



**PEDAGOGICAL MECHANISMS OF ARABIC LANGUAGE ACQUISITION IN
INSTAGRAM-BASED MICROLEARNING: A CASE STUDY OF
@GUNCELARAPCA**

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ABSTRACT

The increasing use of social media for educational purposes has created new opportunities for microlearning in language education. This study investigates the pedagogical mechanisms of Arabic instructional content published on the Instagram account @guncelarapca. Employing a qualitative case study design and content analysis approach, the research examined 74 instructional posts selected from 186 publications between January and June 2025. Data were collected through systematic digital observation and documentation of visual content, captions, hashtags, and engagement indicators, guided by Microlearning Theory, Second Language Acquisition, and Digital Pedagogy. The findings reveal that instructional content was delivered through static images, carousel posts, and short video reels, with vocabulary-focused materials dominating the dataset, followed by fixed expressions and semantic comparisons. The content consistently exhibited core microlearning characteristics, including brevity, a single instructional focus, limited informational density, and visual organization. Structurally, each post functioned as an independent, modular learning unit without evidence of sequential curriculum design or progressive pathways. User engagement was documented through platform-based metrics such as likes and comments, which reflect user interaction patterns rather than learning outcomes. This study contributes to digital language education literature by providing empirical documentation of how microlearning-oriented Arabic content is structured and disseminated on social media. The findings offer a descriptive foundation for future research examining learner experiences, instructional effectiveness, and language acquisition processes in social media-based environments.



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INTRODUCTION

The rapid expansion of digital technologies has transformed how people access information, communicate, and learn. Over the past decade, learning activities have increasingly extended beyond formal educational settings into digital environments where individuals engage with knowledge through everyday online interactions. Social media platforms have become particularly significant informal learning spaces because they provide continuous, flexible, and independent access to educational content. For many learners, especially younger generations, these platforms function not only as tools for communication and entertainment but also as important sites for knowledge acquisition and skill development. This shift reflects broader changes in contemporary learning cultures characterized by mobility, personalization, immediacy, and user-generated participation (Almohesh & Altamimi, 2024).

The transition toward digital learning environments has important implications for language education. Unlike traditional classrooms that are limited by schedules, curricula, and physical resources, digital platforms offer continuous access to linguistic input and interaction opportunities. This aligns with contemporary language learning perspectives that emphasize exposure, engagement, and authentic communication beyond formal instruction. Consequently, social media has attracted increasing attention as a potential environment for second language acquisition (Chen & Tsai, 2022).

Among various platforms, Instagram holds a distinctive position due to its multimodal structure. It integrates images, videos, text, audio, captions, and interactive features within a single ecosystem, enabling educational content to be delivered through multiple channels simultaneously (Sari & Wahyudin, 2023). These affordances allow learners to encounter language in visually rich and contextually meaningful ways. Instagram also embeds learning content into users' daily routines, enabling repeated exposure through everyday scrolling behavior. As a result, Instagram has become an influential platform for informal language learning across diverse linguistic contexts.

The rise of Instagram-based learning coincides with the growing popularity of short-form content. In digital environments where users are exposed to large volumes of information competing for attention, lengthy instructional materials often struggle to maintain engagement. To address this issue, educators and content creators increasingly adopt microlearning approaches that present information in concise, focused, and easily digestible units. Instead of delivering extensive lessons in one session, microlearning divides content into smaller segments that can be completed in short time spans while still achieving specific learning objectives.

Microlearning is not only a response to modern media consumption patterns but also grounded in cognitive learning principles. Educational research suggests that learning is more effective when information is structured in ways that reduce cognitive overload and support manageable processing (Castro-Alonso et al., 2021) (Skulmowski & Xu, 2022a). Microlearning facilitates this by organizing knowledge into small, meaningful units that promote incremental learning and repeated exposure. Its effectiveness, therefore, lies not simply in brevity but in the pedagogical design principles that guide how information is selected, sequenced, and presented.

These developments are especially relevant in Arabic language education. Arabic is widely studied for religious, cultural, academic, and professional purposes. Yet, it is often perceived as a difficult language for non-native learners due to its morphological complexity, grammatical structure, and writing system. These challenges can affect learner motivation and confidence, particularly in early learning stages. While formal institutions remain central to Arabic instruction, many learners seek supplementary resources that provide flexibility and relevance to everyday life (Mustafa & Alrabai, 2023).

Digital platforms have therefore become important supplementary environments for Arabic learning. Through social media, learners can access vocabulary explanations, grammar guidance, pronunciation models, cultural insights, and communicative expressions beyond classroom boundaries; . This is particularly important because language acquisition requires sustained exposure to meaningful input over time. Social media facilitates such exposure by embedding language content into daily digital activities, enabling repeated and contextualized encounters with linguistic forms.

