates consumer perceptions, experiences and behavioural responses.

Enhancement of Consumer Experience Through Virtual Try-On Technology

On the basis of this technology, VTO also optimizes consumer experience through product evaluation and product interactivity and decision support. Increased visual perception and customisation improves perceived usefulness and ability to rate product suitability, which minimizes purchase uncertainty (Costa et al., 2025; Hwangbo et al., 2020). The evaluative capability is also enhanced which improves confidence in decision-making and commitment to purchase.

In addition to functional value, VTO provides experiential value in the form of enjoyment, immersion and interaction. The existing literature proves that such factors as perceived enjoyment, interactivity, and immersion have a positive effect in attitudes to VTO systems and enhance the overall assessment of the digital retail platforms (Kim and Forsythe, 2008; Jegadeesan et al., 2025). Interactive visualisation helps the customer to be more emotionally involved with the products, a factor that makes shopping more fulfilling and meaningful.

VTO also enhances the perceived control and confidence in decisions. It improves the perceived quality of decisions and trust in online retail platforms because it allows evaluating each product in its own way and makes it look real (Nguyen et al., 2025; Akter et al., 2025). These experiential processes are important psychological processes where the technological capability influences the consumer attitudes and consequent behavioural reactions.

Generally speaking, VTO is an intervening experiential process between technological innovation and behavioural intention in the digital retail setting.

Influence on Consumer Behavioural Responses

Improved consumer experience is a core element that influences behavioural reactions in online shopping situations. Personalised and realistic visualisation of products enhances the accuracy of product evaluation, which has a positive impact on the purchasing intention, adoption of technology, and online interaction (Nguyen et al., 2025; Chidambaram et al., 2023). Less

uncertainty coupled with greater confidence enhances willingness of consumers to make transactions.

These behavioural outcomes are motivated by both cognitive and affective factors. The functional assessment of the technology takes the form of cognitive assessment (including perceived usefulness and system effectiveness), and the emotional engagement is reinforced by experiential factors (including enjoyment, immersion, and interactivity) (Costa et al., 2025; Akter et al., 2025). Such combined functional and experiential benefits lead to a positive attitude toward VTO systems, which enhance behavioural intentions and the likelihood of purchase.

These effects are also moderated by individual characteristics. Higher technological familiarity and digital competence mean that the consumers with higher technology familiarity will experience VTO as helpful and convenient to use, thus having higher adoption intention (Nguyen et al., 2025). This interplay with technological capability and users' perceptions highlights the significance of the system design and user preparedness in the determination of behavioural effectiveness.

In sum, the literature shows that VTO positively influences consumer behaviour by improving product evaluation, strengthening experiential engagement, and reinforcing favourable attitudes toward online stores. These behavioural processes represent a key mechanism through which technological innovation translates into e-commerce performance outcomes.

E-Commerce Performance Outcomes and Organisational Implications

The behavioural implications of VTO eventually map into the performance of organisations in the digital retail settings. VTO allows more objective and confident assessment of the products, which increases the purchase conversion rate and sales (Hwangbo et al., 2020). Improved visualisation minimises indecisive behaviour and leads to more confident buying behaviour.

Besides boosting sales, VTO enhances efficiency in operation by lowering the rates of product returns. Real-time visualisation of fit and appearance before buying makes using the product less likely to be inappropriate and therefore reduces the cost of returns and logistics issues (Hwangbo et al., 2020; Srinivasan et al., 2025). This is an operational advantage that improves the efficiency of the supply chain and overall profitability of the retail store.

Long-term customer satisfaction and loyalty is also attributed to VTO. The interaction with the product, which is personalised and involves the user, enhances the general retail experience and increases consumer attitudes toward digital platforms (Costa et al., 2025). Greater satisfaction leads to trust, loyalty and continued interaction- major points of long-term organisational performance.

Strategically, VTO allows retailers to gain a competitive edge due to increasing customer experience, decision accuracy, and effectiveness of digital retail. These results indicate that VTO is not just a technological invention but an aspect of strategy that creates values in the digital commerce ecosystems.

