



Research on Factors Influencing User Experience of Consumer Electronics on Temu: A Perspective of E-commerce Politeness

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ABSTRACT: The global cross-border e-commerce industry is continuing to expand. Temu, with its "full-service model" and extremely low price strategy, has developed rapidly in the overseas market. However, in high-engagement categories such as consumer electronics, price advantage alone is insufficient to sustain long-term user loyalty, and platform competition is gradually shifting towards a comprehensive experience competition centered on "user experience perception". Against this backdrop, this study introduces the concept of "e-commerce politeness" - the perception of respect and care conveyed through language, information, and services in the e-commerce environment - as a theoretical framework. Using the critical incident technique (CIT), the study systemically collected and analyzed 120 satisfactory incidents and 120 unsatisfactory incidents from the consumer electronics category on the Temu platform. The results show that satisfactory incidents can be categorized into five types, with "product quality" and "demand matching" being the main reasons for satisfaction. Unsatisfactory incidents are also divided into five categories, with "product quality", "design features", and "product performance" accounting for the highest proportions. Based on these findings, it is revealed that there are still deficiencies in product performance, product quality, and design features of consumer electronics on the Temu platform. Therefore, specific improvement recommendations are proposed for Temu from three aspects: the platform, merchants, and users. The aim is to promote the transition of cross-border e-commerce from single price competition to value competition centered on e-commerce politeness.

KEY WORDS: E-commerce Politeness, Temu, Cross-border E-commerce, Consumer Electronics, Critical Incident Technique, User Experience

1. INTRODUCTION

The global cross-border e-commerce industry has been growing rapidly in recent years. Platforms with complete supply chains and technological advantages are increasingly establishing their positions in the international market. Among them, Temu platform has rapidly expanded in the overseas market with its unique operating model, becoming a favored shopping platform for a wide range of consumers. Consumer electronics, with their large demand volume and diverse functions, are the driving force behind the growth of platform businesses and also the main window for users to directly experience and evaluate the service quality of the platform. However, low prices alone are no longer enough to maintain user loyalty in the long term, and competition is now shifting towards comprehensive competition centered on user experience. It is worth noting that, compared with domestic platforms, Temu faces more challenges in terms of user experience, product quality, after-sales service, and brand influence. To win in the long run, Temu needs to make up for its shortcomings and continuously improve its overall competitiveness. While China has made significant achievements in the cross-border e-commerce sector, challenges such as long logistics chains, cultural differences, and information asymmetry still exist in cross-border transactions. These factors can be seen as "impolite" behaviors of the platform in the interaction process, which not only cause immediate negative experiences but also directly reduce users' willingness to repurchase. Therefore, continuous optimization of "e-commerce politeness" has become a key path to enhancing user satisfaction in cross-border e-commerce.

In summary, elevating the politeness experience in the process of enhancing user interaction experience has become the key to increasing user satisfaction and long-term loyalty for cross-border e-commerce platforms. Therefore, this study focuses on e-commerce politeness and uses the key event technique to explore the user experience of electronic products on the Temu platform. By deeply analyzing the key events in user reviews, the factors affecting user experience are identified, with the aim of providing theoretical and practical references for optimizing service experiences and enhancing user loyalty for cross-border e-commerce platforms. This will enable platforms to shift from price competition to value competition and establish a sustainable competitive advantage in the global market.

From this, we can see that the construction of a good user experience for cross-border e-commerce involves multiple subjects and covers the entire shopping process, forming a complex system. To more intuitively demonstrate how all parties involved in Temu's full-service model work together to build a high-quality user experience by enhancing "e-commerce manners," we constructed the following ecosystem diagram of Temu platform, merchants, and users for this study.

