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224. TECHNOLOGICAL DIMENSIONS OF CODE-SWITCHING: IT TOOLS FOR MULTILINGUAL BRAND COMMUNICATION IN BELARUS

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Annotation. This paper explores the technological dimensions of code-switching in multilingual brand communication, focusing on Belarus as a case study. In a country where Belarusian, Russian, and English coexist in public discourse, code-switching has become a strategic marketing tool. Information technologies such as Natural Language Processing (NLP), Big Data analytics, AI-driven platforms, and social media algorithms amplify the effectiveness of multilingual communication. The article analyses theoretical foundations, practical applications, advantages, challenges, and future perspectives, demonstrating how IT transforms code-switching from a linguistic phenomenon into a strategic instrument of digital marketing.

Key words. Code-switching, multilingual marketing, Belarus, NPL, AI, brand communication.

Globalisation has intensified the need for brands to engage multilingual audiences. Code-switching is increasingly recognised as a strategic marketing instrument that enhances persuasion among bilingual consumers [1]. In Belarus, the coexistence of Belarusian and Russian, alongside English in global branding, creates fertile ground for IT-driven multilingual communication. The aim of this paper is to demonstrate how information technologies strengthen code-switching as a marketing strategy in Belarus.

Code-switching refers to the spontaneous alternation between languages within a conversation, often reflecting cognitive and cultural dynamics [2]. Its linguistic roots lie in bilingualism studies, but in marketing, it functions as a tool for identifying formation and audience segmentation.

In Belarus, language choice is deeply tied to identity. Belarusian brands often combine Russian with English to signal modernity while retaining cultural authenticity [3]. For example, slogans such as “Будзь онлайн – Stay connected” used by A1 Belarus illustrate how code-switching reinforces both national identity and global relevance.

1. Information Technologies as Drivers of Code-Switching

The rise of digital technologies has transformed code-switching from a spontaneous linguistic phenomenon into a deliberate marketing strategy. Different languages coexist in everyday communication, information technologies provide the infrastructure for brands to deploy multilingual content effectively.

NLP (Natural Language Processing) enables automatic adaptation of brand messages to different languages and cultural contexts [3]. For Belarusian companies, this means that advertising slogans or product descriptions can be dynamically adjusted depending on whether the consumer prefers Russian, Belarusian, or English. For example, e-commerce platforms such as 21vek.by use NLP-driven translation tools to ensure that banners resonate with diverse audiences while maintaining stylistic consistency.

Big Data analytics allows marketers to identify audience preferences and predict reactions to mixed-language communication [2]. In Belarus, where generational divides influence language choice, Big Data helps companies understand which demographics respond positively to English integration and which prefer local languages. Retailers can analyse browsing histories and purchase patterns to determine when code-switching enhances engagement and when it risks alienating consumers.

AI-powered marketing platforms further extend these capabilities. They generate personalised multilingual content, embedding code-switching dynamically into campaigns. For instance, Belarusian fashion brand Mark Formelle uses AI-driven recommendation systems that mix Russian product descriptions with English stylistic cues such as Street Style or New Collection. This hybrid approach appeals to younger consumers who associate English with global culture while maintaining accessibility for local audiences.

Social media algorithms also play a decisive role. Platforms such as Instagram and TikTok use IT-driven segmentation to deliver multilingual content tailored to user profiles. Social media algorithms enhance segmentation, delivering multilingual content tailored to user profiles [4]. This ensures that code-switching is not random but strategically targeted to maximise engagement.

Moreover, the integration of cloud computing and marketing automation platform significantly enhances the scalability of code-switching strategies. Cloud-based computing infrastructures allow companies to process large volumes of multilingual data in real time, ensuring consistent communication across various digital channels. Marketing automation tools further enable the synchronisation of multilingual content delivery, allowing brands to maintain coherence in their messaging while adapting to diverse linguistic audiences. As a result, code-switching becomes not only a linguistic or cultural practice but also a technologically optimised process embedded in digital ecosystems.

2. Practical Applications in Belarus The practical use of code-switching in Belarusian marketing demonstrates how information technologies enable brands to strategically combine languages to appeal to diverse audiences. Several Belarusian companies illustrate how IT-driven multilingual communication strengthens brand identity and expands consumer reach.

Banking and Financial Services (Alfa-Bank Belarus)

Alfa-Bank integrates English terminology such as Cashback, Online Banking and Digital Card into its Russian- and Belarusian-language campaigns. Mobile applications and push notifications often mix Russian with English financial terms, signaling modernity and global integration while maintaining trust among local consumers.

Digital Media and E-Commerce (Onliner)

Onliner, one of Belarus's most popular online platforms, frequently uses English in its technology and lifestyle sections. Headlines and product reviews often incorporate English words like Smartphone, Update, or Streaming, alongside Russian or Belarusian text. Social media algorithms and SEO optimisation ensure that this bilingual content reaches both domestic readers and international audiences.

Retail and Bookstore Chain (OZ)

OZ, a major Belarusian retailer and bookstore, employs code-switching in its online store and advertising campaigns. Russian-language product descriptions are often paired with English labels such as Bestseller or New Arrival. IT tools as recommendation systems and targeted advertising allow OZ to personalize offers, embedding English cues for younger, globally oriented consumers while retaining Russian and Belarusian for traditional audience.

Cosmetics and Beauty Industry (Belita-Vitex)

Belita-Vitex, a leading Belarusian cosmetics brand, integrates English descriptors such as Anti-Age, Skin Care, and Natural Formula into packaging and digital campaigns. This bilingual branding is supported by IT-driven design tools and consumer analytics, which help the company align with international standards while retaining local cultural resonance.