International Journal of Entrepreneurship and Management Practices
IJEMP
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

Conceptual Framework Development

The proposed study develops a conceptual framework based on the thematic synthesis presented in Table 4, explaining how VTO contributes to value creation in digital retail settings. The model integrates technological capability, consumer experience, behavioural responses, and organisational outcomes within a unified explanatory framework. By combining technological, psychological, behavioural, and organisational perspectives, the framework provides a comprehensive account of how VTO influences online shopping processes and e-commerce performance outcomes.

The proposed conceptualisation is based on the Stimulus-Organism-Response (S-O-R) model (Mehrabian and Russell, 1974) that is used to explain the impact of external stimuli on internal cognitive and affective evaluations with resulting behavioural consequences. The S-O-R framework has been extensively used in studying digital retailing to analyse the impact that technology-enhanced setting has on consumer experience and behaviour (Eroglu et al., 2001). In the VTO context, technological capability functions as the stimulus, which allows the consumer to interact with products by visualising realistically and simulating interactively.

These stimuli in the form of technologies affect the organism component, which is an internal cognitive and experiential assessment. VTO increases the perceived usefulness, interactivity, immersion, and confidence in product review (Costa et al., 2025; Kim and Forsythe, 2008). These psychological evaluations form the process by which the technological capability determines perceptions of digital retail experiences by the consumer.

These internal assessments lead to the response component that is manifested in the behavioural outcomes in the form of technology adoption, engagement, and purchase intention (Nguyen et al., 2025; Akter et al., 2025). Favourable experiential ratings enhance behavioural intentions and raise the chances of consumers using VTO as a decision support tool whenever engaging in online shopping.

These behavioural responses are measurable e-commerce performance outcomes at the organisational level. Higher purchase intention and the confidence to decide to make the conversion rates higher, lower the product returns, and enhance the customer satisfaction rates (Hwangbo et al., 2020). The results indicate the value-creating capability of VTO in the strengthening of consumer experience and operational performance.

Together, the framework advocates a sequential cause and effect process whereby technological capability increases consumer experience, a process that leads to behavioural reaction and organisational performance. This integrative framework builds on the existing body of literature by providing a broad explanation of how VTO creates value at various levels of the digital retail system.

International Journal of Entrepreneurship and Management Practices
IJEMP
EISSN : 2600-8750
Volume 9 Issue 33 (March 2026) PP. 221-249

