

## Comparative and Functional Analysis of Emojis in Karakalpak and English-Language Instagram Discourse

NAJIMOVA GULYAIM BATIRJANOVNA  
Karakalpak State University, Nukus, Uzbekistan

### ABSTRACT

*This research continues the tradition of analyzing emojis as paralinguistic markers (Al-Jahdali 2023), and for the first time transfers it to the format of comparing Karakalpak vs English Instagram discourses. The work is based on psycholinguistics and analysis of the emotional impact of emojis (Yang D. et al. 2023), as well as on the conclusion of Koltsova & Kartashkova (2022) that unicode characters perform not only emotive, but also pragmatic, punctuation and rhetorical functions, compensating for the lack of nonverbal signals. Two balanced cases of 1157 comments under posts about ethnic dances were formed (Karakalpak and English-language chats). Mixed coding was performed: quantitative calculation of emoji frequencies, word: emoji ratios, categorization of messages (verbal/emojicommets/mixed), cluster analysis of character groupings and their qualitative pragmatic interpretation. A fundamental difference in communication strategies has been confirmed: Karakalpak texts show a pronounced emoji-dominance (77.0% of all tokens are emojis), while English-language comments remain verbally dominant (78.99% of the text). Although the top 2 emojis coincide (👉, 👋), their absolute frequency and intensity of use in the Karakalpak segment is several times higher (for example, 👉 – 1955 vs 346 tokens). There is a pronounced tendency to intensive duplication of emojis in the Karakalpak discourse: consecutive repetition of one emoji (on average 3-4 times, with a maximum of up to 87 consecutive times) to enhance the emotional response, which is most typical for emojis 👉 and 👋. In the*

*English case, duplication is present, but it is less pronounced, less frequent and shorter, covering a wider range of emojis without extreme repetitions.*

*Karakalpak-speaking users are characterized by the use of emojis as a full-fledged substitute for the verbal act of reactions (support, approval, emotional response), which is confirmed by the predominance of comments consisting only of emojis (68.1%). English-speaking users use emojis mainly as an illustrative amplifier to already verbalized content (mixed comments – 33.9.9%, text-55.0%). In mixed comments in both cases, emojis are most often placed at the end of the message (Karakalpak – 57.0%, English-66.8%), which indicates their role as an emotional assessment conclusion. At the same time, in the Karakalpak segment, the share of location in several places is slightly higher (28.1% vs 15.6%), which may indicate a more free integration into the fabric of utterance.*

*The obtained data not only fix the inverse relationship of "emoji share/text share" for the Turkic (Karakalpak) and German (English) digital discourses, but also document the pronounced tendency to intensive duplication of emojis in the Karakalpak communicative culture as a mechanism of emotion hyperbolization. In contrast to the original hypothesis, this phenomenon is not a unique "tactic", but rather a vivid frequency response of the use of key emojis, which highlights differences in communication styles. The low concentration of activity among top users in both cases (less than 4.2% of comments in the top 10) confirms the representativeness of the identified patterns for wide groups of cultural speakers.*

**Keywords:** Comparative analysis, functional analysis, emoji, smile, Karakalpak, Karakalpak discourse.

#### INTRODUCTION

Emojis – emoticons, emoticons) – are Unicode graphic symbols that encode facial expressions, objects, or actions. They perform an illocutionary function, reducing the uncertainty of verbal affect (Dresner & Herring 2010).

Translated from Japanese as "picture + emotion", emojis are complex semiotic signs-icons created for instant visualization of feelings and ideas (Babuk A.V. et al. 2019).

Unlike the early text emoticons ": -)" or "- ( ", modern emojis are separate graphic unicode glyphs that visually model the emotional state of the speaker at the time of speech (Makarov & Shumilina 2020).

Over time, emojis have evolved into the "built-in grammar" of digital communication (Dresner & Herring 2010) and are recognized as a "full-fledged paralinguistic resource" (Liu et al. 2023): they do not just adorn the text, but act as para-linguistic markers, the dynamics and frequency of which directly affect the perception of discourse (Yang D. et al. 2023).

Experiments show that emojis convey emotional states more accurately than verbal descriptions, which makes them a promising tool for cross-cultural analysis of digital discourse (Kutsuzawa et al. 2022).

Ignoring these signs leads to a simplified understanding of the emotional context (Igali et al. 2024).

At the same time, the conclusions described above are mainly based on the material of European languages. Such data are not available for the Turkic languages of Central Asia, and the Karakalpak language has not been represented at all in interlanguage corpus studies to date.

