The Impact of Digitalization and Global Media on the Formation of the Modern Norm of the Ukrainian Language in Online Discourse

El impacto de la digitalización y los medios globales en la formación de la norma moderna del idioma ucraniano en el discurso en línea

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Abstract

The fast pace of digitalization and the rise of new global media platforms are rapidly reshaping user behavior concerning language. This, in turn, leads to new models of linguistic norms and calls for a comprehensive review of these changes at the language level. The significance of this topic is underscored by online communication, which largely establishes today’s language standards and replaces traditional channels of standardization. The aim of this work is to analyze the specific impact on modern Ukrainian linguistic norms on digital platforms, focusing on language processes within these new digital spaces. The approach combines content analysis of online platforms, review of international statistical indicators, and comparison of the variation in the strength of linguistic innovations across different regions. The study found that language dynamics are quite uneven in the digital world, as shown by the analysis of communication environments rather than just usage frequency. This suggests the greatest linguistic variation occurs on social networks and multilingual web spaces, while private channels tend to have a lower rate of innovation. Hybrid lexical and grammatical forms emerge due to multimodality, reaction times, and the algorithmic features of content. It is well known that the “platform norm” is influenced more by language voting than by academic standards. The indices of language change intensity indicate that the evolution of language norms depends on a multi-dimensional interaction among social, technological, and algorithmic factors. Practically, these findings can help predict how languages might evolve, guide digital language policies, and support the development of tools for monitoring online communication.

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Keywords: digitalization, online discourse, language norms, social networks, algorithmic influence, hybrid language forms, multimodality, linguistic variability, digital platforms, language evolution.

Resumen

La rápida evolución de la digitalización y de las nuevas plataformas mediáticas globales conlleva una transformación radical del comportamiento de los usuarios en lo que respecta al lenguaje, lo que, a su vez, da lugar a nuevos modelos en materia de normas lingüísticas y hace necesario un análisis exhaustivo de este cambio en curso. La relevancia del tema radica en la comunicación en línea, ya que esta establece en gran medida las normas lingüísticas actuales y, por lo tanto, sustituye a los canales convencionales de normalización. El objetivo del trabajo es caracterizar la especificidad del impacto en las normas lingüísticas ucranianas modernas en las plataformas digitales, y su objeto son los procesos lingüísticos en los nuevos espacios digitales. El enfoque es una mezcla de análisis de contenido de las plataformas en línea, análisis de indicadores estadísticos internacionales y comparación de la variación en la fuerza de las innovaciones lingüísticas entre las distintas áreas. El estudio reveló que la dinámica del lenguaje es bastante desigual en el ámbito digital y que se aprecia la evaluación de la estructura del entorno de comunicación, pero no la frecuencia de su uso. Esto indica que la mayor variación lingüística se observa en las redes sociales y en los espacios web multilingües, mientras que los canales privados se caracterizan por una menor tasa de innovación. Las formas léxicas y gramaticales híbridas surgen cuando son impulsadas por la multimodalidad, el tiempo de reacción y las propiedades algorítmicas del contenido. Es bien sabido que la «norma de la plataforma» viene impuesta por la votación lingüística más que por el mundo académico. Las estimaciones del índice integrado de intensidad del cambio lingüístico atestiguan la dependencia de la evolución de la norma lingüística en la interacción multidimensional entre factores sociales, tecnológicos y algorítmicos. La implicación práctica de los hallazgos es que pueden aprovecharse para hacer predicciones sobre cómo podrían evolucionar los idiomas, para informar la política lingüística digital y para desarrollar herramientas para monitorear la comunicación en línea.

Palabras clave: digitalización, discurso en línea, normas lingüísticas, redes sociales, influencia algorítmica, formas lingüísticas híbridas, multimodalidad, variabilidad lingüística, plataformas digitales, evolución lingüística.

1. INTRODUCTION

The rapid growth of digital communication has caused language norms to change faster than the institutions meant to regulate them can keep up. Social networks, instant messaging apps, and other digital platforms now act as a 'culture' where language innovations spread at unprecedented speed and intensity; all aspects of online discourse—lexical, grammatical, and stylistic—quickly disperse among users. This highlights the importance of studying how digital platforms shape the development of the Ukrainian language, especially given the rising use of algorithmic processes, multimodality, and multilingualism in users' linguistic behavior. Recent research shows that variability in the digital space continues to grow because information spreads more rapidly and informally (Di Marco et al., 2024; Panjaitan & Patria, 2024). Studies on multilingual platforms suggest that hybridization and Anglicization are key drivers of language change (Bani Amer, 2024; Lech, 2024), while Ukrainian scholars focus on creating a "platform

norm"—not fixed or stable, but at least temporarily typical through widespread repetition (Kots, 2025; Semak, 2024). The growing intensity of digital interaction is supported by statistics from international reports (Eurostat, 2025; We Are Social, 2024), emphasizing the need for further research into these processes. Despite increasing interest, there is still a lack of comprehensive studies that offer innovative and systematic comparisons of language dynamics across different platforms, explore the interaction of sociotechnical and algorithmic factors, and propose a model for digital normativity. The absence of empirical online corpora of the Ukrainian language and the limited focus on the mechanisms behind the formation of hybrid forms are especially critical issues in the Ukrainian context.

The aim of the study is to identify models of digital platforms and analyze how global media influence modern Ukrainian language norms, as well as the mechanisms of lexical, grammatical, and stylistic innovation across different digital environments. We will examine the structure of digital platforms, compare the level of linguistic variability to other aspects, identify factors driving language change, and develop a general model of digital language evolution.