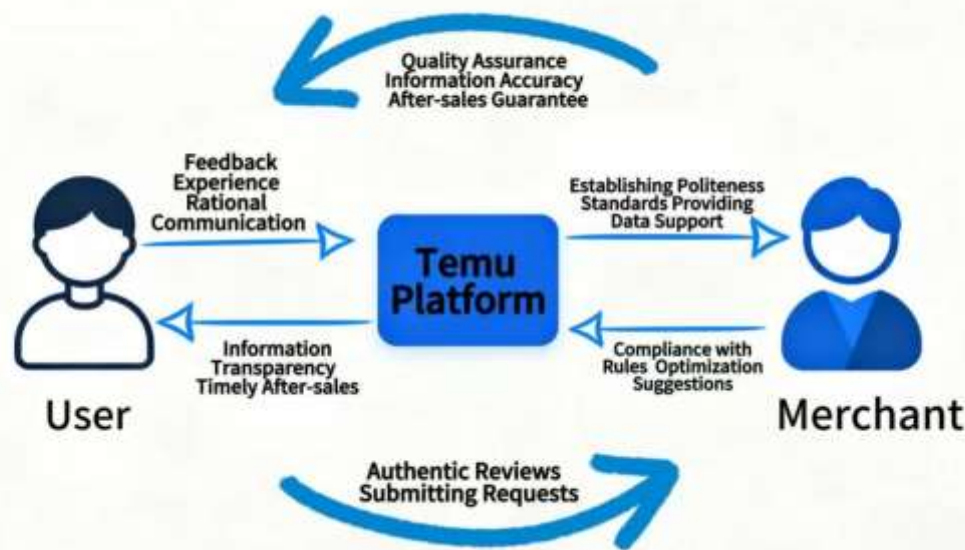


Figure 1: Industry Ecosystem of Cross-border E-commerce Platform Temu

2. THEORETICAL FRAMEWORKS

2.1 Development of Cross-Border E-commerce Platforms

Cross-border e-commerce has become an important model for global trade (Mou et al., 2020). In the early stages of industry development, platforms represented by Amazon and Alibaba established a trust mechanism supporting industry growth by building a series of basic transaction facilities, including payment protection and credit evaluation, laying a solid foundation for the booming development of cross-border e-commerce (Pavlou & Gefen, 2004). Currently, the market competition landscape is showing new trends, with a number of emerging platforms leveraging China's mature supply chain advantages beginning to appear in the international market (Chen et al., 2023). Among them, the Temu platform has achieved rapid market expansion through its innovative "fully managed model" (Xiang, 2025). The core of this model lies in the platform being solely responsible for operations, logistics, and after-sales service, effectively addressing the major risks and operational challenges in cross-border operations (Jean et al., 2020). This not only significantly lowers the barrier for small and medium-sized enterprises to participate in international sales but also offers global consumers, especially price-sensitive users, more high-cost performance product choices (Lichtenstein et al., 1993).

In terms of academic research, the research themes related to cross-border e-commerce show a clear trend of evolution. Scholars initially focused mainly on competition at the price and product level, while recent studies have shifted towards the construction of comprehensive platform capabilities centered on user experience (Huang & Benyoucef, 2013). This trend is specifically reflected in several subfields: in terms of trust mechanisms, scholars have explored the process of trust establishment in the cross-border e-commerce environment (Quintus et al., 2024) and the psychological mechanisms influencing user adoption behavior (Pavlou & Fygenson, 2006); in terms of service experience, research has confirmed that logistics service quality significantly affects user experience (Rao et al., 2011); in user behavior research, scholars have analyzed consumer behavior characteristics in social commerce environments (Hajli, 2015); additionally, the moderating role of cultural differences in cross-border transactions has also received academic attention (Lim et al., 2004).

However, there are still obvious gaps in the current research. Although significant achievements have been made in cross-border research, there is still insufficient user experience research on emerging platforms like Temu that adopt a "fully managed model"

(Xiang, 2025). Although the platform's unique operational model greatly lowers the threshold for cross-border transactions (Chen, 2022), it also comes with users' concerns regarding product consistency, quality, and service reliability (Bart et al., 2005).

In summary, current research tends to approach the issue from a macro business model or marketing perspective (Baden-Fuller & Morgan, 2010), lacking in-depth analysis from the perspective of e-commerce politeness, especially in relation to its key products—consumer electronics. Therefore, this study will focus on the Temu platform under the fully managed model and its category of consumer electronics, with an emphasis on analyzing the e-commerce politeness factors in user experience.

2.2 E-commerce Politeness Theory

The theoretical roots of e-commerce politeness can be traced back to the politeness theory in the field of human-computer interaction (HCI). This theory posits that users unconsciously apply social norms that govern human interaction when communicating with computer systems (Nass & Moon, 2000). Building on this, Whitworth (2005) further pointed out that a “polite” system that adheres to social etiquette can significantly enhance users' interaction experience and satisfaction, laying the foundation for the concept of e-commerce politeness. In a commercial context, this concept is concretized as “sociality” in the online environment, referring to the website's ability to convey support and a sense of care (Gefen & Straub, 2004). Subsequently, Hassanein & Head (2007) developed a multidimensional “social presence” scale to accurately measure such user experiences, establishing a foundation for empirical research in this field. As e-commerce continues to evolve, the connotation of e-commerce politeness is becoming increasingly rich. Research indicates that the effectiveness of online customer service relies on various factors, including information quality, timeliness of communication, personalized attention, and friendly interface design (De Keyser et al., 2019).

In the context of cross-border e-commerce, the importance of e-commerce politeness becomes even more pronounced. Since users cannot physically interact with products, their purchasing decisions heavily rely on the information provided by the platform to build initial trust, as clear product descriptions and reliable seller information are the main criteria for users to evaluate the quality of remote products (Gefen, 2002). A “polite” e-commerce platform can effectively reduce uncertainty and negative feelings that users may experience in cross-border shopping through clear and accurate product descriptions, intuitive and friendly interface guidance, and efficient problem-solving mechanisms (Komiak & Benbasat, 2006). Multiple studies have shown that a good e-commerce politeness experience can directly enhance user satisfaction and repurchase intentions (Quintus et al., 2024).