Modern research shows that emojis and emoticons perform an important orienting function in Internet communication, especially in cross-cultural and interlingual contexts (Kitova 2016). This makes it necessary to make a comparative analysis of their use in various language discourses, including sparsely distributed languages such as Karakalpak.

Current research fills this gap by conducting a comparative analysis of emoji practices between Karakalpak and English digital discourses-topics that haven't previously been studied yet.

#### LITERATURE REVIEW

In the early 2000s, emojis were seen as a simple substitute for nonverbal cues. For example, Crystal (2002) described them as

"visual patches" that make up for the lack of nonverbal signals in text communication.

However, empirical data soon appeared, which showed that the functions of emojis are much broader. Thus, Provine et al. (2007), based on an analysis of IRC chats, found that emojis are most often located at the end of messages (in 80% of cases), which indicates their pragmatic role in completing the cue (Dainas & Herring 2019).

In the 2010s, scientists began to systematize the functions of emojis. Dresner & Herring (2010) was the first to formally describe emojis as markers of illocutionary force that can soften an order, strengthen agreement, or mark irony. This approach became the basis for all subsequent functional classifications.

Further research has confirmed the contextual conditionality of emojis. For example, Luor et al. (2010) showed in an experiment with chats that negative emojis can increase conflict in business communication, while positive emojis are more effective in emotionally rich communication.

Yus (2014), based on the relevance theory, proposed one of the most complete taxonomies, highlighting eight main functions of emoji, from marking propositional attitudes to enhancing affect.

Sampietro (2016) refuted the idea of emojis as "patches", showing that they perform a full-fledged contextualizing and socially interactive work. In the same vein, Chairunnisa & Benedictus (2017) found that emoji enhancers make the perception of messages more emotionally intense than verbal epithets.

By the end of the 2010s, it became apparent that the use of emojis depends on the cultural context. For example, Tian et al. (2017) showed that the same sign can have different meanings (ironic, polite, reinforcing) depending on the context and culture. Cantamutto and Vela Delfa (2019) confirmed this by identifying differences in the use of positive emojis among Argentine and Spanish users. In addition, Shapovalova et al. (2018) found that a high emoji density in the Russian-speaking segment can negatively affect the perception of a post.

Yang et al. (2022) proposed the ALBERT-FAET model, which uses fine-grained attention to analyze the interaction between emojis and text in microblogging comments. Their approach showed that emojis can change the polarity of utterances depending on the context, which is especially relevant for cross-cultural analysis of discourse.

New approaches to analysis have also emerged. Hohlfeld et al. (2020) used emoji word embedding to identify semantic associations, and Aporbo (2022) proposed a universal semiotic typology that became the basis for many subsequent classifications.

In recent years, scientists have focused their efforts on creating universal analytical tools. Koltsova & Kartashkova (2022) summarized six emoji macro roles, including nonverbal, emotive, and pragmatic. Liu et al. (2022) introduced the "fuzziness" factor – an acceptable ambiguity that increases user engagement.

The greatest contribution to the systematization was made by the works of Padilla (2023, 2024). He systematized the approaches by proposing a frequency-function interface and focusing on three key parameters: associativity, intensity, and dialogicality. This allowed us to switch to a quantitative-oriented discourse analysis. For example, Yang et al. (2023) experimentally showed that repeated emojis linearly increase the emotional score of a message, which Padilla (2024) integrated into the "intensity" criterion. Padilla (2024) also formalized "dialogicality" as a way to encode the positional behavior of emojis, which allows you to analyze their role in closing cues or reinforcing a topic. As a result, Padilla (2024) reduced all these approaches to a functional triad, which can be used as an analytical grid for any language and genre.

Current research, such as Brehmer et al. (2025), uses embedding emoji words to create data-driven stories, but as Padilla (2024) notes, semantics without function binding does not provide a complete picture. Thus, functional models remain a priority level of analysis. Hernández-Bitinas and Padilla (2025) showed how emojis in Instagram chat can act as non-verbal

thematic markers, which confirms their role in structuring discourse.

#### METHODS

Emoji analysis was carried out within the framework of the corpus-functional approach Padilla (2023, 2024): at first each token was encoded in Unicode, the place of the emoji in the message was fixed (beginning/middle/end/separate post), followed by the ratio of positions between languages, then classified according to three binary features - [+/- associativity with text], [+/- repeat intensity], [+/- dialogicity] - which allowed us to quantify clusters and compare them between the Karakalpak and English cases.

The coding framework was developed based on the following sources. Snezhkova (2018) proposed a functional typology of paralinguistic means (attractive, semantic, expressive functions); each emoji was assigned to the dominant function in the context of the comment after automatic counting. Also, the quantitative-qualitative approach (frequency analysis + interpretation) of Cantamutto & Vela Delfa (2019) was used for frequency ranking.

