



# The Dual-Dimensional Perception Mechanism of E-commerce Politeness in Cross-Border E-commerce Toys: A Comparative Deconstruction Based on Positive and Negative Critical Incidents

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## ABSTRACT

With the booming development of cross-border e-commerce, platform competition has intensified, and service quality centered on “e-commerce politeness” has become a core competitive factor. However, existing research on e-commerce politeness in the cross-border toy category is insufficient. This study aims to explore the critical incidents affecting TEMU users’ satisfaction and dissatisfaction, clarify the mechanism of e-commerce politeness on user experience. Adopting the Critical Incident Technique (CIT) and purposive sampling, 240 user reviews (Jan 2023 – Jun 2025) were collected and categorized. Results show that scenario adaptability and product usefulness are the top drivers of satisfaction, accounting for 58% and 19% respectively, followed by product quality (15%), while educational implications and logistics services contribute the least. In contrast, consistency with commitment (43%) and product quality (31%) are the primary causes of dissatisfaction, with packaging protection ranking next (16%), and logistics services and cost-effectiveness being the least influential. Notably, product quality is a common key factor affecting both experiences. This research enriches the academic discourse on cross-border e-commerce by revealing the multi-dimensional impact of e-commerce politeness, and provides practical implications for governments, platforms, and merchants to optimize services, enhance user trust, and strengthen competitiveness in the global toy market.

**Keywords:** Cross-border E-commerce Platform, E-commerce Politeness, Critical Incident Technique, User Experience, Toy Category, Platform Commitment Fulfillment

## INTRODUCTION

With the popularization of the Internet and the maturity of digital tools, mobile technology and brand applications have become ubiquitous. Cross-border e-commerce has thus become an inevitable trend in the development of global retail. The rise of the industry is accompanied by huge business opportunities, and platform competition is becoming increasingly fierce. Against this background, service quality has become the core of sustainable platform development. Cross-border e-commerce platforms need to accurately identify user needs and optimize service processes, thereby improving user experience and satisfaction to enhance market competitiveness. Since platforms only cover part of the shopping process, the final experience highly depends on users’ subjective perceptions. Therefore, focusing on user experience and optimizing services accordingly is the key for platforms to survive in fierce competition (Becker & Jaakkola, 2020). However, users’ willingness to continue using is often constrained by multiple factors, such as uneven product quality and imperfect cross-border logistics systems, resulting in low user retention and acceptance (Su, 2025). Unlike physical goods that can be evaluated from multiple dimensions, online shopping experience is more abstract, and its evaluation relies heavily on user reviews, which makes users’ subjective perceptions crucial to platform reputation. In the context of rapid development of financial technology, user needs continue to evolve, and their expectations of shopping experience have extended from simply obtaining products to convenience, reliability, and comfort across the



entire process of searching, browsing, payment, and logistics (Myagkova, 2024). These aspects are precisely the embodiment of “e-commerce politeness”. User reviews, as a direct reflection of user experience, are the key basis for studying the impact of e-commerce politeness. The authenticity and positivity of their content have significant influence on consumer decision-making and the long-term development of platforms (Liu et al., 2025). However, in existing research on cross-border e-commerce toy categories, studies related to e-commerce politeness remain relatively insufficient. Some research indicates that in the era of cross-border e-commerce, understanding the key influencing factors of user experience is crucial (Jaiswal & Singh, 2020). Therefore, this study aims to apply the critical incident technique to analyze toy user reviews on the TEMU platform, identify critical incidents that lead to satisfaction or dissatisfaction, and thereby reveal the core factors influencing perceptions of e-commerce politeness. Finally, based on the research results, relevant suggestions are proposed. The findings of this study are intended to provide practical reference and theoretical insights for TEMU toy merchants and the platform to optimize service quality and improve user experience.

## LITERATURE REVIEW

### Cross-border E-commerce

Currently, digital trade is reshaping global trade, and the long-established international trade model is being challenged, prompting people to rethink competitive relations in the digital era. The continuous rapid development of global e-commerce has benefited from the large-scale popularization of information and communication technology (ICT) and the improvement of online shopping convenience. Nowadays, e-commerce has become an important part of global retail (Veenam, 2024). Cross-border e-commerce refers to the business form of selling goods and services to users in other countries through online platforms or stores. Since its inception, the industry has gradually evolved from the early platform-based distribution model to a high-quality development stage characterized by branding, localization, and intelligence. Therefore, cross-border e-commerce platforms with only single transaction functions can no longer meet the development needs under the global value chain (Ionas & Fora, 2025). Some studies have pointed out that analyzing user experience from user reviews is of great significance for understanding the development of cross-border e-commerce toy categories (Ghose & Ipeirotis, 2011), enabling the industry to evolve toward a more comprehensive and sustainable direction. As the world's largest trading country, China is actively moving traditional trade online. The in-depth development of its cross-border e-commerce not only injects vitality into the industry but also drives endogenous growth through the import of intermediate goods (Han, 2024; Tan, 2021). Some studies have pointed out that achieving sustainable growth in the field of e-commerce requires balancing technological innovation and moral responsibility (Sulastri, 2023). At present, the industry has not only become a new driving force for foreign trade but also demonstrates strong resilience and vitality. The huge market scale and continuous growth trend of cross-border e-commerce provide a foundation for its development and reflect the willingness of relevant parties to actively seek model optimization and experience improvement, to promote sustainable development of the industry and move toward a higher-quality future.

