The 2nd ASEAN School of Business Network International Conference 2025

www.aseansbn.org August 7-8, 2025 Negeri Sembilan, Malaysia

AI-Powered Recommendation Systems and Customer Engagement Among International Students in Malaysia: The Mediating Role of Perceived Trust

Ghaith Abdulridha Mubdir [1], Sharizal Hashim [2*], Nadzirah Rosli [3]

[1,2,3] Faculty of Economics and Management, Universiti Kebangsaan Malaysia, Bangi, Malaysia,

[1]Administration and Economics, University of Thi-Qar, Thi-Qar, Iraq

*Corresponding Author: hsharizal@ukm.edu.my

ABSTRACT

AI has become an integral part of life, businesses, and marketing. This study examines how AI-powered recommendation systems influence customer engagement among international students in Malaysia, with a specific focus on the mediating role of perceived trust. Drawing on the technology acceptance model (TAM) and customer engagement theory, the research investigates the effects of three key recommendation system characteristics which are personalization, accuracy, and cultural relevance on customer engagement. It also examines the effect of perceived trust on customer engagement as well as the mediating role of perceived trust between AI-powered recommendation characteristics and customer engagement. Using a quantitative approach, data were collected from 297 international students, who are users of online retailers, through an online survey and analysed using Smart PLS 4. The results reveal that both personalization and accuracy positively enhance customer engagement, while perceived trust emerges as the strongest direct predictor. Mediation analysis demonstrates that trust partially mediates the personalization-engagement relationship and accuracy-engagement link, but does not significantly mediate cultural relevance's effects. These findings contribute to the literature on AI in consumer behaviour by highlighting trust's central role in technology adoption among transient populations. The study offers practical insights for online retailers seeking to optimize AI recommendations for international students, while identifying cultural relevance as an area requiring further investigation.

Keywords: AI recommendation systems, customer engagement, perceived trust, personalization, technology adoption

DOI: https://doi.org/10.64458/asbnic.v2.58

INTRODUCTION

The digital revolution of consumer markets has made AI increasingly important in customer interactions. Artificial intelligence-powered recommendation systems, which analyze massive quantities of user data to offer products, services, and content based on individual interests, are a major advance in this field [1]. These technologies are widespread across digital platforms, from Amazon to Netflix, changing how customers find and interact with digital offers [2]. The worldwide recommendation engine market, worth $2.69 billion in 2022, is expected to expand 30.6% through year

2030, highlighting its rising relevance in company strategy [3]. This rapid acceptance is due to their proven ability to increase consumer engagement, conversion rates, and average purchase values by providing highly relevant alternatives at crucial decision-making times [4].

In higher education markets, Malaysia is an excellent case study for AI system efficacy. Malaysia has over 100,000 foreign students from over 100 countries, making it the 11th most popular study destination [5]. These students have distinctive consumer behaviors and requirements compared to domestic students [6]. Provisional residents must quickly adjust to new market conditions while keeping some purchasing patterns from their home nations [7]. This makes them particularly dependent on digital platforms for grocery buying, meal delivery, trip reservations, and banking services, but also subject to recommendation algorithms that may not account for their unique circumstances [8]. Businesses using AI recommendation engines in this industry confront problems and possibilities due to these students' cultural, language, and logistical constraints [9].

In recent years, digital consumer engagement has expanded beyond click-through rates to include user experience. Modern engagement frameworks include cognitive, emotional, and behavioral components that impact user-platform interaction depth and quality [10]. These characteristics are complicated for overseas students due to their transitional life period and cross-cultural placement. How effectively suggestions match academic and cultural demands may affect cognitive engagement. System stress relief in new marketplaces may affect emotional engagement. Behavioral engagement may differ from domestic customers in buy frequency, basket composition, and platform loyalty. Businesses trying to grab this significant market niche through AI-driven customization must understand these peculiarities.

Limited information are available about recommendation systems' usefulness for specialized consumer groups like overseas students, despite rising study. Most research address generic consumer groups or algorithm development rather than user experience in unique cultural situations [11]. Limited research has examined how cultural adaptability, accuracy in foreign market situations, and interface localization impact temporary resident engagement [11]–[13]. This mistake is unexpected considering the worldwide economic impact of international student markets and their strong use of digital services. Trust is crucial to technology adoption [14], but its significance as a mediator between recommendation system attributes and engagement results is understudied cross-culturally. This is a crucial gap because trust mechanisms may differ for overseas digital ecosystem consumers compared to local users.