Finally, the clusters were interpreted using Yus's (2014) cognitive-pragmatic taxonomy and Sampietro's (2016) functional roles. After automatic detection, each cluster underwent manual coding for the signs "amplification", "irony", "softening of the act", "affect on the act" ( $k \geq 0.82$ ). In this way, the quantitative metrics of the Padilla corpus are supplemented by a qualitative layer based on previous studies of attitude, politeness, and illocutionary force.

#### *Preliminary remarks*

A comparative study of paralinguistics requires maximum control of non-linguistic variables: genre, media resonance, visual content, social base, and reach. Instead of manual matching, a "natural matched pair" strategy was employed, whereby two posts were selected, each of which met the following criteria:

1. is a short-verified Reel (30-40s) with a national dance;
2. officially geo-tagged to the region of native speakers of the target language (Ireland ↔ English; Karakalpakstan ↔ Karakalpak);
3. hosted by an institutional account (@ireland and @karakalpakstan), which minimizes the impact of individual style.
4. scored >150 thousand views, providing a sufficient comment stream without additional fees.
5. published 4-12 weeks before the parsing date, which allows the "cold" wave of reactions to stabilize and eliminates peak spam of the first hours (Ng et al., 2023).

*Justification of the choice of reaction material (post)*

Posts featuring recordings of ethnic dances were selected as stimulus material, specifically the Karakalpak dance "Shağala" ("Seagull") and Irish step dance. Dance is a stable multi-modal sign system, where movements, gestures, and facial expressions function as "signifiers" that are accessible to cross-cultural interpretation (Pan 2025). Since this type of discourse transcends language boundaries, it activates affective-evaluative reactions in comments, including in the form of emojis, which makes dance content an optimal platform for comparing paralinguistic practices of different cultures.

Both videos are English-language posts: "Irish step-dance for St. Patrick's Festival" (<https://www.instagram.com/p/CEeNa8LAt9k/>, August 29, 2020, 361134 views) and a Karakalpak-language post: "Qaraqalpaqshaayaqoy in *Shag'ala*" (<https://www.instagram.com/reel/C6qUcMCtjWY/>, May 7, 2024, 198462 views) – contain the equivalent pragmatic script: "traditional dance performance in front of an international Instagram audience." This gives grounds to consider reactions comparable in terms of the communicative goal-expressive evaluation of a cultural product.

*Monitoring the independence of observations*

The distribution of comments by authors confirmed the absence of a cluster effect: 93.0 % (Karakalpak chat) and 95.0% (English-

language chat) of users left exactly one message; the top 10 most active authors created less than 4.22% of entries in each sample. The average number of comments per user was 1.1 with a design effect of  $\approx 1.0$ .

The concentration of activity among the top 10 most active users is extremely low (4.1% and 3.7% of comments, respectively). This indicates that the discourses studied are formed by a wide range of users with low individual activity, and not by a narrow group of opinion leaders.

Thus, the relationship between observations is negligible and does not affect the standard error, statistical power, or effect size.

To avoid cross-contamination, a sequential filtering procedure was applied:

1. scientific language identification;
2. delete comments-ads and bots based on the list of trigram indicators.

Due to systematic misclassification of Karakalpak as Uzbek, Kazakh, or Turkish by existing automatic models (including fast Text lid.176), automatic classification was abandoned in favor of sequential manual verification. Comments written in both Cyrillic and Latin Karakalpak, as well as intra-sentential code-mixed comments, were included in the Karakalpak-language discourse corpus. All comments where statements were made only in other languages (mainly Russian) were excluded.

The English-language corpus was processed using the same method.

Comments consisting only of emojis remained unchanged in both cases.

There are also comments that have abbreviations and represent neologisms of English and Karakalpak.

After cleaning, there were 1,157 comments left in the corpus of each language.

#### *Statistical sampling power and effect size*

To assess the sufficiency of the volume of the corpus and the practical significance of the revealed differences, an a priori

calculation of the statistical power and effect size (Cohen's  $h$ ) was performed using the scheme of comparing two independent fractions (Cohen 1988). As a key indicator, the share of messages containing at least one emoji was taken: the Karakalpak – speaking subcorpus – 1008/1157 (87.1 %), the English-speaking subcorpus-544/1157 (47.0 %).