The shift toward non-institutional digital spaces has allowed learners to access structural guidance outside conventional limits. In Indonesian higher education contexts, integrating mobile-based systems into Arabic instruction increasingly bridges the gap between formal lectures and self-directed learning environments (Ardiansyah & Kosim, 2022). While earlier independent digital Arabic learning models focused heavily on comprehensive web-based ecosystems, contemporary media consumption patterns have structural requirements that lean toward bite-sized content delivery via social applications.

Existing research generally indicates that social media can positively support language learning. Studies have shown that Instagram-based content may enhance vocabulary acquisition, learner motivation, engagement, and positive attitudes toward learning. Similarly, microlearning has been associated with improved retention, accessibility, and self-directed learning. Research on multimodal learning also highlights the benefits of combining visual, textual, and auditory input to support comprehension. Together, these findings suggest that social media and microlearning hold significant potential for language education.

However, despite these promising insights, the literature presents several limitations. First, Alfadda (2022), “Social Media in Language Learning: A Systematic Review of Outcomes and Engagement,” shows that although many studies highlight the benefits of social media for learning outcomes, motivation, and engagement, most research remains outcome-oriented. This strong focus on results leaves the pedagogical processes that generate these outcomes insufficiently explained. As a result, there is a limited understanding of how instructional design on social media actually creates meaningful learning opportunities (Alfadda, 2022).

Manca & Ranieri, “A systematic review of social media as a teaching and learning tool in higher education: A theoretical grounding perspective” found that social media platforms are often treated as uniform learning environments in existing studies. Instagram, TikTok, and other platforms are frequently generalized based on their technological features, without sufficient attention to differences in pedagogical strategies among content creators. In reality, variations in instructional design significantly shape learners’ experiences and the quality of learning that occurs (Manca & Ranieri, 2023).

Skulmowski & Xu, “Understanding cognitive load in digital and online learning: Instructional design implications” emphasize that existing research still tends to focus on

learning outcomes rather than the structure of instructional input itself. In language learning, how material is presented including segmentation, contextualization, multimodal representation, and repetition plays a crucial role in acquisition processes. However, these aspects remain underexplored in social media-based digital learning contexts (Skulmowski & Xu, 2022b).

This reveals a broader conceptual gap in the literature: while it is widely acknowledged that Instagram-based microlearning can support language learning, the mechanisms underlying this process remain insufficiently explained. Existing studies show that such approaches are effective, but not how or why they work. This lack of explanatory depth limits theoretical development in digital language pedagogy.

This gap is particularly important for Arabic language education. As Arabic instruction expands into digital spaces, educators require a deeper understanding of instructional principles that support learning outside traditional classrooms. Without such understanding, social media-based Arabic learning risks being viewed primarily as a technological trend rather than a pedagogical development.

Addressing this issue requires integrating microlearning principles with Second Language Acquisition (SLA) theory. SLA emphasizes the importance of meaningful input, repeated exposure, noticing of linguistic forms, and contextualized communication (Sweller et al., 2021). Microlearning, on the other hand, emphasizes segmentation, clarity of objectives, and accessibility. Although these frameworks are compatible, limited research has examined how they interact in social media-based learning environments.

This study addresses this gap by examining the Instagram account @guncelarapca. The account is not selected solely for popularity but as a bounded case representing a consistent application of microlearning principles in Arabic language instruction. Its content includes short-form lessons, visual explanations, concise linguistic input, and learner-oriented engagement strategies. These characteristics make it suitable for analyzing how microlearning is operationalized in practice.

The significance of this study extends beyond describing a single account. Theoretically, it contributes to understanding how microlearning intersects with language acquisition processes in digital environments. Rather than viewing Instagram only as a technological tool, this study conceptualizes it as a pedagogical space where instructional design shapes learning opportunities (Chik, 2022).

Methodologically, the study contributes a content-centered approach to analyzing digital pedagogy. While previous research often relies on surveys or outcome-based evaluation, this study focuses on instructional design, content structure, and language input organization. This approach enables a deeper understanding of how learning opportunities are constructed within social media environments.

Pedagogically, the findings are expected to inform the development of more effective Arabic language learning content on digital platforms. As educators increasingly integrate social media into instructional practices, understanding how microlearning strategies support learning becomes essential for designing engaging and meaningful educational experiences (Lee, 2023) (Denojean-Mairet et al., 2024).

Accordingly, this study aims to investigate how microlearning strategies are designed and implemented within Instagram-based Arabic learning environments and how these strategies contribute to language acquisition processes (C. Teng, Heydarnejad, Hasan, et al.,

2022). Through an in-depth case study of @guncelarapca, the research seeks to explain the relationship between microlearning design, learner engagement, and language learning processes in social media contexts. By focusing on the pedagogical mechanisms underlying Instagram-based microlearning, the study contributes to a more comprehensive understanding of digital Arabic language education in contemporary contexts.