Choosing e-commerce politeness as a research topic holds dual significance: from a theoretical perspective, the concept of e-commerce politeness is rooted in the field of human-computer interaction. Research in this area has shown that users unconsciously apply interpersonal social rules when interacting with machines (Nass & Moon, 2000); from a practical perspective, in the cross-border scenarios faced by Temu, users must cope with long logistics cycles, significant cultural differences, and complex regulatory environments. Whether the platform can make users feel respected and cared for through polite interaction design will directly affect its ability to establish a sustainable competitive advantage beyond price competition (Jun et al., 2015).

In summary, while research on cross-border e-commerce is relatively rich, discussions focusing on the dimension of e-commerce politeness are comparatively insufficient. Particularly in emerging business models such as fully managed modes, there is a clear gap in research on e-commerce politeness. Therefore, an in-depth exploration of e-commerce politeness in the cross-border e-commerce environment has become an important direction for deepening user experience in this field.

2.3 User Experience Characteristics of the Consumer Electronics Category

In cross-border e-commerce platforms such as Temu, the consumer electronics category serves as a key driver of performance growth. Consumer electronics are characterized by high prices, high user engagement, complex functions, and rapid iteration, which give rise to distinctive experience demands among users that differ from those of other product categories (Hartmann et al., 2012). Specifically, user expectations primarily focus on the following three interrelated aspects. First, sensitivity to logistics quality. Owing to the high value of the products, issues such as packaging damage, delivery delays, or product scratches during transportation are likely to trigger strong negative emotions among users (Mentzer et al., 2001). Second, stringent requirements for information transparency and transaction security. Users not only demand clear and accurate product specifications (e.g., the specific compatible models and power of chargers) but also rely heavily on the secure transaction environment provided by the platform, which constitutes the foundation for building a positive user experience. Merchants that offer clear and precise product information while implementing effective security measures to protect consumers' transaction data and financial security tend to gain greater user trust (Kim et al., 2008). Third, users have rigid demands for after-sales services. If the cross-border after-sales processes for consumer electronics (such as repairs and replacements) cannot be smoothly executed, such service failures will directly arouse customer dissatisfaction and significantly increase their willingness to spread negative word-of-mouth (Blodgett et al., 1993). This conclusion is consistent with the frequent complaints on Temu regarding “product inconsistency with descriptions (e.g., marked as compatible with Android but only supporting Apple devices)”, and further explains why “polite and transparent information provision” is particularly crucial for this category.

In summary, cross-border e-commerce platforms represented by Temu attract global users through their extreme low-price strategy, yet this business model is accompanied by users' inherent concerns regarding product quality and information accuracy (Lichtenstein et al., 1993). Meanwhile, existing studies have demonstrated that due to its high-value and high-engagement attributes, the consumer

electronics category is among the most sensitive in terms of post-purchase user experience (Aslam & Farhat, 2020). Precisely based on these unique experience characteristics of the category, although current cross-border e-commerce platforms often rely on low-price competition to maintain user stickiness in the consumer electronics sector, the core demands of consumers for product quality and information consistency far outweigh the short-term appeal of low prices. Therefore, taking consumer electronics as the research object provides a critical pathway for platforms to shift from "price competition" to "value competition" oriented toward e-commerce politeness.

3. MATERIALS AND METHODS

3.1 Critical Incident Technique (CIT)

The Critical Incident Technique (CIT) was first proposed by Flanagan in 1954. It is a research methodology focusing on "specific incidents that significantly influence behavioral outcomes". Its core lies in exploring the key factors affecting users' experience perceptions by collecting, classifying, and analyzing the "most satisfying" and "most dissatisfying" incidents encountered by users in specific scenarios (Flanagan, 1954).

As a classic and flexible research method, CIT has been widely applied in numerous academic disciplines. For instance, in the field of education, Philpot et al. employed CIT to explore the specific methods adopted by physical education teachers to address social justice issues in teaching practices (Philpot et al., 2021). In the field of information technology, Sadeghi et al. utilized CIT to analyze how health library and information services impact clinical decision-making and patient care (Sadeghi et al., 2022). Tan et al. collected service failure cases on e-commerce platforms through CIT, demonstrating the operability of this method in e-commerce service quality research (Tan et al., 2016). Gidener and Deveci adopted CIT to conduct a study on service failures and recovery strategies in Turkey's third-party logistics (3PL) industry (Gidener & Deveci, 2020).