The difference in proportions was +40.1 percentage points (95 % CI 37.0–43.2). Cohen's size effect  $h = 0.896$ , which corresponds to a large effect ( $\geq 0.8$ ). A two-way z-test of share differences showed high statistical significance:  $z = 20.53$ ,  $p < 0.001$ . The a priori power ( $\alpha = 0.05$ ) reached 1.00, which exceeds the recommended threshold of 0.80 (Cohen, 1988; Faul et al., 2009). Consequently, a sample of 1,157 comments in each group was sufficient to reliably detect culturally specific differences in emoji usage.

#### RESULTS AND DISCUSSION

A quantitative analysis of a sample of comments from the Karakalpak-speaking and English-speaking segments of Instagram revealed significant differences in the functional use of emojis, which allows us to speak about the specifics of their use in different linguistic and cultural communities.

The first significant result is a dramatic difference in the proportion of emoji usage relative to the text in the two discourses.

Emojis are the dominant element of communication in the Karakalpak-speaking discourse. They account for 77.0% of the total amount of characters in comments, while text accounts for only 23.0% (Figure 1).

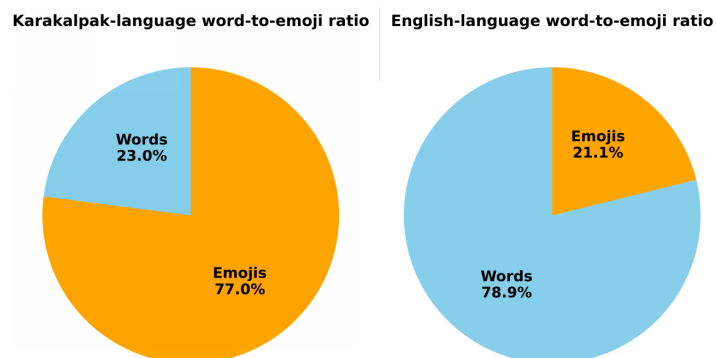


Figure 1. *General distribution of words and emojis in Karakalpak and English chats*

Moreover, the majority of comments (68.1% or 787 units) are represented exclusively by emoji sequences without any text accompaniment. Mixed comments make up 19.1% (221 units), while pure text comments make up the smallest group (12.8%, 148 units) (Figure 2).

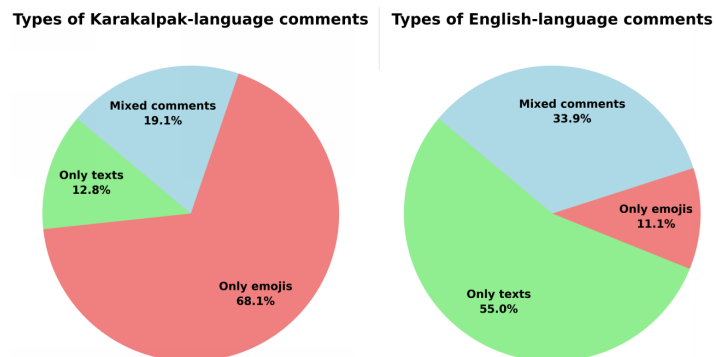


Figure 2. *Distribution of comments consisting of: 1) only from words, 2) only from emojis, 3) mixed-in Karakalpak and English chats.*

In the English-language discourse, the opposite picture is observed. Communication remains mostly in the text plane: the share of words is 78.9%, and emojis – only 21.1% (Figure 1).

The most common type is purely text comments (55.0%, 665 units). Mixed comments account for 33.9% (410 units), while comments consisting only of emojis are relatively rare (11.1%, 134 units) (Figure 2).

This difference indicates that in the Karakalpak-speaking Instagram discourse, emojis have taken on the function of a full-fledged utterance, while in the English-speaking environment they more often perform an auxiliary, modal-evaluative function with a text basis.

The analysis of the most frequently used emojis revealed both universal, cross-cultural preferences, and specific features.

The top 5 emojis in the Karakalpak-language discourse show a high concentration around the topics of approval, admiration, and emotional support. The absolute leader by a large margin is the emoji 🙌 (1955 uses), followed by 👏 (1638) and 👍 (783). High positions are also occupied by emojis of love and admiration: ❤️ (612) and 😊 (320).

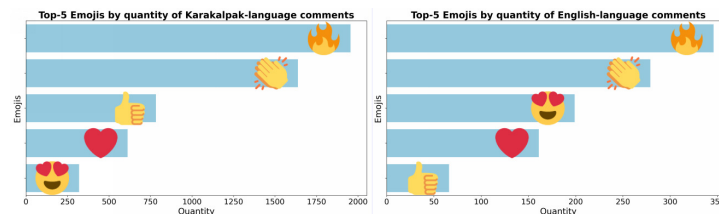


Figure 3. *Leading emojis in Karakalpak and English chats*

The ranking of the most frequent emojis in the English-speaking discourse is also headed by 🙌 (346) and 👏 (279), which confirms their global popularity for expressing delight and applause. However, the list continues with emojis expressing love and sympathy: 😊 (199) and ❤️ (161). Emoji 👍 (66) closes the top 5, which indicates its relatively lower popularity compared to the Karakalpak sample.

