

Localization Translation Strategies for Cross-border E-commerce Product Descriptions and Consumer Response Study

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Abstract: Against the backdrop of the deepening development of global digital trade, product descriptions in cross-border e-commerce have become a critical information interface influencing consumer cognition and decision-making. This study focuses on the intrinsic relationship between localization translation strategies for product descriptions and consumer responses, aiming to construct a systematic theoretical analytical framework. The research first deconstructs the theoretical dimensions of localization translation, elucidating its linguistic features, textual functions, and the cross-context transmission mechanisms of cultural symbols. Subsequently, based on cognitive psychology and cross-cultural communication theories, it constructs an information processing model of localized texts by consumers, analyzing the roles played by cognitive schemas, emotional trust, and cultural distance within this process. Finally, the paper explores the correlational mechanisms between translation strategies (including linguistic accuracy and textual style adaptation) and consumers' perceived value, purchase decisions, and long-term loyalty. This study provides a theoretical basis and strategic insights for effective cross-cultural communication in cross-border e-commerce, emphasizing a systematic and integrated pathway from text reconstruction to consumer psychological response.

Keywords: Cross-border e-commerce; product descriptions; localization translation; consumer response; cultural adaptation; cognitive schemas

Introduction

With cross-border e-commerce becoming a significant form of the global retail market, product descriptions serve as the core text connecting overseas commodities with local consumers, and their communicative effectiveness directly determines the success or failure of marketing efforts. However, language conversion extends far beyond the equivalent transplantation of literal meaning; it involves a complex process of deep cultural adaptation and alignment with consumer psychology. Existing research often approaches this topic from a single disciplinary perspective, such as linguistics or marketing, lacking an in-depth exploration of the systematic relationship between localization translation strategies and the subsequent psychological and behavioral responses of consumers. Therefore, integrating multidisciplinary perspectives to construct a comprehensive analytical framework that spans from translation strategy formulation to consumer response generation holds significant theoretical necessity. This study aims to bridge this research gap by systematically analyzing the multi-dimensional theoretical components of localization translation, elucidating the internal cognitive and emotional mechanisms through which consumers process such texts, and ultimately revealing the correlational pathways through which translation strategy choices influence consumer behavioral intentions. It thereby provides theoretical support for enhancing the effectiveness and precision of cross-cultural communication in cross-border e-commerce.

1. Constructing the Theoretical Dimensions of Localization Translation for Cross-border E-commerce Product Descriptions

1.1 Analysis of the Linguistic Features and Textual Functions of Localization Translation

As a special type of commercial text, cross-border e-commerce product descriptions exhibit a clear composite and purposive nature in their linguistic features. At the lexical level, they integrate professional product terminology with marketing discourse aimed at the general public, requiring

translators to adopt a vocabulary system that is familiar and appealing to consumers in the target market while ensuring the accuracy of technical parameters. The syntactic level is characterized by a predominance of conciseness and persuasiveness, often employing structures such as imperative sentences and conditional clauses to construct consumption scenarios and value propositions. The selection of these linguistic forms directly serves the text's dual core functions: first, to accurately convey the product's physical attributes and functional information, forming the basis for consumers' rational decision-making; second, to stimulate purchase desire and complete persuasive communication by fostering emotional identification and value projection. Therefore, localization translation is by no means a simple code-switching but rather a systematic reconstruction of the source text's informative and vocative functions within the target context^[1].

Achieving this functional reconstruction requires the translation process to transcend literal equivalence. The translator must possess a keen insight into the pragmatic habits, rhetorical preferences, and stylistic norms of the target language. For example, some linguistic cultures tend to use indirect and euphemistic expressions for persuasion, while others favor direct and forceful claims. The control of textual rhythm, degree of colloquialism, and level of formality also influences the fluency and credibility of information reception. This process is essentially about selectively highlighting, reorganizing, or polishing the original information based on the target market's language norms and consumer psychology, ensuring that the translated product descriptions are not only accurate in meaning but also feel linguistically "native" to the target environment, thereby achieving the dual goals of efficient information transmission and psychological resonance.

1.2 The Transmission Mechanism of Cultural Adaptation and Symbolic Meaning in Translation

Cultural adaptation is the core aspect of localization translation, which involves the cross-context transplantation and reinterpretation of the cultural symbols and value connotations embedded in a product. Product descriptions often contain culture-specific imagery, metaphors, allusions, and implicit social values, with these elements constituting the "symbolic meaning" of the product. Literal, word-for-word translation may lead to cultural conflicts, misunderstandings, or a loss of meaning, thus weakening marketing effectiveness. Therefore, localization translation must act as a cultural mediator. Its mechanism lies in identifying the "equivalents," "substitutes," or creatively constructing "new meanings" for source-culture symbols within the target culture, in order to ensure that the lifestyle, emotional experience, or social identity advocated by the product can be seamlessly decoded and accepted by target consumers.