In summary, CIT has been extensively applied in multiple fields including education, information technology, and healthcare. In these fields, it has consistently demonstrated mature performance and effectiveness in capturing the key driving factors behind incidents. These successful application cases provide a solid theoretical and methodological basis for this study to adopt CIT in investigating the user experience of consumer electronics products on the Temu platform—particularly in identifying the specific incidents that influence "e-commerce politeness".

3.2 Research Design

This study employs CIT to conduct an in-depth investigation into users' e-commerce politeness experience regarding consumer electronics products on the Temu platform. From a user-centric perspective, this research collects the most satisfying and dissatisfying critical incidents related to e-commerce politeness encountered by users during their shopping process on Temu, thereby establishing a foundational framework for analyzing cross-border e-commerce politeness in user experience.

The data utilized in this study are derived from user reviews publicly accessible on the consumer electronics category of the cross-border e-commerce platform Temu. To ensure the ethical standards of the research, all collected data have undergone thorough anonymization processing, with the removal of any information that may identify individual users. In terms of sample selection, a purposive sampling strategy was adopted to guarantee that the data possess both market representativeness and in-depth content.

The specific screening criteria and procedures are as follows: 1. Top-ranked products were selected based on the "sales ranking" criterion. These products boast a large user base and a substantial volume of reviews, and their feedback can best reflect mainstream market choices and consumers' general opinions, thus ensuring the market representativeness of the sample. 2. The time frame for review collection was restricted to January 15, 2023, to June 30, 2025. The collection of data over this two-and-a-half-year period captures consumer feedback during the stable development phase of Temu's consumer electronics category, safeguarding the timeliness and dynamism of the data. 3. From each selected product, 10 to 15 reviews were purposefully extracted. The selection process balanced satisfied reviews (5-star ratings) and dissatisfied reviews (1-star ratings), with priority given to detailed reviews that include specific usage scenarios or descriptive details, so as to ensure the depth and richness of data quality.

Through the aforementioned procedures, this study ultimately constructed a qualitative analysis dataset consisting of 240 user reviews. Owing to its focused data source (a single platform and vertical product category), continuous time span, sales-based representativeness, and high-information-density review content, the dataset of this study is well-suited for exploratory thematic mining. It provides a solid empirical foundation for an in-depth understanding of consumer experiences in this market.

3.3 Data Analysis

A total of 240 valid reviews were collected in this study, comprising 120 "satisfying critical incidents" and 120 "dissatisfying critical incidents." According to Flanagan's (1954) sample size requirement for the Critical Incident Technique (CIT)—"50–100 incidents for simple activities and up to thousands for complex activities"—this research focuses on a single category of consumer electronics on Temu, with clearly defined incident attributes. Thus, the sample size of 240 critical incidents meets the requirements for analysis.

3.4 Classification Principles

A total of 120 satisfying critical incidents and 120 dissatisfying critical incidents were extracted from the valid reviews collected in this study. After researchers reviewed all the critical incidents, a preliminary classification was conducted. The satisfying incidents

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were named as follows: Design Features, Product Quality, Logistics Services, Demand Matching, and Cost-Effectiveness. The dissatisfying incidents were classified into: Product Performance, Design Features, Product Quality, Logistics Services, and Information Matching. Since some attribute categories overlapped between the satisfying and dissatisfying critical incidents, consistent naming conventions were adopted for these overlapping attributes. The specific category names and corresponding explanations for both satisfying and dissatisfying critical incidents are clearly presented in Table 1.

Table 1: Classification and Description of Critical Incidents

Category	Description
Design Features	Focuses on the positive experience brought by product design. Examples include: “Aesthetically, it’s a very sleek and compact design that fits perfectly on my desk,” “The blue light can be turned on and off.”
Product Quality	Reflects users’ recognition and trust in the material, craftsmanship, and sturdiness of the product.
Logistics Service	Covers the delivery, packaging, and post-purchase experience after placing an order.
Needs Fit	Emphasizes that the product meets user needs and is easy to use. Examples include: “Can be charged in any way,” “No longer have to worry about plugs for three different devices,” “Extremely practical.”
Value for Money	Reflects the alignment between product price and perceived value, indicating that the product is worth the cost. Examples include: “Really good value for money,” “Affordable and convenient to use.”
Information Consistency	Refers to whether the actual specifications, model, functions, accessories, etc., match what was stated in the order or displayed on the product page.
Product Performance	Refers to the core charging performance, including charging speed, efficiency, stability, and heat management. Example: “Charges slowly and the phone gets hot.”

In addition, this study specifically invited three classifiers with extensive experience in the fields of cross-border e-commerce and consumer electronics to participate in the classification validation of critical incidents. All these classifiers possess in-depth observations and insights into the manifestations of e-commerce politeness in the cross-border consumer electronics context, which ensures that the incident classification is closely aligned with the research theme. Prior to the formal classification work, the classifiers conducted in-depth discussions on the classification system and criteria, identifying the satisfying and dissatisfying critical incidents to guarantee their close relevance to the research theme. Subsequent classification work was initiated only after the three classifiers collectively confirmed that the classification framework could accurately reflect the research theme. Detailed background information of the three invited classifiers is comprehensively presented in Table 2.