Health and Wellness (Flo)

Flo, a Belarus-founded health-tech company now operating globally, uses code-switching extensively in its app and marketing. While the app provides Russian-language support for local users, English dominates product names, features, and international campaigns. AI-driven personalisation ensures that users receive health notifications in their preferred language, while global branding remains.

Beyond these examples, Belarusian companies increasingly use mobile apps, loyalty programs, and email marketing with automated code-switching. Retailers embed English terms such as Bonus Card or Discount into Russian-language notifications, while AI-driven recommendation systems personalise offers based on consumer behaviour. Similarly, push notifications in e-commerce platforms dynamically switch languages depending on user location, ensuring that international customers receive English-language updates while domestic users see Belarusian or Russian.

These examples demonstrate how Belarusian companies strategically employ IT tools to embed code-switching into brand communication. By leveraging NLP, AI personalisation, social media algorithms, and Big Data analytics, brands in Belarus can maintain linguistic authenticity while appealing to global audiences. The result is a hybrid communication strategy that strengthens brand identity, expands consumer reach, and aligns Belarusian marketing with international digital practices.

3. Advantages and Challenges of code-switching

Code-switching increases consumer engagement, expands audience reach, and strengthens brand identity [1]. Information technologies amplify these dynamics by enabling brands to deploy code-switching more effectively, but they also introduce new complexities.

Advantages

One of the most evident advantages is higher engagement rates in multilingual campaigns. Consumers are more likely to interact with advertisements that reflect their linguistic preferences. For example, Belarusian youth respond positively to campaigns that integrate English phrases, associating them with modernity and global culture. Retailers have successfully increased click-through rates during international shopping events by embedding English terms like Black Friday into Russian-language promotions.

Another advantage is the expansion of audience reach across linguistic groups. By employing code-switching, Belarusian companies can simultaneously appeal to Russian-speaking consumers, Belarusian speakers, and globally oriented audiences who expect English integration.

A third advantage is the reinforcement of brand identity through cultural authenticity. Brands that skillfully combine Belarusian or Russian with English signal both national pride and global relevance. For instance, different campaigns strengthen brand's identity as a traditional Belarusian company while positioning its products as internationally competitive. Code-switching in product branding increases consumer perception of quality and global competitiveness [5].

Challenges

Despite these advantages, several challenges complicate the use of code-switching in Belarusian marketing. Cultural differences may lead to misinterpretation. While younger audience embraces English integration, older consumers may perceive it as unnecessary or even alienating. For example, campaigns that heavily rely on English terminology risk being dismissed by monolingual Belarusian or Russian speakers who prefer traditional linguistic forms.

Ethical concerns regarding data privacy in AI-driven personalisation also pose risks. Big Data analytics, which enable companies to predict consumer reactions to multilingual campaigns, rely on extensive data collection. In Belarus, as elsewhere, consumers are increasingly aware of privacy issues, and excessive personalisation may lead to distrust. The use of AI in marketing raises questions about transparency, consent, and the ethical boundaries of consumer profiling [6].

Finally, there is the risk of alienating monolingual consumers. While English integration appeals to younger audiences, older Belarusian consumers may perceive it as confusing or unnecessary. For instance, a campaign that mixes Russian with English may succeed in urban centers like Minsk but fail to resonate in rural areas where monolingual Belarusian speakers dominate. This highlights the importance of tailoring code-switching strategies to specific demographic and geographic contexts.

4. Future Perspectives

The integration of code-switching with generative AI opens new horizons for multilingual brand communication [5]. As artificial intelligence becomes more sophisticated, Belarusian companies will be able to design campaigns that not only switch between languages but also adapt tone, style, and cultural references in real time. Generative AI systems can create advertisements that seamlessly blend Belarusian, Russian, and English, ensuring that each consumer receives a message tailored to their linguistic and cultural background.

For Belarusian brands, digital transformation offers opportunities to expand globally while maintaining linguistic authenticity. Global brands increasingly view multilingualism not as a barrier but as a competitive advantage in digital markets [4]. Belarusian companies can leverage this trend by positioning themselves as culturally authentic yet internationally competitive. For instance, they could use AI-driven campaigns to highlight Belarusian heritage while embedding English descriptors that resonate with international audience.

Finally, ethical and cultural considerations will shape the future of code-switching. While AI offers unprecedented personalisation, Belarusian companies must balance innovation with respect for linguistic identity and privacy. The challenge will be to ensure that code-switching enhances inclusivity rather than creating divisions between monolingual and multilingual consumers.

5. State regulation of code-switching

State control over code-switching in marketing is often implemented through language policy instruments aimed at preserving linguistic balance in the public sphere. In Belarus, where both Belarusian and Russian have official status, regulatory frameworks may encourage or mandate the use of national languages in advertising and branding. This approach prevents the marginalisation of local languages under the pressure of global English and ensures that multilingual communication remains inclusive and accessible to all social groups. As a result, code-switching is not entirely market-driven but operates within boundaries shaped by national language priorities.

Another important dimension of state regulation involves standardisation and compliance mechanisms. Government bodies and supervisory agencies may issue guidelines that define acceptable forms of multilingual communication, including requirements for clarity, accuracy, and non-discrimination in advertising content. In this context, excessive or inappropriate code-switching that may confuse consumers or misrepresent information can be subject to legal restrictions. Thus, the state acts as a guarantor of information quality, ensuring that multilingual marketing does not compromise consumer understanding or trust.

Finally, governments may also support and stimulate the development of multilingual technologies through innovation policies and educational initiatives. Public investments in Natural Language Processing (NLP), especially for underrepresented languages such as Belarusian, help reduce technological gaps and improve the quality of automated translation and content adaptation. By fostering cooperation between academic institutions, IT companies, and the state, such policies contribute to the creation of more inclusive digital ecosystems, where code-switching becomes not only a marketing strategy but also a reflection of technological and cultural development.

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