Toys are an important consumer category in cross-border e-commerce, and as typical childhood objects, they play a role in children's cultural education that cannot be ignored. Toys provide children with diverse learning scenarios, covering aspects ranging from the concept of time to various dimensions related to reading, sharing, and social expectations concerning relative wealth and access to opportunities (Leaver et al., 2023). Appropriate companion toys are particularly important for children's brain development and have long-term impacts on children's education (Wang et al., 2020). Although toys originally stemmed largely from folk traditions or community-based craftsmanship, they possess both commercial value and aesthetic value (Biswas, 2021). It is noteworthy that the value and use of toys are not limited to children; instead, they show a diversified trend extending toward users of all age groups. In the context of an aging society, the cognitive and interactive characteristics of toys demonstrate great potential in the field of elderly health maintenance. Puzzle toys designed specifically for older adults (such as memory puzzles and strategy board games) and rehabilitation-assistance toys can effectively stimulate brain activity and exercise physical functions, playing a positive role in delaying

cognitive decline, supporting rehabilitation training, and alleviating social loneliness, thereby becoming a rapidly growing segment in the “silver economy.” It is noteworthy that toys are not limited to knowledge transmission; more broadly, they encompass multidimensional values such as promoting cognitive development, stimulating creativity, and cultivating social skills. The attributes of toys as “emotional carriers” and “social currency” also make them a universal gift choice across age groups, meeting consumers’ diverse gifting needs in festivals, celebrations, and daily emotional expression, thus stimulating and expanding purchasing intentions.

As classic retail products, toys have continuous and stable market demand. Meanwhile, among many platforms, Temu has rapidly developed into a rising representative due to its cost-effectiveness advantage (Lu, 2024). Enhancing the competitiveness of cross-border e-commerce toys helps more global merchants to join the platform, enrich toy categories, and better meet user needs, with relatively direct positive effects. Mastery of key technologies brings competitive advantages to enterprises, while service level and customer satisfaction are key factors affecting enterprise competitiveness (Hu, 2022). Therefore, this study selects the cross-border e-commerce toy category as the entry point, focusing on user experience for analysis.

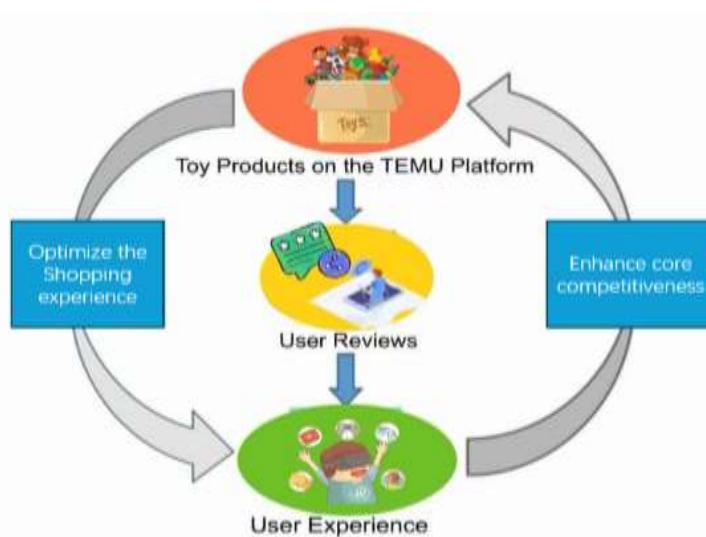


Figure 1 Relationship between Toy Products and User Experience on the TEMU Platform

In summary, the market prospects for cross-border e-commerce in the toy category are broad, but under the background of increasingly fierce industry competition, it is impossible to maintain long-term advantages solely by relying on high cost-effectiveness. The literature points out that service level and customer satisfaction are key factors affecting competitiveness, while current research on related content is somewhat insufficient. Therefore, this study starts from user experience to analyze the current situation and problems of cross-border e-commerce in the toy category, aiming to explore effective paths to enhance competitiveness and meet the diversified needs of users.