Table 2: Background of Coders

Coder	Current Position	Work Experience
Coder 1	Operations Manager for Consumer Electronics Category in an Enterprise	5 years of experience in cross-border e-commerce operations. Familiar with Temu's consumer electronics product standards and capable of accurately identifying platform-related incidents such as "Product Performance" and "Logistics Service."
Coder 2	Lecturer in E-commerce at a University	Research focus on user experience in cross-border e-commerce. Proficient in the theoretical foundations of CIT and able to define classification dimensions by integrating theories such as "E-commerce Politeness."
Coder 3	Senior Researcher at a Market Research Company	Extensive experience in user research on consumer electronics products. Has led multiple large-scale user experience evaluation projects.

3.4 Reliability and Validity Analysis

3.4.1 Reliability Analysis

Reliability refers to the stability and consistency of the measurement tool or methodology, which reflects the repeatability of results in repeated measurements. In CIT research, reliability and validity analysis constitutes a core component ensuring research quality. Its distinctiveness lies in the method's reliance on judging the consistency of qualitative data classification. Typically, reliability is assessed from two dimensions: inter-classifier classification consistency and intra-classifier classification consistency. The former evaluates the consistency of a single classifier when categorizing the same incidents at different time points, while the latter focuses on the degree of agreement among different classifiers when classifying the same incidents. A CIT research result is deemed acceptable when the reliability coefficient exceeds 0.8 (Flanagan, 1954).

3.4.2 Inter-Classifier Classification Consistency

To verify the classification stability of the same classifier across different time points, this study conducted calculations on the inter-classifier classification consistency of the two rounds of classification results (the initial classification and the re-classification performed 14 days apart) from the three classifiers. The specific data are presented in Table 3 Inter-Classifier Consistency Counts: Satisfying Incidents and Table 4 Inter-Classifier Consistency Counts: Dissatisfying Incidents.

Table 3: Inter-coder Agreement for Satisfying and Dissatisfying Incidents

Coder	Number of Agreed Incidents	Inter-coder Agreement
Coder 1	112	0.93
Coder 2	106	0.88
Coder 3	104	0.87

Table 4: Individual Coder Inter-coder Agreement for Dissatisfying Incidents

Coder	Number of Agreed Incidents	Inter-coder Agreement
Coder 1	111	0.93
Coder 2	111	0.93
Coder 3	106	0.88

The data reveal that all the inter-classifier classification consistency coefficients exceeded 0.85. This indicates that the classifiers maintained favorable stability in their classification logic, with no chance agreement resulting from memory bias or ambiguity in classification criteria. This further validates the reliability of the classification results obtained in this study

3.4.3. Inter-Classifier Classification Consistency

Subsequently, by collecting and integrating the data from the two rounds of classification, a systematic comparison was conducted on the inter-classifier classification consistency among the three classifiers. Eventually, the relevant findings were presented in Table 5 Inter-Classifier Consistency Counts: Satisfying Incidents and Table 6 Inter-Classifier Consistency Counts: Dissatisfying Incidents.

Table 5: Pairwise Inter-coder Agreement for Satisfying Incidents

Number of Pairwise Agreements	Coder 1	Coder 1	Coder 1
Coder 1	112	—	—
Coder 2	93	106	—
Coder 3	80	81	104

Table 6: Pairwise Inter-coder Agreement for Dissatisfying Incidents

Number of Pairwise Agreements	Coder 1	Coder 1	Coder 1
Coder 1	111	—	—
Coder 2	88	111	—
Coder 3	89	92	106

Based on the data presented in Table 5 and Table 6, this study verified the degree of inter - classifier classification consistency among the three classifiers. The calculation formulas are presented as follows:

$$A = \frac{2M_{12} + 2M_{23} + 2M_{13}}{n_1 + n_2 + n_2 + n_3 + n_1 + n_3}$$

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

Wherein:

R = Reliability

N = Number of classifiers

A = Average interjudge agreement

M = Number of samples classified identically among classifiers (e.g., (M12) denotes the number of samples classified consistently by the first and second classifiers)

n = Number of samples classified by each individual classifier (e.g., (n1) denotes the number of samples classified by the first classifier)

Following calculations using the aforementioned formulas, the results were compiled into Table 7 Classification Reliability Table.

Table 7: Classification Reliability

Classification	Average Inter-coder Agreement (A)	Reliability (R)
Satisfying	0.79	0.92
Dissatisfying	0.82	0.93

Data from Table 7 demonstrate that both reliability coefficients exceeded the standard threshold of 0.8. This indicates that the classification results possess high stability and consistency, fully meeting the reliability requirements for empirical research. The collected reviews in this study have passed the reliability test, providing reliable data and a solid classification basis for subsequent research stages and thereby ensuring the scientific rigor of the entire research process.