This study addresses these research gaps by evaluating how AI-powered recommendation systems affect consumer engagement among foreign students in Malaysia, focusing on trust. This study focuses on three characteristics of AI-powered recommendations that include personalization, accuracy of recommendations, and cultural relevance. The study deploys the Technology Acceptance Model by [15] explains AI system adoption through perceived usefulness and ease of use of AI-powered recommendations. Personalization and accuracy of recommendations as well as the cultural relevance are characteristics that are related to the usefulness AI-powered recommendations. In addition, the study uses the Customer Engagement Theory (CET) by [16] structures multidimensional user-platform interactions. This study focuses on the international students in Malaysia and their interaction and engagement with local online retailers. The study fills a gap in the literature by considering this group of consumers and by focusing on the culture as a determining variable of the customer engagement. The study also integrates technology adoption model with customer engagement theory to enhance the explanation of customer engagement. Further, the study focuses on trust as a critical factors that can explain the AI-powered recommendations and customer engagement. The following section discusses the literature review followed by research methodology, findings, discussion, and conclusion.

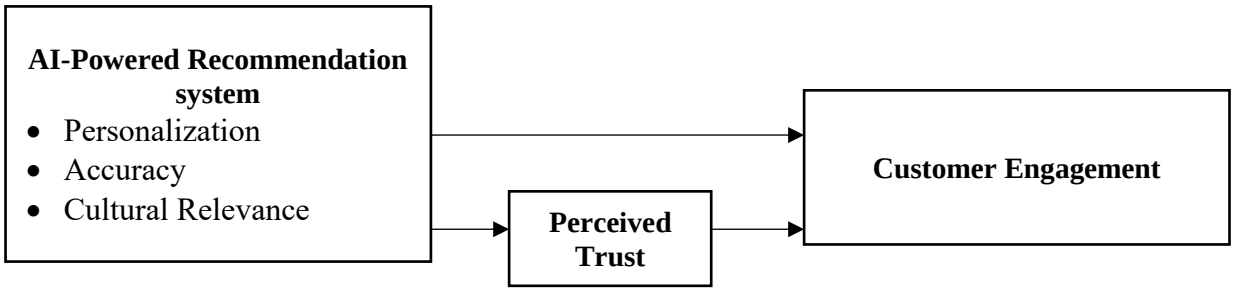
LITERATURE REVIEW

Theoretical framework

Two distinct theoretical views provide a solid framework for studying AI-powered recommendation systems and consumer engagement among international students in Malaysia. TAM asserts that perceived usefulness and simplicity of use affect an individual's likelihood of adopting and employing a technology. International students rate AI-powered ideas' usefulness in finding acceptable products and services in Malaysia's unfamiliar market. The recommendation interface's perceived ease of use is important for students with language barriers or unfamiliar platform designs. Though TAM is highly predictive across technologies [17], its usage in AI recommendation systems for transient, heterogeneous populations is understudied. Due to cultural and commercial differences, international students may need greater confidence in recommendation accuracy. In the context of international student, the role of trust in online retailers and AI-powered recommendation system can play an essential role in motivating or demotivating students from involving in such transactions. This study adds perceived trust as a crucial mediator to TAM.

The second theory is the CET [16] which provides a multidimensional picture of digital platform user interactions. According to [16], cognitive, emotional, and behavioral engagement elements influence user-platform relationship quality and depth. International students' cognitive engagement with AI suggestions depends on relevance and cultural appropriateness. When suggestions satisfy or disappoint cultural standards, emotional engagement occurs. Purchase frequency, click-through rates, and platform loyalty indicate behavioral engagement. This tripartite technique is beneficial for studying international students, whose interaction patterns may differ from local customers owing to temporary residence.