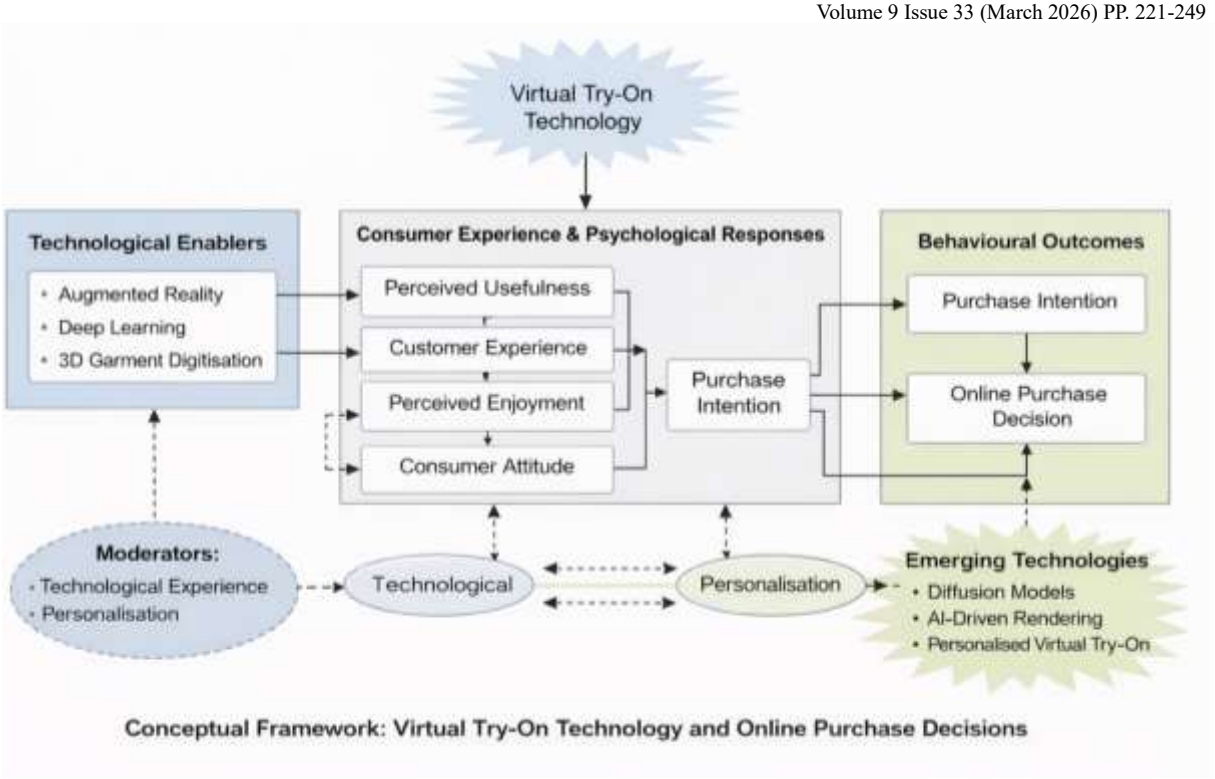

Figure 3. Conceptual Framework Illustrating the Role of Virtual Try-On Technology in Influencing Consumer Experience, Behavioural Responses, And E-Commerce Outcomes.

Source: (Scopus AI, 2026)

As shown in Figure 3, technological capability is the facilitating stimulus that guides consumer experiential and cognitive appraisals. The perceived usefulness, perceived enjoyment, and the overall shopping experience are improved by the presence of core technological aspects such as augmented reality, deep learning, and 3D digitisation of garments. These experiential and cognitive appraisals then affect consumer attitudes and behavioural intentions, specifically purchase intention and online purchase decisions.

In line with the S-O-R model (Mehrabian and Russell, 1974; Eroglu et al., 2001), the stimulus is the technological capability, the organism is the consumer experiential and cognitive considerations, and the response consists of behavioural consequences, including purchase intention and online purchase behaviour.

The model also assumes that behavioural responses mediate the relationship between technological capability and organisational performance. When positive behavioural intentions are applied, there are better e-commerce performance outcomes such as increased sales conversion, minimized product returns and augmented customer satisfaction. These results expand the strategic importance of VTO as a consumer-modifying innovation and organisational value generator.

The framework also accounts for moderating factors that include technological experience and personalisation. The more technologically familiar or personally customised VTO, the more consumers tend to form positive experiential judgments and behaviour intentions. These

moderating factors emphasize the interplay between system design and user attributes in determining retail effectiveness.

In general, the suggested framework presents a hierarchical model of the progression of technological innovation, consumer experience, behavioural reaction, and organisational performance in digital retail environments.

Theoretical Contributions

To deepen the conceptual classification and framework development, this paper contributes to theoretical knowledge on the subject of VTO, by outlining an integrated value-creation process that connects technological capability, consumer experience, behavioural reactions, and organisational performance. This study offers a systematic interpretation of the translation of technological innovation into value in the digital retail settings by integrating multidisciplinary evidence sources in marketing, information systems, artificial intelligence, and consumer behaviour literature.

The main contribution lies in integrating technological and behavioural perspectives into a single conceptual model. Research on VTO has been presented in fragmented perspectives, with some studies focusing on system performance, realism, and computational accuracy (Islam et al., 2024; Nurhidayanti et al., 2024), while others examine consumer attitudes, adoption intention, and purchase behaviour (Costa et al., 2025; Nguyen et al., 2025). Such fragmentation has limited theoretical understanding of how technological capability translates into behavioural and organisational outcomes. The integration of these perspectives provides a holistic explanation of how technological innovation enhances consumer experience, which in turn stimulates behavioural responses and e-commerce performance outcomes.