3.4.4 Validity Analysis

Validity is used to assess whether a study truly and accurately measures the content it intends to investigate (Haynes et al., 1995). In the Critical Incident Technique (CIT), ensuring validity serves as the foundation for guaranteeing the scientific rigor and reliability of research conclusions. This study verifies validity from the following three dimensions:

Expert Validity refers to confirming the rationality of research content and methodologies through the judgments of field experts (Lynn, 1986). To ensure the scientific nature and reliability of the classification results, this study not only examined the consistency of individual judgments made by each classifier but also attached great importance to the consistency of judgments among different classifiers. The three classifiers with professional backgrounds jointly participated in the formulation of the classification framework and independently completed the classification work. Their collaborative judgment process effectively guaranteed the professionalism and rationality of the classification system in this study.

Content Validity denotes whether a measurement tool or classification framework can comprehensively and exhaustively cover all essential aspects of the research construct (Haynes et al., 1995). In this study, drawing on the e-commerce politeness theory and combined with the characteristics of consumer electronics, such as high user engagement and emphasis on performance (Hartmann et al., 2012), the classifiers collectively established multiple classification dimensions, including Product Quality, Product Performance, Design Features, Logistics Services, and Information Matching. This ensures the completeness and representativeness of the content within the classification system.

Face Validity refers to whether the measurement method or data appear reasonable and easy to comprehend in terms of their surface presentation (Nevo, 1985). This study directly adopts authentic user reviews from the Temu platform as the analytical data, and these reviews depict users' specific usage scenarios and experiences (see Table 8 and Table 9). Such raw data are intuitive and clear, grounding the entire analytical process in reality and enhancing the credibility and practical application value of the research results. In summary, this study conducted systematic validation through three aspects: expert judgment, comprehensive content coverage, and real-world data. This ensures the rigor of the research process and enables the research conclusions to truly reflect the impact of e-commerce politeness on user experience.

4. RESULTS AND DISCUSSIONS

4.1 Classification Results

After completing the classification and statistics of critical incidents, to conduct an in-depth exploration of the degree of impact of various aspects of e-commerce politeness on consumer electronics user experience on the Temu platform, this study selected representative cases from both satisfying and dissatisfying incidents for demonstration and analysis. Table 8 presents the specific content of two groups of typical satisfying critical incidents, while Table 9 illustrates the actual circumstances of two groups of typical dissatisfying critical incidents.

Table 8: Examples of Satisfying Critical Incidents

Category	Example 1	Example 2
Design Features	An extremely cute compact charging station! It folds, making it very flat and compact, which makes it easy to carry.	Very convenient, saves a lot of space on my nightstand, and works perfectly. Very satisfied with this product.
Product Quality	I was pleasantly surprised; it matched the description exactly and works very well. Highly recommended. The size is perfect and takes up very little space.	It looks exactly like the picture. The quality is very good. It's functional, and I like it very much.
Logistics Service	I received the package. UPS service placed it safely inside my mailbox; the package was securely locked in my mailbox, just as I expected.	The item arrived in perfect condition, and the shipping was fast.
Needs Fit	It can charge both a phone and a watch simultaneously, and it works very well. I really like this product and hope you can see how it works with two devices at the same time.	Matches the description, very practical. I have the full three-piece set; it can charge my phone, watch, and AirPods, and everything is fully charged by morning. It has a Type-C port for faster charging.
Value for Money	I bought three of these "3-in-1 chargers." They are truly great value for money. No more hassle with plugs for three different devices—affordable and easy to use.	This charges very quickly. I'm impressed by both its quality and price. You really need something like this. Excellent product.

Table 9: Examples of Dissatisfying Critical Incidents

Category	Example 1	Example 2
Product Performance	It didn't charge my phone properly and caused issues with my phone. I had to go back to using my old charging cable.	Very convenient, saves a lot of space on my nightstand, and works perfectly. Very satisfied with this product.
Design Features	This watch part is too small and always blocks my iPhone.	I have an iPhone 12 Pro Max, but this charger simply cannot charge my phone.
Product Quality	The WHS of this product has a very bright blue light that stays on constantly. The charger part was problematic from the start, always disconnecting. The flip cover on the back also keeps opening automatically.	You can get a better one at Walmart. This one is too flimsy and won't stand up stably.
Logistics Service	I did not receive the package, and the company did not issue me a refund.	I did not receive this order. I tried to contact customer service, but they were not helpful.
Information Consistency	I was supposed to receive an Android device, not an Apple one. The Apple device is okay, but I need an Android device.	I wish you had told me before I purchased that this accessory is not compatible with all AirPods models.