A common trend is the leadership of emojis expressing intense positive feedback (👍, 🙌). The main difference is more emotional focus and a clear dominance of emoji-applause and approval in the Karakalpak sample.

The phenomenon of repeated repetition of one emoji in a row (duplication) is a marker of high emotional intensity and is manifested in two communities with different strength.

In the Karakalpak-speaking discourse, duplication is extremely widespread and reaches extreme values. Emojis 🙌 and 👍 are duplicated not only 2-5 times (which is also typical for English discourse), but also repeatedly: cases of repeating 🙌 34 times in a row, and 👍 – 87 times are recorded. Other emojis from the top are also actively duplicated (👉, 😊). This indicates that this technique is a well-established norm for increasing expressiveness and expressing the maximum degree of approval or admiration.

In the English-language discourse, duplication is also present, but it is much more moderate. The maximum values for emoji 👍 and 🙌 emojis are limited to 17 and 9 repetitions, respectively, which is significantly lower than the Karakalpak indicators. In addition, the range of duplicated emojis is much wider, but the frequency of each case is lower. This indicates that although this technique is well-known, it is not so systematic and intensive.

The distribution of positions that emojis occupy in mixed comments reveals the features of their integration into the text structure and indicates cultural-specific communication strategies.

In the Karakalpak-speaking discourse, there is a more balanced, though pronounced, distribution. The emoji position at the end of a comment is predominant (57.0%), which corresponds to the general trend of using emojis as an emotional summation or reinforcement. However, the share of comments where emojis occur in several places (28.1%) and in the middle of a sentence (10.0%) is significantly higher than in English-language data. This indicates the active integration of emojis into the utterance fabric, where they perform not only a final, but also

an interactive, modulating function in the process of thought unfolding.

In the English-language discourse, there is a pronounced concentration on the position of emojis at the end of a comment (66.8%), which emphasizes their role as a clear final accent. The positions "in several places" (15.6%) and "in the middle" (15.9%) are more modest, while the placement at the beginning (1.7%) is marginal. This indicates a more strict and regulated function of emojis, which mostly complete the utterance, and do not interact with its individual elements.

The comparison reveals an important difference: while English-speaking users tend to use emojis as a punctuation final mark, Karakalpak-speaking commentators are more likely to weave emojis into the text itself, using them as a full-fledged narrative element. The data refute the thesis of "high proportion of emojis in the middle" in Karakalpak commentary as a consequence of the overall frequency; instead, they point to a qualitative difference in pragmatics – a more dynamic and distributed use of emojis in Karakalpak discourse.

Applying the integrated approach proposed by Padilla (2023; 2024) allows us to move from a purely quantitative description to the interpretation of the pragmatic and discursive functions of emojis in the studied linguistic and cultural communities.

The data were examined based on the official Unicode classification v15.0 (used in emoji panels and most studies), and the percentages were recalculated.

Table 1. *Comparison of emoji distribution in the Padilla dataset (2023) and in the Karakalpak and Irish datasets*

Code	Name	Examples of Emoji	Percentage in Padilla (2023)	Karakalpak dataset (%)	Irish dataset (%)
C1	People and bodies	👋, 🇺🇦, ❤️, 😊, 🤖, 😊, 😊	54 %	64.2 %	71.0 %
C2	Animals and Nature	🐱, 🌸, 🇺🇦, 🇸🇰, 🇪🇺, 🌿, 🌻	10 %	0.04 %	0.5 %
C3	Food and Drink	🍷, 🍷, 🍷, 🇺🇦, 🍷	13 %	0.0 %	0.6 %



combinations (for example, 🙌🙌🙌🔥🔥) serve as a holistic speech act – in this case, intense praise or approval, replacing a text phrase.

The English-language discourse is dominated by [+association]. Emojis primarily function as a paralinguistic complement to text (55.0% of pure text messages and 33.9% of mixed messages). Their role is often limited to modalizing the utterance, adding an emotional or ironic subtext to the verbal content, which corresponds to the function of "softening" or "intensifying" (Padilla, 2024).

The phenomenon of emoji repetition, studied in detail by Padilla (2024), is a marker of [+intensification] and serves as a paralinguistic tool for enhancing expression.