Including these theoretical perspectives completes this research of AI recommendation systems. TAM explains recommendation technology acceptance and use, whereas Customer Engagement Theory assesses its efficacy. This theoretical synthesis addresses a gap in research that has generally separated technological adoption and consumer participation, notably cross-culturally. The paradigm offers new ways to improve AI personalization for international students and other transient consumer groups in worldwide digital marketplaces. The technique also addresses context-sensitive digital consumer behavior research literature guidelines [12]. Transitory residents in foreign digital settings may not fit standard models for steady, homogeneous communities. Anchoring the study in existing theories and applying it to this setting maintains theoretical rigor and provides practical relevance for understanding international students' AI recommendation engagement. This method increases theoretical integration and gives organizations practical advice on serving this growing consumer niche.



Conceptual Framework and Hypotheses development

Based on TAM and CET as well as the review of the literature, this study proposed that AI-powered recommendation system which include personalization, accuracy, and cultural relevance is expected to affect positively the customer engagement. The study also proposes that trust can mediate the

relationship between AI-powered recommendations and customer engagement. Figure 1 shows the proposed framework of this study.

Figure 1: Conceptual Framework

Personal recommendations reduce search costs and decision fatigue by offering users their favorite options [18]. Previous studies referred to the importance of personalized experience in driving customer engagement [19]. AI enables companies to provide personalized marketing and AI-driven personalized techniques which has a positive impact on customer engagement [20], [21]. Due to unfamiliarity with local markets, international students require this alignment. Students are more likely to click, buy, or return to the platform if AI algorithms propose appropriate course, food delivery options, and convenient payment system. Therefore, in this study, the AI personalization in term of recommendations is expected to affect positively the customer engagement of international students in Malaysia dealing with online retailers.

H1: Personalization has a positive effect on customer engagement.

Accurate suggestions decrease user frustration and increase satisfaction [22]. Advising Muslim international students to dine at non-halal restaurants may discourage them in trusting the suggestions. In addition, suggesting luxury items form students is also an indication of poor accuracy [23], [24]. Therefore, the accuracy of AI-powered recommendation for specialized groups is relevant for their decision and engagement [25]. Accuracy of AI-powered recommendation has a positive impact on customer engagement [3]. Therefore, this study proposes that the accuracy of AI-powered recommendation can have a positive impact on customer engagement.

H2: Accuracy of recommendation generated by AI has a positive effect on customer engagement.

Cultural relevance in AI-powered recommendation systems has been widely recognized as a critical factor in enhancing customer engagement. When digital platforms align content, product suggestions, and services with users' cultural backgrounds, values, and holidays (e.g., Ramadan promotions or local payment options), users perceive the platform as more relatable and trustworthy, which fosters emotional connection and repeated interaction [26]. Cultural relevance is critical for engagement as shown in several previous studies because they help in understanding the local culture and provide culturally relevant suggestions [12], [27]. A study by [11] demonstrated that culturally adapted e-learning recommendations significantly increased student engagement and satisfaction across diverse cultural groups. However, contrasting evidence exists. A study by [13] found that cultural customization had no significant effect on customer engagement among users already highly familiar with globalized digital platforms, suggesting that for digitally fluent users in cosmopolitan contexts, personalization based on behaviour and preferences may outweigh the influence of cultural alignment. Therefore, this study proposed that cultural relevance suggestions has a positive effect on customer engagement.

H3: Cultural relevance recommendations have a positive effect on customer engagement.

User retention, conversions, and loyalty rise with trusted systems [10]. International students, who use digital platforms for daily needs, may rely more on AI for grocery delivery and travel recommendations [19]. International students are not fully aware of the local online retailers. Thus, when they interact with online retailers, they require a certain trust level because they face language barriers, unfamiliarity with local business practices, and concerns about online advice's cultural relevance. These challenges make digital platform involvement more trust intensive. In uncertain or dangerous situations, perceived trust affects technology adoption [14]. Trust psychologically turns AI recommendation system skills into user engagement. Trust decreases the risk of trusting foreign market suggestions for unfamiliar products or services [28]. Second, trust enables students accept proposals without verification, lowering cognitive load and enabling platform use [29]. Third, trust sustains affective participation in cross-

cultural encounters by providing emotional stability [30]. The effect of brand image on consumer behaviour intention by using AI was mediated by trust [31]. Trust also mediated the effect of self-efficacy and attitude toward using AI [32]. Therefore, this study proposes that trust mediates the effect of personalization, accuracy, and cultural relevance on customer engagement.

