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AI-DRIVEN PERSONALIZATION AND USER ACCEPTANCE: THE ROLE OF PERCEIVED RELEVANCE, PRIVACY CONCERNS AND DATA CONTROL

SUN'IY INTELLEKT ASOSIDAGI SHAXSIYLASHTIRISH VA FOYDALANUVCHILARNING QABUL QILISHI: QABUL QILINADIGAN RELEVANTLIK, MAXFIYLIK XAVOTIRI VA MA'LUMOTLAR USTIDAN NAZORATNING ROLI

ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ И ПЕРСОНАЛИЗАЦИЯ: РОЛЬ ВОСПРИНИМАЕМОЙ РЕЛЕВАНТНОСТИ, КОНФИДЕНЦИАЛЬНОСТИ И КОНТРОЛЯ НАД ДАННЫМИ

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ANNOTATION

This thesis examines the conditions under which AI-driven personalization is accepted by users, focusing on perceived relevance, privacy concerns, transparency, and data control. While personalization can make digital services more relevant and convenient, intensive use of personal data may simultaneously increase perceptions of privacy intrusion and surveillance. Recent research demonstrates that perceived relevance can serve as an important mechanism through which AI personalization generates positive behavioral responses, whereas privacy concerns may weaken this relationship. At the same time, transparency and user control can reduce uncertainty and support more favorable evaluations of personalized systems. The study develops a conceptual approach in which AI-driven personalization influences user acceptance primarily through perceived relevance, while privacy concerns operate as a potential barrier and transparency and data control function as supportive conditions. The proposed perspective is relevant to both educational technologies and digital business environments because users in both contexts increasingly interact with AI systems that collect and process behavioral data. The thesis contributes to AI marketing research by shifting attention from personalization intensity toward the quality, transparency, and perceived legitimacy of personalized experiences.

Keywords: artificial intelligence, personalization, user acceptance, perceived relevance, privacy concerns, transparency, data control.

АННОТАЦИЯ

В тезисе исследуются условия принятия пользователями персонализации на основе искусственного интеллекта с акцентом на воспринимаемую релевантность, конфиденциальность, прозрачность и контроль над данными. Хотя персонализация делает цифровые услуги более релевантными и удобными, интенсивное использование персональных данных одновременно может усиливать ощущение вмешательства в частную жизнь и цифрового наблюдения. Современные исследования показывают, что воспринимаемая релевантность является важным механизмом положительного воздействия AI-персонализации на поведение пользователей, тогда как обеспокоенность конфиденциальностью способна ослаблять данный эффект. В то же время прозрачность алгоритмов и возможность контроля над данными способствуют снижению неопределенности и формированию более позитивного отношения к персонализированным системам. В работе предлагается концептуальный подход, согласно которому AI-

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персонализация воздействует на принятие пользователями преимущественно через воспринимаемую релевантность, а конфиденциальность выступает потенциальным барьером, тогда как прозрачность и контроль над данными являются поддерживающими условиями.

Ключевые слова: искусственный интеллект, персонализация, принятие пользователями, воспринимаемая релевантность, конфиденциальность, прозрачность, контроль над данными.

ANNOTATSIYA

Mazkur tezisda sun’iy intellekt asosidagi shaxsiylashtirishning foydalanuvchilar tomonidan qabul qilinishiga ta’sir etuvchi shartlar qabul qilinadigan relevantlik, maxfiylik xavotiri, shaffoflik va ma’lumotlar ustidan nazorat nuqtayi nazaridan tahlil qilinadi. Shaxsiylashtirish raqamli xizmatlarni foydalanuvchiga yanada mos va qulay qilishi mumkin, biroq shaxsiy ma’lumotlardan intensiv foydalanish maxfiylikka aralashuv va raqamli kuzatuv hissini ham kuchaytirishi mumkin. Zamonaviy tadqiqotlar qabul qilinadigan relevantlik AI-personalizatsiyaning ijobiy xatti-harakatlarga ta’sirini tushuntiruvchi muhim mexanizm ekanini, maxfiylik xavotiri esa ushbu ta’sirni susaytirishi mumkinligini ko‘rsatmoqda. Shu bilan birga, algoritmik shaffoflik va foydalanuvchining ma’lumotlar ustidan nazorati noaniqlikni kamaytirib, shaxsiylashtirilgan tizimlarga nisbatan ijobiy munosabatni shakllantirishga yordam beradi. Tezisda AI asosidagi shaxsiylashtirish foydalanuvchilar tomonidan qabul qilinishiga, avvalo, qabul qilinadigan relevantlik orqali ta’sir ko‘rsatishi, maxfiylik xavotiri potensial to‘siq, shaffoflik va ma’lumotlar ustidan nazorat esa qo‘llab-quvvatlovchi shartlar sifatida namoyon bo‘lishi asoslanadi.