Second, this research builds on the existing technology acceptance and consumer experience theories by bringing the conceptualisation of VTO to an experience-driven response mechanism instead of a technologically functional tool. Conventional models of technology acceptance focus on cognitive appraisals as the main predictors of adoption, including perceived usefulness and perceived ease of use (Kim and Forsythe, 2008; Costa et al., 2025). Nonetheless, VTO systems create immersive and interactive layers that affect experiential judgments such as enjoyment, engagement, and immersion. The synthesis in this paper also draws experiential value as one of the key drivers of consumer reaction to immersive retail technologies. This study, which combines cognitive and experience mechanisms, enhances the current technology adoption models and adjusts them to the interactive online retailing systems.

Third, the research is valuable because it explains a sequential process through which technological innovation influences organisational performance via psychological and behavioural mechanisms. Although previous studies have demonstrated positive associations between VTO and purchase intention (Nguyen et al., 2025; Akter et al., 2025), the broader causal pathway from technological capability to e-commerce performance outcomes has not been systematically conceptualised. This paper addresses that gap by proposing a structured model in which technological capability enhances experiential evaluation, which subsequently strengthens behavioural intention and ultimately contributes to improved sales performance, turnover, and customer satisfaction (Hwangbo et al., 2020). This articulation provides a coherent explanation of value creation in digital commerce environments.

Fourth, the study contributes to the strategic theory of placing VTO as a performance-facilitating digital capability as opposed to being a technological application. Most of the literature focuses on the technical advancement, i.e., deep learning templates, image generation, and body-modelling algorithms (Islam et al., 2024; Kashyap et al., 2024) with a relatively lower concentration on the overall strategic implications. Treating VTO as a capability that enhances the consumer experience and improves performance in digital retail transformation, this study widens the theoretical prism in which immersive technologies are perceived.

Lastly, the study has a methodological and conceptual contribution to the field of research because it provides a synthesis of VTO studies in a systematic and thematic way and constructs a theoretical framework. The proposed model explains the connections between technological ability, experience assessment, behavioural reaction and organisational performance, which offers a systematic base of empirical validation and theoretical enhancement of future studies on immersive retail and digital transformation.

Practical Implications

The study results provide valuable practical implications to e-commerce retailers, technology developers, and digital platform managers who want to maximise the consumer experience and organisational performance by implementing VTO. This study incorporates technology, behavioural, and strategic views to provide insights into how VTO can aid in digital retail transformation.

One of the main implications relates to the strategic application of VTO in order to decrease consumer uncertainty when evaluating products online. One of the main weaknesses of online stores is the inability to see and touch products before buying them, which leads to a higher risk perception and product return rates. VTO solves this issue by allowing customised and interactive visualisation of products, thus enhancing the accuracy of evaluation (Islam et al., 2024; Nurhidayanti et al., 2024). This capability can help retailers increase consumer confidence in their decision and also minimize operating expenses related to returns. As empirical evidence shows, the implementation of VTO increases sales performance and reduces the rate of returns, which supports its worth as a decision-support tool in online retail settings (Hwangbo et al., 2020).

The results also emphasize how vital consumer experience is in explaining VTO efficacy. More than the functional visualisation, VTO improves experiential value by being interactive, immersive, and enjoyable (Costa et al., 2025; Kim and Forsythe, 2008). Such practical advantages enhance interaction and create positive views of online platforms. Retailers must thus put greater emphasis on interface design, system responsiveness, visual realism, and ease of use in order to maximise their experiential impact. A quality user experience does not only make the experience more satisfying but also leads to repeat usage and brand loyalty.

The other implication is associated with behavioural outcomes, especially purchase intention and adoption of technology. The literature review indicates that favorable experiential assessments are an important predictor of higher purchase potential and platform interaction (Nguyen et al., 2025; Akter et al., 2025). VTO can be strategically incorporated in product pages and checkout processes to support decision-making and enhance conversion rates among retailers. Making VTO a behaviour-confidence feature can also enhance its behavioural effect.

System accuracy and technological performance are equally important. The loss of consumer trust and decreased adoption can result from inaccurate sizing, unrealistic visualisation, or poor system responsiveness (Kashyap et al., 2024; Islam et al., 2024). Technology developers are encouraged to focus on body modelling accuracy, quality of image synthesis and real-time processing to increase reliability. The deep learning, computer vision, and AR capabilities require constant investment to ensure the credibility of systems and competitive advantages.