H4: Perceived trust affects positively the customer engagement.

H5: Perceived trust mediates the effect of personalization on customer engagement.

H6: Perceived trust mediates the effect of accuracy on customer engagement.

H7: Perceived trust mediates the effect of cultural relevance on customer engagement.

RESEARCH METHOD

This quantitative study examines AI-powered recommendation systems, perceived trust, and consumer engagement among international students in Malaysia. Therefore, the population of this study is the international students who are current studying in Malaysian universities. However, due to the lack of a detail contact of these students, a purposive sampling was selected to choose only those who are active in an online purchase and are interacting with local online retailers. A questionnaire that has been adopted from previous studies was selected as the instrument of data collection. The questionnaire consists of two sections. The first is related to the background information of the respondents followed by the second section which is related to the variables of the studies. The measurement of personalization was adopted from [33], measurement of accuracy was adopted from [22], and measurement of cultural relevance was adopted from [13]. The measurement of perceived trust was adopted from [14] while the measurement of customer engagement was adopted from [10].

Since the measurement was adopted from reliable sources, there was no validation was conducted. An online questionnaire was created using google application and a link was sent to respondents, and they were asked to forward it to those who are customers of online retailers. A total of 313 responses were collected. These responses are sufficient for using software such as Smart PLS 4 [34]. The data was checked for missing values and seven responses were identified as missing large number of answers and they were removed accordingly. The remaining 306 responses were further examined for outliers. A total of nine responses were identified as outliers. These responses were removed making the valid and complete responses account for 297 responses. The data was normally distributed because the value of skewness and kurtosis were less than absolute one as shown in Table 1. In addition, there is no multicollinearity issues because the value of variance inflation factor (VIF) is less than 5 and the tolerance is greater than 0.20 as shown in Table 1.

Table 1. Normality and Multicollinearity

Variable	Normality		Multicollinearity	
	Skewness	Kurtosis	Tolerance	VIF
Personalization	-0.81	-0.14	0.39	2.56
Accuracy	-0.625	0.312	0.44	2.27
Cultural relevance	-0.489	-0.085	0.52	1.92
Perceived trust	-0.301	0.215	0.61	1.64
Customer engagement	-0.423	0.005	0.48	2.08

FINDINGS

Profile of the respondents

A total of 297 respondents have participated in this study. The respondents are divided by 55.6% males and 44.4% females. The largest percentage of the respondents are in the age between 18-25 years (47.1%) and 38% in the age between 26-35 years while 14.8% are above 35 years. Table 2 shows the profile of respondents.

Table 2: Profile of Respondents

Category	Subcategory	Frequency (n)	Percentage (%)
Gender	Male	165	55.60%
	Female	132	44.40%
Age	18–25 years	140	47.10%
	26–35 years	113	38.00%
	Above 35 years	44	14.80%
Region	Middle East	122	41.10%
	Africa	68	22.90%
	Southeast Asia	71	23.90%
	Others	36	12.10%

Measurement Model

The measurement model was assessed by examining the factor loadings, reliabilities, and validities. All the factor loadings scored higher than 0.70 except for one item from accuracy and cultural relevance. The Cronbach's Alpha for all the variables were higher than 0.70 and for composite reliability were also higher than 0.70. The convergent validity was achieved because the value of average variance extracted (AVE) higher than 0.50. Similarly, the discriminant validity were achieved. The HTMT's correlation is less than 0.85. Table 3 shows the results of assessing the measurement model.

Table 3: Assessment of Measurement Model

Variable	CA	CR	AVE	1	2	3	4	5
Personalization	0.84	0.87	0.57	-				
Accuracy	0.82	0.86	0.54	0.63				
Cultural relevance	0.8	0.85	0.52	0.59	0.66			
Perceived trust	0.83	0.88	0.58	0.6	0.62	0.65		
Customer engagement	0.86	0.89	0.61	0.67	0.68	0.7	0.74	-

Structural Model

The structural model was assessed by checking the R-square, F-square, and path coefficient. The R-square of perceived trust as shown in Figure 2 is 0.426 and 0.542 for customer engagement. This indicates that 42.6% of perceived trust and 54.2% of customer engagement can be explained by the A1-powered recommendation systems. The F-square showed varied values between 0.001-0.15. Details of F-square is shown in Table 4. For testing the path coefficient is tested in the structural model. Figure 2 shows the structural model.