### E-commerce Politeness

E-commerce Politeness is the core theoretical perspective of this study. This concept originates from Politeness Theory in Human-Computer Interaction (HCI) and social psychology. It must be pointed out that e-commerce politeness is not a simple online transplantation of traditional interpersonal politeness, but an important paradigm evolution under human-computer interaction. Traditional politeness theory focuses on strategies by which people maintain “face” through language and behavior, while e-commerce politeness is defined as users’ overall perception of whether digital platforms or systems demonstrate respect, consideration, helpfulness, and socially normative behavior (Corritore et al., 2003). Compared with traditional interpersonal politeness, e-commerce politeness has its uniqueness. Traditional politeness is conveyed through individuals’ speech, expressions, and gestures; E-commerce politeness, however, is embedded in platform UI/UX design, algorithmic recommendations, process logic, and customer service protocols, forming a systemic experience driven by code



and rules. Any link that obstructs user experience, such as complex operations, opaque rules, or delayed logistics, can be perceived as “impolite” behavior of the platform. Moreover, users’ evaluation of e-commerce politeness is not only based on whether they feel “respected,” but more critically depends on whether platform functions are reliable, processes efficient, and commitments fulfilled. As emphasized by Chen & Lu (2025) in their study of logistics e-commerce platforms, politeness perception is highly intertwined with practicality and trustworthiness. A “polite” platform must first be an effective and trustworthy platform. Specifically, the manifestation of e-commerce politeness covers the overall perception and interaction quality in browsing, searching, purchasing, payment, and after-sales processes. If these links result in poor user experience, they can be regarded as “impolite” behavior of the platform. User experience, as a key attribute of products or services, has been regarded by many enterprises as a core value proposition and pursued for optimization at the strategic level (Li & Liu, 2020). In order to survive in the e-commerce industry, online retailers need to compete with other merchants to retain users, and must understand and meet users’ online expectations, clarifying the key factors driving user satisfaction (Masyhuri, 2022). In the increasingly competitive field of cross-border e-commerce, e-commerce politeness has become a key dimension for measuring service quality and determining user retention. For platforms such as TEMU, optimizing user experience and improving the level of “e-commerce politeness” is a core strategy to alleviate users’ psychological anxiety caused by cross-border shopping and to build long-term trust (Xiao et al., 2023). Especially in the toy category, since the decision-makers (parents) and actual users (children) are separated, and the products highly depend on experience and reputation, users are particularly sensitive to dimensions of e-commerce politeness such as information transparency, consistency of commitments (e.g., whether products match descriptions), and scenario adaptability (e.g., whether age appropriateness is met). Moreover, some studies have shown that the success of retailers largely depends on whether they can attract a sufficient number of users and the subjective judgments left by users (Liu, 2025). Therefore, analyzing TEMU toy users’ reviews from the perspective of e-commerce politeness can accurately reveal the internal mechanisms affecting user satisfaction and dissatisfaction, and provide concrete and operable guidance for platform optimization.

In summary, against the background of intensified competition in cross-border e-commerce and psychological anxiety accompanying international shopping, optimizing user experience has become the primary task of platforms, while e-commerce politeness is an important factor affecting user experience.

Based on the above two parts, it can be clearly known that: the key for cross-border e-commerce platforms to maintain their core competitiveness lies in optimizing user experience, and user experience is largely influenced by the platform’s e-commerce politeness in human-computer interaction; Therefore, e-commerce politeness is of great significance for cross-border e-commerce toys to enhance their core competitiveness. This study adopts critical incident techniques, collecting critical incidents in toy product reviews on the TEMU platform that make users feel most satisfied and most dissatisfied, and deeply interprets the impact of e-commerce politeness on user experience.

## METHODOLOGY

### Critical Incident Technique

The Critical Incident Technique (CIT) was first proposed by Flanagan in 1954. Its core is to reveal the underlying potential rules by collecting and analyzing key behaviors that can lead to the success or failure of a certain objective (Aveyard, 1954). This method focuses on extracting information from extreme cases, using a few typical incidents to reflect general rules or key influencing factors. At present, the Critical Incident Technique has been widely applied by scholars at home and abroad in multiple research fields, such as in sports psychology to explore situational emotional labor (Hu, 2022); in teacher education to compare reflective practices of experienced and novice TESOL teachers (Zolotarev et al., 2025); in understanding experiences, causal relationships and meaning construction (Jombe & Pretorius, 2025); in operations and supply chain management, revealing and cultivating future operations and supply chain management capabilities (Bals et al., 2025); and in



the field of e-commerce. Value destruction in exaggerated online reviews: the effects of emotion, language, and credibility (Baker & Kim, 2019). Over the past seventy years, the Critical Incident Technique has been successfully applied in multiple fields including e-commerce, demonstrating its mature and stable characteristics. In e-commerce research, CIT is often used to identify key drivers and failure points of service quality. Based on the effectiveness and applicability of this method in the field of e-commerce, this study adopts the Critical Incident Technique to explore the relationship between e-commerce politeness and user experience in TEMU toys.