METHOD

This study employed a qualitative case study design to examine the pedagogical mechanisms of Instagram-based microlearning for Arabic language learning. The research focused on the Instagram account @guncelarapca as a bounded case representing an informal digital learning environment that consistently applies microlearning principles. The study was guided by three theoretical perspectives: Microlearning Theory, Second Language Acquisition (SLA) Theory, and Digital Pedagogy, which informed data selection and analysis (Denojean-Mairet et al., 2024).

The data consisted of instructional posts published between January and June 2025. During this period, 186 posts were uploaded, of which 74 met the inclusion criteria and were selected for analysis. Eligible posts contained identifiable linguistic content such as vocabulary, expressions, grammar explanations, or language-use examples, while also reflecting key microlearning characteristics, including concise presentation, focused instructional objectives, and self-contained learning units. Promotional, administrative, motivational, and non-educational posts were excluded (Buchem et al., 2022).

Purposive sampling was used to identify information-rich cases relevant to the research objectives. Sampling adequacy was established through theoretical saturation, as no substantially new pedagogical categories emerged after the analysis of approximately sixty posts (Hennink & Kaiser, 2022). Nevertheless, all seventy-four selected posts were retained to ensure analytical completeness.

Data were collected through systematic digital observation and documentation. Each selected post was archived, including visual content, captions, hashtags, and engagement indicators. Additional information recorded included publication date, content format, instructional focus, linguistic target, visual features, contextualization strategies, and audience engagement patterns (Shadiev & Wang, 2022) (Muntaha et al., 2023). These data were organized into a structured dataset to capture the pedagogical practices implemented within the Instagram-based microlearning environment.

The analysis aimed to identify pedagogical mechanisms embedded in the instructional content. Guided by the three theoretical perspectives, the analysis employed sensitizing concepts such as content segmentation, linguistic input design, multimodal representation, contextualization, repetition, learner engagement, and interaction opportunities (Lim et al., 2022). These concepts served as analytical references rather than predetermined categories, allowing themes and patterns to emerge inductively from the data while maintaining alignment with the study's theoretical framework.

The analytical framework used in this study consisted of several interconnected components. Content segmentation refers to the examination of how learning materials were divided into small, manageable units that align with the principles of microlearning. Linguistic input design focuses on the analysis of how language input is presented, including vocabulary, expressions, grammar, and overall comprehensibility for learners. Multimodal representation

involves the investigation of the use of multiple communication modes such as text, images, audio, video, and visual cues to support learning processes (Pacheco & Amgott, 2022).

Contextualization is defined as the assessment of how linguistic content is situated within meaningful, authentic, or relatable contexts to facilitate learner understanding. Repetition and reinforcement refer to the identification of strategies used to strengthen learning through repeated exposure, review, and reinforcement of specific language items. Learner engagement involves the analysis of features designed to attract, maintain, and encourage learner attention and active participation. Interaction opportunities examine the extent to which the platform provides space for learner interaction, feedback, responses, or participation through its available features. In addition to these predefined components, the framework also includes emergent categories, which refer to additional themes and patterns that arise inductively during the coding process and are not specified in the initial analytical framework (Sulis, 2022).

Several strategies were applied to ensure methodological rigor and trustworthiness. Peer debriefing was conducted with a second researcher in Arabic language education who reviewed 25% of coded data, leading to refinement of codes and themes. An intercoder agreement check during initial coding reached 86%, with discrepancies resolved through discussion. An audit trail documenting coding decisions, memos, and theme development ensured transparency and confirmability. Reflexive memos supported ongoing researcher reflexivity to minimize bias. Thick description was used in presenting findings to enhance transferability by providing detailed contextual explanations. These procedures collectively strengthened credibility, dependability, confirmability, and transferability of the study framework.

RESULT AND DISCUSSION

Result

The findings presented in this section are derived from a descriptive analysis of instructional content published on the Instagram account @guncelarapca during the observation period. The analysis focuses exclusively on observable characteristics of the content, including post formats, linguistic categories, structural features, content distribution, and platform-based engagement indicators. In accordance with the research design, the findings are limited to what can be directly identified from the published posts and associated interaction metrics (Barrot, 2023). No claims are made regarding learning effectiveness, language acquisition outcomes, cognitive development, or learner achievement.

The instructional content identified in the dataset was delivered through three primary content formats: static image posts, carousel posts, and short video reels. Among these formats, static image posts appeared most frequently. These posts generally presented a single Arabic lexical item or short phrase accompanied by its Indonesian translation (Lee, 2023) (Rovira-Esteva & Vargas-Urpí, 2023). The visual design of such posts was relatively simple and consistent across the dataset. Arabic script was typically positioned as the central visual element and displayed in a larger font size than accompanying text. Additional explanatory information was generally limited, and most posts emphasized direct presentation of linguistic content rather than extended explanation. The visual composition often employed clear spacing and contrast to highlight the target language item.