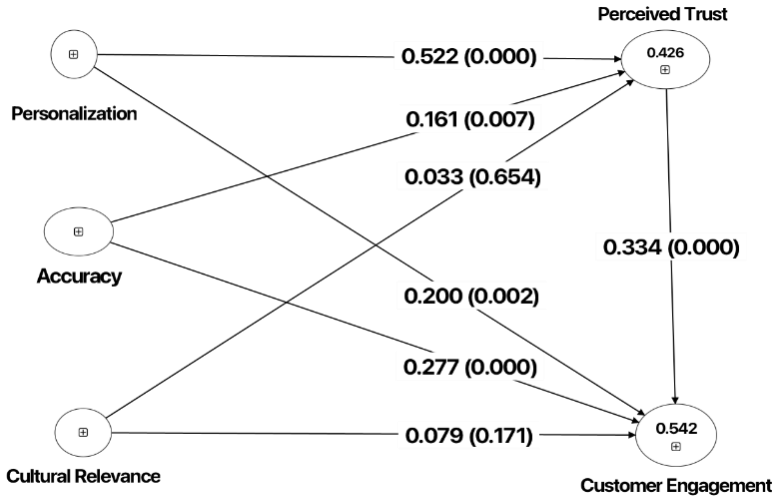


Figure 2: Structural Model

Table 4 shows the results of testing the hypotheses. The table shows the results of testing the direct effect of AI-powered recommendations on customer engagement. It also shows the mediating role of perceived trust. The table shows the path coefficient (B), standard deviation (Std.), T-value (T), and p-values.

Table 4: Result of the Hypotheses Testing

H	Path	B	Std.	T	P values	F-square
H1	Personalization -> Customer Engagement	0.200	0.065	3.085	0.002	0.090
H2	Accuracy -> Customer Engagement	0.277	0.052	5.347	0.000	0.100
H3	Cultural Relevance -> Customer Engagement	0.079	0.058	1.370	0.171	0.001
H4	Perceived Trust -> Customer Engagement	0.334	0.070	4.765	0.000	0.150
H5	Personalization -> Perceived Trust -> Customer Engagement	0.174	0.040	4.386	0.000	0.089
H6	Accuracy -> Perceived Trust -> Customer Engagement	0.054	0.023	2.373	0.018	0.031
H7	Cultural Relevance -> Perceived Trust -> Customer Engagement	0.011	0.025	0.444	0.657	0.001

As shown in Table 4, the results indicate that both personalization ($\beta = 0.200$, $p = 0.002$) and suggestion accuracy ($\beta = 0.277$, $p < 0.001$) considerably improve consumer engagement. The results indicate that international students react favourably to personalized AI recommendations that correspond with their own preferences and demands, while specific advice that connect with their real requirements exert an even greater influence on their engagement habits. Therefore, H1 and H2 are supported. Cultural relevance did not have a significant direct influence on engagement ($\beta = 0.079$, $p = 0.171$), suggesting that the mere inclusion of cultural components in recommendations may be inadequate to enhance engagement without other supporting variables. Therefore, H3 is rejected.

The greatest significant direct effect was seen for perceived trust ($\beta = 0.334$, $p < 0.001$), underscoring its critical role in the engagement process. This robust association highlights that international students'

propensity to participate with recommendation systems is significantly influenced by their trust in the system's reliability and objectives. The significance of perceived trust corresponds with the distinct status of international students as temporary residents manoeuvring through new digital markets, where the establishment of trust is especially vital.

The mediation analysis uncovered more intricate insights into the interrelationships among these components. confidence completely mediated the connection between customization and engagement ($\beta = 0.174$, $p < 0.001$), indicating that personalized suggestions predominantly affect engagement by first fostering users' confidence in the system. This discovery highlights that customisation acts as a method for developing trust, hence enhancing engagement. faith served as a partial mediator in recommendation accuracy ($\beta = 0.054$, $p = 0.018$), signifying that accuracy not only directly enhances engagement but also indirectly fosters users' faith in the system.