## Research Design

Qualitative research, as one of the widely used research methods in social sciences, emphasizes understanding individuals' experiences, behaviors, and interactions in specific contexts, thereby uncovering the deep logic behind phenomena. This study adopts qualitative research as its paradigm, using the Critical Incident Technique to collect and analyze critical incidents that influence users' satisfaction and dissatisfaction in the process of cross-border toy purchasing, with a focus on the dimensions of e-commerce politeness reflected in the content of incidents. The specific analysis process includes proposing classification names based on the performance of e-commerce politeness in shopping experience and categorizing the content of critical incidents accordingly.

The Critical Incident Technique has the advantages of being sensitive in identification, highly targeted, and less affected by external interference, which helps to improve the objectivity of evaluation, and is therefore suitable for this study. Online reviews, as user-generated content (UGC), are an important data source reflecting users' real emotions and attitudes (Pu et al., 2025). This study takes users who purchase toys on the TEMU platform as the main research subjects. After multi-dimensional comparison, the toy category was selected because of its large number of reviews, wide time span, and inclusion of many real expressions of satisfaction and dissatisfaction, which provides the basic conditions for research use.

## Data Sources and Sample Selection

### Data Sources

The data in this study were retrieved from public user-generated content (UGC) comments under the toy category of the cross-border e-commerce platform Temu. Data collection strictly adheres to three core compliance principles to ensure legitimacy and ethicality: It aligns with the provisions of the Personal Information Protection Law of the People's Republic of China regarding the rational use of publicly available information; It complies with the general principles of international data privacy protection (e.g., the core principles of "lawfulness, fairness, and transparency" emphasized in the EU General Data Protection Regulation (GDPR)); It conforms to the relevant clauses in Temu's Terms of Service, which permit the use of public comments for academic research upon proper anonymization. To uphold academic ethics, the collected data have undergone full-process anonymization: personal identifiers (e.g., usernames, delivery addresses) were removed, and commercial information (e.g., store names, product links) was anonymized. The data are exclusively used for academic analysis in this study, stored in an encrypted form and accessible only to the research team. Upon completion of the study, the data will be archived or destroyed in accordance with academic standards, with no commercial use involved.

### Sample Screening Strategy

This study adopted a purposive sampling strategy to balance the market representativeness of data and the information density of content, with the following specific screening criteria, Research Object, the toy category of cross-border e-commerce was selected. This category features stable market demand, sufficient comment stock, and a separation between consumers and actual users, involving multi-dimensional experience scenarios, which is highly consistent with the research theme of "e-commerce politeness" (Lu, 2024; Biswas, 2021). Time Scope, the data covered the period from January 2023 to June 2025 (total of 2.5 years), which includes the stable development stage of the platform, ensuring the timeliness and dynamics of the data. Comment Screening: From



the top-selling products, 10–15 comments were extracted for each product, including both 5-star positive reviews and 1-star negative reviews. Priority was given to comments containing specific usage scenarios or detailed feedback, while generalized evaluations were excluded. Ultimately, a qualitative analysis dataset consisting of 240 user comments was constructed between July 5 and 10, 2025, with 120 critical incidents from positive reviews and 120 from negative reviews, providing a solid empirical basis for this study.

## Data Analysis

### Classification Principles

In the reviews collected in this study, a total of 120 satisfied critical incidents and 120 dissatisfied critical incidents were obtained. After preliminary browsing of the critical incidents by the researchers, classification was conducted. The satisfied critical incidents were named as: practicality, product quality, educational implication, logistics service, and scenario adaptability. The dissatisfied critical incidents were classified as: logistics service, packaging protection, product quality, consistency with commitment, and cost-effectiveness. Since some related attributes are consistent between satisfied and dissatisfied critical incidents, the same naming was adopted. From Table 1, it can be clearly seen the classification naming and detailed description of satisfied critical incidents and dissatisfied incidents.

Table 1 Classification Naming of Critical Incidents and Detailed Description

Classification Naming	Detailed Description
Practicality	Refers to the “value in actual use” of toys, such as whether they are resistant to falling, whether the operation is simple, and whether children will continue to play.
Product Quality	Refers to the quality of the product itself, including material, workmanship, functional integrity, and safety compliance.
Educational Implications	Toys with educational attributes (such as STEM and puzzle types), to examine whether they can realize the advertised educational value.
Logistics Service	Refers to the entire process from the buyer placing an order to the product being delivered, including transportation, distribution, tracking, customer service, etc. It covers shipping speed, transportation timeliness, transparency of logistics information, timeliness and politeness in handling exceptions.
Scenario Adaptability	Refers to whether the toy matches the user’s usage scenarios, such as age adaptability (marked 3+ but too complex), occasion adaptability (outdoor toys not waterproof, broken in rain), and demand adaptability (purchased as a gift but packaging too simple).
Packaging Protection	Refers to the level of protection during the packaging process, focusing on whether the packaging material is sturdy and whether it can effectively prevent damage caused by pressure, collision, or moisture during transportation.
Cost-effectiveness	Refers to the match between the product’s price and its quality, functions, and usage value.
Consistency with Commitment	Refers to the gap between the commitments made by the platform or seller in product pages, promotion, and customer service (such as shipping time, product functions, after-sales policy) and the actual delivery results.