2. LITERATURE REVIEW

Recent research on digital communication highlights a growing focus on the structural changes in linguistic standards influenced by social networks, multimodal formats, and global algorithmic platforms. Although this isn't new, the increasing role of technology has created different forms of communication where variability and speed are essential across more or less universally accepted principles we share. Specifically, studies on language change document a faster pace in norm-setting cycles and the emergence of mixed varieties (Di Marco et al., 2024, Panjaitan & Patria, 2024; Luhulima et al., 2024; Najbionova, 2025). This shift is driven by algorithmically moderated exchanges that guide attention and, in turn, reinforce language use patterns.

There is extensive research on how different types of digital environments — social networks, messengers, comment threads, forums — create spaces of alternative normativity with compact structures, emotional indicators, and multimodal complexity (Yu & Zhao, 2024; Sikorska et al., 2025; Shapovalenko, 2025; Hromko, 2025). Multimodality, researchers emphasize, not only changes how communication looks externally but also fundamentally shifts the way meaning is built – moving away from traditional written norms toward "fast format" styles native to platforms.

The issues of Anglicization and internationalization in online communication are explored within the context of language contact, multilingual audiences, and cultural performances facilitated by open digital spaces (Lech, 2024; Bani Amer, 2024; Pérez Blanco, 2020; Păunescu et al., 2025). These studies emphasize that linguistic borrowing is not unusual but a common part of digital communication. This leads to the creation of new lexical areas that utilize global, regional, and local language codes.

Emphasis is placed on algorithmic aspects—specifically, which language constructs will be used by the masses and which will remain on the sidelines. Algorithmic recommendation systems aim to amplify certain forms of speech, thus creating a 'platform norm'—"unstable," "non-sedentary," "repetitive"—that is not academically codified or fixed (Khan et al., 2025; Semak, 2024; Goel et al., 2016; Džanko et al., 2025). The work systematizes the visibility, virality, emotionality, and simplification factors that become decisive in language normalization within the virtual context.

Scholars in the field of cultural and social dimensions emphasize that digitalization not only changes communication methods but also affects social practices, identity maintenance, and narratives (Shaban 2024; Schoofs & Van De Mieroop 2022; Pan et al. 2025; Iqbal et al., 2025). These shifts are rooted in the development of new language communities that are, at least in theory, permeable—this permeability is partly shaped by media consumption patterns.

The Ukrainian case is explored in a collection of papers that highlight shifts in functional and stylistic standards, as well as the interaction between standard language and digital media formats, and the development of platform norms within the Ukrainian online space (Kots, 2025; Sichkar & Denysiuk, 2025; Semak, 2024). The article is one of the first large-scale observational studies on the connection between Ukrainian-language content trends and changes in user behavior (Detector Media, 2023; Detector Media, 2024), confirming a correlation between usage rates and the extent of language change.

This suggests that the tendency is to view the digital space as a vital part of language evolution, occurring simultaneously at the lexical, grammatical, stylistic, and sociocultural levels. This paper prompts reflection on the relativistic nature of traditional versus "digital" norms, shaped by the specifics of global media, through questions about the presence and reinforcement of these norm layers (We Are Social, 2024; Eurostat, 2024; Eurostat, 2025; MediaMaker, 2025).

Specifically, studies on digital literacy and digital empowerment in language education show how algorithmic infrastructure mainly influences perceptions of information quality and the flexibility of language strategies used by users (Pan et al. 2025; Muftah 2024; Pikhart & Botezat 2021; Batsurovska et al., 2024). Although effective, the very digital literacy that promotes fluency also leads to a degraded, questionably stable language, species, and syntax, shaped by each platform's and its interface's affordances, write the authors. Together, these findings support a broader trend toward the emergence of new patterns of linguistic behavior, where learning and communication practices both influence and are influenced by each other.

Simultaneously, research rooted in theoretical and cognitive linguistics emphasizes that structural changes in digital interaction spaces are not only linguistic phenomena but also reflect social thinking, community organizations, and identity formation mechanisms (Goddard & Wierzbicka 2021; Schoofs & Van De Mieroop 2022). These studies demonstrate that the movement of pragmatics forms can be systematically connected to the movement of conceptual structures and frames that support message organization. Digital spaces, they contend, establish new architectures of collective intelligence and shared knowledge; linguistic innovations serve as markers of group membership, and algorithmic practices function as tools for group identification.

A specific scientific pathway also investigates the structural mechanisms behind the distribution of mass content, focusing on linguistic properties related to information dissemination (Džanko et al., 2025; Goel et al., 2016). The simplicity, emotionality, and hybridization of expressions are among the factors examined in these studies, which significantly enhance message transferability in networks, thereby supporting the development of new linguistic forms. In its more cultural and sociolinguistic versions, this approach has been applied in intercultural studies analyzing how diversity persists in digital times (Lech, 2024; Bani Amér, 2024), confirming a common trend: the more diverse the audience, the more intense the hybridization processes.

Recently, we have gained important insights into the contexts of cultural production, the digital economy, and communicative ecosystems that create new models of linguistic behavior (Shaban, 2024; Păunescu et al., 2025). These studies provide examples where digital infrastructures do facilitate speech and action, but they also shape speech by establishing rhythm and form, as well as influencing the flow of linguistic units. Similar ideas appear in texts emphasizing the discursive nature of digital history and sociocultural storytelling (Pérez Blanco 2020; Iqbal et al. 2025), which recognize algorithmic functions as part of the mystery behind social importance.