On this basis, through the quantitative statistics of incidents under each category, this study produced Table 10 Data Analysis of Satisfying Critical Incidents and Table 11 Data Analysis of Dissatisfying Critical Incidents. These tables systematically reveal the weight distribution of different politeness dimensions in shaping user experience.

Table 10: Analysis of Satisfying Critical Incidents

Category	Coder 1 Number of Incidents	Coder 2 Number of Incidents	Coder 3 Number of Incidents	Average Incidents	Number of	Percentage	Rank
Needs Fit	41	47	48	45.33		38%	1
Product Quality	54	43	31	42.67		36%	2
Design Features	13	20	22	18.33		15%	3
Value for Money	5	7	12	8		7%	4
Logistics Service	7	3	7	5.67		5%	5
Total	120	120	120	120		100%	

Table 11: Analysis of Dissatisfying Critical Incidents

Category	Coder 1 Number of Incidents	Coder 2 Number of Incidents	Coder 3 Number of Incidents	Average Incidents	Number of	Percentage	Rank
Product Performance	33	41	26	33.33		28%	1
Design Features	32	28	34	31.33		26%	2
Product Quality	31	24	33	29.33		24%	3
Logistics Service	16	18	20	18		15%	4
Information Consistency	8	9	7	8		7%	5
Total	120	120	120	120		100%	

Based on the classification results, it can be observed that among satisfying incidents, "Needs Fit" ranked first with 45.33 incidents (38%), closely followed by "Product Quality" with 42.67 incidents (36%). These were followed by "Design Features" (18.33 incidents, 15%), "Value for Money" (8 incidents, 7%), and "Logistics Service" (5.67 incidents, 5%) in third to fifth places, respectively. This finding reveals that the core of building user satisfaction on cross-border e-commerce platforms lies in successfully establishing an experience cycle from "meeting functional expectations" to "building quality trust." The former

addresses the question of "whether it works well" through "Needs Fit," while the latter responds to concerns about "whether it is durable" through "consistent quality," together shaping the final evaluation of user experience.

Among dissatisfying incidents, "Product Performance" emerged as the primary source of dissatisfaction with 33.33 incidents (28%), while "Product Quality" (31.33 incidents, 26%) and "Design Features" (29.33 incidents, 24%) ranked second and third, respectively. "Logistics Service" (18 incidents, 15%) and "Information Consistency" (8 incidents, 7%) accounted for relatively lower proportions. Within product performance issues, "insufficient charging efficiency" and "abnormal device heating" were the most frequently reported specific problems. The three dimensions of "Product Performance," "Design Features," and "Product Quality" collectively constituted the key factors affecting user experience, accounting for 78% of all dissatisfying incidents. This distribution clearly indicates that the user experience of consumer electronics is primarily determined by product performance, quality, and design features. In particular, key technical indicators such as charging efficiency and heat dissipation directly shape users' fundamental evaluation of the product. Therefore, improving product performance, refining product design details, and strengthening quality control should be prioritized for platforms and merchants seeking to optimize user experience.

Based on the above research findings, it is recommended that the Temu platform and cross-border merchants prioritize the optimization of product performance, address design flaws, and enhance quality control. Particular attention should be paid to improving key technologies that received the most feedback, such as charging efficiency, device compatibility, and heat dissipation issues. These measures will effectively reduce user dissatisfaction and enhance the overall user experience.

4.2 Limitations and Future Directions

The findings of this study are based on an analysis of user reviews in the consumer electronics category on the Temu platform, and the generalizability of its conclusions to other e-commerce platforms or product categories requires further verification. Furthermore, the textual review data are primarily derived from the user perspective, failing to fully capture nuanced user behavioral data and the impact of interaction mechanisms between platforms and merchants on politeness experience. Future research can be extended to multi-platform and multi-category comparative studies, and mixed methods can be employed to verify the impact of e-commerce politeness on user experience.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

This study finds that on the Temu platform, E-commerce Politeness is primarily manifested in seven specific aspects: product quality, product performance, needs fit, logistics service, design features, value for money, and information consistency. Among these, product performance is the main source of user dissatisfaction, while needs fit is the key driver of user satisfaction. This indicates that in the cross-border e-commerce context, the connotation of E-commerce Politeness is not limited to interactive courtesy at the customer service level. Its core manifestation lies more fundamentally in the reliability of the product itself, its suitability for user needs, and the platform's ability to actually deliver on its promises to users. Analysis of user feedback suggests that if the Temu platform relies solely on low prices without addressing issues such as unstable product performance, lack of information transparency, and cross-border logistics challenges, it will struggle to earn users' long-term trust. In other words, in the current cross-border market, E-commerce Politeness has become a crucial bridge connecting user experience and platform value. These findings not only help users better understand the concept of E-commerce Politeness but, more importantly, provide clear directions for improvement for the platform and merchants. By focusing on and enhancing these aspects, the platform can transition from pure price competition to a more valuable experience-based competition, thereby fostering its sustainable development.