Carousel posts constituted the second major format identified in the dataset. Unlike static image posts, carousel posts distributed instructional information across multiple slides within a single publication (Fitria, 2022) (R. Zhang & Zou, 2022). Individual slides commonly contained separate components of information, such as vocabulary items, translations, example sentences, or supplementary explanations. The multi-slide format enabled content to be segmented into smaller visual units while remaining part of a single instructional sequence. The progression from one slide to another created a structured presentation format that differed from the more condensed structure of static image posts. Despite the multi-slide design, the overall amount of information presented remained relatively concise compared to long-form educational materials.

Short video reels represented the least frequently observed instructional format. These posts incorporated audio and visual elements simultaneously and typically focused on pronunciation practice, oral modeling, or brief lexical explanations (C. Teng, Heydarnejad, & Hasan, 2022) (Alfadda et al., 2022). The duration of the reels was generally short, and the instructional content remained focused on limited linguistic targets. In some instances, Arabic words or phrases were accompanied by spoken demonstrations, while visual text overlays reinforced the presented language items. Although reels introduced additional multimedia elements compared to static images and carousels, their instructional scope remained narrow and concentrated on specific language components.

Across all three formats, several common characteristics were observed. The instructional content was consistently presented in short textual segments, and no examples of extensive textual explanations or long-form instructional narratives were identified (W. Li et al., 2022) (Liu, 2024). Visual organization played a central role in content presentation, with clear separation between Arabic text and supporting Indonesian explanations. The brevity of the content was evident regardless of format, indicating a consistent emphasis on concise presentation across the dataset.

Based on linguistic focus, the instructional content could be classified into three primary categories: vocabulary items (*mufradāt*), fixed expressions, and semantic comparison posts. Vocabulary-based content represented the most prominent category. The majority of posts presented a single Arabic lexical item paired with its Indonesian meaning. These vocabulary-focused posts often emphasized recognition of individual words and their direct equivalents in the target language. The recurring appearance of this format throughout the dataset indicates that vocabulary presentation constituted a central component of the account's instructional content (Pi et al., 2023).

The second category consisted of fixed expressions commonly used in everyday communication or religious contexts. These posts presented complete expressions rather than isolated lexical items. The expressions were generally accompanied by Indonesian translations and occasionally supported by contextual examples. However, grammatical analysis or detailed linguistic explanations were rarely included (J. Li et al., 2026) (Susilana et al., 2022). Instead, the emphasis remained on presenting the expression as a functional language unit. Compared with vocabulary posts, expression-based content appeared less frequently but remained a recurring feature of the dataset.

A third category involved semantic comparison posts. These posts presented two or more Arabic terms with related meanings and provided brief distinctions between them. The objective of these posts appeared to be the clarification of lexical differences rather than the

introduction of entirely new vocabulary. Semantic comparison content represented the smallest category within the dataset. Although less common than vocabulary and expression posts, these materials contributed additional variation to the overall content distribution observed during the study period.

The structural organization of the instructional posts exhibited several consistent characteristics. First, each post generally focused on a single instructional objective or linguistic target. Whether presenting a vocabulary item, an expression, or a semantic distinction, the content remained centered on one primary point of instruction. This pattern was observed across all content formats and linguistic categories. Second, the amount of linguistic input presented within individual posts was relatively limited. Posts rarely introduced large quantities of information simultaneously, and content was typically confined to a small number of language items (M. F. Teng, 2022).

Another recurring structural feature was the independence of individual posts. Each publication functioned as a standalone instructional unit and could be understood without reference to preceding or subsequent posts. No explicit sequence linking multiple posts into a cumulative instructional progression was identified during the observation period. Likewise, no evidence of a structured curriculum or staged learning pathway was observed. Instead, posts appeared to be organized as separate learning units, each presenting a discrete linguistic topic (Khlaif & Salha, 2022). Additionally, visual hierarchy was consistently employed to distinguish Arabic text from supporting explanations. Differences in font size, placement, color, or spacing were commonly used to guide attention toward the primary instructional content.

User engagement was documented through observable platform-based indicators, particularly likes and comments. All instructional posts received measurable engagement in the form of likes. The number of likes varied across posts, indicating differing levels of audience interaction with published content (Khezrlou, 2024). Comment activity also varied considerably. Some posts received no comments, while others generated multiple responses from users. The comments that were present were generally brief and concise in nature.

Several observable patterns emerged from the comment data. Many comments consisted of short reactions, acknowledgments, or expressions of appreciation. Other comments contained requests for clarification regarding specific vocabulary items or language usage. In certain cases, users repeated the vocabulary items presented in the post, either in Arabic script or transliterated form (Tavassoli & Beyranvand, 2023). These interactions remained relatively short and did not typically develop into extended discussions. Furthermore, carousel posts appeared to receive comments more frequently than static image posts in several observed instances, although this observation is reported solely as a descriptive pattern within the dataset.