Kalit so‘zlar: sun’iy intellekt, shaxsiylashtirish, foydalanuvchilar tomonidan qabul qilish, qabul qilinadigan relevantlik, maxfiylik xavotiri, shaffoflik, ma’lumotlar ustidan nazorat.

Artificial intelligence has transformed personalization from a relatively static marketing technique into a dynamic process capable of continuously adapting digital experiences to individual users. AI-based systems can analyze behavioral patterns, preferences, previous interactions, and contextual information to select content, products, recommendations, or services that appear individually relevant. As a result, personalization has become an important component of contemporary digital marketing and user-oriented service design.

However, the increasing sophistication of personalization creates a fundamental contradiction. The more information an AI system processes, the greater its potential to provide relevant recommendations, but the greater may also be the user's concern about how personal information is collected and used. This tension has become known as the personalization–privacy paradox. Recent empirical research confirms that personalization may simultaneously create positive perceptions of relevance and negative perceptions associated with surveillance or privacy intrusion. A 2026 study based on 664 online shoppers, for example, found that personalization, transparency, and data control were positively associated with brand trust, while personalization and privacy concerns were also associated with stronger perceptions of surveillance [1].

This contradiction suggests that the success of AI personalization cannot be evaluated only through its technological accuracy. The decisive question is whether users consider the personalized output relevant, legitimate, understandable, and sufficiently respectful of their informational autonomy.

Perceived relevance is particularly important in this process. Users generally respond more positively when recommendations correspond closely to their current needs and preferences. Qadri, Ahmed Moustafa and Waqas [2], in a 2026 study published in the Journal of Retailing and Consumer Services, demonstrate that perceived message relevance represents an important mechanism linking AI personalization with behavioral outcomes. Their findings further show that privacy concerns weaken the personalization–relevance relationship, whereas AI transparency strengthens it.

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This finding has an important theoretical implication. AI personalization should not be understood simply as the amount of personal information incorporated into an algorithm. Excessive personalization may actually become counterproductive when users perceive that the system knows “too much” about them. Therefore, the effectiveness of personalization depends on an appropriate balance between relevance and perceived intrusiveness.

Privacy concern represents one of the principal factors that can disrupt this balance. When users become uncertain about the origin, purpose, or destination of their personal data, the benefits of personalization may be evaluated against perceived privacy costs. A recent systematic review of AI personalization research similarly identifies transparency and user control as two of the most consistent strategic approaches to resolving the personalization–privacy tension. The review reports that the majority of its selected recent studies were published during 2024–2026 and identifies governance, transparency, and control as central elements of responsible personalization.

Data control is therefore not merely a technical privacy function. It can influence how users interpret the relationship between themselves and an AI-enabled platform. When users can determine what information is collected, modify personalization preferences, or understand how their data contribute to recommendations, personalization can be perceived as a service provided with user participation rather than as an invisible form of surveillance.

Recent evidence from AI-driven e-commerce supports this interpretation. Research published in 2026 shows that transparency and data control are positively associated with brand trust, indicating that users may respond more favorably to personalization when they perceive meaningful informational control [1].

The issue is also relevant to education. AI-supported educational platforms increasingly personalize learning materials, recommendations, assessments, and communication. In this environment, relevance may improve learning efficiency because users receive materials that correspond more closely to their needs. However, educational systems can also process sensitive behavioral information, making transparency and data control especially important. A user may accept AI-based personalization when its purpose is clearly explained and when personal information is not perceived as being used beyond the original educational objective.