5.2 Recommendations

The cross-border e-commerce sector is currently experiencing robust growth, and platforms like Temu are continuously refining and improving their services. However, research on user experience from the perspective of E-commerce Politeness remains relatively scarce. By applying the Critical Incident Technique (CIT) to collect and analyze user feedback in the consumer electronics category, this study identifies that impolite behaviors within the e-commerce context—such as those related to product performance (28% of dissatisfying incidents), product quality (26%), design features (24%), information consistency (7%), and logistics service (15%)—not only directly diminish user satisfaction but also erode long-term trust in the platform and undermine its market competitiveness. It is important to note that these impolite behaviors do not stem from a single source; rather, they result from the interplay of platform governance, merchant supply, and user interactions. Therefore, a collaborative effort involving the platform, merchants, and users is essential to implement targeted improvements, reduce experiences of impoliteness, and strengthen the perception of E-commerce Politeness.

5.2.1 Recommendations for Cross-Border E-Commerce Platforms

As the core intermediary connecting users and merchants, platforms' rule design and functional services are the core manifestations of e-commerce politeness. Therefore, platforms should strengthen information politeness and establish standardized disclosure mechanisms. Specifically, they should develop mandatory information templates for consumer electronics products, requiring merchants to clearly and prominently label key parameters such as compatible models, charging power, and interface types. This

fundamentally eliminates the typical impolite experience of "product inconsistency with descriptions" at the source of transactions and embodies respect for users' right to information.

Furthermore, platforms need to optimize logistics services to achieve a fully transparent shopping experience. Addressing the issue of long cross-border logistics chains, platforms should provide more accurate logistics tracking predictions and real-time updates. For potential problems such as delivery delays and package damage, they should formulate clear service commitments and proactive compensation schemes. Such proactive communication and guarantees can significantly alleviate users' anxiety during the waiting period and convey the platform's care.

Finally, platforms must improve after-sales politeness and build an efficient feedback service system. They can establish independent cross-border after-sales green channels to ensure that user issues are promptly addressed and resolved. A "commitment mechanism for after-sales processing time limits" should also be established. When service failures occur, the service recovery theory posits that timely and fair remedial measures can not only defuse crises but also effectively restore and even enhance user trust and loyalty by demonstrating the platform's sense of responsibility and care—namely, "post-failure politeness".

5.2.2 Recommendations for Cross-border E-commerce Merchants

In cross-border e-commerce, the optimization of E-commerce Politeness is not solely the platform's responsibility; merchants also play a crucial role. Firstly, in response to the finding that product performance accounts for the highest proportion of dissatisfying incidents, merchants should prioritize enhancing the practicality and reliability of their products. Sellers in the consumer electronics category can address existing issues such as charging efficiency, device compatibility, and product overheating to ensure stable and dependable performance in real-world usage. Specifically, for problems identified in the CIT, such as "slow charging speed" and "the phone gets hot during charging," merchants should strengthen performance testing during the product development process. This will help reduce performance-related issues and better meet user needs.

Secondly, product quality remains a core concern for users. Regarding product quality, merchants should reinforce quality control to ensure that craftsmanship, materials, and durability meet established standards. Providing clear and specific warranty terms, along with accessible after-sales channels, demonstrates a commitment to product quality through tangible actions, thereby fostering user trust. For example, in response to CIT feedback such as "all the ports are very loose, causing the phone to wobble" and "lightweight plastic, but it works," merchants should improve production techniques and utilize more durable materials to deliver a superior user experience.

Finally, analysis of satisfying critical incidents reveals that practicality is a dimension highly valued by users. Merchants should optimize product design to ensure that quality and functionality genuinely fulfill user needs. By taking concrete actions to retain customers, merchants can make users feel understood and respected—representing a deeper manifestation of E-commerce Politeness.

5.2.3 Recommendations for Platform Users

Users also play a significant role in cross-border consumption. Before making a purchase, users should actively utilize information provided by the platform—such as product specifications, user reviews, and images—to comprehensively assess a product's practicality and value for money, rather than focusing solely on low prices. This approach supports more informed decision-making. After purchase, if issues arise, users should describe the problem factually, providing specific usage contexts and evidence (e.g., order numbers, photos/videos of the issue) when communicating with customer service or merchants through official channels. Clear and rational feedback can lead to faster resolution and help platforms and merchants improve their offerings.

During platform interactions, such as when writing reviews, users should focus on sharing genuine experiences related to product quality, performance, and design, avoiding emotionally charged complaints. Contributing valuable information not only assists other users but also encourages merchants to prioritize product substance, collectively fostering a community atmosphere that emphasizes E-commerce Politeness.

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