The overall distribution of instructional content revealed a clear dominance of vocabulary-focused materials. Vocabulary posts constituted the largest proportion of the dataset and appeared consistently throughout the observation period. Expression-based content formed a secondary category, while semantic comparison posts represented the least frequent content type (P. Zhang & Zhang, 2024). This distribution indicates that the majority of instructional activity on the account centered on the presentation of individual vocabulary items rather than broader grammatical explanations or extended discourse-level instruction.

In summary, the descriptive analysis identified several recurring patterns within the instructional content of @guncelarapca. The content was delivered primarily through short-form digital formats, including static images, carousel posts, and short video reels. Each post generally focused on a single linguistic element and presented a limited amount of instructional information. Vocabulary instruction emerged as the dominant content category, followed by fixed expressions and semantic comparison posts. Structurally, posts functioned as independent instructional units without evidence of sequential organization or curriculum-based progression. User engagement was observable through likes and comments, which served as measurable platform interaction indicators. These findings provide a detailed description of the content characteristics present in the dataset while remaining strictly limited to observable features and interaction metrics.

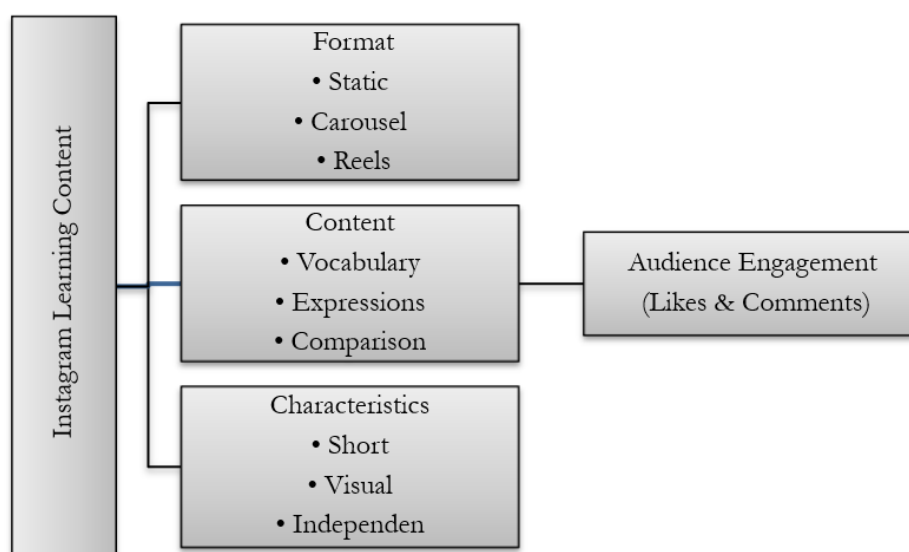


Figure 1. Instructional Content Characteristics on Instagram @guncelarapca

This study examined the pedagogical characteristics of Arabic-language instructional content published on the Instagram account @guncelarapca through a qualitative content analysis approach. The discussion presented in this section is grounded exclusively in the descriptive findings reported in the Results section. It focuses on how the observed instructional patterns can be understood within the context of microlearning-oriented content design. Importantly, the discussion does not attempt to establish causal relationships between content characteristics and learning outcomes, nor does it make claims regarding language acquisition, learner achievement, or instructional effectiveness. Instead, the purpose of this discussion is to contextualize the observed patterns within relevant theoretical perspectives on microlearning, instructional design, and digital language education (Sankaranarayanan et al., 2022).

The findings reveal a highly consistent instructional structure across the analyzed dataset. Regardless of content format, whether static image posts, carousel posts, or short video reels, the instructional materials were characterized by brevity, limited informational density, and a singular linguistic focus. Most posts concentrated on presenting one vocabulary item, one expression, or one semantic distinction at a time (C. Teng, Heydarnejad, & Hasan, 2022) (Baruti & Subekti, 2023). This pattern suggests a deliberate approach to content organization in which instructional information is divided into relatively small and

self-contained units. Such consistency was evident throughout the observation period and represents one of the most prominent characteristics of the account's instructional design.

A notable feature of the dataset is the predominance of vocabulary-based content. Vocabulary items constituted the largest category of instructional materials, substantially exceeding the frequency of expression-based posts and semantic comparison posts. From a descriptive standpoint, this distribution indicates that lexical content functions as the primary instructional focus within the account. Rather than emphasizing grammatical explanations, discourse structures, or extended communicative tasks, the instructional materials largely center on introducing individual lexical items and their meanings. This pattern reflects a particular content design orientation in which vocabulary serves as the central unit of instruction. However, the present study does not evaluate whether such an approach contributes positively or negatively to language learning. The findings merely document the relative prominence of vocabulary-focused materials within the observed dataset.

Another important observation concerns the structural independence of individual posts. The analysis found that each post generally functioned as a standalone instructional unit that could be understood independently of previous or subsequent content. No explicit curricular sequencing or progressive instructional pathway was identified across the dataset. Instead, instructional content appeared to be organized as separate learning objects, each addressing a distinct linguistic element. This organizational pattern is significant because it demonstrates how language-learning content can be presented in modular form within a social media environment. At the same time, the study does not assess whether the absence of sequential progression affects learning processes or learner development. Such questions fall beyond the scope of the present investigation.