All three classifiers in this study have rich experience in the e-commerce industry and have been long active on live-streaming e-commerce platforms, paying particular attention to the performance of e-commerce politeness on the platforms. Classifier 1 is a senior user of e-commerce platforms with extensive cross-border e-commerce shopping experience. Classifier 2 is a university lecturer in e-commerce, who has served as an e-commerce professional teacher for many years and possesses abundant theoretical knowledge of e-commerce. Classifier 3 is the director of an e-commerce platform, with many years of working experience in the e-commerce field. Therefore, this study specially invited these three classifiers to conduct classification verification of user review



data from cross-border e-commerce platforms, identifying satisfied critical incidents and dissatisfied critical incidents, to ensure that these incidents are closely aligned with the research theme. Only after the three classifiers unanimously confirmed the classification results of this study did the subsequent classification work continue.

## Reliability and Validity Analysis

### Reliability Analysis

Reliability refers to the dependability of measurement results, that is, the degree of consistency obtained when the same measurement method is applied multiple times to the same variable. In the reliability analysis of CIT, it is usually examined from two aspects: “individual classification consistency” and “inter-classifier classification consistency.” The former evaluates the consistency of the same classifier when classifying the same incident at different times, while the latter focuses on the degree of consistency among different classifiers when classifying the same incident. When the reliability analysis is greater than 0.8, it indicates that the CIT research results are acceptable (Flanagan, 1954).

After three classifiers agreed on the classification of satisfied critical incidents and dissatisfied incidents in this study, the first classification work was carried out. Once the three classifiers reached a consensus, the first classification of critical incidents and dissatisfied incidents was conducted. After an interval of one month, the three classifiers were again asked to perform classification. In this way, two sets of classification data were collected and integrated, and subsequently the classification results of the three classifiers were compared and analyzed.

The reliability analysis of classification in the Critical Incident Technique can generally be divided into two parts: “individual classification consistency” and “inter-classifier consistency” (Flanagan, 1954), as described below:

a) Individual Classification Consistency: Since the Critical Incident Technique involves researchers making subjective judgments and classifications of the collected critical incidents, whether the classification has reliability becomes particularly important in the entire research process. Some scholars argue that if the degree of similarity in classification results among more than two researchers is greater than 0.8, then the classification can be considered consistent and reliable (Campbell & Fiske, 1959). In this study, three researchers served as classifiers. After gaining a thorough understanding of the classification items and rules, each independently judged and classified all critical incidents. To avoid the influence of residual classification memory, a second round of judgment and classification was conducted two weeks later. Based on the two classification results, the number of times the three classifiers assigned the same incident to the same category was calculated: the higher the number, the greater the classification consistency. From the analysis of classification results in this study, the similarity degree of the first classifier in major categories was 0.88, the second classifier was 0.95, and the third classifier was 0.95. The study found that the individual classification consistency of the three classifiers in both the most satisfied critical incidents and the most dissatisfied critical incidents was greater than 0.8. Therefore, the individual classification consistency in this study has a considerable degree of reliability.

b) Inter-classifier Consistency: Since the classification in the Critical Incident Technique relies on the subjective judgment of classifiers, in addition to verifying the individual consistency of classifiers, the degree of interjudge agreement among different classifiers, as well as the process of handling situations when classifications differ among researchers, will affect the level of reliability. To ensure that the consistency among classifiers during classification reaches an acceptable range, that is, meets the standard of fairness and objectivity, this study adopted reliability analysis to verify the degree of inter-classifier consistency among the three classifiers. Obtained Table 2 Number of Inter-classifier Consistencies – Satisfied Incidents and Table 3 Number of Inter-classifier Consistencies – Dissatisfied Incidents.



Table 2 Number of classifiers' Mutual Consistencies – Satisfactory Events

Number of Relevant Consistencies	Classifier 1	Classifier 2	Classifier 3
Classifier 1	109	---	---
Classifier 2	104	113	---
Classifier 3	97	102	97

Table 3 Number of classifiers' Mutual Consistencies – Unsatisfactory Events

Number of Relevant Consistencies	Classifier 1	Classifier 2	Classifier 3
Classifier 1	106	---	---
Classifier 2	107	115	---
Classifier 3	102	109	115

Based on the data from Table 2 and Table 3, this study verifies the degree of inter-rater consistency among the three classifiers. The formula is as follows:

$$A = \frac{\frac{2M_{12}}{n_1+n_2} + \frac{2M_{23}}{n_2+n_3} + \frac{2M_{13}}{n_1+n_3}}{N} \quad (1)$$

$$R = \frac{(N \times A)}{1 + [(N-1) \times A]} \quad (2)$$

R = Reliability

N = Number of classifiers

A = Average interjudge agreement

M = Number of identical classifications between classifiers (e.g.,  $M_{12}$  represents the number of samples classified identically by classifier 1 and classifier 2)

n = Number of classification judgments made by each classifier (e.g.,  $n_1$  represents the number of judgments made by classifier 1)

By applying the above formula and calculations, Table 4: Classification Reliability Table is obtained.