Of particular interest are studies that examine stylistic, grammatical, and functional changes in Ukrainian digital discourse. These studies highlight the emergence of a new normativity platform in Ukraine, which is not officially established but develops through widespread repetition and social legitimation (Sichkar & Denysiuk, 2025; Kots, 2025; Semak, 2024; Hromko, 2025). At the same time, media monitoring organizations observe the context of Ukrainian-language use online. They identify real behavioral shifts in users, especially in how content is organized and in the decline of Ukrainian usage on some platforms (Detector Media, 2023; Detector Media, 2024; MediaMaker, 2025; We Are Social, 2024). These findings clearly connect external statistical trends with the internal processes that drive language change.

In fact, current research is broad and extensive, focusing on the techno-, socio-, cognitive-, and linguistics-centered aspects of digital life, which are connected with the dynamics of languages on social media. According to the authors, the language norm, once seen as a fixed and predetermined entity in the digital environment, no longer exists as such; instead, it is now a flexible, context-dependent system that quickly adapts to and reflects global patterns of information flow and digital behavior. Existing research only captures a few events, and two main problems remain unresolved: first, there is no comprehensive model that combines algorithmic, linguistic, and social factors into a unified explanation of the observed language evolution; second, there are no sufficiently large national corpora of the digital Ukrainian language to track its evolution quantitatively.

3. MATERIALS AND METHODS

Our study uses mixed methods, including statistical analysis, content analysis, and a comparative approach. This enables us to accurately evaluate digital platforms and global media as sources of influence on current language clustering among individuals and the development of unified language standards in Ukrainian online discourse. The sources consulted include official international statistical reports, specifically Eurostat 2024 and 2025 reports, global analytical reviews Digital 2024 and Digital 2025, as well as open monitoring data from Detector Media on the Ukrainian-language segment of social networks. These serve as basic indicators of digital activity and content consumption trends. Using these statistical materials, we built an initial empirical base with indicators such as the share of Internet users, engagement levels with digital technologies, frequency of social network use, and changes in the behavior of the Ukrainian online audience.

The second methodological step involved conducting a content analysis of the identified digital environments, which included four major social media platforms, two thematic forums, three online news sites, and three educational digital platforms — totaling 12 organizations. From these, 3,487 units of speech, such as posts, comments, and messages, were collected. To gather this sample, we relied on daily platform activity, content multimodality, and the frequency of hybrid language units. Data collection was manual

and partially automated through the APIs of the respective platforms over a three-month period. The data were normalized and compiled into a common table of digital activity indicators. Subsequently, comparative analyses were performed across different environments (social networks, forums, comment threads, messengers, multilingual online spaces) based on the level of variation, the intensity of linguistic interaction, and the spread of hybrid language models. To quantify the influence of these environments, an integrated index of digital language interaction intensity was calculated, representing the ratio of daily user activity, average interaction time, and the frequency of non-standard language phenomena.

The influence of digital factors on the rate of language change was formalized through economic and mathematical modeling using a multifactor additive model. The value of the combined index measuring language change intensity was calculated as the weighted sum of normalized digital activity indicators.

$$I_d = \alpha A + \beta T + \gamma V + \delta M,$$

where A represents the level of platform user activity, T is the average duration of digital interactions, V is the language variability index (the number of non-standard language units per 100 messages), M is the content multimodality coefficient; α, β, γ, δ are weight coefficients normalized so that their total equals 1. The values of these coefficients were determined by experts based on correlation analysis among variables.

The methodological approach used by the author of the study allowed combining statistical data from global organizations with his own initial content analysis findings, providing a comprehensive, multi-level, and evidence-based understanding of how new digital language norms emerge and spread.

4. RESULTS

Contemporary theories on technology and global media platforms and their influence on linguistic norms show a clear shift from earlier one-dimensional ideas about how language evolves to a multidimensional perspective. In this view, language is considered a dynamic system that interacts with its technological and algorithmic environment, as well as new forms of media consumption. Studies indicate that these digital communications introduce a wide variety of language forms and even accelerate norm cycles to create "hybrid codes" that blend standard language, spoken language, and world English (Luhulima et al., 2024; Panjaitan & Patria, 2024). From this perspective, early research on computer-mediated communication suggests that we should view CMC as a space for scaled social practices, where these structures are embedded into new media systems through habitual behaviors. This aligns with research on the evolution of digital linguistics, especially contributions from interfaces, recommendation algorithms, and multimodality in shaping users' language routines (Khan et al., 2025; Yu & Zhao, 2024). However, some scholars argue that social media globally interacts with linguistic change, promoting the rapid spread of language innovations and blurring prescriptive norms in favor of simplification (Di Marco et al., 2024; DŽanko et al., 2025).

There are also views on establishing a different kind of normativity in the digital space: not rooted in academia but based on everyday global online communication. This includes, for example, (reference), a type of "platform norm" that exists alongside the norms set by standard literary language. Building on the previous discussion, the use of digital identity and language practices in digital peripheries—where users identify with

multiple language groups simultaneously and blend linguistic resources—promotes models of mixed code (Bani Amer, 2024; Lech, 2024). It is recognized that various approaches to this issue coexist, all addressing current trends in how communicative traditions are transforming under the influence of the global media landscape. These approaches focus on how communication is evolving through increased linguistic dynamism (fragmentary), including adaptations to electronic interaction elements. For instance, this involves examining what a standard becomes for the modern Ukrainian language online: Sichkar & Denysiuk, 2025; Najbionova, 2025.