On a more global strategic level, VTO is a digital strength that can assist differentiation of retailers in technology-heavy markets. VTO enhances engagement, satisfaction, and customer retention through immersive and personalised product interaction. With the business competition going digital, VTO can be incorporated into the customer experience as a long-term strategic resource to maintain business continuity.

Lastly, the implementation of VTO must be consistent with technological innovation and consumer needs. Retailers must embrace a user-centric attitude, where the design of the system must be guided by usability, accessibility, and the experience of the system. The level of technological sophistication is not enough; it must be effective in terms of its ability to be transformed into positive consumer perceptions and behavioural responses.

Limitations and Future Research

Although the study presents a comprehensive and systematic review of the literature on VTO, there are various limitations to it, which should be taken into account and guide the further course of research.

To begin with, the methodological approach is a conceptual limitation. The review used the Scopus database to determine thematic patterns and concepts with the help of AI-assisted analytical tools. Although such a strategy allows for effective synthesis of prevailing research themes and interdisciplinary connections, it does not provide descriptive screening counts as it is a characteristic of PRISMA-oriented systematic reviews. As a result, the research focuses on integration of concepts and not thorough quantification of inclusion and exclusion processes. To increase the methodological transparency, replicability, and full documentation, future studies can enrich AI-assisted synthesis with manual screening procedures.

Second, the literature was restricted to the publications that were included in the Scopus database. Even though Scopus is considered one of the largest and all-encompassing academic databases, other databases, including Web of Science, IEEE Xplore, or ACM Digital Library may have missed out on some relevant studies. Systematic reviews in the future can be performed using multi-database search methods to increase the coverage and minimise the chances of selection bias.

Third, the research is theoretical. The model has not been validated, despite the fact that it presents a theoretically sound framework that connects technological capability, consumer experience, behavioural reactions, and organisational performance. The suggested framework needs to be tested by future research, which can be conducted using quantitative methods, including, but not limited to structural equation modelling, experiments, or longitudinal research. Causal conclusions would be reinforced by empirical validation that will prove the existence of the offered relations.

Fourth, the literature reviewed is mainly dominated by the short-term consumer perception and technological development with relatively less emphasis on the long-term behavioural effects as well as the impact on the organisation. Future studies can be done on the outcome of customer loyalty, continuance intention, customer lifetime value, and long-term performance impacts. The longitudinal studies would help gain insight into the long-term effect of VTO on consumer behaviour and competitiveness at retail level.

Fifth, there is the issue of individual differences which should be explored further. Consumer responses to VTO systems may be moderated by variables like age, digital literacy, technological readiness, and previous experience and cultural context. These moderating effects need to be studied in future in an attempt to gain a better understanding of heterogeneity in adoption patterns and behavioural outcomes. These insights would aid more inclusive and targeting digital retail approaches.

Last, the further development of technology provides research possibilities. The current advancements in artificial intelligence, augmented reality, generative modelling, and personalisation algorithms will most likely transform VTO abilities. Future studies can look into the effect of enhancing realism, adaptive personalisation and system intelligence on trust development, the degree of engagement and the purchasing behaviour. The investigation of these dynamics will also contribute to the theoretical knowledge in the field of immersive technologies in digital commerce settings.

Conclusion

This paper presents a systematic literature review of VTO and its impact on online purchasing experiences and online purchase decisions. The research synthesizes multidisciplinary work in relation to marketing, consumer behaviour, artificial intelligence, and retail technology, through the use of AI to create an integrated understanding of VTO, consumer and organisational performance in digital retail settings.

According to the findings, VTO research has evolved across interconnected domains, such as technological innovation, consumer experience, behavioural reactions, and final outcomes of e-commerce. Innovations in the areas of augmented reality, computer vision, and deep learning have contributed to the increase in the system realism and functionality, making it possible to visualise a product more accurately in online shopping. These technical features enhance consumer experience through perceived usefulness, interactivity and engagement that subsequently affect behavioural outcomes such as purchase intention and technology adoption.