The effective transmission of symbolic meaning relies on grasping the deep cognitive structures and emotional patterns of the target culture. As the symbolic meanings of colors, animals, numbers, and other elements vary significantly across cultures, translators need to exercise careful judgment in their conversion. Abstract values such as social relationships, family concepts, and aesthetic orientations also require skillful linguistic alignment. For instance, a product description emphasizing individual achievement may need to incorporate references to family well-being or community recognition within collectivist cultural contexts. Rather than representing cultural compromise, this adaptation process constitutes a strategic cultural dialogue and meaning co-construction aimed at seamlessly embedding the product into target consumers' cultural schemas and semantic networks, thereby enhancing its cultural affinity and perceived value.

1.3 A Multi-dimensional Theoretical Framework for Localization Translation Strategies

Constructing a strategic framework for the localization translation of cross-border e-commerce product descriptions requires integrating multidisciplinary perspectives from linguistics, cross-cultural communication, and communication studies, thereby forming a multi-dimensional system that spans from textual manipulation to contextual integration. The foundational dimension of this framework is the "linguistic-functional dimension," which focuses on achieving the equivalence of the text's informative and vocative functions within the target context. Specific strategies include terminology standardization, syntactic localization, rhetorical device conversion, and stylistic adjustment. A deeper level, the "cultural-cognitive dimension," guides the translator in mapping cultural symbols, aligning values, and adapting cognitive models. Its strategies involve the substitution of cultural images, compensation for cultural blanks, and the downplaying or reconstruction of culturally sensitive elements^[2].

Building upon the two dimensions mentioned above, it is necessary to introduce the

"audience-response dimension," which incorporates the characteristics, media usage habits, and information processing preferences of the target consumer group into strategic considerations. This requires that translation strategies possess dynamism and segmentation, such as adapting internet language for different age groups or communities, and coordinating textual and visual narratives within multimedia contexts. These three dimensions intertwine and interact synergistically, collectively forming a systematic decision-making model for localization translation strategies. This framework emphasizes that the selection and combination of strategies are not random but are based on a systematic analysis of the target market's linguistic ecology, cultural psychology, and communication environment. Its ultimate purpose is to minimize cross-cultural communication noise through precise textual construction, thereby maximizing the effectiveness of product descriptions in eliciting positive cognitive and emotional responses from consumers.

2. An Information Processing Model of Consumer Response to Localized Product Descriptions

2.1 Consumer Cognitive Schemas and the Acceptance Path of Translated Texts

When consumers encounter cross-border e-commerce product descriptions, they do not receive information from a blank state but instead rely on their existing cognitive schemas for interpretation. Cognitive schemas are psychological frameworks concerning products, brands, and consumption scenarios, formed by consumers based on their past experiences, knowledge structures, and cultural backgrounds. The acceptance path of a localized translation text begins with the degree of match between the textual information and the consumer's existing schemas. A translation with a high degree of match—that is, a text that adheres to the linguistic habits, conceptual categories, and expressive logic of the target audience—can reduce the difficulty of information processing, promote processing fluency, and enable product information to be efficiently assimilated into the existing cognitive structure. On the contrary, if the translated text conflicts with the target schema at the lexical, syntactic, or conceptual level, it may induce cognitive dissonance, leading to the information being rejected or misunderstood.

The effectiveness of translation strategies therefore largely depends on their ability to activate or align with consumers' relevant schemas. The popularizing translation of specialized terminology, the reinterpretation of product functions based on local life scenarios, and the echoing of local values in marketing language all aim to construct this cognitive alignment. The endpoint of the acceptance path is the formation of a new mental representation of the product, and the clarity and appeal of this representation, as well as the strength of its connection to the consumer's self-concept or needs, are directly modulated by the quality of the translation. By optimizing this acceptance path, from schema matching to meaning construction, successful localization translation lays the cognitive foundation for subsequent consumer responses.