In the Karakalpak-speaking discourse, intensification through duplication is a systemic norm. Extreme cases of repetition (🔥 x87, 🙌 x34) are not an anomaly, but reflect a culturally determined need to express the maximum degree of emotional engagement, approval, and support. This can be interpreted as a manifestation of a collectivist communication strategy aimed at strengthening social ties (lazos, by Padilla, 2023) through hyperbolized positive feedback.

In the English-language discourse, duplication is present, but it is moderate and tactically limited. Emoji repetitions rarely exceed 5-10 times and are distributed over a wider range of emojis. This is consistent with the conclusion that emojis here are more often used for point-by-point intensification of part of the utterance, rather than for forming the entire message. Culturally, this may be due to a greater focus on information content and avoiding overexpression in public discourse.

The position of emojis in mixed comments reveals their dialogic function.

In both discourses, emojis show high [+dialogicity], mainly occupying a position at the end of the remark (Karakalpak: 57.0%; English: 66.8%). This corresponds to the function of "reacting" or "closing" a speech act (Padilla 2024), where an emoji serves as an emotional response to the content of a post or previous comment, completing the communication cycle.

An important difference is observed in the strategies for integrating emojis into the message body, which indicates a different degree of dialogical activity within a single replica.

The strategy of placing emojis in several places is much more common in the Karakalpak-speaking discourse (28.1% vs. 15.6% in the English-speaking one). This indicates a more integrated and multimodal nature of communication, where emojis are dynamically interwoven into the narrative, acting as an active component of building meaning throughout the entire utterance. This use approaches the function of reactive-initiative moves within a single remark, supporting and enhancing its internal dialogism.

The emoji position in the middle of the message is somewhat more typical for the English-language discourse (15.9% vs. 10.0% in Karakalpak). This indicates a different pragmatics: emojis are used for punctuating or emotionally coloring individual elements of an utterance as it develops, acting as an illustrator ([+asociación], Padilla, 2024), and not for creating a distributed emotive field.

Thus, functional analysis confirms that, despite the external similarity of top emojis, Karakalpak-language Instagram discourse tends to the model of hyperbolized collective support implemented through autonomous and intensively duplicated emojis, while English-language discourse is focused on a balanced model of text-centered communication, where emojis serve as an emotional modal complement.

#### *Comparison with international studies and theoretical generalization*

The results confirm a number of universal trends identified in earlier studies.

The revealed dominance of the final emoji position ( $\approx 70\%$  in both discourses) is fully consistent with the conclusions of researchers such as Dresner & Herring (2010), and confirms the universal function of emoji as a marker of illocutionary force and a means of "affective closure" of the cue (Sendari et al. 2020). The emoji in this position acts as a visual analogue of the

exclamation mark, increasing the emotional load of the entire utterance.

Consistent with Cantamutto & Vela Delfa, the study is characterized by a dominance of emojis with positive emotional coloring. This confirms the hypothesis about the universality of politeness and positive emotional attitude in public digital discourse, regardless of language.

The present results support the conclusions of Atif & Franzoni (2022) that the basic emotion categories (following Ekman) expressed by emojis are universal. The same emojis (.,) occupy top positions in both languages, encoding similar concepts of delight, support, and admiration.

However, substantial differences are also observed, suggesting the need for a cultural explanation. The most striking difference is not in the set of emojis, but in their functional load. The present findings build on and extend the ideas of Al-Jahdali (2023) and Aporbo (2022) concerning the cultural specificity of emojis. It can be observed that formally identical emojis convey different pragmatic meanings: the Karakalpak 🇰🇰 emoji often expresses collective enthusiasm and public approval, whereas the English 🇬🇧 emoji primarily conveys individual admiration or content evaluation. This distinction is well illustrated by Hall's (1976) theory of high - and low-context cultures. Karakalpak discourse, with its minimal verbal content and extreme intensification through repetition, is an example of highly contextual communication, where most of the meaning is implicit and lies in a common cultural code.

The thesis that emojis in Karakalpak discourse act as a "curtailed speech act" can be interpreted as a form of language economy, but not to the detriment of expressiveness, but rather as its hyperbolization. The proposition about the connection of mass repetitions with the oral tradition of repeated echo-refrain in Turkic folklore is an extremely promising hypothesis, which requires separate research and gives our work a unique cultural meaning.

The observed phenomenon of extreme duplication (up to 87 times), which is not typical for Western buildings (Sendari et al.

2020; Marko 2021), is your most prominent indicator. It not only confirms the thesis of Raguzin (2018) about "nonverbal excessive duplication" in highly emotional contexts, but also expands it, showing that the very degree of redundancy is culturally conditioned. This is a qualitatively new observation, not previously described in emoji studies.