Notably, the synthesis reveals that VTO extends beyond technological functionality to generate measurable organisational value. The reviewed literature provides consistent evidence that VTO enhances decision-making accuracy, reduces product uncertainty, and improves customer satisfaction, conversion rates, and return rates. These findings position VTO as a strategic capability that strengthens consumer experience and improves e-commerce performance outcomes.

Following the thematic synthesis, this paper developed a conceptual framework grounded on a theoretical basis, combining technological capability, consumer experience, behavioural response and organisational outcomes as a single process. The framework explains how technological innovation is transformed into experiential evaluation, behavioural intention, and

eventual performance enhancement, providing a systematic clarification of value generation within digital retail ecosystems.

This study contributes to the literature by providing its systematic AI-assisted synthesis of VTO research, logical thematic classification, and progression of a comprehensive conceptual framework bridging technology, psychology, behaviour, and organisational performance. These contributions add to the theoretical knowledge of immersive technologies in digital commerce and provide the basis of further empirical validation.

In practice, the results emphasize VTO strategic significance as a decision support and experience improvement tool. A successful implementation has the potential to enhance consumer trust, accuracy in purchase, and maintain competitiveness in digital retail. Due to the constant evolution of digital commerce, VTO will probably become even more central in the process of providing immersive, interactive, and personalised shopping experience.

Overall, the present study highlights that VTO represents a technological innovation that has a strategic value because it can fill the experiential gap between physical and digital retail environments and provide quantifiable value to consumers and organisations.

Acknowledgements:	The authors would also like to thank Universiti Teknologi MARA (UiTM) Kedah Branch, Faculty of Business and Management, who assisted the study by giving institutional support, research facilities, and academic resources during the process of the study. The authors also acknowledge the Research Management Unit (RMU), UiTM Kedah, in facilitating research-related activities. The authors also extend special thanks to colleagues and peers who provided insightful input, constructive feedback, and academic support, which played a critical role in enhancing the quality and clarity of this manuscript.
Funding Statement:	This research received funding from the Research Management Unit (RMU) of Universiti Teknologi MARA (UiTM) Kedah Branch in Malaysia, on the Research Support Fund scheme at an amount of RM250. The funding organization did not influence the study design, data collection, analysis, and interpretation of results, or publication of this paper.
Conflict of Interest Statement:	The authors declare that there are no conflicts of interest regarding the publication of this paper. All authors have made significant contributions to this manuscript and overall, it has been approved by all authors to be submitted in the International Journal of Entrepreneurship and Management Practices (IJEMP).
Ethics Statement:	This study did not involve human participants, animals, or sensitive personal data requiring ethical approval. The study was a systematic literature review study done using secondary data that was provided in published academic materials indexed in Scopus. The authors assure that this study was conducted within the

framework of the established standards of academic integrity and ethical publication.

Author Contribution Statement:

Nurliyana Abas took the conceptualization of the study, research design, development of the methodology, systematic review of the literature process, Scopus AI-assisted analysis, development of the conceptual framework, and preparation of the original manuscript draft. Hanani Hussin participated in the literature review process, thematic data synthesis, and interpretation of thematic results as well as offered critical intellectual thinking in developing the conceptual framework and theoretical developments of the manuscript. The organisation of data, verification of reviewed literature, and the interpretation of technological and behavioural research themes were helped with by Azlyantiny Mohammad. She also contributed to manuscript revision and refinement. Siti Khadijah Rafie assisted the researcher in providing general academic supervision, a critical review of the manuscript, conceptual validation, and expert advice to improve the theoretical rigor, clarity, and the quality of academic scholarly study. Every author reread, edited and gave consent before submitting the final draft of the manuscript.

References

Akter, M. S., Khan, S. A., Sultana, N., & Islam, M. T. (2025). Unpacking how virtual try-on technology influences consumer decision-making in online shopping: Insights from Bangladesh. *Human Behavior and Emerging Technologies, 2025*(1), Article 7070627. https://doi.org/10.1155/hbe2/7070627

Al'mayahee, A. (2025). Deep learning-powered virtual try-on platforms: An extensive analysis of models, datasets, and prospects. *International Journal of Advances in Soft Computing and Its Applications, 17*(3). https://doi.org/10.15849/ijasca.251130.03