For testing the mediating effect of perceived trust, the direct and indirect effect were compared. Perceived trust mediated the effect of personalization and accuracy on customer engagement. Thus, H5 and H6 were supported. The insignificant mediation effect of perceived trust between cultural relevance and customer engagement ($\beta = 0.011$, $p = 0.657$) indicates that although cultural adaptation may be crucial for initial acceptance or pleasure, it seemingly does not much affect engagement via trust mechanisms within this demographic. This study may indicate that cultural aspects in recommendations function more as fundamental expectations than as variables that actively foster trust or promote greater participation. Therefore, H7 is rejected.

DISCUSSION

This study discovered how personalization, accuracy, and trust are powerful engagement accelerators. The findings show that trust is important in itself and a key mediator for AI-powered recommendation system to impact engagement behaviours. Personalization and recommendation accuracy boost engagement, but perceived trust is the most important factor, operating as both a direct influencer and a key mediator. These findings support and enhance previous research on technology adoption and customer engagement while providing new insights for transient ethnic populations.

Perceived trust significantly impacts engagement, supporting earlier research on technology adoption [14], especially for international students in emerging digital marketplaces. Due to their transitory residency and cross-cultural placement, this group seems to require more trust to participate. The partial mediation effect between personalization and engagement via trust suggests that overseas students use individualized recommendations as trust-building signals rather than engagement triggers [31]. This research improves TAM by showing how cross-cultural trust processes affect system qualities.

The direct impact of recommendation accuracy supports the importance of precision in AI systems [25], while partial mediation through trust shows parallel influence channels. This suggests that accurate suggestions improve user experience immediately and build confidence over time. The non-significant findings on cultural relevance contrast with some cross-cultural studies [13], suggesting that while cultural adaptation is a fundamental expectation for international students, it does not necessarily foster deeper engagement without accuracy or personalization.

AI Literacy. At the foundation is AI Literacy, modelled as a higher-order construct comprising Awareness, Usage, Evaluation and Ethics (Wang et al., 2023). This study highlights AI Literacy as a key enabler and significant moderator particularly reducing reliance on social influence, thereby promoting more autonomous and informed adoption decisions (Celebi et al., 2023). AI-literate individuals demonstrate greater critical engagement and ethical awareness, reinforcing the shift from compliance-driven to values-driven adoption. Initiatives like AI Untuk Rakyat and structured civil service training

underscore the government's commitment to cultivating these competencies. Without AI literacy, even the best strategies risk failure due to lack of cognitive, practical or ethical readiness.

Implication

These findings enhance existing research. They first improve TAM by showing how trust mechanisms in transitory populations affect AI system attributes. Second, they measure cross-cultural engagement characteristics to improve CET. The study establishes important boundaries for personalization research and shows that trust in certain groups can mediate the AI-powered recommendations and their impact on customer engagement. These findings suggest that transient resident groups like international students may require modified technology adoption and engagement models. The results give clear advice for companies and platform designers targeting international students. They stress that recommendation systems must prioritize trust-building qualities including data usage openness and computational methods. The study suggest that recommendations accuracy may outperform cultural adaptability. Personalization should encourage trust, maybe through explainable AI features that explain particular recommendations and suggestions.

CONCLUSION

This study enhances the understanding of the operation of AI-powered recommendation systems among international student, emphasizing the pivotal importance of perceived trust in fostering customer engagement. The results provide theoretical enhancements to technology adoption models and practical recommendations for addressing this significant demographic. The findings demonstrate persistent patterns in the effect of system characteristics on engagement, while also highlighting significant topics for additional research, especially with the integration of cultural components in recommendation algorithms. As AI systems gain prominence in commercial spheres, these insights establish a basis for creating more effective, culturally attuned technologies that cater to the requirements of international student demographics.

This study is limited to international students residing in Malaysia. The study concentrated on overall engagement without differentiating among various digital platforms. Future study may investigate whether the identified connections are consistent across diverse service categories, especially those characterized by varying degrees of risk or commitment. Future research should enhance the assessment of cultural relevance to encompass more subtle dimensions of cultural adaptation. Qualitative follow-up research may explain certain cultural aspects that have significance for various student populations. The study was done within the specific cultural environment of Malaysia. Replication studies in additional international education centers might evaluate the generalizability of these findings across various national and institutional contexts. Future studies can possibility examines the moderating influences of cultural distance between originating and destination nations. In addition, future studies can further examines the convergence of AI recommendations and social media impacts on student decision-making and engagement.