The findings provide partial support for Marko's (2021) conclusion, while also indicating notable differences. If in English-language discourse emojis really often act as emphatic markers in the text, then in Karakalpak they overwhelmingly function as full-fledged lexical substitutes for whole utterances (👉👉👉 = "This is great").

Similar to Tian et al. (2017), emojis are recognized as multifunctional. In the Karakalpak corpus, however, the most frequent emojis ( ,👉) did not provide convincing evidence of ironic use.). Their function is primarily straightforward and emotionally positive. This may be a feature of the genre of Instagram comments under public posts in this linguoculture.

In the light of recent work by Hernández-Bitinasand Padilla (2025), positional data takes on a new meaning. In Karakalpak discourse, emojis can function not only as the final accent ("closing" of the topic), but also as active markers involved in intra-response management of the topic. Their distributed arrangement can serve to maintain or dynamically redistribute the focus of attention within a single utterance, just as the marked word order in oral speech signals a change or development of a topic.

By applying the classification proposed by Snezhkova (Snezhkova, Baranov & Parshin) to the present dataset, it can be argued that emojis function as a complex supragraphic tool integrating features of all three categories. They act as a powerful tool for font variation, attracting attention and emphasizing the emotional state. In the Karakalpak-speaking discourse, where emojis account for 77.0% of the communicative volume, they actually completely assume the function of emotional highlighting, traditionally performed in italics, bold or color in the text.

The data that 57.0% of Karakalpak-speaking and 66.8% of English-speaking mixed comments have emojis at the end of utterances actually correlate with their punctuation function. Emojis in the final position serve as a kind of " illocutionary vector" (Kitova), orienting the recipient to the correct interpretation of the previous text, just as the final punctuation marks complete and modally color the utterance.

However, the actual quantitative ratio reveals an important cross-cultural difference: in English-language discourse, the tendency to use emoji as the final punctuation marker is much stronger. This may indicate a more strict regulation of communication patterns, where emojis consistently occupy the position of the final accent.

In the Karakalpak discourse, despite the predominance of the final position (57.0%), the share of comments with emojis in several places is significantly higher (28.1%). This indicates that the punctuation function of emojis is not exclusive here. Emojis can also perform more complex, distributed functions within an utterance, acting not only as a final vector, but also as a means of accentuating or emotionally accompanying a thought as it unfolds.

The topographical function can be traced in cases of multiple repetitions of emojis (🔥🔥🔥). An array of identical characters visually organizes the comment space, creating a special rhythm and accentuating the intensity of emotion, which is akin to using paragraph indents or changing the line length to convey a pause or tension.

Thus, the present study confirms and extends Snezhkova's thesis that emojis constitute a modern digital embodiment of the full range of paralinguistic graphic tools described by Baranov and Parshin, while demonstrating substantially higher semiotic potential.

The present comparative study provides strong and differentiated empirical support for Kitova's conclusions on the sociopragmatics of emoji communication.

As in Kitova's research, in both discourses emojis serve as a key tool for indicating "how a message should be interpreted."

However, the mechanism of this orientation is different. In English-language discourse, this function is secondary and modal: emojis complement and color the verbal text ("laughter to tears" 😊 after a joke). In the Karakalpak language, it is primary and self-sufficient: the sequence 🙌🙌🙌 itself is a complete act of applause that does not require verbal accompaniment.

Data from the Instagram discourse, where communication is public by default and is directed to the content creator, partially coincides and partially diverges from Kitova's conclusions about instant messengers.

For example, in Russia, the high frequency of positive emojis (👍, ❤️, 😊) fully corresponds to the thesis that emojis "contribute to maintaining a friendly atmosphere". Comments on Instagram are essentially an act of public support or approval, which makes them similar to communicating "with loved ones" on Kitova.

However, in this context, communication is inherently asymmetrical, occurring from the commenter to the post author, and is publicly observable. This means that emojis here perform not only the function of maintaining one-on-one relationships, but also the function of publicly demonstrating loyalty, approval, and inclusion in the community around the media personality. The Karakalpak pattern with its extreme repetitions can be interpreted as a ritualized act of collective recognition, enhanced by digital means.

These findings offer convincing empirical support for Kitova's main thesis that emojis are not a universal language. The same forms (.) in different linguistic and cultural contexts (collectivist Karakalpak vs. individualistic English-speaking) acquire a different functional load and pragmatic depth. This proves that their meaning really "depends on the context, general experience, and cultural characteristics of a particular community."