The visual presentation of content also emerged as a recurring characteristic of the instructional materials. Across the dataset, Arabic text was consistently highlighted through visual hierarchy, often appearing in larger fonts, central positioning, or distinctive visual arrangements. Supporting explanations and Indonesian translations were generally presented as secondary elements. In carousel posts, information was further segmented across multiple slides, creating clear visual divisions between instructional components. These observations suggest a strong emphasis on visual organization and information structuring within the content design. The consistency of these visual patterns indicates that presentation format constitutes an integral component of how instructional information is delivered within the analyzed Instagram account.

The observed instructional characteristics can be discussed in relation to the broader concept of microlearning. Within the literature, microlearning is commonly associated with the presentation of information in small, focused, and self-contained units that can be consumed within a relatively short period of time. The findings of this study demonstrate several observable characteristics that correspond to this description (Susilana et al., 2022). The brevity of posts, the singular instructional focus, the limited quantity of information presented in each unit, and the modular nature of content organization collectively resemble features frequently associated with microlearning-oriented design. Consequently, the account may be described as employing instructional patterns that align with key characteristics commonly discussed in microlearning literature.

Nevertheless, it is important to emphasize the descriptive nature of this alignment. The present study does not test microlearning theory, nor does it evaluate whether the observed

content achieves outcomes predicted by microlearning frameworks. Rather, the findings indicate that the instructional content exhibits design features that are conceptually similar to those identified in discussions of microlearning (Buchem et al., 2022). Therefore, references to microlearning should be understood as descriptive observations concerning content structure rather than as evidence supporting the effectiveness of any particular pedagogical approach.

The findings may also be considered from the perspective of instructional design. One of the central principles of instructional design involves the organization of information in ways that facilitate clarity and accessibility (Castro-Alonso et al., 2021) (Skulmowski & Xu, 2022a). In the analyzed dataset, instructional content consistently employed visual segmentation, limited informational density, and focused presentation. These characteristics suggest an emphasis on making content visually manageable and easy to navigate within the constraints of the Instagram platform. Furthermore, the repeated use of similar layouts and content structures indicates a high degree of consistency in content production. Such consistency may contribute to a recognizable instructional format within the account. However, the present study does not investigate how users perceive or respond to these design choices beyond observable interaction metrics.

The engagement data provide an additional dimension for understanding the instructional content. Likes and comments were recorded as observable indicators of user interaction with posts. All instructional materials received measurable engagement in the form of likes, while comment activity varied across posts (Muntaha et al., 2023) (Khezrlou, 2024). Some publications generated multiple comments, whereas others received little or no comment activity. Several carousel posts appeared to attract relatively higher levels of commenting compared to static image posts. These differences constitute observable patterns within the dataset and therefore warrant documentation as part of the descriptive findings.

However, the interpretation of engagement metrics requires careful consideration. Social media interactions can be influenced by numerous factors unrelated to learning, including platform algorithms, posting schedules, audience size, visual appeal, and broader patterns of social media behavior (Sulis, 2022) (Shadiev & Wang, 2022). Consequently, the engagement indicators reported in this study should not be interpreted as measures of educational value, learner motivation, comprehension, satisfaction, or achievement. Instead, they function solely as observable indicators of user activity within the Instagram platform environment. The study therefore adopts a cautious approach by describing engagement patterns without attributing educational significance to them.

An additional contribution of the findings lies in their documentation of Arabic-language instructional practices within a non-institutional digital learning environment. Much of the existing literature on language education has traditionally focused on formal educational settings such as schools, universities, and structured online courses. In contrast, the instructional materials examined in this study originate from a social media account operating outside conventional institutional frameworks. The findings therefore provide empirical insight into how Arabic language content is organized and disseminated through contemporary social media platforms (Rahman et al., 2025). By documenting observable instructional patterns, the study contributes to a growing body of research examining digital language-learning environments and informal educational practices.

The study also contributes methodologically by demonstrating how pedagogical content analysis can be applied to social media-based instructional materials. Rather than evaluating learner outcomes, the analysis focuses on the characteristics of instructional content itself. This approach enables researchers to examine how educational materials are structured, categorized, and presented within digital platforms. Such descriptive investigations can serve as a foundation for future studies that seek to explore learner experiences, instructional effectiveness, or comparative analyses across multiple content creators and platforms (Chen & Tsai, 2022).