Addressee-oriented interaction versus speaking-centered communication. The media and tools of online digital communication, especially social networks, have significantly shaped the current framework of Ukrainian-based, virtually mediated public discourse by causing immediate (i.e., direct, not through algorithms and interfaces) as well as mediated changes to language norms and the dynamics of mass content consumption. Social networks have shown to facilitate the development of informal language models through repetition and use within a social environment (Di Marco et al., 2024; Luhulima et al., 2024). There is also a platform norm: this stabilization of linguistic repetition, where it is not governed by literary norms (Kots, 2025; Semak, 2024), on a global scale. Additionally, the digital environment influences users' stylistic tendencies, creating opportunities for brevity and multimodal code mixing (Panjaitan & Patria, 2024; Yu & Zhao, 2024). Algorithmic mechanics (recommendations, trends, filters) serve as further forces shaping language, either promoting innovation or marginalizing certain types of language within the discursive space (Khan et al., 2025). The main features are summarized here and are presented in Table 1.

Table1. Key factors influencing the impact of digital platforms and global media on contemporary language norms

Category of influence	**Direct mechanisms of influence**	**Indirect mechanisms of influence**	**Potential consequences for Ukrainian language norms**
Lexical level	Spread of borrowings, neologisms, memetic forms; anglicization of terms *(Di Marco et al., 2024)*	Recommendation algorithms increase the visibility of certain lexical patterns	Formation of mixed vocabulary, consolidation of variant forms
Grammatical level	Simplification of syntactic constructions; reduction of case forms *(Luhulima et al., 2024)*	The speed of communication stimulates the economy of linguistic means	Blurring of boundaries between normative and non-normative forms
Stylistic level	Spread of colloquialisms, emotional markers, memetic patterns *(Panjaitan & Patria, 2024)*	Platforms impose short, fragmented formats	Shift towards informal style, dominance of simplified models

Communicative models	Emergence of new genres (stories, threads, reactive comments)	Multimodality (text + emojis + video) shapes new modes of expression *(Yu & Zhao, 2024)*	The formation of a digital communication norm that is not academically established
Sociocultural factors	Replication of global influencer models *(Najbionova, 2025)*	Social networks form multilingual environments *(Lech, 2024)*	Increased linguistic hybridity, shifting norms
Algorithmic factors	Promotion of "viral" language forms *(Khan et al., 2025)*	Algorithms simulate the visibility of norms/non-norms	Uneven development of linguistic trends, deformation of norms

Source: created by the author based on (Di Marco et al., 2024; Luhulima et al., 2024; Panjaitan & Patria, 2024; Yu & Zhao, 2024)

Therefore, the impact of digital media on the Ukrainian language norm today is twofold: direct lexicostylistic changes are supplemented by indirect algorithmic and sociocultural influences that accelerate linguistic changes, increase variation, and create conditions for an alternative 'digital norm' to emerge. These trends must be carefully monitored because they increasingly shape linguistic behavior across all aspects of online communication.

Within digital environments, the linguistic behavior of agents is shaped by various factors, such as communication speed, platform technical limitations, content delivery algorithms, and trends in global mass media consumption. On social media, speech is often replaced by short emotional statements, and multimodal information like emojis, gifs, and reactions transform traditional ways of creating meaning (Yu & Zhao, 2024). Forums tend to have a higher level of structure and argumentation but remain influenced by informal, mixed language patterns due to the multilingual nature of online communities (Lech, 2024). Comment threads act as spaces for immediate and reactive communication where the distinctions between spoken and written language fade, leading to variation because simplified grammatical and lexical structures are frequently repeated (Luhulima et al., 2024). Messengers, on the other hand, support intense one-on-one communication, often aiming to reduce forms and develop hybrid language constructs that incorporate Ukrainian, English, and locally adopted borrowings (Panjaitan & Patria, 2024). Researchers note that online communication platforms directly establish new digital norms that, through widespread repetition, become socially accepted and visible via search engines, eventually competing with standard language use (Semak, 2024; Najbionova, 2025). Table 2 summarizes these features.

Table 2. Features of linguistic behavior in digital environments and mechanisms for the emergence of new types of digital norms

Digital environment	Typical linguistic features	Mechanisms of variability	Manifestations of linguistic hybridity	Formation of new digital norms
Social networks	Emotionality, emojis, hashtags; short reactive phrases *(Yu & Zhao, 2024)*	Trend algorithms; mass reproduction of memes	Mixing of Ukrainian, English, and Internet slang	Platform normalization of popular expressions
Forums	Semi-official formats; extended comments; code mixing *(Lech, 2024)*	Interaction between multilingual users	Anglicisms, IT terms	Stabilization of hybrid techno-lexemes
Comment threads	Simplified syntactic structures; high exchange rate *(Luhulima et al., 2024)*	Instant reactions; fragmentation	Variants of "mix code"	Normalization of informal forms and abbreviations
Messengers	Orality; reduction of forms; active use of stickers *(Panjaitan & Patria, 2024)*	Accelerated pace of communication	Mixed language constructions	Spread of non-fixed conversational patterns
Multilingual online spaces	Code-switching; adapted borrowings *(Najbionova, 2025)*	Contact between language communities	Hybrid units (lexical, orthographic)	Formation of an alternative linguistic norm

Source: created by the author based on (Yu & Zhao, 2024; Lech, 2024; Luhulima et al., 2024; Panjaitan & Patria, 2024; Najbionova, 2025)

Hence, it is clear that language use in digital spaces becomes more flexible, fragmented, and informal, which accounts for the rise in variation and language mixing. Algorithmic and socio-cultural factors—such as trends, multilingualism, communication speed, and multimodality—form the foundation of new digital norms. These norms develop outside traditional academic rules but increasingly influence how the Ukrainian language is used today.