REFERENCES

[1] G. A. Mubdir, S. Hashim, A. H. Ayob, and N. Rosli, “Online Purchase Intention using Social Media: A Systematic Literature Review,” Eng. Technol. Appl. Sci. Res., vol. 14, no. 5, pp. 17261–17268, 2024.

[2] L. Zhang, H. O. Zaki, S. Hashim, and N. A. Omar, “The role of personalization and emotional attachment on privacy calculus: an empirical study of intelligent voice assistant,” Asia Pacific J. Mark. Logist., 2025.

[3] L. Ding, G. Antonucci, and M. Venditti, "Unveiling user responses to AI-powered personalised recommendations: a qualitative study of consumer engagement dynamics on Douyin," Qual. Mark. Res. An Int. J., vol. 28, no. 2, pp. 234–255, 2025.

[4] G. A. Mubdir, S. Hashim, A. H. Ayob, and N. Rosli, "Exploring Customer Engagement in Social Commerce: A Literature Review of Frameworks, Pathways, and Emerging Trends," Eng. Technol. Appl. Sci. Res., vol. 15, no. 2, pp. 20601–20608, 2025.

[5] H. Omar Zaki, N. A. Omar, S. Hashim, Y. Kamarulzaman, and S. Lada, "Talk to engage: The influence of smartphone voice assistants on consumers' brand engagement," J. Glob. Sch. Mark. Sci., vol. 34, no. 4, pp. 584–608, 2024.

[6] N. Rosli, E. R. Johar, M. L. H. B. M. Lazim, S. Hashim, and N. F. Juhari, "From Hearts to Carts: Understanding the Impact of Comments, Likes, and Share Functions on Consumer Purchase Intentions in a Social Media Landscape," Eur. J. Sustain. Dev., vol. 13, no. 2, p. 46, 2024.

[7] M. Y. Bhutto, M. A. Khan, C. Sun, S. Hashim, and H. T. Khan, "Factors affecting repurchase intention of organic food among generation Z (Evidence from developing economy)," PLoS One, vol. 18, no. 3, p. e0281527, 2023.

[8] E. Ahmed, H. A. Entebang, S. K. Yeng, S. Hashim, H. Mahmood, and R. I. Sabir, "Impact of Value Co-creation Behavior among Banking Customers of Pakistan," 2023.

[9] N. Rosli, E. R. Johar, M. L. H. B. M. Lazim, S. Hashim, and N. F. Juhari, "Who's the Winner? A Comparative Study of Like, Comment and Share Functions in Consumers' Purchase Intention between Facebook and Instagram," Institutions Econ., pp. 139–166, 2024.

[10] R. J. Brodie, A. Ilic, B. Juric, and L. Hollebeek, "Consumer engagement in a virtual brand community: An exploratory analysis," J. Bus. Res., vol. 66, no. 1, pp. 105–114, 2013.

[11] F. H. M. Asri, D. Singh, Z. Mansor, and H. Norman, "A review of cross-cultural design to improve user engagement for learning management system," KSII Trans. Internet Inf. Syst., vol. 18, no. 2, pp. 397–419, 2024.

[12] D. Agarwal, M. Naaman, and A. Vashistha, "Ai suggestions homogenize writing toward western styles and diminish cultural nuances," in Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems, 2025, pp. 1–21.

[13] A. T. Junaedi, N. Renaldo, I. Yovita, K. Veronica, and S. Sudarno, "Digital culture as a moderating factor in increasing digital literacy," Reflect. Educ. Pedagog. Insights, vol. 1, no. 3, pp. 116–127, 2023.

[14] D. Gefen, "E-commerce: the role of familiarity and trust," Omega, vol. 28, no. 6, pp. 725–737, 2000.

[15] F. D. Davis, "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," Source MIS Q., vol. 13, no. 3, pp. 319–340, 1989.

[16] R. J. Brodie, L. D. Hollebeek, B. Jurić, and A. Ilić, "Customer engagement: Conceptual domain, fundamental propositions, and implications for research," J. Serv. Res., vol. 14, no. 3, pp. 252–271, 2011.