Table 4 Classification Reliability Table

Classification	Average Degree of Mutual Consistency(A)	Reliability(R)
Satisfactory	0.89	0.96
Unsatisfactory	0.90	0.96

Table 4 shows that the average inter-rater agreement is higher than 0.8, the classifiers' results are stable and consistent, and the reliability is also higher than 0.8, indicating good classification consistency. (Holsti, 1969) The review data of this study has passed the reliability test, providing reliable data and classification basis for subsequent research, and promoting the rigorous development of the study.

### Validity Analysis

Validity refers to the extent to which a measurement tool accurately measures the intended construct, reflecting the effectiveness and accuracy of the measurement method. It is mainly divided into expert validity, content validity, and face validity. Expert validity refers to confirming the rationality of research content and methods



through the judgment of domain experts (Lynn, 1986). In this study, experts in the field of e-commerce were invited to confirm the classification naming and to classify key events, to prevent deviation from the theme of e-commerce politeness and to ensure the scientific nature of the research. Therefore, this study meets the criteria of expert validity. Content validity is an evaluation based on the appropriateness of the measurement content. Content validity refers to whether the measurement tool or classification framework can comprehensively and without omission cover all important aspects of the research concept (Haynes et al., 1995). The evaluation of content validity relies on the use of expert panels to assess the elements of the tool and to rate them according to their relevance and representativeness to the content domain (Almanasreh et al., 2019). Ensuring that this study covers the relevant dimensions of e-commerce politeness in cross-border e-commerce platforms, this study meets the criteria of content validity. Face validity refers to whether the measurement method or data appears reasonable and easy to understand (Nevo, 1985). By using critical incident technique to explore user experience in depth, this study comprehensively analyzes cross-border e-commerce platforms from the perspective of e-commerce politeness. To ensure that the characteristics of e-commerce politeness are understood and accepted by users of cross-border e-commerce platforms, this study meets the criteria of face validity.

In summary, this study takes e-commerce politeness as the entry point and explores in depth its impact on user experience in cross-border e-commerce platforms, aiming to enhance users' comfort during usage and their dependence on the platform.

## Classification Results

After categorizing the collected critical incidents according to the classification naming and counting the number of cases, in order to gain a deeper understanding of the impact of each category on the user experience of cross-border e-commerce platforms, this study selected two incidents respectively from the satisfactory and unsatisfactory critical incidents as examples, and conducted data analysis on each category of incidents. The critical incident examples and data analysis are as follows: Table 5 presents examples of satisfactory critical incidents, Table 6 presents examples of unsatisfactory critical incidents, Table 7 shows the data analysis of satisfactory critical incidents, and Table 8 shows the data analysis of unsatisfactory critical incidents.

Table 5 Examples of Satisfactory Critical Events

Event Classification	Example 1	Example 2
Practicality	Lightweight and easy to assemble. My two-year-old daughter likes it very much! It can be easily wiped off to start playing again. She immediately began to play. She has already lost two magnets, but overall, it is really great!!	My granddaughter has been playing with it all the time. This toy fascinates her, and it was a wonderful Christmas for her.
Product Quality	My grandsons like these very much. Great product, thank you, exactly as described, affordable price, good quality. This is a very wonderful children's drawing board, also a great birthday/Christmas gift. It is a very popular gift, all the children like it... I will definitely buy more.	My grandson likes this little table very much, but he is more interested in all the letters and numbers. He was very excited when he saw that these letters and numbers could stick to the magnetic part of the table. This little table is consistent with the description, sturdy and well-made. It is a very great item. Thank you.
Educational Implications	My grandsons like these very much. It is very suitable for teaching and learning, a great thing for children, thank you.	I have four grandchildren, but my grandson is the first to own such a toy. He is now 18 months old, and from the moment his mother gave it to him, he liked it very much. I think this is a great idea to help them start practicing writing and improving dexterity early. And in terms of price, this toy is also very worthwhile.



Logistics Service	It was shipped almost one or two days after purchased, delivered on time, and my child was very happy drawing with it.	The Christmas gift arrived on time. It is very cute, small enough to carry around.
Scenario Adaptability	Very suitable as a toy for children, bought as a Christmas gift! Very affordable, and the quality is also very good.	My grandson likes this kind of toy, I saw it and bought it. It matches the description completely, prepared as a Christmas gift for my grandson.