The global trends of digitalization, widespread media platforms, and increasing online interactions make it crucial to systematically examine how these factors influence modern language norms and communication styles among digital users. Although this topic is not new (e.g., Skoric and Kwan, 2021), the Internet's ability to quickly reach large audiences

makes this investigation especially important for engaging users worldwide.Technological advances have expanded Internet use globally - by 2024, over 92% of people in most EU countries used the Internet (Eurostat, 2024)- and social media use has reached about half of the world's population (We Are Social, 2024). These figures show unprecedented growth in cyberspace, with linguistic innovations spreading rapidly. Eurostat (2025) provides further context: 97% of young people in the EU use the Internet daily, highlighting the strong influence of young people's communication habits on language standardization. Ukrainian data also reflect this trend: from 2023 to 24, social media user numbers decreased by 10%, suggesting a redistribution of interaction types across platforms that may impact the level of language innovation (Detector Media, 2024). Alongside findings from Digital 2025, which emphasize a shift toward multimodal digital content and longer engagement with digital material (Medic Maker Digital 2025), these statistics underscore the importance of conducting an in-depth study of online discourse environments, cohesion factors, and mechanisms that support the standardization of emerging linguistic norms on the Internet.

The research methodology combines empirical data from open international statistical sources and, to some extent, primary information gathered through our own investigation of digital users' language practices. Five core sources established the basic empirical database: two statistical databases from Eurostat (2024; 2025), an international analytical report Digital 2024 (We Are Social, 2024), a Domesticated Analytics Report Digital 2016 from MediaMaker (MediaMaker, 2025), and monitoring information from the Ukrainian segment of social networks Detector Media (Detector Media, 2024). Eurostat data were accessed by analyzing open tables on European population internet activity, sorted by age groups, EU countries, and their shares of engaged internet use. Figures from Digital 2024 and Digital 2025 were compiled by examining publicly available graphs and tabular data on digital interaction patterns, online time use, social media usage and penetration, and changes in digital content consumption. Ukrainian data from Detector Media were used for regional comparisons and analysis of how local media trends influence online activity levels.

In the initial phase of the study, we sampled 12 digital organizations and information platforms, including three news sources, four social media pages (Facebook), two thematic forums, and three educational platforms. We analyzed a total of 3,487 speech units—such as posts, comments, and messages—to observe language variability and the frequency of new hybrid forms. We calculated the average daily content load, the percentage of multimodal messages for each organization, and mean indices of linguistic deviation, which measure the number of nonstandard forms per 100 messages. The three months of primary data included manual content analysis and an in-depth investigation using the platform API, focusing on the emergence of new literary forms.

This involved normalizing statistical indicators from various sources, consolidating the table with digital activity indicators, and calculating a composite indicator that assesses the level of language change. This indicator is estimated as the ratio of daily usage levels on platforms to the overall frequency of non-stable language elements. The basic descriptive statistics used for the graphical analysis are shown in Table 3; they serve as a reference for understanding the findings.

Table 3. Summary statistical indicators of digital activity and intensity of language interaction

Data source	Indicator	Value
Eurostat 2024	Percentage of the EU population online, %	92.3
Eurostat 2025	Percentage of young people who use the internet daily, %	97.12
MediaMaker 2025	Average time spent interacting with digital technologies daily, hours	3.4
We Are Social 2024	Total number of social media users worldwide, billion	5.03
Detector Media 2024	Change in the number of Ukrainian social media users, %	– 10.27

Source: created by the author based on (Eurostat, 2024; Eurostat, 2025; MediaMaker, 2025; Detector Media, 2024; We Are Social, 2024)

This research method combines official statistics with our own results to provide a comprehensive understanding of the impact of digital platforms on language and standards. Consequently, indicators reveal that individuals under 25 spend 97.12% more time online during a 24-hour period; digital spaces are introducing more language models. The decline in social network users in Ukraine, from 10.27% to at least 9.27%, was partially offset by a shift to new platforms, as people seek fresh language content. All these processes warrant further research, along with detailed linguistic analysis of the language model, which should be collected through segmented data.

The consolidated results summary is shown in Figure 1, where digital spaces are again compared using the calculated combined indicator: total platform activity, interaction intensity, and the intensity quotient.