2.2 Linguistic Drivers of Emotional Response and Trust Building

The linguistic characteristics of localized product descriptions are key drivers in stimulating consumers' emotional responses and building initial trust. The emotional driving force of language stems from its evocative capacity, including the affective valence of vocabulary, the resonance of the narrative, and the affability of the tone. By using words that carry positive cultural associations, constructing consumption narratives that easily evoke empathy, and adopting a sincere rather than exaggerated tone, such descriptions can directly elicit positive emotions in consumers, such as pleasure, aspiration, or a sense of security. These emotional responses not only increase the level of involvement in information processing but also lay an emotional foundation for the formation of brand attitudes^[3].

Trust building, in turn, depends more deeply on the professionalism, consistency, and reliability demonstrated by the translated text. Professionalism and accuracy are reflected in the error-free translation of product specifications and technical parameters, as well as the appropriate use of industry terminology, thereby establishing an image of professional credibility. Consistency refers to the uniformity of the brand voice and value proposition across different language versions and various parts of the text, which reinforces the perception of brand reliability. Furthermore, the text's accurate grasp and respect for subtle cultural nuances in the local context, such as avoiding cultural taboos and employing appropriate honorifics, conveys the brand's regard and sincerity toward the target market, serving as an indispensable element in building cross-cultural trust. Language thus functions not merely as a carrier of information but as a crucial medium for conveying emotional warmth and establishing

trusting relationships.

2.3 The Influence Mechanism of Cultural Distance on Consumer Information Decoding

Cultural distance refers to the degree of difference between the target market culture and the source culture in terms of values, social norms, ways of thinking, and expressive habits, and it systematically moderates the consumer's process of decoding translated product descriptions. A greater cultural distance implies a significant gap between the symbols, metaphors, and logical presuppositions in the source text and the cognitive environment of the target consumer. At this point, if the translation strategy fails to effectively bridge this gap, consumers will face higher decoding efforts and may even experience cultural confusion or misinterpretation, leading to the failure or distortion of the product's core value proposition. Cultural distance thus constitutes a key interfering variable in the information decoding process.

The influence mechanism of cultural distance specifically operates on multiple levels. At the semantic level, it affects the understanding of a concept's connotation and denotation. At the pragmatic level, it determines whether the intention of a speech act (such as a promise or persuasion) is accurately identified. At the symbolic level, it concerns whether the consumer can understand the cultural identity or social meaning associated with the product. One of the core tasks of localization translation strategies is to manage the impact brought about by cultural distance. The spectrum of strategies can range from complete "cultural adaptation" (thoroughly rewriting according to the norms of the target culture) to selective "cultural fusion" (retaining some foreign elements while providing a framework for understanding). The choice of strategy must be based on a nuanced analysis of the specific dimensions of cultural distance, aiming to keep the cognitive resources required for decoding within a reasonable range while maintaining a necessary sense of novelty and appeal, ultimately achieving accurate information transmission and effective consumer understanding.

3. The Correlation Mechanism Between Localization Translation Strategies and Consumer Behavioral Intentions

3.1 The Mapping Relationship Between Linguistic Accuracy and Consumer Perceived Value

Linguistic accuracy serves as a fundamental indicator for consumers to assess the credibility and professionalism of product descriptions, and it exhibits a direct and positive mapping relationship with perceived value. Perceived value is constituted by consumers' comprehensive trade-off between the benefits and sacrifices associated with a product, with linguistic accuracy directly contributing to the informational value within the "benefits" dimension. When product descriptions achieve precise and error-free communication in terms of technical parameters, material specifications, functional descriptions, and usage scenarios, consumers can construct a clearer mental model of product performance, thereby reducing perceived risks arising from ambiguous or incorrect information. This process enhances their evaluation of the product's functional value and quality reliability. Such rational cognition, formed on the basis of accurate information, constitutes the cornerstone of perceived value. By ensuring the effective transmission of information density, linguistic accuracy reduces consumers' cognitive load and uncertainty, making the value assessment process smoother and more confident. It is not merely a guarantee of factual precision but also a key factor in constructing cognitive certainty, directly influencing consumers' judgment and acceptance of the product's core benefits^[4].

Linguistic accuracy also indirectly shapes perceived value by influencing perceived quality and perceived sacrifice. A highly accurate translation conveys the brand's rigorous attitude and professional competence, enhancing consumers' inferences about the overall quality of the product. At the same time, it reduces the additional effort and potential costs that consumers might otherwise expend to clarify ambiguities or bear the risk of a mistaken purchase—that is, it lowers non-monetary perceived sacrifice. Consequently, through the dual pathways of strengthening perceived benefits and weakening perceived sacrifices, linguistic accuracy systematically enhances consumers' overall perceived value. This value perception serves as a crucial cognitive antecedent that drives subsequent positive behavioral intentions, such as adding items to a wishlist or engaging in product comparisons.