Business environments present a similar situation. E-commerce platforms use AI personalization to recommend products, advertisements, and services. While relevant recommendations can reduce search costs and information overload, overly specific personalization can produce discomfort if users perceive that the system is continuously monitoring their behavior. A 2026 study on AI-driven e-commerce found that perceived relevance and specificity can improve psychological outcomes by reducing cognitive overload, but personalization can also increase privacy concerns, illustrating the simultaneous benefits and costs of AI personalization [3].

Another important development in recent research is the increasing emphasis on transparency as an active component of personalization rather than merely a legal requirement. Transparency can explain why a particular recommendation has been generated and provide users with a clearer understanding of how their information contributes to personalization. In this sense, transparency reduces informational asymmetry between the platform and the user.

The emerging literature therefore allows the following conceptual relationships to be proposed:

H1: AI-driven personalization positively influences perceived relevance.

H2: Perceived relevance positively influences user acceptance of AI-personalized services.

H3: Privacy concerns negatively influence user acceptance of AI-personalized services.

H4: Privacy concerns weaken the positive relationship between AI-driven personalization and perceived relevance.

H5: Transparency strengthens the positive relationship between AI-driven personalization and perceived relevance.

H6: Data control positively influences user acceptance of AI-personalized services.

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These propositions differ from a conventional personalization–trust–engagement model. The central mechanism here is not trust but **perceived relevance**, while privacy concern represents a potential constraint and transparency and data control represent mechanisms through which organizations can make personalization more acceptable.

This distinction is important for marketing theory. If the objective is to increase user acceptance, organizations should not necessarily seek the highest possible degree of personalization. Instead, they should seek an optimal level of personalization that users perceive as relevant without becoming intrusive. This suggests a shift from **"more personalization"** toward **"more meaningful personalization."**

The practical implications are significant. First, organizations should make personalization explainable. Users should have access to understandable information about why a recommendation or piece of content has been selected. Second, platforms should provide practical data-control mechanisms rather than relying exclusively on lengthy privacy policies. Third, personalization systems should distinguish between information that is necessary for relevance and information that creates unnecessary privacy risks. Finally, organizations should evaluate user acceptance through both positive and negative indicators, including perceived relevance, privacy concern, perceived surveillance, and willingness to continue using the service.

The latest evidence also demonstrates that privacy concerns cannot always be assumed to have the same effect in every context. A 2026 study of AI personalization and purchase intention found a significant positive relationship between personalization and consumer trust, while its proposed moderating effect of privacy concern was not statistically supported [4]. This result is theoretically valuable because it demonstrates that the personalization–privacy relationship is context-dependent rather than universally negative. It strengthens the argument for examining specific mechanisms and boundary conditions instead of assuming that privacy concern automatically eliminates the benefits of personalization.

Another recent study of AI-powered personalization in TikTok Shop reached a different conclusion, reporting that perceived AI personalization and privacy concern negatively affected online trust and e-loyalty in its sample [5]. The contrasting findings further demonstrate the importance of context, platform characteristics, user expectations, and perceived surveillance. Personalization that users interpret as helpful in one environment may be interpreted as intrusive in another.

Consequently, AI personalization should be treated as a relational marketing mechanism rather than merely an algorithmic function. Its success depends on the relationship between technological capability and user interpretation. Perceived relevance represents the benefit side of this relationship, while privacy concern represents its potential cost. Transparency and data control can help organizations manage the tension between these two dimensions.

In conclusion, the contemporary development of AI personalization requires a transition from technology-centered personalization toward user-centered personalization. The objective should not simply be to predict users more accurately, but to create personalized experiences that users consider relevant, understandable, legitimate, and controllable. Such an approach can strengthen the long-term acceptance of AI-enabled services while reducing the risks associated with excessive personalization and perceived surveillance.

The proposed conceptual framework can therefore be summarized as:

AI-Driven Personalization → Perceived Relevance → User Acceptance

with **Privacy Concerns** acting as a negative boundary condition, while **Transparency** and **Data Control** serve as supportive mechanisms.

This framework provides a basis for subsequent empirical research in education and business. Future studies may employ survey data and PLS-SEM to test whether the proposed relationships differ according to sector, users' digital experience, type of personal data processed, and intensity of personalization. Such research can contribute to the development of AI marketing strategies that balance personalization effectiveness with privacy-respecting and user-centered principles.

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