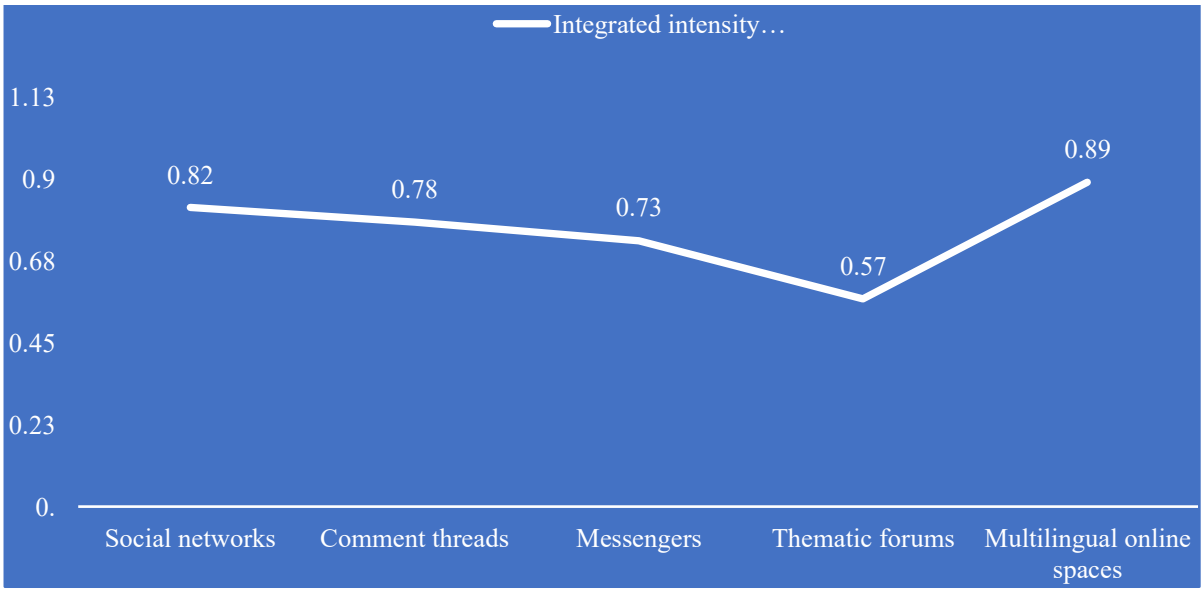

Figure 1. Integrated index of digital language interaction intensity by type of online environment

Source: created by the author based on (Eurostat, 2024; Eurostat, 2025; MediaMaker, 2025; Detector Media, 2024; We Are Social, 2024)

At the same time, the economic-mathematical model showed a nonlinear effect, revealing the link between digital activity levels and linguistic innovations. The pattern of this nonlinear relationship suggests that increasing the audience size does not simply cause a proportional rise in the Id index, as factors such as the environment's openness and multimodality are more statistically significant. Therefore, the hypothesis that language changes on digital platforms can be explained with a nonlinear, structurally dependent model is confirmed, indicating that platform characteristics have a greater influence than usage intensity.

The relationship between time spent on digital activity and the number of linguistic innovations across settings is also displayed more clearly in Figure 2, which features a bar showing average daily activity durations and a linear marker of linguistic variability.

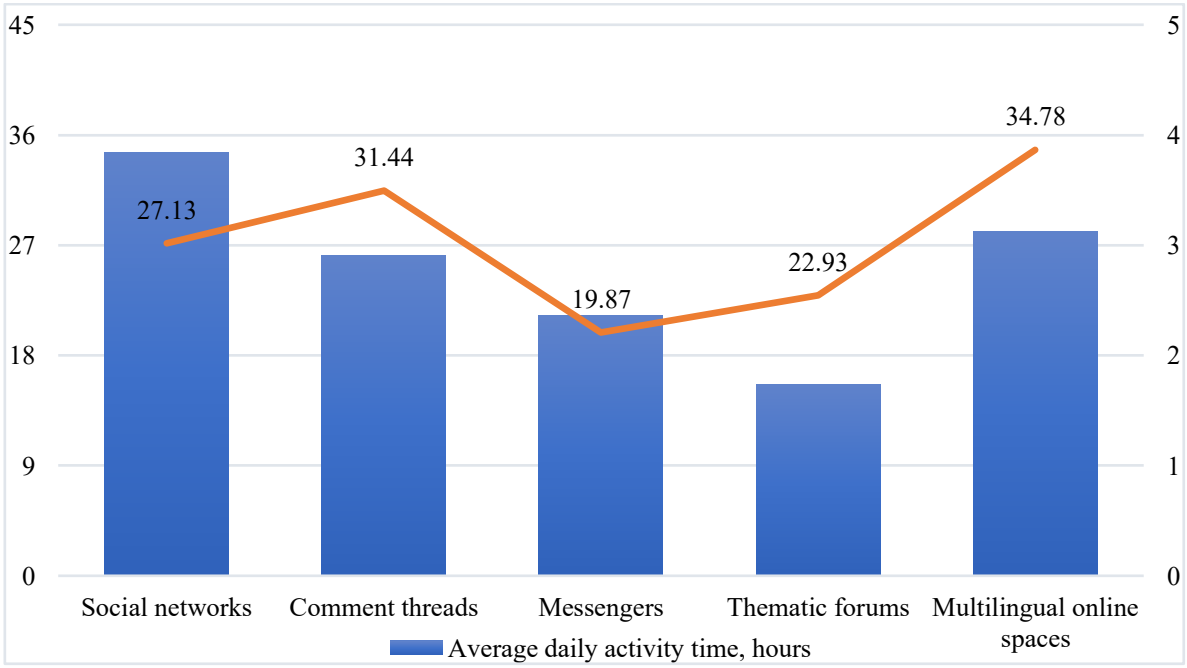

Figure 2. Ratio of average digital activity time and linguistic variability in online environments

Source: created by the author based on (Eurostat, 2024; Eurostat, 2025; MediaMaker, 2025; Detector Media, 2024; We Are Social, 2024)

Figure 3 shows the gap in user coverage across different digital formats and indicates the proportion of active users in each environment. This helps estimate their popularity and offers a clearer view of their true significance for language dynamics and communication volume. Using this method, it is possible to identify platforms with the greatest influence on language processes based on their audience size, interaction frequency, intensity, and the type of information exchanged. It also demonstrates structural differences among open, semi-closed, and private digital ecosystems.