3.2 The Moderating Effect of Textual Style Adaptation on Purchase Decisions

The degree of textual style adaptation refers to the extent to which the translated product description

aligns, in terms of register, rhetoric, tone, and narrative mode, with the mainstream aesthetics of the target market and the preferences of specific audience segments. It plays a significant moderating role between consumer information processing and the final purchase decision. A highly adapted textual style can promote the fluency of information processing, reduce cognitive resistance, and make persuasive information more easily accepted. When the textual style meets the linguistic expectations of the target audience, consumers' attention is more readily focused on the product's benefits themselves, rather than being disrupted by awkward or heterogeneous expressions, thereby facilitating the formation of a positive product attitude^[5].

This moderating role is particularly evident in the dimensions of decision-making confidence and speed. A textual style that aligns with local aesthetics and cultural psychology can trigger emotional resonance and a sense of identity, thereby enhancing consumers' perception that the brand "understands us." This psychological closeness increases confidence in decision-making and reduces hesitation. For impulse purchases or product categories heavily driven by emotion, texts with a high degree of style adaptation can swiftly stimulate purchase desire and shorten the decision-making cycle. For high-involvement products, an appropriate textual style assists consumers in completing a complex evaluation process by establishing a professional and approachable information environment. Therefore, the degree of textual style adaptation is a key contextual variable that moderates the efficiency of the transition from cognitive evaluation to decision-making. Its mechanism of action can be viewed as layering an emotional and identity filter onto the framework of rational information assessment. Effective style adaptation softens the boundaries of commercial communication, transforming the purchase decision from a mere functional choice into a value exchange behavior imbued with cultural or emotional identity.

3.3 The Shaping of Consumer Long-term Loyalty through the Optimization Path of Localization Translation

Localization translation is not a one-time task; its continuous optimization constitutes a dynamic communication path for establishing long-term relationships with consumers, exerting a profound influence on cultivating their long-term loyalty. The core of optimization lies in iteration based on market feedback and consumer behavior data, ensuring that product descriptions are not only accurate but also capable of reflecting linguistic evolution, cultural dynamics, and consumption trends in a timely manner. This continuous optimization conveys to consumers the brand's long-term commitment to providing an excellent localized experience, which helps establish a psychological contract that transcends individual transactions. When consumers perceive the brand's unremitting efforts and respect in communication details, their emotional connection and sense of trust will deepen. The optimization path reflects the brand's capacity for continuous learning and adaptation to the target market, and this capacity itself becomes a significant signal of the brand's credibility and vitality, leading consumers to form stable future expectations.

The cultivation of long-term loyalty relies on the accumulation of consistent positive experiences. By continuously providing clear, relevant, and appealing product information, optimized translations reduce long-term costs associated with information search and evaluation, thereby enhancing customer satisfaction. Simultaneously, deeply localized content can promote the cultural integration of the brand with the local community, fostering in consumers a sense of belonging and identity. This allows their loyalty to evolve from a functional attachment to the product into a cultural and emotional allegiance. Such loyalty is manifested not only in repeat purchases but may also develop into proactive word-of-mouth recommendations and brand defense. Consequently, a systematic optimization path for localization translation constitutes a vital strategic link in managing long-term customer relationships and constructing a sustainable competitive advantage through nuanced communication management.

Conclusion

This study systematically constructs an integrative analytical framework encompassing three stages—strategy formulation, information processing, and behavioral correlation—thereby deeply revealing the complex interaction mechanisms between the localization translation of cross-border e-commerce product descriptions and consumer responses. The research finds that effective localization translation is a systematic process of textual reconstruction informed by multi-dimensional considerations of linguistics-function, culture-cognition, and audience-response. Its efficacy is highly dependent on a precise grasp of the target market consumers' cognitive schemas, emotional patterns, and cultural

distance. Linguistic accuracy directly influences consumers' rational evaluation by shaping perceived value, while the degree of textual style adaptation plays a crucial moderating role between cognition and decision-making. Continuous translation optimization is not merely a guarantee of informational accuracy but rather a strategic communication pathway for building cross-cultural trust and cultivating long-term brand loyalty. Future research could further explore the application boundaries of AI-assisted translation in localization processes, examine the contingent characteristics of optimal translation strategies across different product categories and market contexts, and verify the long-term impact of localized communication on customer lifetime value through longitudinal data.

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