[17] V. Venkatesh and F. D. Davis, "Theoretical extension of the Technology Acceptance Model: Four longitudinal field studies," Manage. Sci., vol. 46, no. 2, pp. 186–204, 2000.

[18] A. Kumar and R. Vohra, "Impact of deep learning models for technology sustainability in tourism using big data analytics," in Deep learning technologies for the sustainable development goals: Issues and solutions in the post-COVID era, Springer, 2023, pp. 83–96.

[19] Y. Gupta and F. M. Khan, "Role of artificial intelligence in customer engagement: a systematic review and future research directions," J. Model. Manag., vol. 19, no. 5, pp. 1535–1565, 2024.

[20] C. Verma, P. Vijayalakshmi, N. Chaturvedi, U. Umesh, A. Rai, and A. Y. A. B. Ahmad, "Artificial Intelligence in Marketing Management: Enhancing Customer Engagement and Personalization," in 2025 International Conference on Pervasive Computational Technologies (ICPCT), 2025, pp. 397–401.

[21] D. P. Gowri, "Impact of AI in Personalized Digital Marketing: Boosting Customer Engagement through Tailored Content," J. Commun. Manag., vol. 3, no. 03, pp. 216–221, 2024.

[22] L. Rook, A. Sabic, and M. Zanker, "Engagement in proactive recommendations: The role of recommendation accuracy, information privacy concerns and personality traits," J. Intell. Inf. Syst., vol. 54, no. 1, pp. 79–100, 2020.

[23] F. F. Halimi, S. Gabarre, S. Rahi, J. A. Al-Gasawneh, and A. H. Ngah, "Modelling Muslims' revisit intention of non-halal certified restaurants in Malaysia," J. Islam. Mark., vol. 13, no. 11, pp. 2437–2461, 2022.

[24] J. K. Eastman, R. Iyer, and B. Babin, "Luxury not for the masses: Measuring inconspicuous luxury motivations," J. Bus. Res., vol. 145, pp. 509–523, 2022.

[25] S. Patel, R. Patel, R. Sharma, and D. Patel, "Enhancing User Engagement through AI-Powered Predictive Content Recommendations Using Collaborative Filtering and Deep Learning Algorithms," Int. J. AI ML Innov., vol. 12, no. 3, 2023.

[26] J. J. Smith, L. Jayne, and R. Burke, "Recommender systems and algorithmic hate," in Proceedings of the 16th ACM conference on recommender systems, 2022, pp. 592–597.

[27] L. Bognár and M. S. Khine, "The shifting landscape of student engagement: A pre-post semester analysis in AI-enhanced classrooms," Comput. Educ. Artif. Intell., vol. 8, p. 100395, 2025.

[28] S. Shi, Y. Gong, and D. Gursoy, "Antecedents of trust and adoption intention toward artificially intelligent recommendation systems in travel planning: a heuristic–systematic model," J. Travel Res., vol. 60, no. 8, pp. 1714–1734, 2021.

[29] I. Benbasat and W. Wang, "Trust in and adoption of online recommendation agents," J. Assoc. Inf. Syst., vol. 6, no. 3, p. 4, 2005.

[30] E. Glikson and A. W. Woolley, "Human trust in artificial intelligence: Review of empirical research," Acad. Manag. Ann., vol. 14, no. 2, pp. 627–660, 2020.

[31] M. A. Rahman, M. M. H. Emon, T. Khan, and S. A. J. Siam, "Measuring the Influence of Brand Image on Consumer Behavioral Intentions by using AI: Exploring the Mediating Role of Trust," in 2024 IEEE International Conference on Computing, Applications and Systems (COMPAS), 2024, pp. 1–7.

[32] B. N. Obenza et al., "The mediating effect of AI trust on AI self-efficacy and attitude toward AI of college students," Int. J. Metaverse, vol. 2, no. 1, 2024.

[33] V. Kumar, A. R. Ashraf, and W. Nadeem, "AI-powered marketing: What, where, and how?," Int. J. Inf. Manage., vol. 77, p. 102783, 2024.

[34] J. Hair, J. F. Hair Jr, M. Sarstedt, C. M. Ringle, and S. P. Gudergan, Advanced issues in partial least squares structural equation modeling. saGe publications, 2023.