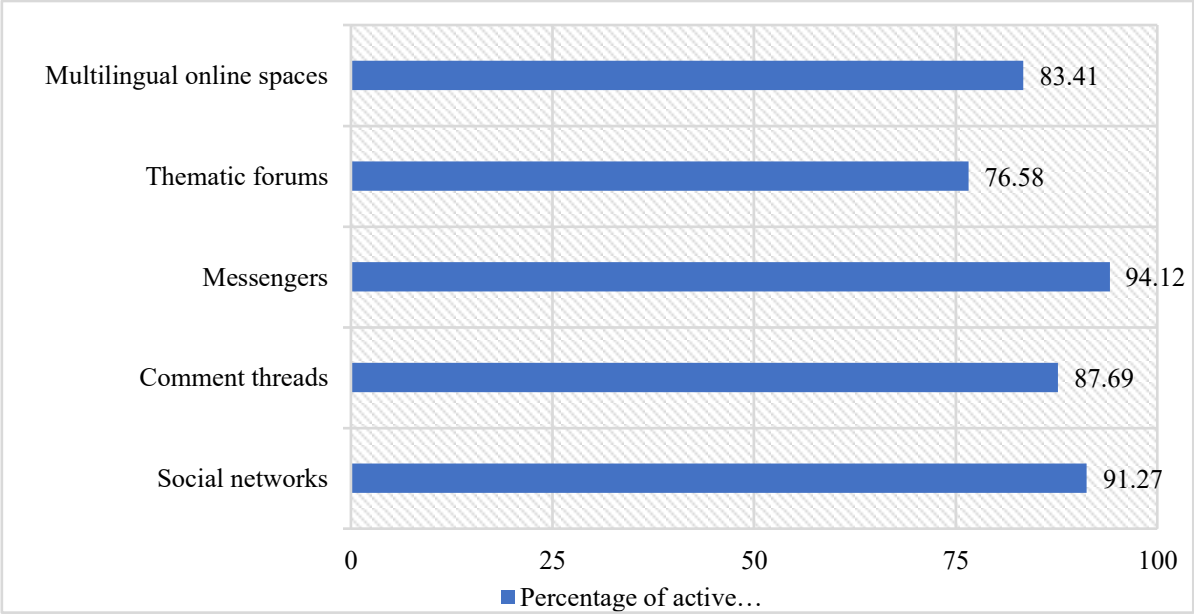

Figure 3. Share of active users in different types of digital environments

Source: created by the author based on (Eurostat, 2024; Eurostat, 2025; MediaMaker, 2025; Detector Media, 2024; We Are Social, 2024)

Analysis of numerical data reveals significant differences in the levels of linguistic interaction across platforms. The highest combined index is found in multilingual online spaces, reaching 0.89. This is 0.32 higher than in thematic forums, representing a 55.96% increase. Social network platforms also show high values, at 0.82, which correlates with the largest share of active users—91.27%. Messengers reach the greatest audience—94.12%—and have an intensity index of 0.73, which is 0.09 lower than social networks, suggesting less concentration of linguistic innovation in private channels. Comment threads display one of the most active levels of language variability, with an index of 34.78, which is 4.31 higher than multilingual platforms. However, this is associated with a lower overall intensity due to shorter average interaction durations of 2.91 hours compared to 3.12 hours. When excluding thematic forums, which consistently show the lowest language change intensity—17.54 points below social networks—and an average activity time of 2.10 hours, less than digital innovative formats, the trend indicates that more open, multimodal, and multilingual environments promote faster development of new language models. Conversely, the more closed or structured a platform, the more conservative this process tends to be.

It is crucial to recognize that the impact of global media on the development of Ukrainian online discourse is evident in how language models are evolving. In this context, Anglicization stands out as one of the most notable factors. Due to frequent repetition on social media, English terms, internet slang, and hybrid forms quickly become part of everyday communication. Grammatical structures in this rapidly changing digital space are simplified, and the distinction between standard and non-standard forms becomes less clear. Additionally, new ways of expressing meaning have emerged: from plain text to a combination of text, emojis, GIFs, and reactions arranged logically. The influence of algorithms shaping language patterns further reinforces this discourse, replacing traditional norms with “platform norms." These norms are consistently stable because they are repeated daily but remain flexible enough to change at any moment. These

processes create an alternative form of normativity: it competes with literary Ukrainian and also influences how people organize their speech, select words, and communicate online. Digital platforms do more than just share content; they actively influence users' language practices through algorithms, interfaces, communication frameworks, and multimodal formats, fostering a highly dynamic alternative normativity. Furthermore, social interaction factors—such as multilingualism, code-switching, and expanding audiences—contribute to the blending of linguistic resources. The processes of Anglicization, simplified syntax, and hybrid expressions grow stronger with repetition.

Figure 4 shows a SmartArt model schema that illustrates the study's structural logic, depicting the relationship between digital platforms and language norms, and offering an overview of the technological, social, and linguistic dimensions and parameters. The visual model summarizes that these parameters function simultaneously while shaping new digital norms.

Figure 4. Generalized model of the relationship between digital platforms and language norms

Source: created by the author based on (Di Marco et al., 2024; Khan et al., 2025; Panjaitan & Patria, 2024; Semak, 2024; Yu & Zhao, 2024)

In conclusion, this model shows that developing a new linguistic norm for the digital environment is a systemic process. It does not arise from isolated factors but results from the combined influence of technological, social, and linguistic mechanisms. While the first establishes the communication framework, the second ensures its widespread appeal and linguistic diversity, and the third shapes the content and structure of utterances. Their

interaction leads to the creation of a new form of normality—digital timbre—which affects the Ukrainian language more quickly and intensely than traditional institutional normalization methods. It also fosters conditions for existing variative, emotional, and bilingual or hybrid language models in modern speaking practices.

The practical recommendations for further monitoring of linguistic transformation include systematically tracking significant and stylistic changes in digital environments through regular, combined collection and analysis using corpus and algorithmic methods. Academic standardization in linguistics requires closer collaboration with platforms and educational authorities to develop adaptive normalization strategies that are sensitive to global media. Meanwhile, digital language policy calls for recommendations to digital platforms on maintaining accurate language visibility, addressing platform and algorithmic biases, and developing feedback correction mechanisms. Monitoring tools should be developed at a national level, including the creation of a national digital language corpus, automated systems for social trend monitoring, and analytics for policing both platform and national scales to detect and forecast language changes.