Comparison with the studies of Snezhkova and Kitova indicates that emojis in Instagram discourse:

1. represent a direct continuation and development of traditional paralinguistic resources in written communication;

2. are strongly influenced not only by interpersonal context (as demonstrated by Kitova), but also by broader cultural and genre-related factors (e.g., public commenting), which shape the choice between text-centered and emoji-centered communication strategies.

#### LIMITATIONS

Despite the fact that this study has revealed a number of significant patterns, it has certain limitations that are important to take into account when interpreting the results and planning future research.

1. This study focused exclusively on the discourse of the Instagram platform. Communication practices, including the use of emojis, can vary significantly depending on the platform (for example, Twitter, Facebook, TikTok, or messengers like WhatsApp) due to differences in audience, technical capabilities, and established genre norms. Therefore, extrapolate the findings to other digital environments with caution.
2. During data collection and analysis, variables such as gender, age, social status, and digital literacy of users were not monitored. Meanwhile, existing research (e.g., Chen 2024) shows that these factors can have a significant impact on pattern emoji usage patterns. Their inclusion in future studies would allow for a more nuanced and detailed analysis.
3. Despite the sufficient amount of data for qualitative analysis, the sample is targeted (fans or non-fans of national dances) and does not claim to be fully representative of the entire Karakalpak-speaking or English-speaking segment of Instagram. Broad generalizations will require research on even larger data sets.
4. This study focused on the frequency, position, and basic functions of emojis. A deeper linguistic analysis, including the study of semantic relations between emojis in sequences, their interaction with specific lexical units in mixed

comments, and subtle pragmatic nuances, remains a promising task for future research.

#### CONCLUSION

The comparative and functional study revealed fundamental differences in the use of emojis in the Karakalpak and English-language Instagram discourse.

The key conclusions of the paper are as follows:

1. For the first time, empirical data shows that Karakalpak-language discourse is emoji-centric (77.0% of emojis in the total amount of tokens in comments, 68.1% of comments are emoji only), while English-language discourse retains text-centricity (78.9% of verbal tokens, 55.0% of pure text comments).
2. Universal emojis (👉,👊,❤️) acquire a language-specific pragmatic valence. In the Karakalpak communicative space, they function as self-sufficient speech acts that fully replace the verbal response. In the English-speaking environment, their role is reduced to illustrative and modal, they serve to emotionally strengthen the text utterance.
3. The classification of emoji functions remains stable (expressive, phatic, modal, etc.), but their pragmatic content and frequency vary. This confirms the applicability of typologies such as the Aporbo (2022) model to poorly understood languages and demonstrates that cultural differences are manifested not in the absence of functions, but in their hierarchy and implementation contexts.
4. Duplication of emojis and their final positioning are reliable quantitative markers of affective reinforcement in Karakalpak discourse. These patterns can serve as a diagnostic feature for identifying culturally determined digital communication strategies.

The theoretical contribution of the study is to expand modern linguistic models.

These findings build on the ideas of Hernández-Bitinas and Padilla (2025), demonstrating that universal communicative needs (topic management, intensification, and relationship expression) are realized across modalities and languages through different means: word order in spoken interaction, and the positioning and repetition of emojis in digital discourse. While Chung and Li (2019) view emojis primarily as a visual educational tool, the present study highlights their role as paralinguistic markers which, although often not consciously recognized by participants, systematically structure discourse.

The practical significance of the work lies in its applications for:

- **Sociolinguistics and cross-cultural research:** Emoji has proven effective as a tool for measuring and comparing emotional states and communication norms in different digital communities.
- **NLP system development and moderation:** The data obtained indicate the need to create language-specific models. For emoji-centric discourses like Karakalpak, the sentiment systems of the future should treat emoji chains as single intensity tokens, rather than as additive units. Ignoring this principle will lead to incorrect content processing.

Prospects for further research are seen in:

- Expansion and research into other Turkic languages to identify regional trends;
- In addition, the analysis of socio-demographic parameters (gender, age) for more fine-grained data stratification;
- Research and experimental studies to test the hypothesis about the perception of duplicated emojis by native speakers of different cultures;
- A deeper and more qualitative analysis is needed to identify cases of ironic and indirect use of emojis in both discourses.

Thus, this study not only fills a gap in the study of the digital discourse of the Karakalpak language, but also contributes to the

general theory of media linguistics, emphasizing the key role of cultural context in the formation of digital communication practices.

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**NAJIMOVA GULYAIM BATIRJANOVNA**  
KARAKALPAK STATE UNIVERSITY,  
NUKUS, UZBEKISTAN.  
E-MAIL: <NAZGULYAIM.GN@GAMIL.COM>