Table 6 Examples of Unsatisfactory Critical Events

Event Classification	Example 1	Example 2
Logistics Service	“This is the way the product I received was packaged. The shipping label was on the product packaging box. I tried to tear off the label, but only ended up ripping it. The purchased product was not packed in a shipping carton. I am very dissatisfied with this!!”	The package I received arrived only after Christmas, much later than expected. The packaging box was crushed and later taped back together. Moreover, the package was much smaller than described, only slightly larger than a spiral-bound notebook.
Packaging Protection	The received gift had no packaging, only hoping it was not damaged. This was a Christmas gift for my grandsons. The box was already damaged and torn open.	“The packaging box received was already damaged, with no protective packaging, only the original box, and in very poor condition, making it impossible to present as a gift. This was a Christmas gift.”
Product Quality	The quality of this product is average. The magnetic screen cannot be completely erased, so the entire screen becomes increasingly messy. What is the difference compared to buying plain paper?	The manufacturing quality of this product is very poor. It was almost broken on the second day after receiving it, and we hardly used it.
Consistency with Commitment	This is so disappointing! I bought it as a Christmas gift for my son, but it is much smaller than I expected. If you still remember Etch A Sketch, that is its actual size.	This is a toy suitable for infants, but it is too small for toddlers. Its size does not match what is shown on the website at all.
Cost-effectiveness	The quality of this drawing board is very poor, not worth the price, and it is much smaller than ordinary drawing boards. Do not waste money, just go to Amazon or Walmart to buy one.	This board is very fragile, and the stamps may cause a choking hazard. The pen is also broken and not fixed to the board. I am disappointed with this purchase because I paid quite a lot for it. I will not buy from here again. Do not waste your money. There are boards of better quality at the same price on Amazon.

Table 7 Analytical Data of Satisfactory Critical Events

Satisfactory Critical Event Classification	Number of Classifications by Classifier 1	Number of Classifications by Classifier 2	Number of Classifications by Classifier 3	Average Number of Items	Average Ratio	Sorting
Scenario Adaptability	68	74	68	70	58%	1



Practicality	24	21	25	23.33	19%	2
Product Quality	21	16	18	18.33	15%	3
Educational Implications	4	8	6	6	5%	4
Logistics Service	3	1	3	2.33	2%	5

Table 8 Analytical Data of Unsatisfactory Critical Events

Unsatisfactory Critical Event Classification	Number of Classifications by Classifier 1	Number of Classifications by Classifier 2	Number of Classifications by Classifier 3	Average Number of Items	Average Ratio	Sorting
Consistency with Commitment	43	56	56	51.67	43%	1
Product Quality	42	35	35	37.33	31%	2
Packaging Protection	20	19	19	19.33	16%	3
Logistics Service	10	6	6	7.33	6%	4
Cost-effectiveness	3	4	4	3.67	3%	5

The data show that, among the satisfactory critical incidents, scenario adaptability accounts for the largest proportion, exceeding half; among the unsatisfactory critical incidents, commitment consistency accounts for a relatively high proportion. Moreover, product quality is a common factor in both satisfactory and unsatisfactory critical incidents, and its proportion of critical incidents is relatively large. This indicates that if cross-border e-commerce platforms handle these three types of issues well, they can greatly improve users' experience during the usage process.

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

This study adopts the critical incident technique, taking e-commerce politeness as the entry point, to explore in depth its impact on user experience in cross-border e-commerce platforms. From the research data, it is found that e-commerce politeness in cross-border e-commerce platforms—practicality, product quality, educational implication, logistics service, scenario adaptability, packaging protection, promise consistency, and cost-effectiveness—has an influence on user experience. Among these, product quality, promise consistency, and scenario adaptability may lead to user satisfaction but may also cause dissatisfaction. It is noteworthy that users' dissatisfaction with promise consistency is particularly prominent, and this factor is perceived by users as the most serious “impolite” behavior.

In summary, under the background of the upward development of cross-border e-commerce, with fierce platform competition and upgrading user demands, users generally pay attention to experience during shopping, and user experience is directly affected by the e-commerce politeness demonstrated in human-computer interaction on the platform. Therefore, according to this study, platforms in the cross-border e-commerce toy category need to ensure e-commerce politeness in the eight aspects of practicality, product quality, educational implication, logistics service, scenario adaptability, packaging protection, promise consistency, and cost-effectiveness. Doing so will help enhance the core competitiveness of the toy category in cross-border e-commerce platforms, strengthen platform capability, promote industry development, and ultimately form a virtuous cycle.