Several limitations should be acknowledged when interpreting the findings. First, the study does not include direct measures of language learning outcomes. No assessments, interviews, surveys, or performance data were collected from learners. As a result, the findings cannot be used to determine whether the instructional content contributes to vocabulary acquisition, language development, retention, or any other educational outcome. Second, engagement metrics are limited to publicly observable platform interactions and provide no information regarding users' internal cognitive processes, motivations, or levels of understanding. Third, the dataset was derived from a single Instagram account. Consequently, the instructional patterns identified in this study may not be representative of all Arabic-language educational accounts on social media. Different content creators may employ alternative pedagogical approaches, content structures, or engagement strategies (Hennink & Kaiser, 2022).

Overall, the findings provide a detailed description of how Arabic-language instructional content is structured and presented within an Instagram-based microlearning environment. The analyzed content is characterized by short-form delivery, vocabulary-centered instruction, modular organization, visual segmentation, and measurable platform-based engagement (Zhan & Wong, 2022). These patterns illustrate how linguistic input can be packaged and disseminated through social media while remaining consistent with several descriptive characteristics commonly associated with microlearning-oriented content design. Importantly, the study remains limited to documenting observable pedagogical features and does not make claims regarding effectiveness, language acquisition, or learner outcomes. Instead, the findings offer an empirical foundation for future research that may investigate how such instructional designs are experienced by learners and how they function within broader digital language-learning ecosystems.

Discussion

This study examined the pedagogical characteristics of Arabic-language instructional content published on the Instagram account @guncelarapca through qualitative content analysis. Rather than evaluating instructional effectiveness or learner outcomes, the study sought to describe how instructional content is organized and presented within a social media environment. The findings reveal a consistent instructional pattern characterized by short-form content, vocabulary-centered materials, modular organization, and visually segmented presentation. Collectively, these characteristics suggest that the account adopts a content design that closely reflects principles commonly associated with microlearning-oriented instruction.

One of the most prominent findings is the predominance of vocabulary-based content over other forms of linguistic instruction. Most posts introduced individual lexical items accompanied by Indonesian translations, while considerably fewer posts focused on fixed expressions or semantic comparisons. This distribution indicates that vocabulary functions as the principal instructional unit within the analyzed account. Such an emphasis is consistent with previous research suggesting that lexical knowledge is frequently prioritized in digital language-learning environments because vocabulary can be presented as discrete, self-contained learning objects that are well suited to short-form media (Pi et al., 2023; Baruti & Subekti, 2023). Unlike grammar instruction, which often requires extended explanation and cumulative sequencing, vocabulary lends itself to concise presentation within the temporal and visual constraints of social media platforms. The present findings therefore illustrate how platform affordances may shape instructional priorities by encouraging the delivery of compact lexical content.

The organization of instructional materials also reflects important characteristics of modular instructional design. Each post addressed a single linguistic objective and functioned independently from other posts, with no observable evidence of sequential progression or curriculum-based organization. This modular structure corresponds to theoretical discussions of microlearning, which describe instructional content as being divided into small, autonomous units that can be accessed individually according to learners' immediate needs (Buchem et al., 2022; Sankaranarayanan et al., 2022). Rather than presenting language learning as a continuous instructional sequence, the analyzed content appears to prioritize accessibility and flexibility, allowing individual posts to stand alone without requiring prior exposure to earlier materials. Although the present study does not evaluate whether such modularity facilitates learning, the findings demonstrate how microlearning principles can be operationalized through social media content design.

Another notable characteristic concerns the strong emphasis on visual organization. Across all content formats, Arabic script consistently occupied the most visually prominent position, while Indonesian translations and supporting explanations were presented as secondary elements. Carousel posts further enhanced visual segmentation by distributing information across multiple slides, thereby reducing informational density within each screen. These observations are consistent with instructional design literature emphasizing the importance of visual hierarchy, information chunking, and content segmentation in digital learning environments (Castro-Alonso et al., 2021; Skulmowski & Xu, 2022). Rather than relying on lengthy textual explanations, the instructional materials employ visual structure to direct users' attention toward key linguistic elements. This finding highlights the importance of presentation strategies in adapting educational content to highly visual social media platforms such as Instagram.

The variation in content formats also illustrates how different platform affordances can support distinct forms of instructional presentation. Static image posts primarily facilitated direct vocabulary presentation through simple visual layouts, whereas carousel posts enabled information to be distributed across multiple connected screens. Reels introduced audiovisual elements, including pronunciation modeling and spoken demonstrations, although they represented the smallest proportion of the dataset. These observations align with previous studies indicating that social media platforms provide multiple content formats that educators can utilize for different instructional purposes (Lee,

2023; Rovira-Esteva & Vargas-Urpí, 2023). Importantly, despite these format differences, the underlying instructional pattern remained highly consistent, suggesting that the pedagogical organization of content was maintained regardless of media type.