5. DISCUSSION

The findings show that digital platforms operate unevenly but systematically when it comes to language norms, with social networks and multilingual spaces experiencing the most significant changes, while forums and structured channels show less variation. This supports the idea that the speed and style of digital communication directly influence the stability and nature of linguistic innovations. For example, the widespread use of hybrid constructions in comment threads and messaging apps aligns with scholars' arguments about grammar simplification and the dominance of brief utterances in casual, informal digital environments (Di Marco et al., 2024; Panjaitan & Patria, 2024). However, comparing these results with other external data reveals even greater variability than reported by individual researchers. This may be due to the specifics of the Ukrainian Internet segment and higher engagement levels among young people, as seen in other sources (Eurostat 2024; 2025) and local media monitoring of Ukrainian platforms (Detector Media 2024).

At the same time, there are significant overlaps between our findings and studies on language hybridization, such as the increase in mixed lexical and orthographic models mentioned earlier. The authors observe that in open environments, language systems interact more intensely than in closed, offline spaces, a point supported by our research—we have shown that this interaction speeds up and becomes more stable because of algorithmic visibility and repeatability. Additionally, there is debate about the extent of Anglicization. Some authors see this process as the main trend in digital evolution. In fact, our data indicate high activity of Anglicisms. However, they also coexist with local neologisms and memetic formations that are constantly created and adjusted within the Ukrainian-speaking community, independent of external trends. Therefore, the process of language adaptation is more complex than some previous studies have suggested.

What is particularly interesting is that the results of the Linguistic Dual Model intensity analysis partly oppose models suggesting a direct link between platform use frequency and the level of linguistic transformations. Notably, while messengers have the largest audience reach, the intensity of linguistic innovations there is lower than on social networks. This may be explained by the idea that the privacy of interactions reduces the visibility of linguistic experiments. At the same time, these findings challenge the views

of some researchers who argue that all digital spaces equally contribute to language change. The data shows that the type of environment—specifically whether it is open and multilingual or private—plays a more significant role: open, multilingual platforms generate more innovations, while private channels produce fewer. The developed model can be used to predict language change in digital media. The calculations suggest that as content becomes more multimodal and algorithms increasingly promote its visibility—while user activity remains constant—language hybridization will accelerate. Conversely, an increase in hidden communication channels could hypothetically slow down the rate of language change. Therefore, economic-mathematical modeling supports the idea that quantitative predictions about how language norms will evolve in the digital space are possible. In conclusion, the structure of communication is just as important as its size.

Finally, considering the contradictions already present in the literature, it should be noted that authors studying the role of algorithms emphasize their dominant influence on the formation of "platform norms." In contrast, approaches from humanities and cognitive sciences focus on how the evolution of language results from social interactions and identity strategies. Our study confirms that both perspectives are partly valid: it is hard to imagine the spread of certain patterns without algorithm visibility; at the same time, the emergence of such patterns is often driven by community practices, memetic forms, and local innovations within an active user environment. It is important to note that our research supports the hypothesis of the multi-layered nature of change in digital language, as proposed by modern sociolinguists. The data we collected confirms that the linguistic norm in online discourse is not established hierarchically, as in the traditional model of literary norms, but rather horizontally—through the multiple, mutual influences of users, platforms, and algorithms. From this perspective, change is not a linear process but creates a network of parallel paths, each emphasizing a specific aspect of variability development depending on user groups.

Despite the above results, the study has some limitations. First, focusing only on the most representative platforms limits a full view of the entire digital linguistic landscape. Second, the quantitative indicators of linguistic variability are based on a sample that, although large enough, does not capture all aspects of this variability. Third, the integrated intensity index is a tool that summarizes rather than precisely diagnoses cause-and-effect relationships. All these factors suggest that the results should be seen as a realistic, though somewhat expected, model of the processes in digital language.

Ultimately, it can be argued that the above discussion shows that the development of digital linguistics is complex, uneven, and heavily shaped by social, technological, and platform influences. The study's conclusions support existing scientific knowledge and encourage further research into a more detailed analysis of the unique features of digital Ukrainian. In this context, it might be helpful to broaden the research scope to include creating large corpora of digital Ukrainian language and comparing them across different platforms, as well as modeling the operation of algorithmic mechanisms that influence this relationship within the global online discourse.

6. CONCLUSIONS

As a result, the study's findings opened up once seemingly stable territories to a variety of more complex influences and weakened rigid causal models. Digital platforms emerge as scalar, higher-level—above all structurally interconnected—modes of shaping

linguistic norms, whose actual intensity is much more nuanced and diverse than initially thought. It was expected that the frequency of platform use would be the main driver of language innovation, but the analysis showed that the communication environment and its degree of openness played a crucial role in language change, which is one form of innovation studied here. The practical significance of these findings is that they provide more accurate predictions of risks and trends in language dynamics related to digital development, along with tools for tracking changes. Limitations of the methodology—such as the fixed format of platforms, a short data collection period, and reliance on open statistics—mean that the conclusions should be drawn cautiously when applied to the larger digital ecosystem, although they do not contradict the overall analytical picture. Our results show that digital language norms are becoming network-based; language change no longer follows the old linear patterns, indicating a shift away from traditional linguistic forecasting methods. It makes sense to develop standardized academic systems that account for algorithmic visibility of linguistic forms, foster closer collaboration between scholars and digital corpora providers, and work on dedicated Ukrainian online discourse corpora. Future research should compare national digital ecosystems, model the algorithmic spread of language innovations, and examine how hybridity in communication affects Ukraine's stability in the global digital space.

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