### Recommendations

Although cross-border e-commerce platforms are relatively well-developed and continuously improving, there



has been little analysis from the perspective of e-commerce politeness. This study analyzes cross-border e-commerce platforms from the dimensions of e-commerce politeness, using CIT to explore in depth the impact of e-commerce politeness on users' sensory experience, and provides recommendations from three aspects: government, platforms, and merchants.

### Recommendations for Government

In terms of recommendations for the government, this study focuses on two dimensions: support and regulation. recommendations are made in the following three aspects: product quality, promise consistency, and scenario adaptability.

- a) Product Quality, the government can guide and supervise platforms to transform random post-event inspections into full-chain quality management conducted before and during the process. Through incentive and penalty mechanisms, resources can be directed toward high-quality merchants. The government can encourage platforms to establish and improve whitelist and blacklist systems, regularly disclosing information about merchants with good credit and those with poor credit.
- b) Promise Consistency, the government can strengthen supervision of platforms' promotional content review and establish effective mechanisms for commitment and accountability. At the same time, platforms should be encouraged to address false advertising issues and enhance the scrutiny of promotional content.
- c) Scenario Adaptability, the government can guide platforms and merchants to enrich the dimensions of product information, helping users make decisions that better fit their own scenarios while also discovering new product value. Platforms should be encouraged to add "scenario applicability" tags in product reviews and motivate users to share their experiences in different scenarios, thereby forming a richer product reputation database to provide references for subsequent users.

### Recommendations for Cross-Border E-Commerce Platforms

The results of this study show that product quality, consistency with commitments, scenario adaptability, and logistics services are key factors influencing users' perception of whether e-commerce behaves politely. To enhance user experience, the platform should focus on optimizing these four aspects. Platform recommendations for the above four aspects are as follows:

- a) Product Quality: Platforms should strengthen quality control mechanisms, establish strict supplier evaluation systems, and ensure that products meet users' expectations. Regular monitoring and transparent product information can help reduce dissatisfaction. Platforms should take the lead by issuing documents that specify product quality requirements and standards. Incentive activities can be used to encourage high-quality merchants, thereby promoting the overall optimization of the quality environment. A reward and punishment mechanism should be established: merchants whose products fail to meet quality standards may face traffic restrictions or warnings, while high-quality merchants should receive traffic support and promotion. Platforms can publish quarterly "whitelists" and "blacklists" of merchants to motivate continuous improvement in product quality.
- b) Promise Consistency: Platforms must ensure that promotional content and actual product/service delivery are consistent. Establishing clear standards for merchant commitments and implementing accountability mechanisms will reduce false advertising and enhance trust. Platforms should strengthen the screening and auditing of merchants to ensure that promotional content is truthful and reliable. Based on standardized promotional guidelines, merchants can be encouraged to innovate in product promotion, enhancing competitiveness through product updates.
- c) Scenario Adaptability: Platforms should enrich product descriptions and provide scenario-based recommendations to help users make decisions that align with their personal needs. Encouraging users to share scenario-specific experiences can build a more comprehensive feedback system. Platforms can



encourage merchants to include “scenario applicability” descriptions in product introductions, helping users make more suitable choices. Merchants should be guided to explore new uses and values of products, enriching product information and enhancing user decision-making.

d) Logistics Service: Platforms should improve logistics efficiency, enhance delivery accuracy, and provide reliable after-sales support. Transparent logistics tracking and responsive customer service will significantly improve user satisfaction. Platforms can introduce deep learning neural network technologies into cross-border e-commerce logistics and supply chain management. This will improve logistics and supply chain efficiency while reducing costs in cross-border logistics and supply chain operations. By focusing on these four dimensions, cross-border e-commerce platforms can effectively improve user experience, strengthen user loyalty, and enhance their competitiveness in the global market.

## Recommendations for Cross-Border E-Commerce Merchants

In cross-border e-commerce, the construction of e-commerce politeness is not only related to the platform but also requires the coordinated participation of all parties to jointly shape a healthy business ecosystem. This is not only conducive to fair competition but also helps promote the sustainable development of industry. Merchants need to focus on improving product and service quality, paying attention to promotion and packaging, and ensuring the safe delivery of goods. Users choose e-commerce often for reasons such as saving time and interest in page displays, and good e-commerce politeness can significantly enhance their purchase intention. Recommendations are proposed from the three aspects of product quality, consistency with commitments, and scenario adaptability:

- a) Product Quality, Merchants should strengthen quality control measures and actively participate in quality traceability and certification processes. By doing so, they can enhance the core competitiveness of their products and win user preference.
- b) Promise Consistency, Merchants must ensure that promotional content is truthful and compliant with regulations. During sales, they should clearly provide usage instructions, specify contraindicated groups, and avoid misleading claims.
- c) Scenario Adaptability, Merchants can enrich product information by offering detailed scenario-based descriptions. This helps users make more suitable purchasing decisions and increases the perceived value of the product.

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