The engagement data provide an additional perspective on how users interact with instructional content within the platform. Observable indicators, including likes and comments, demonstrate that all instructional posts generated some degree of audience interaction, although the volume of engagement varied across publications. Carousel posts appeared to receive comments more frequently than static image posts, while many comments consisted of acknowledgments, appreciation, vocabulary repetition, or requests for clarification. These interaction patterns are consistent with previous studies describing social media engagement as predominantly brief and interaction-oriented rather than discussion-based (Khezrlou, 2024; Tavassoli & Beyranvand, 2023). However, engagement metrics should be interpreted cautiously. Likes and comments primarily reflect visible platform activity and may be influenced by numerous contextual factors, including algorithmic recommendation systems, posting schedules, visual attractiveness, and audience characteristics (Sulis, 2022; Shadiev & Wang, 2022). Consequently, the observed engagement should not be interpreted as evidence of instructional quality, learner satisfaction, or educational effectiveness.

From a broader perspective, the findings contribute to the growing literature on informal digital language education. Much existing research on Arabic language instruction has focused on formal educational settings, including schools, universities, and structured online learning environments. In contrast, the present study documents instructional practices occurring within a publicly accessible social media account operating outside institutional contexts. By examining the pedagogical organization of naturally occurring instructional materials, this study extends current understanding of how language-learning resources are adapted to contemporary digital communication platforms (Rahman et al., 2025). The findings therefore contribute empirical evidence regarding the instructional characteristics of informal social media-based language education, an area that remains comparatively underexplored.

Methodologically, the study demonstrates the value of qualitative content analysis for investigating pedagogical practices within digital environments. Rather than focusing on learner achievement, the analysis systematically examined observable instructional characteristics, including content format, linguistic focus, visual organization, structural patterns, and engagement indicators. This descriptive approach provides a useful foundation for subsequent research examining learner perceptions, instructional effectiveness, or comparative analyses across multiple educational accounts and social media platforms (Chen & Tsai, 2022). Future investigations may build upon these findings by integrating content analysis with interviews, surveys, learning analytics, or experimental methods to better understand how learners engage with and benefit from microlearning-oriented instructional materials.

Several limitations should be acknowledged. First, the study analyzed content from a single Instagram account, limiting the transferability of the findings to other Arabic-language educational creators or social media platforms. Second, the research relied exclusively on publicly observable instructional materials and engagement indicators, without collecting data directly from learners or content creators. Consequently, the study cannot explain users'

motivations, learning experiences, or cognitive engagement with the instructional content. Third, because no assessments of learning outcomes were conducted, the study does not provide evidence regarding vocabulary acquisition, language development, retention, or instructional effectiveness. These limitations reflect the descriptive scope of the research and highlight opportunities for future studies employing mixed-method or longitudinal research designs.

Overall, the findings demonstrate that Arabic-language instructional content on @guncelarapca is organized around concise, vocabulary-centered, visually structured, and modular learning units that closely resemble characteristics commonly associated with microlearning. Rather than evaluating the educational effectiveness of this instructional approach, the study provides a systematic description of how pedagogical content is designed and presented within a contemporary social media environment. As digital platforms continue to expand their role in informal language education, understanding the instructional characteristics of such content represents an important step toward developing a broader evidence base for social media-based language learning.

CONCLUSION

This study has explored the pedagogical structure of microlearning as implemented in Arabic language instructional content on the Instagram account @guncelarapca. The analysis focused on how linguistic input is organized and presented within an informal digital learning environment, rather than on measuring learning outcomes or instructional effectiveness. The findings indicate that the instructional content is consistently designed around short, single-focus learning units with a strong emphasis on vocabulary and visually structured presentation. The main contribution of this study is descriptive and exploratory in nature. It provides empirical documentation of how microlearning principles are operationalized in a non-institutional Arabic learning context on social media. Rather than demonstrating effectiveness, the study highlights how instructional content is structured in ways that reflect microlearning-oriented design logic within Instagram-based educational practices.

It is important to emphasize that this study does not provide evidence of learning effectiveness. No assessments of learner achievement, comprehension, or language acquisition outcomes were conducted. The analysis is based solely on content structure and observable engagement metrics, which do not constitute measures of learning performance or cognitive change. Furthermore, the study is limited by its focus on a single Instagram account and the exclusive use of content analysis as the methodological approach. Learners' perspectives, learning processes, and performance data were not included in the analysis. As a result, the findings should be interpreted as exploratory and context-specific rather than generalizable to broader populations or instructional settings.

Future research is encouraged to build upon these findings by incorporating learner-centered data, such as interviews, surveys, or performance-based assessments. Comparative studies across multiple social media platforms and longitudinal designs tracking actual learning outcomes would also be valuable in developing a more comprehensive understanding of how microlearning influences Arabic language acquisition in digital environments. Overall, this study contributes a preliminary and context-bound understanding of how Arabic microlearning content is structured on Instagram. The findings

should be viewed as a foundation for further empirical investigation rather than as evidence of instructional effectiveness.

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AUTHOR CONTRIBUTIONS STATEMENT

Authors MS, AS, JB, W and ZH all contributed to the completion of this study. They wrote the introduction, methods, data analysis, discussion, and conclusions.

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