Chidambaram, V., Rana, N. P., & Parayitam, S. (2023). Antecedents of consumers' online apparel purchase intention through virtual try-on technology: A moderated mediation model. *Journal of Consumer Behaviour, 23*(1), 107–125. https://doi.org/10.1002/cb.2158

Costa, A., Marozzo, V., & Abbate, T. (2025). Consumers' attitudes toward virtual try-on technology: An extended TAM model. *International Journal of Retail & Distribution Management, 53*(13), 184–199. https://doi.org/10.1108/IJRDM-01-2025-0060

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research, 133*, 285–296. https://doi.org/10.1016/j.jbusres.2021.04.070

Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2001). Atmospheric qualities of online retailing: A conceptual model and implications. *Journal of Business Research, 54*(2), 177–184. https://doi.org/10.1016/S0148-2963(99)00087-9

Hwangbo, H., Kim, E. H., Lee, S., & Jang, Y. J. (2020). Effects of 3D virtual "try-on" on online sales and customers' purchasing experiences. *IEEE Access, 8*, 189479–189489. https://doi.org/10.1109/access.2020.3023040

Islam, T., Miron, A., Liu, X., & Li, Y. (2024). Deep learning in virtual try-on: A comprehensive survey. *IEEE Access, 12*, 29475–29502. https://doi.org/10.1109/access.2024.3368612

Jegadeesan, R., Pachiappan, K., Mythili, B., Sherly, S. I., Augustine, P. J., & Isaac, J. S. (2025). AI in augmented reality and virtual reality applications. In *Proceedings of the International Conference on Emerging Trends in Engineering and Technology*. IEEE. https://doi.org/10.1109/ICETETSIP64213.2025.11156490

Kashyap, M., Dambhare, H., Kumar, R., Singh, A. K., & Saxena, S. (2024). VTO: Human shape and dimension estimation for virtual try-on. In *Lecture Notes in Networks and Systems* (pp. 21–30). Springer. https://doi.org/10.1007/978-981-97-7360-2_3

Kim, J., & Forsythe, S. (2008). Adoption of virtual try-on technology for online apparel shopping. *Journal of Interactive Marketing, 22*(2), 45–59. https://doi.org/10.1002/dir.20113

Konarzewski, B., & Reiner, M. (2023). Augmented shopping: Virtual try-on applications in eyewear e-retail. In *Communications in Computer and Information Science* (pp. 289–299). Springer. https://doi.org/10.1007/978-3-031-42310-9_21

Liu, Y., Liu, Y., Xu, S., Cheng, K., Masuko, S., & Tanaka, J. (2020). Comparing VR- and AR-based try-on systems using personalized avatars. *Electronics, 9*(11), Article 1814. https://doi.org/10.3390/electronics9111814

Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. MIT Press.

Nguyen, Q. H., Hanh, T. T., Hanh, N. L. M., Nhi, N. D. L., Anh, D. N., & Linh, H. T. (2025). The impacts of virtual try-on for online shopping on consumer purchase intention: The moderating role of technology experience. *Cogent Business & Management, 12*(1), Article 2500774. https://doi.org/10.1080/23311975.2025.2500774

Nurhidayanti, C., Misbullah, A., Farsiah, L., Nazaruddin, Budiansyah, A., & Junidar. (2024). Implementation of virtual try-on for clothing products using deep learning methods. In *Proceedings of the International Conference on Electrical Engineering and Informatics* (pp. 40–45). IEEE. https://doi.org/10.1109/ICELTICs62730.2024.10776101

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research, 104*, 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039

Srinivasan, G., Gadad, A. R., Danaraddi, A. G., Kagwade, A., & Bhavana, M. C. (2025). Virtual matching system with virtual try-on (VTON) for enhanced online shopping experience. In *Proceedings of the International Conference on Data Science and Information Systems*. IEEE. https://doi.org/10.1109/ICDSIS65355.2025.11070440

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management, 14*(3), 207–222. https://doi.org/10.1111/1467-8551.00375

Vandanapu, S. G., Dasari, H., Desai, A. K., & Rani, K. M. S. (2024). *Virtual try-on for fashion ecommerce platform: A review*. *Grenze International Journal of Engineering and Technology, 10*(2), 5331–5334.